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Profiling the Supervision Experiences of Postgraduate Research Students with Different Personal and Institutional Factors in Open and Distance Learning Environment

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Abstract

Quality in research supervision is one of the main concerns among the institutions and stakeholders today especially those involved in open and distance learning (ODL). This research examined the supervision experiences of postgraduate research candidates during different stages of research at the biggest open and distance learning institution of Pakistan. The study was based on mixed-method approach using sequential design (Quan→qual). Survey was conducted from the postgraduate research candidates enrolled under the four different faculties of Allama Iqbal Open University, Pakistan. An adapted version of Supervisor-Supervisee Relationship Questionnaire (Saleem, 2014) was administered along with autobiographical accounts of the research candidates selected through a multi-stage sampling design. The generated data were used to identify the supervision related experiences of research candidates with respect to the different personal and institutional factors. Further, to explore region specific supervision issues, their reasons with respect to the ethnic and cultural aspects focused group discussion was conducted at Provincial Head Quarters (PHQs) of the university. The findings implicated valuable academic and administrative adaptations for improving the quality of research supervision practices for open and distance learning institution.

Keywords: Research supervision experiences, distance learning, supervisory relationship, Doctoral research

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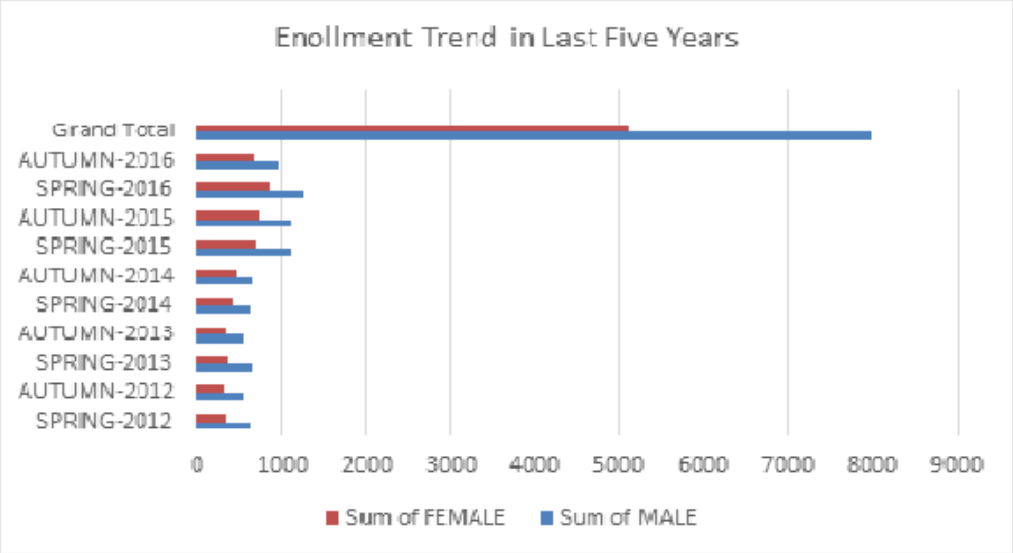
Introduction

Allama Iqbal Open University is the oldest open and distance learning institution in Pakistan that was established in 1974. It is the largest institution in Pakistan providing mass education to the 1.3 million students from all the corners (i.e. Punjab, Sindh, Khyber Pakhtunkhwa, Baluchistan, Azad Jammu Kashmir and Gilgit Baltistan) of the country. More than 70 percent students are employed, the female enrollment is more than 50 percent. The rural-urban distribution of the students is 58% and 42% respectively. At present a large number of clienteles is in SSC, Intermediate, Bachelor and Teacher Education porgrammes. However, for the last few years the university has been emphasizing more on higher education (AIOU, 2016). Consequently, the candidates enorolled in postgraduate (MPhil/ PhD) level programmes has significantly grown from 916 to 13062 in the last five years (See figure 1& table 1 for details).



*2012-2016: MPhil/ PhD enrollment data
Source: AIOU data information cell

Figure 1. *Semester-wise male-female enrollment trend in last five years at AIOU*

Currently, university is offering MPhil/ PhD degrees under the four disciplines i.e. Education, Social Sciences and Humanities, Islamic Studies ab=nd Physical Sciences and their subsequent departments. Unfortunately, there is a total of only 92 full-time PhD faculty members in the four disciplines (AIOU, 2017). Hence, it is not possible for the existing faculty to supervise all the enrolled candidates. Moreover, the candidates from far flung areas have freedom to select the supervisor from the nearby universities or from their own university according to their choice.

Subsequently, candidates generally prefer to select the supervisors from the nearby universities as most of them are professionals and this flexibility in supervision selection provides them an opportunity to take up their studies along with their jobs. But, meanwhile the quality of supervision becomes a question mark when it comes to monitor their progress, the essential parameters to conduct MPhil/ PhD level research and degree completion.

Secondly, due to the lack of any existing mechanism to assess the general health of postgraduate research supervision practices in distance learning environment the procedural delays and student de-motivation are the main source of degree non-completion and drop-out.

In this context, there is a dire need to establish the evidence about the research supervision practices and the potential supervision issues in the largest distance learning institution of Pakistan.

Rationale of the Research

The concept of assessing supervision health of universities at postgraduate level in Pakistan is not only unique in general but specifically there cannot be found a single research study that reveals the postgraduate level supervision experiences of students in distance education system. The study is also important due to the fact that in our distance education system students have freedom to take supervisor not even outside the university but from anywhere in Pakistan due to which a larger number of research candidates have to experience the out sourced nature of supervision practices. Meanwhile, there is currently no formal mechanism is existed in postgraduate institutions in our country to monitor the working progress and outcomes of the most prestigious degree in our education system. These supervision related problems ultimately led about low rates of progress, high rates of discontinuation of higher level degrees specially in distance learning institutions. However, if we see the recent trends in postgraduate studies in developed countries (i.e. Australia and UK) then it is worth important to know that at national level in Australia Postgraduate Research Experience Questionnaire (PREQ) and

in UK Postgraduate Research Experience Survey (PRES) have been used to provide a useful snapshot of the postgraduate level research student experience mainly focused upon the supervision related research experiences at university level.

Based on the fact that (Heath, 2002) the success of PhD system heavily depends on the supervision practices of supervisors, who must provide their time, expertise and support in fostering the candidate's research and attitudes skills and to ensure the production of a thesis of acceptable standard, the present study will help to provide current situation of supervision practices in the open distance education system.

Moreover, Li and Seale (2007) viewing the supervision admitted that although the frequency of meetings between supervisor and candidate is essential, but the quality of these meetings is even more important aspect to investigate that may ultimately inform the university's higher authorities to reconsider the current rules, practices and policies about the phenomenon of higher degree research supervision practices in open and distance learning scenario.

In this scenario, this study investigated the supervision related experiences of higher degree research candidates enrolled in different MPhil and PhD level programmes that are offered under four faculties (i.e. Education, Social Sciences and Humanities, Islamic Studies & Physical Sciences) of Allama Iqbal Open University (AIOU). Following are the subsequent research questions.

Research Questions

The following research questions were made to investigate the problem:

1. What are the supervision related experiences of postgraduate level research candidates in open and distance learning institution?
2. What kind of supervision related problems are reported by the research candidates at the different stages of their research in open and distance learning institution?
3. What are the reasons behind the supervision problems reported by the research candidates in different regions of an open and distance learning institution?

Literature Review

Universities strive for the academic excellence through maintaining the quality of education so that their undergraduate and postgraduate degrees remain competitive. An important facet of quality at postgraduate level is the quality of research and research supervision. Quality in research supervision is one of the main concerns among the

institutions and stakeholders today especially those involved in open and distance learning (ODL). Reviewing the literature reveals that there has been conducted research on the problems and complexities of distance postgraduate research degree programmes (Evans & Green, 1995; Fox, 2002; Price & Money, 2002; Venter, 2003; Butcher & Sieminsky, 2006; Crossouard, 2008; Paran et al., 2010).

Focusing the major supervisory concerns at postgraduate level, Otago (2010) reported the most important qualities of the ideal graduate research supervisor from the perspective of students entails: 1) Supportiveness, 2) Availability 3) Interest and enthusiastic 4) Knowledge and expertise in the field 5) Good communication constructive feedback, approachability and rapport 6) Experience and interest in supervision.

Evans and Green (1995) looked at the Deakin University remote doctorate program in order to explore the opportunities and challenges associated with distance learning programs, sometimes known as "absent presence" or "virtual presence."

As part of a research conducted across the institution, Fox (2002) looked at the supervisors' knowledge of information technology at the institution of Hong Kong. Price and Money (2002) conducted a comparison of several methods for delivering a PhD program in business administration in order to determine the effect on student performance. In order to gather information about the experiences of remote postgraduate students at the Open University, Butcher and Sieminski (2006) employed a questionnaire that included questions about supervision and the relationship between the supervisor and supervisee. A comprehensive list of postgraduate supervisory components and their adaptation for remote distribution was given by Unwin (2007). Wisker (2007) looked into how cultural norms and expectations affected the effectiveness of remote postgraduate supervision. Crossouard (2008) examined the value of online formative evaluation and feedback using a case study.

Through a variety of information technology solutions, Sussex (2008) highlighted the concerns that have an impact on the frequency and quality of supervisor-supervisee conversations. An review of University College London's distance master's programs was given by Paran, Hyland, and Bentall in 2010. The advantages and disadvantages of using virtual world technology, such Second Life, for long-distance doctoral research supervision have been examined by Willems et al. (2011). A case study on how to obtain the knowledge and abilities needed to deliver a remote doctoral program satisfactorily was given by Andrew (2012). A strong relationship between supervisors and supervisees is one of the most important variables that impacts the success of postgraduate supervision, according to Manyike (2017), referencing (Bitzer, 2011; Koen, 2007; Lessing, 2011; Yeatman, 1995). Manyike (2017) pointed out that the difficulties

associated with postgraduate supervision in a distance learning setting are exacerbated by the fact that postgraduate supervision frequently necessitates a physical distance between supervisors and students. It was agreed upon by Nasiri and Mafakheri (2014) that the difficulties in remote postgraduate supervision stem from the temporal and spatial separation and distance between the supervisee and the supervisor. According to Wisker et al. (2003), remote education is a type of instruction provided to students who do not attend classes regularly and do not, therefore, have in-person interactions with their supervisors.

Furthermore, Sussex (2008) argued that the challenge of distance can be mitigated through the use of a variety of technologies which includes fax, email, recorded audio/video, audio/video conferencing, live chat, live streaming and virtual learning environments. Nasiri and Mafakheri (2014) cautioned that as universities are trying to keep up with technological change, the means of communication in distance supervision is changing. This is the result of the significant time in such long-distance discussions that might be spent on exploring and talking about new technology or software instead of a clear focus on research issues.

While Alam et al. (2013) found in the context of Australia that previous studies about postgraduate students come from "various ethnic, cultural, political, economic, linguistic and educational backgrounds and their attraction and retention are paramount for educational institutions" but most universities were not deliberately focusing on this area. Actually, Mouton (2011) noted with concern that postgraduate studies in any university in South Africa were suffering from too much focus on administration and managerial processes instead of exploring the quality of the students. Interestingly, as is common with studies in higher education, the methodological paradigms that have been employed in previous studies to understand postgraduate studies are many. For example, in South Africa, Mouton (2011) analyzed policy document and statistics to understand the challenges of doctoral production. Contrastingly,

Albertyn, et al. (2008) used a qualitative descriptive study to profile the exiting postgraduate students' performance and experiences. Heeralal (2015) used a qualitative study to explore the postgraduate supervision in an open and distance learning environment. However, in reflecting on this trend, Mouton (2011) indicated that for too long research in postgraduate studies have focused too much "on the quantitative goals of doctoral production – how to increase the number of doctoral graduates and to reduce time to degree and attrition rates". Mouton's (2011) called for a hybrid methodological trajectory is addressed in this mixed method study.

Gaps in Previous Research

It seems from the above review that there are still knowledge and methodological gaps in understanding the supervision of postgraduate studies. First, studies that have been carried out to understand postgraduate studies in South Africa are focused on the traditional system of learning, and not distance education. Second, Heeralal's (2015) study focused on postgraduate supervision in distance education that is qualitative and lacks the quantitative examination of the phenomena. Thus, to address the highlighted knowledge gaps Mouton (2011, p.28) pointedout to "…apply our minds equally to concerns of quality in doctoral training" by examining the nature of supervision in distance learning higher education using Unisa as the research site.

Despite the abrupt increase in the enrollment trend and the number of programmes offering under the open and distance mode of education, there could be find only few research studies that use real cases in capturing the quality of distance postgraduate research supervision (Evans & Green 1995; Fox 2002; Price & Money 2002; Venter 2003; Butcher &Sieminsky 2006, 2009; Crossouard 2008; Paran et al. 2010). These empirical studies on the challenges of postgraduate research supervision in distance education programmes were based on data from a single programme or limited to a specific university. More specifically, in the context of Pakistan as a developing country there is not a single study to examine the supervision related issues. There is a clear need for surveys capturing such the supervision issues under the distance mode of supervision to provide wider evidence on the performance of these programmes.

Methodology

The research was based on the mixed-method research design; survey method was used to examine the supervision related experiences of postgraduate level research candidates in the oldest and largest open and distance learning institution in Pakistan, AIOU. While in subsequent manner, the qualitative data of the study was collected to explore the region specific supervision issues and to sort out the reasons behind them.

Population

There are total four faculties (i.e. Education, Social Sciences and Humanities, Islamic Studies & Physical Sciences) in AIOU. Currently, the total number of postgraduate (MPhil/ PhD) level enrolled candidates in these four faculties is N= 13,062. Among these 13,062 candidates, 1,868 candidates have been offered with thesis that can provide the data about the supervision experiences with their supervisors. Hence, the population of this study will be comprised of 1,868 postgraduate research candidates. The distribution of research candidates in four faculties of AIOU is given below:

Table1

Total Number of Candidates Enrolled in Mphil/ PhD Level Programmes at AIOU

Faculty	n* (1868)	Proportion of the total number of research candidates	Selected sample(934)
Education	504	27% apx.	254
Physical Sciences	425	23%apx.	214
Social Science & Humanities	400	20%apx.	187
Arabic & Islamic Studies	573	30%apx.	279

Note: * Total number of research candidates; apx.= approximately

Sample

A multistage sampling design was employed to foster the required variation (gender, stage of research candidacy, discipline of study and degree level etc.) in the sample of the study. Hence, at the first stage of sampling 50% (n= 934) of the MPhil/ PhD enrolled candidates only those at research candidacy stage (n=1868) were selected proportionately from the four faculties according to the proportion as described in the table 1 and on the basis of their different stages of research candidacy. A subsequent sample from the above selected sample was drawn for the Focused Group Discussion (FGD i.e. 8 candidates) in order to explore research supervision problems faced by MPhil and PhD candidates in different regions. The selection of these candidates was based on the cases working on slow pace have taken extension and reported extreme nature of supervision problems in the survey questionnaire.

Instruments

1. Survey Questionnaire
2. Focused Group Discussion

Considering the worth of working relationship between postgraduates and their supervisors that has been recognized as key to a successful supervision process, degree completion rates, faculty research performance and postgraduate satisfaction with their doctoral education by many researchers (e.g. Aspland et al., 1999; Hockey, 1996; Holdaway, Deblois & Winchester 1995; Ives & Rowley, 2005; Kyvik & Smeby, 1994) an indigenous, self-constructed Supervisor-Supervisee Relationship Questionnaire (SSRQ) and Research Candidate Background Profile Performa were used to achieve the objective of the study. The specific features of the questionnaire were: 1) different supervision aspects of the supervisors 2) Supervision experiences of the supervisees across the different stages and 3) Intellectual support aspects of research supervision.

Further, to explore the region specific research supervision problems in depth a Focused Group Discussion Protocol was developed and discussion were audio recorded and compiled to extract the reasons behind facing those problems. Time-wise it is more economical than conducting numerous individual interviews; group dynamics work better to bring out the relevant information (Carey, 1994).

Procedure of the Study

After the formal approval of program and workshop coordinators to collect the data from the research candidates of AIOU, the respondents of the study were approached from two channels:

The contact details of the research candidates were collected from the MPhil/Phd programme coordinators and data information unit of AIOU. Supervisor-Supervisee Relationship Questionnaire (SSRQ) were e-mailed and posted to the respondents.

Researcher personally approached the respondents during their scheduled Doctoral Research Proposal Committee meetings/ Board of Advance Studies and Research meetings and Course workshops (in case of doctoral students who have completed their MPhil from AIOU). However, no respondent was forced to participate in the survey; meanwhile they were also ensured about the confidentiality of the data.

After the analysis of survey data, cases (8-10) with reported extreme supervision problems in different regions (PHQs) were select for the focused group discussion (FGD) in order to explore the potential issues and their reasons embedded in their cultural and ethnic context. Six-point continuous scale of agreement was used to score the items included in the questionnaire.

Table 2
Scoring Scheme for Supervisees' Data

	Subscales		Range		
Sr#		Total items	Low	Moderate	High
1	Project Management	12	12-24	25-48	49-72
2	Workload Management	5	5-10	11-20	21-30
3	Pertinent Research Skills	8	8-16	17-32	33-48
4	Intellectual Support	15	15-30	31-60	61-90
5	Interpersonal Communication Skills	6	6-12	13-24	25-36
6	Supportive Skills	11	11-22	23-44	45-66

Analysis and Results

As the research as intended to examine the current research supervision related problems experienced by the research candidates at postgraduate level in AIOU and the nature of the study mixed using a combination of quantitative and qualitative data analysis techniques. Thus, the generated data from the survey questionnaire were analyzed through descriptive (i.e. mean, SD.) and inferential statistical techniques (i.e. One-Way-ANOVA, Independent Sample t-test) as per the needs of specific objectives of the research. Qualitative data were analyzed

Table 3
Subscale-wise Descriptive Analysis and Test of Normality

Subscales	n	Min.	Max.	M	SD	Skewness	Kurtosis
Project Management (N=12)	109	28.00	72.00	55.37	10.18	-.87	.71
Workload Management (N=5)	109	9.00	30.00	20.63	5.22	-.37	-.34
Pertinent Research Skills (N=8)	109	24.00	48.00	38.46	6.67	-.64	-.33
Intellectual Support (N=15)	109	42.00	89.00	71.66	11.91	-.65	-.14
Interpersonal Communication Skills (N=6)	109	16.00	36.00	28.77	5.33	-.54	-.22
Supportive Skills (N=11)	109	12.00	65.00	41.44	15.65	-.24	-1.14

The data were found normally distributed and under the acceptable range of skewness and kurtosis. Hence found suitable for inferential statistics.

Background Factors and Supervision Experiences

Table 4
Gender-wise Analysis of Supervisee's Experiences

Subscales	Gender	n	M	SD	t-value	df	p
1.Project Management	Male	30	56.33	6.81	.745	85.64	.45
	Female	79	55.01	11.21			
2.Workload Management	Male	30	22.00	4.11	1.699	107	.09
	Female	79	20.11	5.52			
3.Pertinent Research Skills	Male	30	41.83	4.52	4.088	79.99	.00
	Female	79	37.18	6.92			
4. Intellectual Support	Male	30	78.33	7.13	4.821	89.83	.00
	Female	79	69.12	12.41			
5.Interpersonal Communication Skills	Male	30	30.00	4.80	1.490	107	.13
	Female	79	28.30	5.48			
6.Supportive Skills	Male	30	45.16	16.71	1.542	107	.12
	Female	79	40.02	15.09			

Significant at P<.001

Independent sample t-test was conducted to compare the gender-wise mean scores of students on the six subscales of students' supervision evaluation at postgraduate level. It was found that there was a significant difference between the males' and females' supervision experiences regarding Pertinent Research Skills (P=.00) and Intellectual support (P=.00) of their supervisors. Moreover, gender wise mean score revealed that male were more satisfied than female about Pertinent Research Skills (Male= 41.83 & Female= 37.18) and Intellectual support (Male= 78.33 and Female= 69.126) of their supervisors.

Table 5
Area-wise Descriptive Analysis of Supervisee's Experiences

Subscales		n	m	SD
Project Management	Sindh	20	53.50	5.15
	Baluchistan	15	50.00	8.82
	KPK	30	53.16	12.22
	Punjab	20	58.00	10.53
	Islamabad	10	67.50	2.63
	Sindh	20	21.00	2.80
Workload Management	Baluchistan	15	17.66	4.65
	KPK	30	18.00	5.63
	Punjab	20	23.25	5.19
	Islamabad	10	25.00	3.16
Pertinent Research Skills	Sindh	20	36.00	7.25
	Baluchistan	15	37.33	4.95
	KPK	30	36.66	7.89
	Punjab	20	42.00	4.03
	Islamabad	10	43.00	3.16
	Sindh	20	69.00	9.00
Intellectual Support	Baluchistan	15	66.66	8.87
	KPK	30	66.66	15.37
	Punjab	20	79.00	6.52
	Islamabad	10	83.00	3.16
	Sindh	20	28.25	2.22
Interpersonal Communication Skills	Baluchistan	15	28.66	4.65
	KPK	30	26.00	6.53
	Punjab	20	32.25	2.55
	Islamabad	10	31.50	3.68
	Sindh	20	39.00	14.27
Supportive Skills	Baluchistan	15	28.66	18.21
	KPK	30	39.00	15.45
	Punjab	20	44.00	12.33
	Islamabad	10	58.00	3.16

Table 6
Area-wise Mean Score Comparison of Supervisee's Experiences

Subscales		SS	df	MS	F	P
Project Management	Between Groups	2256.754	4	564.189	6.26	.00
	Within Groups	8101.667	90	90.019		
	Total	10358.421	94			
Workload Management	Between Groups	666.075	4	166.519	7.580	.00
	Within Groups	1977.083	90	21.968		
	Total	2643.158	94			
Pertinent Research Skills	Between Groups	693.158	4	173.289	4.393	.00
	Within Groups	3550.000	90	39.444		
	Total	4243.158	94			
Intellectual Support	Between Groups	3623.684	4	905.921	7.840	.00
	Within Groups	10400.000	90	115.556		
	Total	14023.684	94			
Interpersonal Communication Skills	Between Groups	552.456	4	138.114	6.600	.00
	Within Groups	1883.333	90	20.926		
	Total	2435.789	94			
Supportive Skills	Between Groups	5519.825	4	1379.956	6.741	.00
	Within Groups	18423.333	90	204.704		
	Total	23943.158	94			

Note. SS= Sum of Squares, df= Degree of Freedom, MS= Mean of Squares, p=Value of Significance
Significant at P<.05

One way between groups analysis of variance (ANOVA) was conducted to examine the area wise mean score differences among the students' experiences regarding supervision at postgraduate level. It was found that there is a significant difference (p< .05) among students' experiences on the subscale of Project Management (p= .00), Workload Management (p= .00), Pertinent Research Skills (p= .00), Intellectual Support (p= .00), Interpersonal Communication Skills (p= .00), Supportive Skills (p= .00).

Table 7
Area-Wise Post-Hoc Analysis of Supervisee's Experiences Tukey HSD

Dependent Variable	(I) Area to which you belong	(J) Area to which you belong	Mean Difference (I-J)	p
Project Management	Islamabad	Sindh	14.00000*	.002
		Baluchistan	17.50000*	.000
		KPK	14.33333*	.001
Workload Management	Islamabad	Baluchistan	7.33333*	.002
		KPK	7.00000*	.001
Pertinent Research Skills	Punjab	Sindh	6.00000*	.027
		KPK	5.33333*	.033
	Islamabad	Sindh	7.00000*	.039
Intellectual Support	Punjab	Sindh	10.00000*	.033
		Baluchistan	12.33333*	.010
		KPK	12.33333*	.001
	Islamabad	Sindh	14.00000*	.010
		Baluchistan	16.33333*	.003
		KPK	16.33333*	.001
Interpersonal Communication Skills	Punjab	KPK	6.25000*	.000
	Islamabad	KPK	5.50000*	.012
Supportive Skills	Punjab	Baluchistan	15.33333*	.019
		Sindh	19.00000*	.008
	Islamabad	Baluchistan	29.33333*	.000
		KPK	19.00000*	.004

Post-hoc results revealed that area-wise mean score differences ($p < .05$) across the overall students' experiences regarding supervision at postgraduate level revealed better supervision experiences of students from Islamabad and Punjab region as compared to the students' supervision experiences from Sindh, Baluchistan and Khyber Pakhtunkhwa region.

Academic Factors and Supervision Experiences

Table 8
Study Discipline -wise Descriptive Analysis of Supervisee's Experiences

Subscales	Study Discipline	n	M	SD
	Physical Sciences	64	52.59	10.08
Project Management	Education	35	60.14	9.00
	Art & Humanities	5	48.00	.00
	Total	104	54.91	10.19
Workload Management	Physical Sciences	64	19.20	5.37
	Education	35	22.57	4.05
	Art & Humanities	5	18.00	.00
	Total	104	20.27	5.08
Pertinent Research Skills	Physical Sciences	64	37.15	6.43
	Education	35	41.85	3.22
	Art & Humanities	5	24.00	.00
	Total	104	38.10	6.61
Intellectual Support	Physical Sciences	64	69.46	12.20
	Education	35	75.28	10.11
	Art & Humanities	5	60.00	.00
	Total	104	70.97	11.76
Interpersonal Communication Skills	Physical Sciences	64	27.51	5.76
	Education	35	30.71	3.78
	Art & Humanities	5	25.00	.045
	Total	104	28.47	5.28
Supportive Skills	Physical Sciences	64	36.75	17.00
	Education	35	47.57	10.25
	Art & Humanities	5	39.00	.034
	Total	104	40.50	15.40

Table 9
Study Discipline -wise Mean Score Comparison of Supervisee's Experiences

Subscales	Study Discipline	Sum Squares	ofdf	Mean Square	F	p
Project Management	Between Groups	1540.49	2	770.24	8.486	.00
	Within Groups	9167.7	101	90.77		
	Total	10708.22	103			
Workload Management	Between Groups	283.98	2	141.99	6.033	.00
	Within Groups	2376.93	101	23.53		
	Total	2660.91	103			
Pertinent Research Skills	Between Groups	1545.11	2	772.55	26.337	.00
	Within Groups	2962.72	101	29.33		
	Total	4507.83	103			
Intellectual Support	Between Groups	1397.83	2	698.91	5.488	.00
	Within Groups	12863.08	101	127.35		
	Total	14260.91	103			
Interpersonal Communication Skills	Between Groups	294.78	2	147.39	5.768	.00
	Within Groups	2581.12	101	25.55		
	Total	2875.91	103			
Supportive Skills	Between Groups	2661.42	2	1330.71	6.168	.00
	Within Groups	21788.57	101	215.72		
	Total	24450.00	103			

p=Value of Significance, Significant at P<.05

One way between groups analysis of variance (ANOVA) was conducted to examine the area wise mean score differences among the students' experiences regarding supervision at postgraduate level. It was found that there is a significant difference (p< .05) among students' experiences on the subscale of Project Management (p= .00), Workload Management (p= .00), Pertinent Research Skills (p= .00), Intellectual Support (p= .00), Interpersonal Communication Skills (p= .00), Supportive Skills (p= .00).

Table 10
Study Discipline -wise Post-hoc Analysis of Supervisee's Experiences

Dependent Variable	(I) Study Discipline	(J) Study Discipline	Mean Difference (I-J)	Sig.
Project Management	Education	Physical Sciences	7.54911*	.001
		Art & Humanities	12.14286*	.024
Workload Management	Education	Physical Sciences	3.36830*	.004
	Physical Sciences	Art & Humanities	13.15625*	.000
Pertinent Research Skills	Education	Physical Sciences	4.70089*	.000
		Art & Humanities	17.85714*	.000
Intellectual Support	Education	Physical Sciences	5.81696*	.042
		Art & Humanities	15.28571*	.015
Interpersonal Communication Skills	Education	Physical Sciences	3.19866*	.009
Supportive Skills	Education	Physical Sciences	10.82143*	.002

Post-hoc results revealed that study discipline-wise mean score differences ($p < .05$) across the overall students' experiences regarding supervision at postgraduate level revealed better supervision experiences of students from Education discipline as compared to the students' supervision experiences from Physical sciences discipline, Arts and Humanities.

Table 11
Supervisor Allotment Procedure Descriptive Statistics

Subscales	Supervisor Selection	N	Mean	Std. Deviation
Project Management	By department without my consent	5	57.0000	.08900
	Mutual agreement	54	54.0926	8.77877
	Of my own choice	40	55.3750	13.03779
	Total	99	54.7576	10.48720
Workload Management	By department without my consent	5	23.0000	.90000
	Mutual agreement	54	19.1481	4.48228
	Of my own choice	40	22.2500	6.44006
	Total	99	20.5960	5.47148
Pertinent Research Skills	By department without my consent	5	44.0000	.72000
	Mutual agreement	54	36.3519	6.82989
	Of my own choice	40	40.6250	6.58159
	Total	99	38.4646	6.95659
Intellectual Support	By department without my consent	5	77.0000	.32000
	Mutual agreement	54	70.1111	9.41028
	Of my own choice	40	75.0000	14.62348

	Total	99	72.4343	11.82022
Interpersonal	By department without my consent	5	34.0000	.00650
Communication Skills	Mutual agreement	54	28.4444	5.01570
	Of my own choice	40	29.1250	6.16935
	Total	99	29.0000	5.49582
Supportive Skills	By department without my consent	5	53.0000	.00600
	Mutual agreement	54	35.8704	15.08472
	Of my own choice	40	45.7500	16.64678
	Total	99	40.7273	16.25801

Table 12
Mean Score Comparison of Supervision Experiences and Supervisor Allotment Procedure

Subscales	Supervisor Selection	N	df	Mean Square	F	p
		64.270	2	32.135	.288	.750
	Within Groups	10713.912	96	111.603		
	Total	10778.182	98			
Workload Management	Between Groups	251.524	2	125.762	4.501	.014
	Within Groups	2682.315	96	27.941		
	Total	2933.838	98			
Pertinent Research Skills	Between Groups	580.936	2	290.468	6.700	.002
	Within Groups	4161.690	96	43.351		
	Total	4742.626	98			
Intellectual Support	Between Groups	658.990	2	329.495	2.427	.094
	Within Groups	13033.333	96	135.764		
	Total	13692.323	98			
Interpersonal_	Between Groups	142.292	2	71.146	2.424	.094
Communication Skills	Within Groups	2817.708	96	29.351		
	Total	2960.000	98			
Supportive Skills	Between Groups	3036.044	2	1518.022	6.373	.003
	Within Groups	22867.593	96	238.204		
	Total	25903.636	98			

One way between groups analysis of variance (ANOVA) was conducted to examine the mean score differences on the basis of Supervisor Allotment Procedure among the students' experiences regarding supervision at postgraduate level. It was found that there is a significant difference ($p < .05$) among students' experiences on the subscale of Workload Management ($p = .014$), Pertinent Research Skills ($p = .002$), Supportive Skills ($p = .003$).

Table 13
Supervisor Allotment Procedures –wise Post-hoc Analysis of Supervisee's Experiences of Students

Dependent Variable	(I) I was allotted supervisor	(J) I was allotted supervisor	Mean Difference (I-J)	p
Workload Management	Of my own choice	Mutual agreement	3.10185*	.016
Pertinent Research Skills	By department	Mutual agreement	7.64815*	.039
	Of my own choice	Mutual agreement	4.27315*	.007
Supportive Skills	Of my own choice	Mutual agreement	9.87963*	.008

Post-hoc results revealed that mean score differences among students' experiences ($p < .05$) on the basis of Supervisor Allotment Procedures, regarding Workload Management, Pertinent Research Skills and Supportive Skills at postgraduate level. It was found that students reported better supervision experiences when choose supervisor of their own choice rather than being allocated to a supervisor by department.

Table 14
Descriptive Statistics of Match between Supervisor-Supervisee Area of Specialization

		n	M	SD
Project Management	completely different	10	54.00	16.86
	Different to some extent	45	52.55	10.66
	Have some published work	5	57.00	.45
	exactly same	39	57.58	8.62
Workload Management	completely different	10	17.00	5.27
	Different to some extent	45	20.22	5.30
	Have some published work	5	23.00	.087
	exactly same	39	21.00	5.57
Pertinent Research Skills	completely different	10	36.50	3.68
	Different to some extent	45	38.22	5.12
	Have some published work	5	44.00	.910
	exactly same	39	37.76	8.76
Intellectual Support	completely different	10	68.00	12.64
	Different to some extent	45	70.11	12.51
	Have some published work	5	77.00	.045
	exactly same	39	71.43	11.93
Interpersonal Communication Skills	completely different	10	28.50	.52
	Different to some extent	45	28.66	5.55
	Have some published work	5	34.00	.67
	exactly same	39	28.87	6.20
Supportive Skills	completely different	10	33.50	22.66

	Different to some extent	45	35.66	15.22
	Have some published work	5	53.00	.90
	exactly same	39	44.79	11.92

Table 15

Mean Score Comparison of Supervision Experiences and Match between Supervisor-Supervisee Area of Specialization

Subscales	Supervisor-Supervisee Research Area		df	Mean Square	F	p
		559.635	3	186.54	1.706	.17
	Within Groups	10388.547	95	109.35		
	Total	10948.182	98			
Workload Management	Between Groups	164.545	3	54.84	1.953	.12
	Within Groups	2667.778	95	28.08		
	Total	2832.323	98			
Pertinent Research Skills	Between Groups	204.213	3	68.07	1.541	.20
	Within Groups	4197.201	95	44.18		
	Total	4401.414	98			
Intellectual Support	Between Groups	307.622	3	102.54	.709	.54
	Within Groups	13748.034	95	144.71		
	Total	14055.657	98			
Interpersonal	Between Groups	133.141	3	44.38	1.491	.22
Communication Skills	Within Groups	2826.859	95	29.75		
	Total	2960.000	98			
Supportive Skills	Between Groups	3008.495	3	1002.83	4.710	.00
	Within Groups	20226.859	95	212.91		
	Total	23235.354	98			

One way between groups analysis of variance (ANOVA) was conducted to examine the mean score differences on the basis of Match between Supervisor-Supervisee Area of Specialization among the students' experiences regarding supervision at postgraduate level. It was found that there is a significant difference ($p < .05$) among students' experiences on the subscale of Supportive Skills ($p = .00$).

Table 16

Post-hoc Analysis of Supervision Experiences and Match between Supervisor-Supervisee Area of Specialization

Dependent Variable	(I) super and supervisee area of specialization	(J) super and supervisee area of specialization	Mean Difference (I-J)	p
Supportive Skills	exactly same	Different to some extent	9.12821*	.02

Post-hoc results revealed that mean score differences among students' experiences ($p < .05$) on the basis of Match between Supervisor-Supervisee Area of Specialization, regarding Supportive Skills of supervisors at postgraduate level. It was found that students were found more satisfied about the support mechanism of their supervisor when their area of specialization exactly matches with their supervisors' area of specialization.

Table 17
Descriptive Statistics of Supervisees' Research Stage

		n	M	SD
Project Management	Synopsis development	55	51.81	11.72
	Data collection	25	57.20	4.67
	Thesis Write-up	10	63.50	1.58
	Submitted Thesis	15	63.00	5.27
Workload Management	Synopsis development	55	20.09	5.87
	Data collection	25	18.80	3.61
	Thesis Write-up	10	24.00	4.21
	Submitted Thesis	15	24.66	2.12
Pertinent Research Skills	Synopsis development	55	38.36	7.41
	Data collection	25	35.20	5.29
	Thesis Write-up	10	43.50	2.63
	Submitted Thesis	15	42.66	3.19
Intellectual Support	Synopsis development	55	70.90	13.91
	Data collection	25	71.60	5.02
	Thesis Write-up	10	70.00	16.86
	Submitted Thesis	15	79.00	3.87
Interpersonal Communication Skills	Synopsis development	55	28.72	5.32
	Data collection	25	28.80	4.97
	Thesis Write-up	10	29.50	5.79
	Submitted Thesis	15	31.00	3.68
Supportive Skills	Synopsis development	55	40.63	16.93
	Data collection	25	32.00	11.81
	Thesis Write-up	10	55.00	6.32
	Submitted Thesis	15	53.33	7.28

Table 18
Mean Score Comparison of Supervision Experiences and Supervisees' Research Stage

		Sum of Squares	df	Mean Square	F	p
Project Management	Between Groups	2291.509	3	763.83	9.22	.00
	Within Groups	8364.682	101	82.81		
	Total	10656.190	104			
Workload Management	Between Groups	454.312	3	151.43	6.36	.00
	Within Groups	2401.879	101	23.78		
	Total	2856.190	104			
Pertinent Research Skills	Between Groups	778.868	3	259.62	6.80	.00
	Within Groups	3852.561	101	38.14		
	Total	4631.429	104			
Intellectual Support	Between Groups	842.312	3	280.77	2.05	.11
	Within Groups	13830.545	101	136.93		
	Total	14672.857	104			
Interpersonal Communication Skills	Between Groups	65.448	3	21.81	.84	.47
	Within Groups	2617.409	101	25.91		
	Total	2682.857	104			
Supportive Skills	Between Groups	6212.987	3	2070.99	10.48	.00
	Within Groups	19946.061	101	197.48		
	Total	26159.048	104			

One way between groups analysis of variance (ANOVA) was conducted to examine the mean score differences on the basis of Supervisees' Research Stage and their supervision related experiences at postgraduate level. It was found that there is a significant difference ($p < .05$) among students' experiences on the subscale of Project Management ($p = .00$), Workload Management ($p = .00$), Pertinent Research Skills ($p = .00$), Supportive Skills ($p = .00$).

Table 19
Post-hoc Analysis of Supervision Experiences and Supervisees' Research Stage

Dependent Variable	(I) Stage of Research	(J) Stage of Research	Mean Difference (I-J)	p
Project Management	Thesis Write-up	Synopsis development	11.68182*	.00
	Submitted Thesis	Synopsis development	11.18182*	.00
Workload Management	Thesis Write-up	Data collection	5.20000*	.02
	Submitted Thesis	Synopsis development	4.57576*	.00
		Data collection	5.86667*	.00
Pertinent Research Skills	Thesis Write-up	Data collection	8.30000*	.00
	Submitted Thesis	Data collection	7.46667*	.00
Supportive Skills	Thesis Write-up	Synopsis development	14.36364*	.01
		Data collection	23.00000*	.00
	Submitted Thesis	Synopsis development	12.69697*	.01
		Data collection	21.33333*	.00

Post-hoc results revealed that mean score differences among students' experiences ($p < .05$) on the basis of Supervisees' stage of research were found significantly different regarding their experiences on the subscale of Workload Management, Pertinent Research Skills ($p = .00$) and Supportive Skills ($p = .00$). It was further found that students at the later (write-up and submission) stage o research were found significantly better supervision experiences about the research management and support mechanism of their supervisors as compared to the students on the earlier (synopsis development and data collection) stages of their research.

Research Problems and Reasons: Synopsis Development Stage

It was reported by students that at initial stage they face problems regarding the selection of supervisors although they are not bound to take supervisors from department but they prefer to take supervisor from department because students who do not take supervisor from department has to suffer a lot due to difference between the patterns of doing research and selection of topic etc. specially students who belong to far flung areas like Gilgit, Swat and Quetta. Otherwise when they take supervisors from department it becomes very difficult for them to visit their supervisors frequently, hence long gaps in supervision meetings lead to delays and with feel of in sufficient support required to develop approvable research projects. In addition to this students also reported that electronic mode of communication are used as second source to contact supervisors but usually could not receive required feedback and help resultantly. Supervision of distant students becomes more critical when students are de-motivated due to in-sufficient support mechanism.

Research Problems and Reasons: Data Collection Stage

Students shared their experiences regarding the problems they face or faced during data collection stage. In social science discipline students mostly conduct survey type research so the reported problems were mostly related to data collection procedure and getting support from authorities. Another issue, which is more prevalent in science disciplines with students who work in labs, is the availability of chemicals and lab resources to complete their experiments.

Research Problems and Reasons: Thesis Write-up Stage

Thesis write-up sage is very critical stage, especially for students in social science, Arts and Humanities disciplines where they have to narrate down their research. Secondly students due to their poor language and writing skills could not deliver what they wanted to communicate. Students from remote areas face the language issues and due to least feedback from supervisors and least frequent meetings write up issues remained the part till end of research. Due to these problems sometimes, students could not submit their theses in time. Moreover, students face difficulties in performing data analysis and reporting the results, the reason is their least competence in data analysis expertise and insufficient support from supervisors especially in far furlong areas. The workshops and the given expertise in research could not make them able to do it independently.

Research Problems and Reasons: Thesis Submission Stage

Students at this stage along with institutional administrative requirements have to publish research article in HEC recognized “Y” category journal. This is one of the most difficult task which student cannot complete without the academic input of supervisors. Due to lack of supervisors’ support and cooperation it becomes undoable. Students from social sciences disciplines usually face this problem more frequently because of lesser number of journal and high number of publications in queue. Consequently, they have to wait for long in order to publish their work which leads to late submissions. Another problem that was reported by students was delay in foreign evaluation process, they have to wait so long for the evaluation reports, which sometimes takes 12 to 18 months after the thesis submission.

Discussion

Distance education programs are source of attraction for the marginalized people (female and male from least developed areas), from thefar-flung areas of our country. Some people from least developed areas of country could not acquire basic skills (language, communication, data analysis and reporting) due to which their expectation and

dependence towards their supervisors get increased as compared to the normal students. The supervisor's intensive guidelines are very much required by academically weak students but their unavailability brings challenges in their research work (Manyike, 2017). The supervisor's hectic work schedules of teaching and administrative duties were the main reasons for their unavailability and students in turn experience limited interactions with them to discuss their queries and receive intensive guidelines for research work (Garwe, & Mugari, 2015). The compromised supervision experiences influence the motivation and engagement of supervisee as they require continuous technical and pastoral support from them (Sussex 2008). Students lacking proper understanding about the threshold concepts of research would feel more helpless and dependent on their supervisors. Students from far furlong areas have to face differences between their understanding of research and their supervisors' instructions during research due to which usually they reach late on terminal stages.

The current research also found that students experienced more satisfaction from the support mechanism of their supervisors when their area of specialization exactly match with their supervisors' area of specialization. Similar findings were echoed by the work of Saleem & Mahmood (2017) that the supervision experiences of supervisees are significantly influenced by the match between research expertise of supervisor and supervisees' research topic in face to face learning mode.

It was further found that students at the later stage of research were found significantly better supervision experiences about the research management and support mechanism of their supervisors as compared to the students on the earlier stages of their research. Hence, there was significantly better supervision experiences of students about the research management and support mechanism of their supervisors at the later (write-up and submission) stage of research were identified as compared to the students on the earlier (synopsis development and data collection) stages of their research in distance learning environment. The findings were aligned with the work of Saleem & Mahmood (2018) that supervision experience varies across discrete stages of research among supervisees in face to face learning environment.

Moreover, male students would have better opportunities and resources to get help from people other than their supervisors. Therefore, sometimes females are found less satisfied regarding their supervision experiences during research as compared to the male students.

In some regions supervisory support is poor due to lack of resources and less awareness of supervisors with latest trends in research methodologies and paradigm shifts due to which students reported poor supervision experiences. With the passage of time students learn to work with supervisors and in later stages of research they found more satisfied. Less adoption and use of technological means of communication among supervisors and their supervisees increase the misunderstandings, de-motivation and disownership.

Moreover, the researcher found that students belonging to Education discipline reported better supervision experiences than other disciplines in distance and open learning environment. This finding was contradicted by the work of Saleem & Mahmood (2017) that students from Life sciences experience more support from supervisor than from Education discipline in face to face learning mode.The reason for such findings is changed mode of learning as face to face learners receive more support from their counterparts in distance learning setup.

Recommendations

1. Based on this research's findings following recommendations are given for institution to improve supervision practices:
2. In order to improve discipline specific supervision practices students may be allocated to supervisors with same specialization in which students are supposed to conduct research.
3. After allocation a record of advisory meetings may be maintained and transition from one terminal stage to another may be monitored according to a given schedule of research as per institutional guideline. A minimum number of supervisory meetings and its minutes may be submitted on quarterly basis.
4. An institutional guidelines and support manual may be sent to students after their registration into thesis code for smooth transition from one stage to other stage.
5. Use of technology (e-mails/ whatsapp/skype etc.) may be enhanced to support frequent meetings and contact among supervisors and supervisees.
6. Use of learning management system may be extended to monitor the frequency of supervision meetings and support mechanism during supervision at postgraduate level.

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