

## **PhD. Scholars' Problems: A System Comparison of the US and Pakistan**

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### **ABSTRACT**

Comparison of problems faced by PhD scholars in the US and Pakistan was the main objective of this research study. The approach used in this research study was qualitative. A sample of 74(50 from Pakistan and 24 from the US) PhD (Education) scholars was used to collect primary data conveniently. Problems of the research scholars were explored through structured interview. N-Vivo coding technique was applied to analyze the qualitative data. Diversified problems were identified such as: lack of research knowledge, lack of finances, fewer facility of room and board, competencies of the supervisors, inadequate advisor-advisee meetings and weak communication between them, politics of staff, scarcity of online access and information technology resources, and lack of availability to the latest texts. It was suggested for Pakistani research scholars to time line the synopsis submissions and final research project, suggestion for the government to offer students loan schemes for the scholars and suggestion for the administration to conduct educational seminars, arrange workshops to enhance the time management skills of the students, increase access to online resources for research scholars, provide them well-reputed research journals and the latest books for the better quality of research in the future.

**Key words:** *Research scholars, Pakistan, problems, US*

### **Introduction**

Pakistan (a developing country – whether you assert the term towards either social or economic development) needs a more effective system for its higher education. Today, there are 211 HEC recognized universities or degree awarding institutions in Pakistan. Of these, 128 are in the public sector and 83 are in private sector. Massive investments have been made by the Higher Education Commission (HEC) to achieve excellence in teaching as well as research at higher education by upgrading the physical infrastructure. The measures taken by HEC have increased student enrollment in higher education. Enrollment has increased tremendously in the past decade and a half; of particular note, the enrollment of females has gone up nearly six-fold. Total enrollment for the

2014-15 year was 1,295,178 as shown in figure 1. It is important to point out that the HEC, upon review, has closed 31 out of 293 PhD programs in different universities for not meeting quality standards (Abbasi, 2016). As stated by HEC (2016), in comparison to other regional countries like Russia, China, and India; Pakistan in 2016 has a high percentage of cited papers. Thomson Reuters reported that the number of articles published annually has considerably increased from 2,000 to 9,000 in the ten-year span from 2006 to 2015. According to HEC statistics, in 2001-02 there were 3,124 enrolled PhD students, which ballooned up to 14,374 by 2015. The details are shown in following table 1.

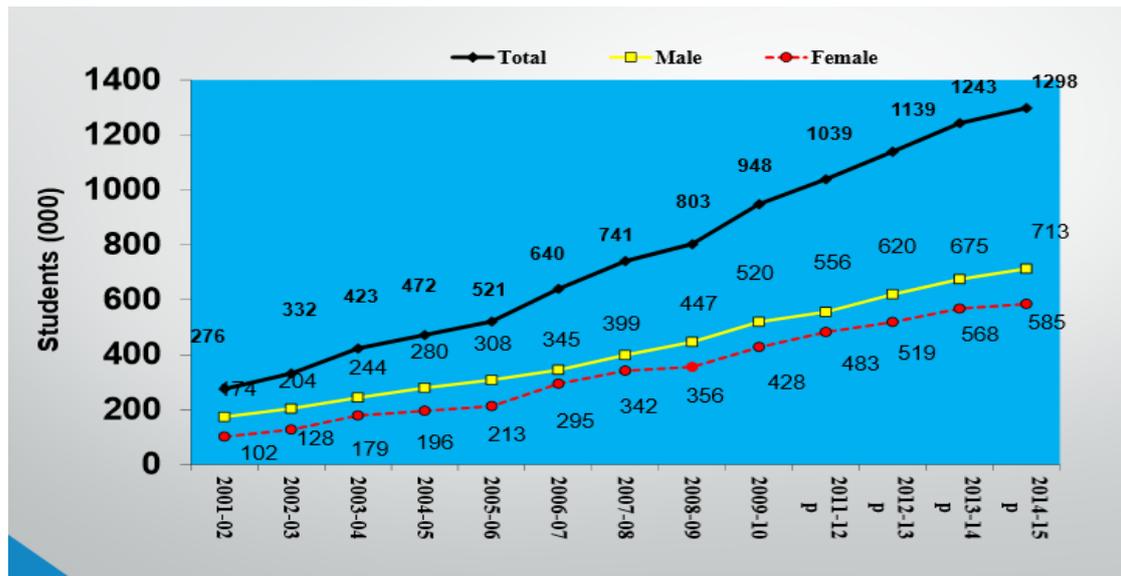


Figure 1: Enrollment of students at higher education

**Table 1**

Enrollment of Students by Degree

Academic Year	Bachelor 16 Years	Bachelor 17 Years	Master 16 Years	MS/M.Phil	Ph.D	P.G.D	Grand Total
2001-02	186,481		78,529	3,871	3,124	4,269	276,274
2002-03	224,290		94,524	4,842	4,138	3,951	331,745
2003-04	295,712		108,667	7,454	6,472	4,931	423,236
2004-05	329,933		124,896	8,356	4,443	4,336	471,964
2005-06	359,683		140,917	10,430	5,139	5,304	521,473
2006-07	442,547		172,886	12,824	5,345	6,459	640,061
2007-08	511,317		200,138	14,859	7,322	7,456	741,092
2013-14 (P)	844,461	57,025	209,617	111,440	12,784	7,713	124,3040
2014-15 (P)	869,378	63,142	219,280	124,107	14,374	8,319	1,298,600

These numbers only account for 1.1% of the all enrolled students globally in the different programs at university levels. Although the HEC has taken many steps to improve the standards at higher education, there is still a long way to go; of the world

top 100 ranked universities, not a single Pakistani university is listed (QS Top Universities, 2018). To improve university standards, Pakistan's universities need more skilled, well-educated faculty with solid research backgrounds. Advanced

countries with more experienced and educated faculties show that progress in higher education is directly correlated to the development and enhancement in the field of science and technology. If this correlation holds true, upgrading Pakistani University standards should help to advance Pakistan's global economic and political standing. It is important to note that this may be an oversimplification: All the factors that could be attributing to the lower quality of the Pakistani higher education system are not being addressed here. Still, let it be known that the main problem which the authors feel need to be addressed in the proper manner here are: "What are the reasons behind Pakistan's low-quality higher education system?" To explore the different reasons for low quality higher education, we feel it is important to identify doctoral students' problems to improve their research skills.

There are some studies that have touched upon the problem of Scholars. Madhusudhan (2007) identified the problem of inadequate facilities: limited access to computers with internet facilities, and where internet was available, its connection speed was very slow. Madhusudhan (2007) also found that research scholars did not have proper skills and training to utilize the available resources. From surveys conducted for this research, it was shown that 57% of the respondents were not able to retrieve their data. In the same survey we also identified another problem: those researchers lacked the research techniques and training. Hockey (1994) also showed that the supervisory role in managing intellectual and counseling aspects is a problem for many students, while Nevada (2009) identified the problem of high fees and that most PhD scholars do not choose and

explore the research topic alone. In the latter case, PhD candidates were having their topic chosen by their supervisors. PhD research scholars also faced poor facilities in their departments (e.g., lack of computers and internet facilities, insufficient access to the learning resources (including websites), poor electricity, non pure drinking water, busy schedule of supervisors, prejudices towards caste and sex). Supervisors are also prone to not inform their students about research related activities such as seminars and conferences. Students do not receive grant or scholarship money on time. Many times, students are not helped at the administration level and their problems are not solved because of the lengthy procedures, which can take weeks or even months to resolve. In Pakistan, Ali (1998) identified research scholars' (both M. Phil and PhD) problems around lack of financial support along with the other deficiencies like laboratory access, conveyance facilities, administration assistance, and computer services.

He made some useful recommendations one of which included compensate scholars for their research work. Iqbal, Saeed and Abbas (2012) also highlighted the problems of scholars at Ph.D. level related to university administration and supervision that contributes the lower quality educational system. The United States is in many ways on the other end of the spectrum when compared to Pakistan, and as it pertains to education there is no exception. According to the National Center for Educational Statistics (NCES), there were 4,724 degree granting institutions in the 2013-14 school year (U.S. Department of Education, 2016), nearly 26 times the number of institutions in Pakistan. During this same

year, over 20 million students were enrolled at these institutions, with over 12 million of these enrollments being full-time students (U.S. Department of Education, 2016). Female enrollment at universities has been above male enrollment since the late 1970s and the gap between the two genders is only growing; today there are close to 12 million female students enrolled compared to about 9 million male students (U.S. Department of Education, 2016). While Pakistan is approaching 10,000 annual citations, the US is consistently on the top of total citations lists, with close to 50 million in the ten-year period from 2001 to 2011 (Science Watch, 2012). US schools awarded over 50,000 doctoral degrees in 2014 according to National Science Foundation data (National Science Foundation, 2015), and as it pertains to top universities, the same source of top universities that had zero Pakistani institutions in the top 100, had 31 US institutions in the top 100. Acting in a similar manner to the HEC, the US government has a strong accreditation process to ensure that all institutions maintain at least a base level of standards (U.S. Department of Education, Accreditation: Universities and Higher Education). Among these standards are requirements for all institutions to provide students with access to libraries and internet access, electricity, clean water, and other needs and amenities that are the norm for most American citizens, in universities or not.

Seeing as how many of the issues faced by Pakistani graduate students are not even a part of the social fabric of the US, let alone apparent in a graduate institution, there is limited research on student satisfaction that is parallel to

Pakistan student dissatisfaction. The most closely related research might be in the relationships between mentors and students in graduate programs. Tenenbaum, Crosby, and Gliner (2001) focused on graduate students' satisfaction with their advisors as a piece of their work, and the male to female dyads of advisor-advisee, as well as the different types of advisement provided (practical vs. socio-emotional), and found that, in general, "socio-emotional mentoring increases student satisfaction, whereas instrumental help increases student productivity" (Tenenbaum, Crosby, & Gliner, 2001). McAllister, Ahmendani, Harold, and Cramer (2017) sought an even more granular analysis, focusing on "targeted mentoring" aimed at lesbian, gay, bisexual, and transgender persons in social work education. These types of social studies are perhaps more typical in an environment where Maslow's basic needs are more frequently met and psychological needs and self-fulfillment needs can be focused on in more detail (Maslow, 1943; 1954). The authors feel it is very important to identify and compare problems faced by PhD scholars in developed and developing countries at higher education level, in this case the US and Pakistan. This study was aimed at answering the subsequent questions:

1. What are the problems faced by PhD scholars in Pakistan and US?
2. Are the problems faced by PhD scholars in Pakistan different from US?
3. How to overcome the problems faced by PhD scholars?

### **Methodology**

The nature of the study was qualitative. It is an approach used to better understand

the situations and events from the viewpoint of participants (Fraenkel and Wallen, 2006). According to Creswell (2002) it is based on words from small sample to get understanding of the respondents' views. A sample of 74 (50 from Lahore, Pakistan and 24 from the New York, US) PhD (Education) scholars was selected conveniently. Structured interview protocol was developed for this study on the basis of review of related literature and validated by two experts. Lincoln and Guba (1985) introduced structured interview first time in the field of research (as cited in Cohen, Manion, & Morrison, 2007). The main focus of the questions of the interview used in this study was to explore the problems faced by PhD scholars in the US and Pakistan. The data was collected through personal

visits of researchers. It was difficult for the researchers to collect data from the PhD scholars especially from US. They conducted face to face interviews with subjects individually because of uncertainty of confidentiality (Cohen, Manion, and Morrison, 2007). They guaranteed the respondents to keep data confidential as suggested by Best and Kahn (2008). The interviews were audio recorded. Average time for one interview was 10 minutes. N-Vivo coding technique was applied to analyze the data. According to Patel (2014) it makes codes from actual language based on a word or short phrase which is found in the recorded qualitative data. At first stage the responses were transcribed and then segregated the data into broad categories. Respondents' demographic details were as follows:

**Table 2**

*Information about respondents' age*

Sr. No.	Age	Male PAK	Female PAK	Total PAK	Male US	Female US	Total US
1	Less than 30 years	9	5	14	4	4	8
2	30 to 40 years	17	7	24	2	12	14
3	More than 40 years	10	2	12	2	-	2
Total		36	14	50	8	16	24

Table 2 describes demographic information of the respondents. There were 36 males and 14 females respondents from Pakistan. From US there were 8 males and 16 females respondents participated in the study. Respondents

from Pakistan with ages less than 30 years, 30-40 years and above 40 years were 14, 24, and 12 respectively. Similarly, respondents from US with ages less than 30 years and 30-40 years were 8 and 14 respectively.

**Table 3**

*Information about Research Period*

Sr. No.	Period as researcher	PK(M)	PK(FM)	Total PK	US(M)	US(FM)	Total US
1	Less than 1 year	6	3	09	-	2	02
2	1 to 5 years	19	6	25	8	12	20
3	More than 5 years	11	5	16	-	2	02
Total		36	14	50	08	16	24

Note: PK(M)=Males from Pakistan, PK(FM)=Females from Pakistan, US(M)=Males from USA, US(FM)=Females from USA, PK=Pakistan, US=United States of America Table 3 shows that there were 9, 25, and 16 respondents from Pakistan within the period as a researcher less than Table 4

*Broad Categories*

Broad Categories	Initial Code	Frequency PAK	In %age	Frequency US	In %age
Administration related Problems	Internal politics	14	28	2	8
	Not conduct enough seminars	29	58	20	83
	Less access to learning resources	33	66	10	42
	Accommodation problem	40	80	0	0
	Direction & Guidance	30	60	10	42
	Overall satisfaction	9	18	8	33
Supervision related Problems	Not give proper time	45	90	8	33
	Lacking in research competencies	37	74	4	16
	Communication gap	43	86	2	8
	Supervisor misbehavior	3	6	0	0
	Overall satisfaction	11	22	14	58
Scholars' personal problems	Responsibilities and problems at home/office	28	56	10	42
	English writing	45	90	0	0
	Financial problems	46	92	10	42
	Problems in data collection	28	56	8	33
	Boring courses	18	36	4	16
	Overall satisfaction	15	30	2	8

**Administration Related Problems**

Most of the graduate research scholars attributed their problems to university administration in Pakistan. The problem of

1 year, 1-5 years, and above five years respectively. Similarly, respondents from US within the research period less than 1 year, 1-5 years, and above five years were 2 and 20, and 2 respectively.

**Findings**

The data have been divided into three broad categories after transcription.

university hostel accommodation was identified by most of the scholars (i.e. 80%). One scholar, explained, “It was difficult for us to live in the private hostels,

*because of high expenses in paying for rents and meals.*” Another observation pointed out by many of the scholars that the university does not allow students to stay in the hostels after one year of study. Nevada (2009) also revealed the similar finding. Problem of grouping and internal politics in the universities was also identified by 28% of respondents as creating problems in obtaining synopses approval. One female respondent shared that, *“I am feeling difficulty in getting my synopsis approved, due to the clashes between my supervisor and the director.”* When respondents were asked about research seminars, a majority of respondents, 58%, were not happy with the administration. They pointed out the scarcity of such research seminars conducted by the administration, even though they felt this was an imperative part of enhancing their research skills. One respondent said that *“Information regarding the conduction of seminars is not well on time.”* Likewise, a female respondent expressed *“If some seminars were arranged, all the scholars were not informed properly.”* This indicates weak administration planning and management for research related activities in the universities of Pakistan. These results were in line with the study conducted by Alan, Maria, and Leal (2005), whose study concluded that *“the quality of postgraduate study is not purely a question of supervision, methodology and motivation but also requires the scholars to participate and attend research seminars and presentations”*. Many respondents, 66%, were also identified as having limited access to online journals and books, another similarity between our study and that of Nevada (2009). In Pakistan, the graduate research scholars considered the

accommodations as a major obstacle. Almost 80% voiced this as a main issue. The doctoral research scholars in the US also voiced dissatisfaction with their universities’ administration. Around 83% cited the insufficient numbers of seminars as one of the main problems. According to the viewpoint of one of the scholar, *“I feel, I do not really have any idea how to actually conduct a research.”* Although departments are engaged in arranging courses related to research skills, the fact that a large majority of the respondents found it difficult to find such courses was quite disturbing. Research scholars were not well aware/informed by the administration about such courses, much like their Pakistani peers. Only one scholar stated that there was no need for such courses. According to 42% of the scholars, inadequacy of the online library facilities and research related material was another basic problem. One of them expressed his opinion as *“Online research is not delivered very smoothly.”* On the other hand, only 16% of them were satisfied with the existing online available resources. In the case of providing direction and guidance for the preparation of the research plan, 42% of research scholars held the belief that the lack of interest in paper work and in providing counseling from the administration is considered as one of the most significant problems. Only one scholar was of the opinion that bureaucracy in the internal politics of the universities administration was an obstacle and a major hindrance in their research work. Overall 33% of the research scholars in the US were satisfied with the administration and did not assess this as a hurdle for their research. The details of comparison between Pakistan

and US administration have been shown in the figure 2.

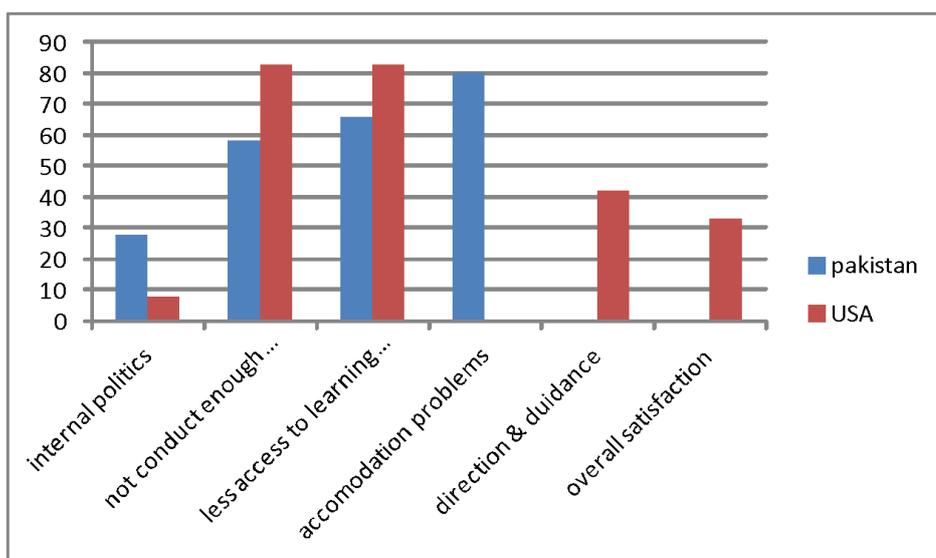


Figure 2: Comparison of administrative related problems between US and Pakistan

### Supervision Related Problems

When researchers inquired the Pakistani respondents on supervision related problems, most of them, 90%, pointed out an inadequate time was provided from supervisors to meet and discuss research work; with the reason being that the busy academic schedule prohibited such meeting time. One scholar explained that *“In the public sector universities, there was problem of less number of staff at PhD level that is why teachers were overloaded.”* Nevada (2009) revealed the same finding; that supervisors were busy with their other work. Biasness and prejudice was another problem identified in this study in terms caste and sex. This resulted in creating difficulties for scholars while conducting their research project. Additionally, 74% of the scholars expressed that their supervisors do not have competency in their research field. Respondents pointed out the lack of knowledge and skills of their research supervisors. One respondent shared his experience that *“I am doing PhD research work on my own; whenever I want to consult my supervisor and get my work*

*approved, I have to give my supervisor monitory benefits (cloths, fruits, bakery items etc.)”* Similar results were found in the study of Bacha (2009). Most of the respondents, 86%, identified a communication gap between research supervisors and scholars, similar to what Hockey (1994) found about supervisors in his research. 6% of the respondents attributed problems related to the supervisors’ harshness. They further explained that it was difficult for them to discuss the matters related to their research. *“My supervisor’s harshness sometimes creates problems for me as I remain unable to discuss my research work properly.”* said one respondent. The research scholars were also inquired about any complications that might have arisen in their relationship between them and their supervisors. Among them 58% were well contented with their supervisors/sponsors. One of interviewers even added, *“My mentor is amazing.”* and another scholar considered his as the best. One of other hand, 33% of them have particular belief that their supervisors are not rendering them proper time, because

mostly supervisors were being overloaded with work and number of research scholars. Sometimes they were even unable to respond to emails in time.

Only 16% of the US doctoral research candidates thought that their mentors were not competent in research practices. They did perceive that their

supervisors were not critical enough for their work. In the US only 8% identified a communication gap between supervisors and scholars as a problem, a huge difference from the 86% that Pakistani graduate research scholars provided. Full details of the comparison values are shown in figure 3.

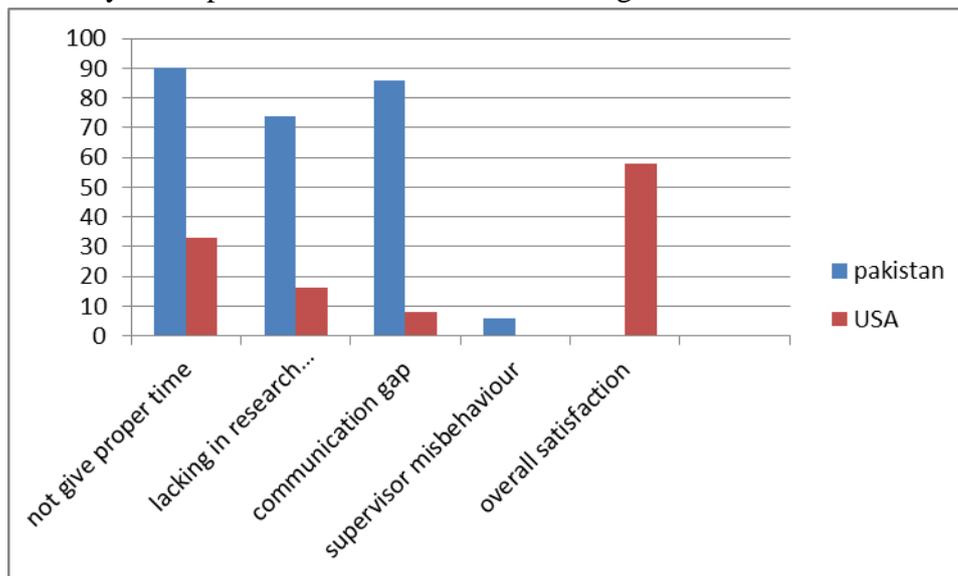


Figure 3: Comparison of supervisors related problems between US and Pakistan

### Scholars' Personal Problems

Of Pakistani respondents, 56% shared that they do not give proper time to their research work due to their own domestic responsibilities and problems. English writing was pointed out as a serious problem for them. Lack of ability in technical research writing and writing in English language often creates problems for the doctoral students. Most of the doctoral students, 90%, were identified as having a problem writing English. Almost all, 92%, identified that the financial burden placed upon them in graduate school was a major problem. Scholars said that they have to pay lots of money to the private hostels as well as the high fees of the university. One doctoral student said that *“I am lacking in IT skills and research techniques which creates problem for me during my research project.”* Similar

results were found by Madhusudhan (2007). One respondent shared that *“After course work, I have joined my job because I could not get leave from my parent department and thus unable to give proper time to the research project.”* (Of critical note, 8% of respondents pointed out that while giving information for this research project they felt hesitation, further explaining that they and possibly other people might not reply frankly while filling out the instruments of the research. This fact, in and of itself, implies that there may be deeper institutional problems that foster this type of thought when completing an anonymous survey, such as was provided in this research project.)

When the US graduates research scholars were asked about their own problems in conducting the research, around 42% of them mentioned that the

balance between job, home, and the research is a substantial problem. As one of them stated that “*Balance between a full time job, allocating time to the write-up work for their dissertation, and a family life at home, is an important pitfall.*” Working full time and writing a

dissertation also revealed to cause financial problems for 42% research scholar in the US, requiring some to turn to other means of funding to maintain their standard of living, such as student loans. The details are shown in figure 4.

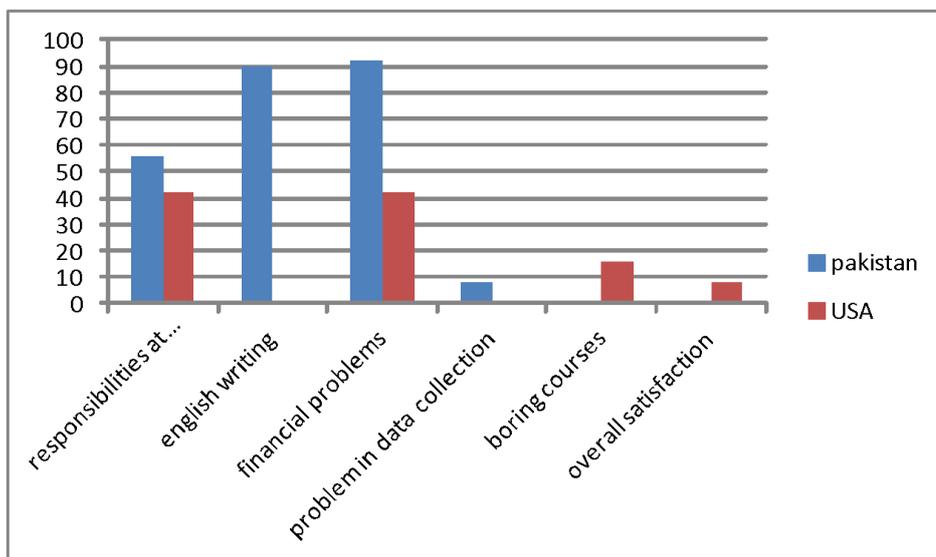


Figure 4: Comparison of scholars’ personnel problems between US and Pakistan

### Similarities and Differences between the two countries

In Pakistan, the highest hurdle identified by the scholars was financial support, as 92% of the respondents identified this as their main problem. Similarly, US scholars identified this as their biggest hurdle, though at a much lower rate, 42%. In Pakistan one major trouble is writing theses in English; almost 90% scholar mentioned this problem. They identified their weakness in English vocabulary as well as grammar. This is large, if not unexpected. US students did not express any such difficulties. Another major problem that was mentioned earlier is that respondents in Pakistan do not reply properly for the data collection, as 8% pointed out. This number may be larger still, as in US scholars may not have expressed this point. Graduate research scholars in Pakistan, 80% of them

addressed accommodation problems in their institutions as a major hindrance, and this was not indicated as a problem with any of the US scholars. While 58% of the Pakistan scholars expressed a desire for more research seminars, 83% of the US scholars expressed an even stronger desire for research seminars. Communication and time with advisors was a major hurdle for Pakistan scholars to overcome, as 86% and 90% indicated this as a problem, respectively. US scholars did not have the same struggles as Pakistani scholars did, with rates of 8% and 33%, respectively.

### Conclusions

The following conclusions were made.

1. University administration does not conduct enough research seminars to develop research skills both in US and Pakistan.
2. In Pakistan, there was scarcity of online resources. Although the HEC of

Pakistan has taken measures to increase access to digital resources.

3. In the US, scholars were facing a lack of guidance.
4. Research supervisors were overly loaded in teaching and administrative works; so they could not be able to give adequate time to their students in both Pakistan and US.
5. Scholars do not find ample time for their research projects due to their busy schedule, between research commitments and jobs. This is an issue in both the US and Pakistan.
6. Pakistani scholars' were lacking in writing skills of English.
7. Both US and Pakistani scholars were facing financial related problems.

### Recommendations

Some recommendations were made in the light of above conclusions.

1. In Pakistan, the balancing of course work, requirements from supervisors, comprehensive tests, synopses submission, and other graduate research scholar needs, would benefit from having a more detailed schedule for scholars to follow.
2. Minutes of meetings with supervisor may be in black and white form to trace that what the researcher have done and what is still left in his research work. The department head may endorse the minutes. By being explicit and laying out the details, it could help both scholar and supervisor.
3. For the enhancement of knowledge and skills of research, and writing skills in English, more seminars are needed both in the US and Pakistan.
4. Workshops related to time management skill should be arranged in universities in order to enhance

students' capacity to do research work along with the jobs.

5. Government should offer manageable schemes of student loans for those scholars working in research field and having financial problems.
6. There is need to increased access to digital resources in Pakistan to help research scholars to enhance their knowledge and in formulation of their research studies.

### References

- Abbasi, K. (2016, September 22). HEC closes 31 PhD, 26 MPhil programmes. *The Dawn*, pp. A1, A4. Retrieved from <https://www.dawn.com/news/1285367>.
- Alan, E., Maria, E. R. & Leal, W. F. (2005). *An overview of the elements that influence efficiency in postgraduate supervisory practice arrangements*. Retrieved from <http://www.emeraldinsight.com/Insight/viewContentItem.do?contentType=Article&hdAction=Inkpdf&contentId=1463826>.
- Ali, Z. (1998). *A study of researches completed by the social scientists of Peshawar University at PhD and MPhil levels (1970-1998)*. PhD thesis, University of Peshawar, Peshawar. Available on <http://eprints.hec.gov.pk/482/>.
- Bacha, S.M. (2009). *Issues and Problems in Ph.D. in English - Degree Quality Assurance in Pakistan*. Retrieved from <http://www.languageinindia.com/dec2009/pakistanphd.pdf>.
- Best, W. J. & Kahn, V. J. (2008). *Research in education*. New Delhi, India: Pearson Education, Inc.

- Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education* (6th ed.). NY, USA: Routledge.
- Creswell, W. J. (2002). *Research design: qualitative, quantitative, and mixed-methods approaches* (4<sup>th</sup> ed.). New York, USA: Pearson Education, Inc.
- Fraenkel, R. J. & Wallen, E. N. (2006). *How to design and evaluate research in education*. NY, USA: Mc- Graw Hill.
- Higher Education Commission of Pakistan, Islamabad (2016). Pakistan Emerges as a Country with scientific Influence and Citation Impact. Retrieved from, <http://hec.gov.pk/english/news/news/Pages/Pakistan-Emerges.aspx>.
- Hockey, J. (1994). *Establishing Boundaries: problems and solutions in managing the PhD supervisor's role*. Retrieved from, <http://www.informaworld.com/smp/p/content~content=a746392515&db=all>.
- Iqbal, M.Z., Saeed, M. Furrakh, A. (2012). Problems in Public Sector Universities of Punjab: Views of Ph.D. Scholars. *International Researches*, 1(3), 3-13.
- Lincoln, Y. S. and Guba, E. G. (1986). But is it rigorous? Trustworthiness and authenticity in naturalistic inquiry. In D. D. Williams (ed.) *Naturalistic Evaluation*. San Francisco, CA: Jossey-Bass, 73 – 84.
- Madhusudhan, M. (2007). Internet Use by Research Scholars in University of Delhi, India, *Journal of Library Hi Tech News*, 24, 36 – 42. Retrieved from, <http://www.emeraldinsight.com/Insight/viewContentItem.do;jsessionid=DC07F5A976CB46D6662B0D1AEF833930?contentType=Article&contentId=1630885>.
- Maslow, A. H. (1943). A Theory of Human Motivation. *Psychological Review*, 50(4), 370-96.
- Maslow, A. H. (1954). *Motivation and personality*. New York: Harper and Row.
- National Science Foundation, National Center for Science and Engineering Statistics. 2015. Doctorate Recipients from U.S. Universities: 2014. Special Report NSF 16-300. Arlington, VA. Retrieved from <http://www.nsf.gov/statistics/2016/nsf16300/>.
- Nevada, V.L. (2009). *Research in Indian Universities: A Critical Analysis*. Retrieved from, [http://www.cluteinstitute.com/Programs/Las\\_Vegas\\_2009/Article%20267.pdf](http://www.cluteinstitute.com/Programs/Las_Vegas_2009/Article%20267.pdf).
- Patel, S. (2014). A Guide to Coding Qualitative Data. Retrieved from, <http://salmapatel.co.uk/academia/coding-qualitative-research>.
- Newman, J. (2018). QS World University Rankings. Retrieved from <https://www.topuniversities.com/university-rankings/world-university-rankings/2018>.
- Science Watch. (2012). *Top 20 Countries: Citations in five-year increments*. Retrieved from, <http://archive.sciencewatch.com/dr/cou/2012/12janALLgraphs/>.
- Tenenbaum, H. R., Crosby, F. J., & Gliner, M. D. (2001). Mentoring relationships in graduate school. *Journal of Vocational Behavior*, 59, 326-341.

U.S. Department of Education, Accreditation: Universities and Higher Education. Retrieved from, [www.ed.gov/accreditation](http://www.ed.gov/accreditation).

U.S. Department of Education, National Center for Education Statistics. (2016). *Digest of Education Statistics, 2015* (NCES 2016-014), Table 105.50. Retrieved from,

<https://nces.ed.gov/fastfacts/display.asp?id=84>.

U.S. Department of Education, National Center for Education Statistics. (2016). *Digest of Education Statistics, 2015* (NCES 2016-014), Table 303.10. Retrieved from, [https://nces.ed.gov/programs/digest/d15/tables/dt15\\_303.10.asp](https://nces.ed.gov/programs/digest/d15/tables/dt15_303.10.asp).