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## **Users' Perception and Satisfaction with Higher Education Commission Pakistan**

### **Research Repository (PRR): problems and opportunities**

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#### **Abstract**

The purpose of this study was to know the users' perception, awareness, purpose, problems, and satisfaction with Pakistan Research Repository (PRR). To meet the purpose, study was conducted in multiple phases. In the first phase, literature review was done. And, on the bases of reviewed literature, a semi structured questionnaire was developed. Data was collected via online survey from 400 users (LIS professionals & library users of Pakistan) of PRR. A convenience sampling method was used. The useable responses were 384 (96%).

Results of the study revealed that majority (36.2 %) of the respondents came to know about PRR through library staff. Similarly, majority of the respondents agreed that they accessed the PRR to retrieve the material but a good number of participants responded that they accessed the PRR for both (to deposit & retrieve) purposes.

The current study is first one in Pakistan of its type in terms of topic as no study has been conducted yet on this national program i.e. PRR. The study focuses on the importance of PRR from the users' point of view. Problems and users' satisfaction level with PRR are also discussed in the study.

**Keywords:** Repository, digital libraries, open access, HEC resources, e-resources, ICT, electronic resources.

## **Introduction**

The Higher Education Commission (HEC) set up by the Government of Pakistan in 2002 (previously named the University Grant Commission) is the primary supervisory body of higher education in Pakistan. The main objective is to upgrade and facilitate the universities and higher education institutions of Pakistan to be centre of excellence in education. HEC has made huge investment, especially in the last decade, in the education sector to support the research culture in the country.

The Higher Education Commission (HEC) of Pakistan initiated a national level project Pakistan Research Repository (PRR) <http://www.eprints.hec.gov.pk/> to maintain a repository of all the PhD theses produced by the intellectuals of Pakistani universities. At present, digitized full - text PhD theses produced by research scholars of Pakistan are freely accessible through PRR.

Institutional repositories (IR) are electronic collections. The purpose of the repositories is to organize and disseminate the research work produced by the intellectuals of the institutions (Anuradha, 2005). The aim of application is to facilitate the access to research output without financial hindrances (Shearer, 2003).

The most prominent hurdle for research scholars of developing countries is the limited access to the scholarly works. And, open access resolves this problem by providing access to intellectuals' work without the economic barriers (Islam and Akter, 2013).

The idea of repositories is novice and there is a dire need to study this area of research (Shearer, 2003). Institutions have considered the importance and benefits of the freely available digital contents. The role of library and information science professional in the implementation of repositories is very much important (Ghosh and Das, 2007). Organizations have realized the worth of repositories (Palmer et al., 2008).

This study is an effort to investigate the awareness, use, problems, and satisfaction of users with PRR.

### **Objectives of the Study**

The main objectives of the study with reference to PRR are:

1. To know the users' awareness about PRR
2. To investigate the users' purposes and frequency to access the PRR
3. To explore the users' satisfaction level from PRR
4. To identify the problems in the access of PRR
5. To furnish some suggestions for improvement in PRR

### **Literature Review**

Lynch (2003) defined the IR as a service which institutions render to their members to manage and disseminate the digital contents produced by the organizations and their intellectuals.

Erway (2012) believes that open access is very famous among the educational organizations since 2002. Conversely, Chang (2003) argued that the concept of collection, management, dissemination and preservation of scholarly work produced by the students and faculty of universities and colleges is not well known yet. Similarly, Davis and Connolly (2007) observed that users were not well aware of the institutional repository.

However, Nicholas et al. (2012) described that institutional repositories, regardless of type, are known since the last decade. Similarly, Rafiq (2008) revealed that developing countries' universities are taking initiative for ETD's implementation since the last decade of the twentieth century.

Johnson and Magusin (2009) narrated that digital repositories can't be ignored and that these repositories help the libraries to support the institutions. Similarly, Jean et al. (2011) concluded that there is a dire need of publicity and development of repositories.

Author narrates that more research stuff needs to be available in the repositories. Allen (2005) revealed that academics of various disciplines acknowledge the role of repositories and users are interested to deposit their research work in the digital repositories. Goh et al. (2006) narrated that digital libraries help in creating and managing the digital information. Author also believes that digital libraries have a crystal clear role in changing the users' way of retrieving the information contents. Likewise, Pappalardo et al. (2007) concluded that people support the open access worldwide and it is very much important to manage the research material in a logical manner so that stuff can be accessible easily. Bailey (2005) believes that reference librarians have the potential to contribute well in the development and support of digital repositories.

Kresh (2007) concluded that institutions are creating digital repositories and describes that the role of information specialist will change due to the popularity of repositories among the users. Similarly, Van Der Graaf and van Eijndhoven (2008) concluded that there were some institutions in Europe which have implemented more than one digital repository. But the majority has one repository. Again, Graaf (2009) conducted a study and concluded that Europe has implemented digital repositories for research. Author believes that implementation of digital repositories is useful for the authors, researchers, and institutions.

Halder and Chandra (2012) reveal that repositories contain the research produced by the institutions. Similarly, Graaf (2008) described that there were various type of research material i.e. research papers, thesis, working papers, proceedings available in the institutional repositories.

Warraich and Ameen (2008) concluded in their study that majority (56%) accessed the digital contents of the HEC (Higher Education Commission of Pakistan).

Though, at the moment, the development of digital repositories, especially in the developing countries, is in the developing phase and the awareness about the concept among

the users is not very high but the targeted users have keen interest in the institutional repositories. Institutional repositories are very much important for the promotion of research culture. It is very important to enrich the repositories with the maximum contents. The contents available in the repositories include theses, dissertations, conference papers, articles, proceedings etc.

### **Method**

A semi structured questionnaire was developed with the help of reviewed literature to collect the data. The data were collected by the author through web i.e. online survey.

Population of the study was PRR's users of Pakistan. To reduce the error, a total sample of 400 users (LIS professionals & library users) of PRR from 53 educational institutions of Pakistan was conveniently selected. To get the maximum response, author made personal calls and sent emails to respondents due to which the usable response rate was 96% (384). Convenience sampling method was used because the list of PRR's users was not available. Researcher tried to cover all the segments of the population i.e. male, female, students, faculty, and LIS professionals.

### **Data Analysis**

The quantitative data analysis was conducted with the help of the SPSS-21 software. After the review of collected data, responses of the 384 participants were selected for detailed analysis.

Results of Table 1 showed that male participants were 76% while percentage of female respondents was 24%. 59% were students, 29% were Library and Information Science professionals and only 12% were faculty members. Forty one percent of respondents were Bachelor, 37 % Master and 17% was Postgraduate qualification (see table 1).

Table 1

*Demographic Profile of Respondents*

		<b>Frequency</b>	<b>% age</b>
<b>Gender</b>	Male	293	76
	Female	91	24
	<b>Total</b>	<b>384</b>	<b>100</b>
<b>Status</b>	Student	226	59
	LIS Professional	110	29
	Faculty	48	12
	<b>Total</b>	<b>384</b>	<b>100</b>
<b>Qualification</b>	Bachelor	157	41
	Master	144	37
	M.Phil	65	17
	PhD	18	5
	<b>Total</b>	<b>384</b>	<b>100</b>

**Users' awareness about PRR**

The researchers also explored how the respondents first learned about the existence of PRR. The results presented at table 2 showed that top three sources of awareness were library staff, friends and webpage.

Table.2

*Source of Awareness about PRR*

<b>Awareness</b>	<b>Frequency</b>	<b>Percent</b>
Library Staff	139	36
Friend	67	17
Webpage	49	13
Newsletter	41	11
Email	30	8
Flyer	29	8
Workshop	17	4
Seminar	12	3

**Purpose and frequency to access the PRR**

Table 3 showed that majority of the users accessed the PRR to retrieve the material. As PRR is developed for PhD theses archive, therefore users who accessed PRR with the purpose to deposit the material are small in number.

The users were also asked about their purpose of access of PRR. The majority (74%) of respondents revealed that their purpose to visit PRR was to retrieve the document from website. 19% respondents accessed the repository for both purposes (deposit and retrieve). Only a few (7%) respondents visit only for deposit purpose (see table 3).

Table 3

*Respondents' Purpose of PRR's Access*

<b>Purpose</b>	<b>Frequency</b>	<b>Percent</b>
To Retrieve Material	284	74
To Deposit & retrieve Material	72	19
To Deposit	28	7

The usage frequency of PRR among users was different. Results of table 4 showed that majority (54%) of the respondents accessed PRR “sometimes”. Responses revealed that the respondents who used PRR “rarely” were 25%. A good number (14%) of participants accessed PRR “very often”. Similarly, a considerable (7 %) respondents of the study revealed that they accessed PRR “always”.

Table 4

*Respondents' Frequency of PRR's Access*

<b>Frequency of PRR's Access</b>	<b>Frequency</b>	<b>Percent</b>
Sometimes	208	54
Rarely	96	25
Very Often	52	14
Always	28	7

**Availability of Respondents' Required Material**

Respondents were asked to mention, if not available, the material they want to see in the PRR. Results of table 5 showed that majority (78%) of the respondents were satisfied with the contents of the PRR. Some (22%) respondents responded that there should be other



material i.e. M. Phil theses and the PhD theses of the Pakistani scholars who completed their PhD from abroad in the PRR.

Table 5

*Availability status of Respondents' Required Material*

<b>Availability</b>	<b>Frequency</b>	<b>Percent</b>
Yes	300	78
No	84	22

**Problems in the Access of PRR**

Respondents were asked to mention the problems in accessing the PRR. The results presented in table 6 showed that the most prominent problem in the access of PRR was the lack of awareness (38%). Lack of electricity (23%) and slow internet speed (23%) were also prominent problems in the access of PRR. Only (16%) Respondents agreed that lack of IT skills is the problem in the access of PRR.

Table 6

*Problems in PRR's Access*

<b>Problem</b>	<b>Frequency</b>	<b>Percent</b>
Lack of Awareness	147	38
Electricity	90	23
Internet Speed	87	23
Lack of IT Skills	60	16

**Users' Satisfaction level with PRR**

Researchers also investigated users' current level of satisfaction with PRR. The table 7 showed that respondents were satisfied with PRR. They agreed with the statements like PRR is useful, it is important to have PRR, PRR is helpful in staying up-to-date with latest knowledge, the material is usually displayed in a format that is compatible with my PC, PRR makes it possible to reach knowledge at earliest opportunity, it is easy to use PRR, I tend to find the information that I need quite quickly, the files are quick to download, and training is necessary to use the PRR. However, respondents were not agreed with the statements i.e. it is

difficult to use the PRR, PRR possesses non useful material, and use of PRR is just a waste of time.

Table 7

*Users' Current Level of Satisfaction with PRR*

<b>Statements</b>	<b>Mean</b>	<b>SD</b>
PRR is useful	1.78	.696
It is important to have PRR	1.92	.750
PRR is helpful in staying up to date with latest knowledge	2.02	.838
The material is usually displayed in a format that is compatible with my PC	2.27	.930
PRR makes it possible to reach knowledge at earliest opportunity	2.32	.874
It is easy to use PRR	2.33	.919
I tend to find the information that I need quite quickly	2.40	.926
The files are quick to download	2.45	.944
Training is necessary to use the PRR	2.55	1.142
It is difficult to use the PRR	3.26	1.108
PRR possesses non useful material	3.48	1.209
Use of PRR is just a waste of time	3.71	1.203

1= Strongly agree, 2 = Agree, 3 = Neutral, 4 = Disagree and 5 = Strongly Disagree.  
Significant at P < 0.05

**Gender Effect on User Satisfaction with PRR**

The authors analyzed, using Independent sample t-test, the data to know the satisfaction level's difference between male and female respondents. Analysis revealed that both groups have no significant difference in satisfaction level with PRR. Similarly, there was no significant difference between groups about the importance of PRR.

**User Satisfaction based on Qualification and Status**

ANOVA test is recommended to explore the variation among three and above independent groups. Therefore, ANOVA was used to know the significance difference among the three (3) user groups (Students, Faculty, and LIS Professionals) of the study. The results showed significant difference among the users i.e. F = 13.7, p = .000 (see Table 8).

Participants of the study with different educational status have different level of satisfaction with PRR. Results of Tukey HSD test further showed difference in the mean score of student respondents from faculty ( $p = .02$ ) and LIS graduates ( $p = .000$ ). Similarly, mean scores of students, faculty and LIS graduates indicated that LIS graduates and faculty users were more satisfied than students.

Table 8

*User Satisfaction of Different Type of Users*

Variable	Students		Faculty		LIS Graduates		Overall		F	Sig
User Status	N	Mean	N	Mean	N	Mean	N	Mean	13.7	.000
	226	2.30	48	2.07	110	1.98	384	2.18		

Table 9

*Post Hoc Tukey Test on Different Type of Users*

(I) Status	(J) Status	Sig.
Student	Faculty	.022
	LIS Professional	.000
	Student	.022
Faculty	LIS Professional	.621
	Student	.000
	Faculty	.621
LIS Professional	Student	.000
	Faculty	.621

Respondents were asked to furnish suggestions, if any, for the maximum use of PRR. Some respondents suggested that there is a need to market the PRR to crop the maximum benefits of the repository. Many respondents appreciated the availability of the PRR.

**Discussion**

The overall users of PRR were very much satisfied and accepted the importance of PRR. Respondents agreed that existence of PRR is very useful for research purposes. So, it can be concluded that PRR is useful and possesses an undeniable importance. Authors found some previous studies in the favor of our arguments (Ghosh, 2007; Palmer et al., 2008; Allen,

2005; Goh, 2006; Pappalardo, 2007; Graaf, 2009). Results of the current study revealed that majority of the users accessed the digital contents of repository. A previous research study (Warraich, 2008) supported our claim.

Considering the results of the study it can be said that more contents i.e. M.Phil theses and PhD theses produce by Pakistani nationals in foreign universities need to be made available in the repository. In this context, research study (Jean, 2011) also recommended the need of more contents' availability in the repositories. On the basis of respondents' responses, it can be concluded that users had interest in depositing the research stuff in the digital repositories. A previous research (Allen, 2005) presented the same view.

Keeping in mind the perception of respondents, it can be concluded that PRR needs to be highly marketed so that researchers can get the maximum benefits of the repository. The previous research study (Jean, 2011) supported this perception of the users.

### **Conclusion & Recommendations**

The results of study revealed that all the users groups (Students, Faculty, and LIS Professionals) have similar opinion about the importance and uses of PRR. Likewise, there is no significant difference between the opinion of the gender groups (male and female) about the uses of PRR. Conversely, faculty and LIS professionals were more satisfied with PRR than the students. Majority of the respondents knew about the availability of PRR through library staff, friends, webpage, and news letter. Most of the respondents used PRR sometimes. Greater part of the respondents accessed the PRR to retrieve the material. A good number of participants accessed the PRR to deposit the material. A considerable number of respondents mentioned that they accessed the PRR for the both (retrieve & deposit) purposes. Majority of the users were very much satisfied with the available contents. Respondents narrated that lack of awareness, slow internet speed, and lack of electricity are the major problems in the PRR's access. Users also praised the availability of PRR.

Considering the positive attitude of participants it is highly recommended that HEC, LIS (Library & Information Science) professionals, and research organizations should market the existence of PRR to crop the benefits of the research output of Pakistan's intellectuals. It is also suggested that M. Phil theses should also be part of the PRR. Availability of PhD theses produced by the Pakistani scholars in foreign universities is also recommended to be included in the PRR. More research studies should also be conducted frequently to know the opinion of the users of PRR for the possible improvements in the Pakistan Research Repository (PRR).

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