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“Postgraduate Research Collaboration in Quetta: A Study of Supervisors' and Scholars' Perspectives”

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ABSTRACT

The current study sought to emphasize researchers' practices of collaboration in HEIs of Quetta. For the purpose of the study, it applied the qualitative research method using survey research. The study sample for this current study include post graduate research scholars and research supervisor of the post degree programs. Selection of the sample used the methodology of multistage sampling technique. Data collection tool was a research questionnaire, and was given through email and paper base moods. The results were analysed using descriptive statistics. The research findings also show that there exists research collaboration between researchers in the surveyed HEIs at both the interpersonal level and interdisciplinary level. Nevertheless, little evidence can be drawn about the lack of evident in research collaboration between researchers at the community, industry and international levels. The HEIs' management, thus shall determine research policies and program to build the research's professional capacity in carrying out research studies with industry orientation.

Introduction

Academic growth and innovation in higher education involves research collaboration with academic institutions being one key driver. In the context of a developing world of global academia stemmed partnerships between scholars and supervisors play a pivotal role in creating an atmosphere of research through knowledge sharing and interdisciplinary research (Katz & Martin, 1997).

Research collaboration is obviously key to supporting their role in driving innovation and knowledge production in higher education institutions. Collaborative research not only keeps the quality of finished academic outputs but also improves institution rankings and global visibility (Bozeman and Gaughan, 2016). In fact, the role of postgraduate scholars and their supervisors is crucial as, by collaborating effectively between these two groups, it allows mentorship as well as skill development and better research outcomes (Horta et al., 2016). Partnering with NASA and Center for Earth Surface Dynamics ties directly into our ability to respond to complex, interdisciplinary research questions and generate research responsive to societal needs (Lee and Bozeman, 2020).

There are several factors that have been emphasized with respect to successful collaboration within HEIs, such as trust, communication and institutional support systems. Melin and Persson (2019) for example, highlight the fact that constant interaction between the researchers facilitates the production of quality research by offering better output. Besides this, funding mechanisms, institutional policies, and access to resources critical enablers of effective research collaboration (Abramo,

D'Angelo, & Di Costa, 2020). At the same time, though, barriers – for instance, the lack of resources, the administrative hassle, and the imbalance of power between supervisors and scholars – hinder productive collaboration (Kyvik & Reymert, 2017).

Given the growing academic infrastructures of Quetta's HEIs, even more so, understanding the nuances of collaborative practices becomes important in the context of Quetta's HEIs. Similar regions have identified major impediments to research productivity such as limited access to research grants, insufficient training and a lack of institutional incentives for research (Hassan et al., 2020). This study aims to quantify both the extent and quality of collaborations between postgraduate scholars and their supervisors in Quetta's higher education institutions in terms of identifying the enablers and barriers to successful research partnerships.

In developing region Northern Pakistan HEIs have to face global issues in a more controlled manner using involvement of research collaborations as such amelioration process become more valuable in such kind of HEIs, that initially accountable in addressing local challenges by means of educated based comprehension for remedies. But research practices in these settings are still hampered by scarce resources, insufficient training and weak institutional support (Tijssen, 2007).

Research collaboration is and should be a key characteristic of HEIs, and there is no strong reason for the government not to support it this way. An environment of strong research culture allows collaboration to flourish, while sound collaborative practices in turn build and redefine research culture in an institution. Recent literature

highlights this reciprocal relationship emphasizing the need for an institutional culture, that supports cooperation, resource sharing and interdisciplinarity (De Silva et al., 2021).

Research collaboration is commonly regarded as a highly important lever to support a productive and innovative research culture in HEIs. When faculty and postgraduate students work together on projects, they cause the ideas to cross pollinate, expertise to be shared, and the creation of inter disciplinary networks (Tomaszewski & Procter, 2022). The visibility of institutions in the global academia increases, and collaboration research improves the environment, which is inclusive and dynamic (Abramo et al., 2020). When HEIs grow more engaged in collaborative practices within and across disciplines, they develop a more research oriented culture characterized by more focus on innovation, critical thinking and problem solving.

The support systems for research in HEIs are deeply politicized in the context of institutional policies and culture of research. Institutions that make funding, infrastructure, and incentives for joint projects a priority in their efforts to promote research collaboration, create a culture in which academics and postgraduate scholars are more inclined to work together on meaningful projects, as Davies, Fidler and Gorard (2021) suggest. In turn, the quality and quantity of the research output are driven by scholars who perceive, they feel supported and motivated to work together collaboratively (Horta & Santos, 2022). The other hand, institutions that have not such support, may suffer to grow the culture of research as researchers have difficulties to serialize admitted the resources and the networks for the collaboration.

The extent to which collaboration promotes knowledge sharing and skill development also influences research culture in HEIs. Collaborative research studies also demonstrated improvements in the individual researchers' technic skills and overall intellectual capital of the institution (Lee & Bozeman, 2020). It encourages a culture of continuous learning, and mutual support, in which the knowledge, tools and methodologies of established researchers and early career scholars are shared. For their part, institutions that focus strongly on research collaborations tend to be more innovative and flexible and better at resolving complicated and multidisciplinary research questions.

However, there are also issues with the development of a collaborative research culture as suggested in the literature. There are barriers to effective collaboration, such as competitive funding environments and academic hierarchies, power imbalances in relationships between supervisors and postgraduate students (Kyvik & Reymert, 2017). For example, many HEIs also lack equitable access to research opportunities, especially for early career researchers and postgraduate students (Bozeman & Gaughan, 2016). It can create an atmosphere where the real potential of a collaborative research culture is undermined. As a result, HEIs would have to deal with these structural and systemic barriers to allow all the parts of the academic community to be fully engaged in collaborative research.

The relationship between research collaboration and research culture is even more important in developing regions, like Quetta. HEIs in these regions, thus, face challenges in developing a researched culture aided by scarcity of resources and institutional support (Hassan et al., 2020). In these contexts, collaborative efforts provide

a way to overcome the limitations of the individual and the institution, to pool resources, share expertise, and in due course deliver more impact work. But this necessitates deliberate policy interventions as well as capacity building initiatives to develop a collaborative ethos and nurturing research culture within the institution (Aslam & Ahmad, 2022).

In order to optimize research in HEIs, it is important to make sense of the way collaborative research works in Quetta's HEIs between postgraduate scholars and their supervisors. Previous studies have indicated that both the quality of research and individual capacity building and institutional prestige are increased by collaborative efforts in academic environments (Adams, 2013). This study seeks to quantify and analyze the present practices of research partnerships in Quetta's HEIs amongst the experiences and challenges they undergo by postgraduate scholars and supervisors. This research explores the dynamics of these relationships to produce actionable insights for promoting effectiveness of collaboration in the academic community.

1.1. Research Problem Statement

The researcher task is one of the most important responsibilities within HEIs; that is, to conduct research, develop new insight about a specific phenomenon, and to produce knowledge through research. Faculty members of the HEIs are also responsible besides teaching are doing research. In the present context both faculty members as well as post graduate scholars enter into research processes. However, researchers at the HEIs, Quetta have a shortage of empirical evidence of collaborative practices. It has arisen the queries how much these researcher

cooperate with each other for doing research task. He also describes what types of impediments are present when doing a collaboration of a research task. What kind of (departmental, institutional, national or international) and form of collaboration (between the research scholars of the HEIs did exist? So the current study "Postgraduate Research Collaboration in Quetta: This paper will talk a 'Study of Supervisors' and Scholars' Perspective", to not only add insight to the modes of collaboration present in HEIs of Quetta, but also ponder to the researchers the challenges they encounter during collaborative research. Additionally, without comprehension of current practices and challenges in research collaboration amongst local HEI's, the academic and policy leaders in Quetta have struggled to formulate strategies improving a more conducive and collaborative research environment. Thus, this study aims to fill this gap by quantitatively investigating the nature, dynamics and barriers of research collaboration among postgraduate scholars with their supervisors in Quetta's HEIs, in order to identify the factors that can help to improve collaboration and the overall research culture.

1.2. Research Objectives and Research Questions

One research objective of the current study is to seek the collaboration practice of the researcher in the HEIs. The research question which is related to the present study was that, at great extent which researchers around the HEIs in Quetta do collaborate and what form of collaboration researchers have with each other. And how much they are involved in national and international research collaboration.

1.3. Significance of the Study

This is one of the foremost study that aims to mainly bring to the attention the joint practices of post graduate researcher and focused research supervisors in the local context. By tackling this research collaboration, this study will neither limit to the collaborative forms of research; but also lays a ground to identify the character of research collaboration. Furthermore, this current work would offer empirical evidence to the policy makers and management of HEIS the ability to devise/ form such policies and statutes for the satisfaction of research needs and demands.

2. Research Methodology

Quantitative research design was used in this study because the opinion of the researchers was reflected on through survey method. Data was collected using survey questionnaire of the current study. The pool of eligible sample consisted of those research scholars who are studying in the post graduate degree program (MPhil. & PhD.) Faculty members of HEI who are the research supervisors. The current study was compiled using multistage sampling technique. Here we identify different faculties which offer admission in post degree courses using stratified sampling technique. Of these faculties two faculties (Faculty of science and Faculty of social sciences) were chosen as a strata for this study. In second stage of sampling, non random method was adopted because the researcher of the post degree program were not easily accessible. In this study, 513 respondents have been responded, using a convenience sampling technique. The sample of the current study includes 369 post graduate research scholar and some 164 research supervisors. Comprising of 7 demographic variables and 18 close ended

items, the current study uses the instrument. The data of this study is through both electronic and paper based survey. They were contacted via email for responses to those respondents who are not available in their office or their research lab. The main results of the study will be discussed in the connecting section. Responses by respondents were measured on 5 point Likert Scale from 5 (strongly agree) to 1 (strongly disagreed). Data analysis was done on the descriptive statistics (frequency, percentage, mean score and standard deviation) of the data.

3. Results of the study

The following section will discuss the main findings of the current study. Initially the demographic characteristics of the respondents discussed. In the later paragraph of the section highlighted the responses of the respondents.

3.1. Table no. 4.1 Frequency and Percentage of the Demographic Variables of the study

Variable	Frequency	Percentage
Gender	Male	261
	Female	272
Parent University	UOB	258
	SBKWU	119
	BUTTEMS	156
Qualification	Master	91
	MPhil.	335
	Ph.D.	97
	Post. Doc.	10
Faculty	Natural Sciences	91
	Social Sciences	335
	Other faculties	97
Researcher Status	Research Scholar	369
	Research Supervisor	164
Research Experience	No experience	99
	1 to 5 years	62
	6 to 10 years	79
	11 to 15 years	30
	More than 15 years	21
Job Designation	Lecturer	242
	Ass. Professor	56
	Associate Prof.	26
	Professor	7
	Other	202

**the data was initially collected for Ph.D. dissertation of the researcher.*

The demographic variables of the respondents of the study under consideration are shown in Table No. 4.1. According to

gender therefore, there is no equality in the participation of respondents in the current study since male (49%) and female (51%) were both involved in the current study. As there are 3 public sector universities, there contribution in the sample is as follows: Respondents from UOB were a number of 258, while 119 respondents were from SBKWU and a number of 156 were from BUIITEMS. The study's corresponding demographic variable was the qualification of the respondents. 33 number of 91 have done the Master and in the MPhil program and great number of 335 have done their MPhil. Besides, the number of PhD respondents of 97 and 10 respondents with post doctorate degree. The variable of demographic concern to teaching faculty the major part of the respondent (62%) were from the faculty of social sciences, the next part (17%) were from the faculty of natural sciences and 18% of the respondents from other faculties.

It were about the researcher status also, major interviewed (369) was currently enrolled in post graduate degree program. a number of 130 respondents were research supervisors. Additionally, as shown in the research experience variable, the majority (57%) of respondents have had research experience of 1 to 5 years. Furthermore, 18% of respondents don't have any research experience. A total of 45% of respondents of the current study are lecturer and 40 % of respondents are not mentioned their job.

3.2. Table No. 4.2 Means score (M) and Standard Deviation (SD) of the Respondents Opinion Regarding Research Collaboration.

Statement	SA		A		U		DA		SDA		M	S
	N	%	N	%	N	%	N	%	N	%		
1.	33	5.4	230	37.8	79	13	230	37.8	36	5.9	2.99	1.101
2.	52	8.6	276	45.4	63	10.4	165	27.1	52	8.6	3.18	1.174
3.	64	10.5	342	56	83	14	93	15	26	04	3.53	1.012
4.	53	8.7	280	46.1	92	15	151	25	32	5.2	3.28	1.091
5.	43	07	252	41	110	18	171	28	32	05	3.17	1.078
6.	29	05	184	30	94	16	234	39	67	11	2.79	1.131
7.	50	08	226	37	82	14	201	33	49	08	3.04	1.164
8.	45	07	330	54	68	11	128	21	37	06	3.38	1.080
9.	52	07	254	42	132	22	140	23	27	04	3.27	1.050
10.	39	06	27	34	177	29	147	24	38	06	3.27	1.050
11.	34	05	248	41	113	19	175	24	38	06	3.10	1.039
12.	31	05	170	28	159	26	188	31	60	10	2.88	1.083
13.	29	05	182	30	170	28	168	28	59	10	2.92	1.073
14.	29	05	186	31	138	23	210	35	45	07	2.91	1.096
15.	28	05	215	35	141	23	187	31	37	06	3.02	1.044
16.	23	04	176	29	194	32	185	31	30	05	2.96	0.972
17.	73	12	379	62	95	16	57	10	04	01	3.50	1.062

The overall mean scores and standard deviation scores and frequencies and percentages against the statement is in the table no 4.2. The opinion of respondents on a joint research showed that stronger majority of the respondents have experience in joint research (M=1.61 SD=0.909). The researcher however also offer facilitator services to other researcher with the finding indicating that this phenomenon (M=3.18, SD= 1.174). In addition, the researchers also consult with senior researcher (M=3.53, SD=1.012).

According to the majority of the participants (M=3.28, SD=1.091) the statement about the working with the dynamics researchers of universities is on the level of consecutive statement. The results reveal that one of the

statement was formulated to access how researchers from different departments can alternative help ($M=3.17$, $SD=1.078$) each other in their research. Indeed, the researchers are not agree ($M=2.79$, $SD=1.131$) to the idea that they can use or utilize the resources of the department.

For a majority of respondents ($M=3.04$, $SD=1.164$) this item was undecided. The result suggests that majority of the researchers ($M= 3.38$, $SD= 1.080$) agree that the research other than research supervisor helps in research work.

According to the statement related to conducting interdisciplinary research at university, majority of the researcher agree ($M= 3.27$, $SD= 1.050$) that they can conduct interdisciplinary research. Further, the statement, which measure the opinions of the researcher about collaborative research among two universities the finding shows that majority of the researcher ($M= 3.27$, $SD= 1.050$) agreed that there is chance for collaboration among two universities researchers.

The table that shows the statement that can measure how research output is disseminated to community and industry shows that most of the respondents ($M= 2.88$, $SD= 1.083$) were not agree with the statement. Moreover, the researchers do not agree with the statement that measures the university activity (process of dissemination of their research work with international community) have means score and standard deviation ($M= 3.27$, $SD= 1.050$).

Respondents majorily do not agree ($M=2.91$; $SD=1.096$) with the statement “Someone from another organization does not help you with your research.” Nevertheless, a very large number of the researchers were in doubt ($M=3.0$,

$SD=1.041$) about the statement “Research consultation with scholars of other Universities is at your disposal in your University”.

The researchers' collaboration in research oriented task is assessed, and a majority of the participants agree either completely or somewhat with the statement “Only few researchers are actually engaged in doing actual research work in your organization when you are engaged in joint research”. Moreover, a large majority of respondents were unsure ($M=3.05$, $SD=1.062$) of the extent of the role of university management in facilitating the act of joint research.

4. Discussion and Conclusion

The aim of this study was to observe the collaborative practices of researchers in HEI Quetta; it was found out that approximately half of the research scholars and research supervisors of the current study actively involved in the joint research studies. Participants views also exemplify collaboration among researchers either in interdisciplinary manner or requesting help from senior mentors. Research work with the dynamic group of researcher is also prevailing in the surveyed universities moreover.

The current study also had one of the interesting finding that in cases where they needed to use the resources of the other department's researchers, they thought they couldn't use it. Besides, no hesitation can be made with the use of university resources for research purpose. From the material/resource point of view, it is difficult to operate the resources of the organization of a researcher but these astonishing findings infer existence of humanistic support amongst researchers for collaborative research work.

Such finding provides one reasonable argument that the survey HEIs are finding it hard to meet the shortfall of resources (Qadoos, Malik, Maria, 2024). The study conducted in these varsities reveals that the resources were lacking. Perhaps this is why researchers don't get and don't get any collaboration in using materials of the university or department.

The study findings show that not only is interdisciplinary collaboration parasitized, but inter universities and organization collaborations exist in the organization as well. There is no collaboration among community and industry and organization. One of the astonishing findings of the study is this. This is one of the main reason why the research studies conducted in the HEI are not disseminated to community and industry as well to international one.

It suggests two important propositions; by not disseminating research findings to outside world of the university. One of the things they are lacking in research is whether it is poor quality or is being done purely for academic reasons. Secondly, a hug gape is between research carried out in university and those needs of the community or the industry.

For the first scenario, the first explanation is plausible that there are not enough resources in the HEIs of Quetta (Qadoos et al., 2024) as researchers do not carry out quality research in their domains. Poor research culture also tends to follow due to poor research quality in research organization () Though this argument is reasonable to an extent and a state which to some extent the quality of the research studies in the universities is bad that the research studies output is not shared by any person or organization who is working outside the university.

They only operate on close system mechanism answering to the second preposition, most of the universities especially located in poor countries. Centralized relations of agency and controls that dominated the organizational structures are run () on. In addition, and maybe worst of all, they do not care about or do not consider or pay attention to community and industry directions or feedback.

The surveyed varsities are not only centrally run on authority mode but the varsities cannot survive on the basis of lesser people's decision without considering the demands of market. The reason they do not involved the community and industry due that. This scenario continuing means that research organization are not only producing poor quality of research but also do not meet the full requirement of the market.

A finding shows that the researcher highly supports that the university management helps conduct a joint research. A side assumption of such finding is that half of the researchers to the current study did not partake in a joint research effort as indicated, and therefore do not know about it. They said they agreed to the statement. Although we find from the findings that universities' management facilitate joint research.

It is found that research scholars of HEIs in Quetta collaborate with each other. In addition, these research collaborations are also interaorganizational (between two research organizations) and interdisciplinary (between researchers). The study shows lack of collaboration from physical material/ resources aspect. The HEIs' management does not announce the intention of the researchers deliver community (national and international) and industry.

4.1.

4.2. Recommendations

The study findings reveal that researchers in different forms research collaboration exists in between researchers, and it is high time the research organization management creates research related policies that not only strengthen the research collaboration work but also it paves way of more productive research.

In addition, the university and the community are said to be in communication gap with the management of the HEIs. Universities are very autonomous and run on close system basis, something that cannot take a university to meet the demands and needs of the community. It is high time for them to re adjust the organizational decision making structure by operating on the open system mechanism based on demands and need of the community.

Finally, it also shows a lack of communication between the organizational research outcome or result with market/industry and international community. Having in mind the findings, it is suggested that the researchers acquire the skills needed to compile market oriented research, as organization management should provide capacity building opportunities.

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