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Students' Perception about Institutional Repository and Impact of Electronic Contents on their Research: A Pakistani Perspective

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Students' Perception about Institutional Repository and Impact of Electronic Contents on their Research: A Pakistani Perspective

Abstract

This manuscript aims to investigate the students' opinion about the Institutional Repository (IR) and the participants' opinion about the impact of e-resources on their research work. Quantitative research design was employed to collect the data about students' perception regarding IR and qualitative research design was utilized to explore the students' opinion about the impact of e-resources on their research work. A questionnaire and an interview guide were utilized to collect the data. A convenience sampling technique was used to collect the data from two well-renowned Pakistani universities' students. Total 84% of the respondents responded the questionnaire regarding their perception about the IR and 10 interviews were also conducted to explore the participants' opinion about the impact of e-resources on their research work. The study focuses on the purpose of IR's usage from the users' point of view. Problems in using the IR and users' satisfaction level from it were also discussed in the study. The study explored the role and advantages as well as disadvantages of the e-resources in the views of the study's participants. This paper also highlighted the problems users faced while using the e-contents and their satisfaction level from the e-resources available in their respective institutions.

Keywords: Institutional repositories, DSpace, electronic contents, problems of students, research databases.

Introduction

IR are meant for collection, management, dissemination, and storage of research contents shared by research scholars of different organizations (Anuradha, 2005). Library institutions have focused on digital in initiatives since the beginning of 1990. Worldwide, academic libraries have realized that IR is of great value (Palmer et al., 2008). The presence of digital repository in the nations with developing status confirms that their research is being

contributed towards the world's knowledge (Anuradha, 2005). The study is conducted to know the opinion of students regarding IR.

Secondly, e-resources are an inseparable aspect of research in the current times. These resources have won much attention of researchers of this era. Due to the flexibility in the use of these resources, experts use these resources extensively while conducting their research studies such as Mirza (2012) concluded in his study that Pakistani university libraries are offering effective online services and facilities and that the users are satisfied with the offered services. Researcher further highlighted that users are very happy with the services like OPAC (Online Public Access Catalogue), online databases services, CAS (Current Awareness Service, SDI (Selective Dissemination of Information), CD-ROM databases etc. Mostofa (2013) narrates that the development in the computer applications has brought the prominent changes in storing, organizing, disseminating, and acquiring the information stuff. Author describes that internet can be used to access the information and it is very important because of the repeated call for research activities. Ganski (2008) recommends that the theological libraries should make print material accessible in the electronic form.

Worldwide, rich literature is available in terms of IR (Barov, 2020; Dulek, 2019; Formonek, 2021; Hamill, 2019; Kumar, 2017; Satish, 2019; Trambo, Shafi, & Gul, 2012). However, limited number of studies have been conducted by researchers with reference to Pakistan. This scenario sheds light on the deficient literature on IR and impact of e-resources on the research work of students focusing Pakistani population. Therefore, this study is an attempt to fill this gap.

Surveyed universities are based in Islamabad, a capital city of Pakistan, and offer education in multiple disciplines related to Management, Computer, Engineering and Medical. The surveyed institutions offer programs on undergraduate and postgraduate levels. The libraries of the investigated institutions consider the importance of their support for the

academic and research needs of their students, faculty and researchers. IR is available at the institution to support the students and faculty. Libraries of the both institutions are committed to facilitate the users to meet their educational and research needs. Libraries also possess a rich collection such as books, newspapers, magazine, and journals in print as well as electronic format. Libraries also facilitate the users in accessing the e-journal, databases, and other e services like SDI, CAS, OPAC and DDS.

Manuscript's Objectives

This paper is intended:

1. To identify the users' purpose to access the institutional repository.
2. To explore the types of contents available in the IR.
3. To know the participants' level of satisfaction from the IR.
4. To highlight the problems regarding the use of institutional repository and e-resources.
5. To identify the participants' satisfaction from e-resources.
6. To explore the advantages & disadvantages of e-resources.

Literature Review

The purpose of establishing IR is the collection, preservation and dissemination the researchers' research. Different programs are available regarding the techniques to create, maintain and preserve the material in electronic formats. However, there is an absence about the evaluation related to usage of the contents (Ameen & Erdelez, 2011). Process that is involved in the IR's implementation is demanding due to the involvement of academics and their produced research (Alexia & Zervas, & Kounoudes, 2009). In the current times, implementing IR is considered as a new area (Hartson et al., 2004). Lacked promotion and awareness related activities are the major issues of the library professionals (Fatima & Tahira, 2009).

Developing of IR is ongoing and organizations are designing the regulations regarding the IR's usage (Palmer et al, 2008). Most of the individuals using IR do not know much about IR and also not familiar regarding its purposes scope (Shen, 2012). It is felt that preserving the contents should not be ignored and users should also understand that IR is not useless but it is beneficial for them (Russel & Day, 2010). It is alarming that some of the respondents highlighted Wikipedia as an IR. However, respondents found information about IR through faculty members, google, library sessions and their organizations (Jean et al., 2008). It can be argued that interest of the users can ensure the IR's success (Alemayehu, 2010).

Different types of material such as manuscripts, theses, news, meetings, books, reports, periodicals softwares is found in IR (Nagatsuka & Koremura, 2011). The purpose of using the IR is to find scholarly communications, store learning contents as well as coursewares, publish electronic material, manage research collection, preserve electronic material for future use, showcase research output, management of knowledge, assess research, encourage open access, and house digital collection (Barton & Waters, 2005).

Faculty members, researchers, staff use the IR and they consider that it is valuable for them and is important as well (Rieh et al, 2007). The role of IR in the era of open access is proving vital. However, it is important that research community should be clear that IR is effective for them to enhance the quantity of IR and collection in it (Baba et al., 2008). It is felt that library professionals and research community are not on the same page regarding the importance of IR. Therefore, there is a need to reassess the purposes, marketing strategies of IR to harness their maximum benefits (Cullen & Chawner, 2009). IR face different types of problems such as limited usage by teaching faculty and resources (Meier, 2008). Although, it is obvious that people are not much aware about IR and it is being developed and not mature yet but it is also important to note that they are positive regarding it.

According to the statistics of world Internet Statistics, there were more than eighteen

million internet users in Pakistan till 2010 with 10% penetration rate in the population (Internet World Stats, 2010).

Thornton (2000) stated that libraries, in future, will be very different from the current times. Consortia will be very important force in the electronic environment. Sarasvady and Khatri (2007) concluded in their study that there is a remarkable increase in the electronic resources' availability in the last decade. Adegbore (2011) argues that technologies are very common in every sphere of 21st century's life. Author mentioned that libraries are working to convert their print material into electronic format to satisfy their users' need.

Madhusudhan (2009) narrates that e-resources played a vital role in changing the information seeking behavior of the research scholars. Author recommends that libraries of the newly developing countries have to provide a considerable amount of literature in electronic format to meet the latest technological development. Researcher also predicts that the use of electronic resources will increase in future.

Borrego, Lluís, Anglada, Barrios and Comellas (2007) concluded in their study that users accept that the print is decreasing and electronic papers are increasing. Author describes that majority (76%) of the respondents of the study prefer the electronic resources than the print resources if both format are available.

Ibrahim (2004) investigated the opinions of the visitors about e- resources and found that the most participants used e-resources to access full text articles, online journals, and reference material.

Mirza, and Mahmood (2009) concluded that there is a need of library websites development with a hyperlink on university websites. Professionals should consider the importance of web based library services.

Ahuja, Goel, and Kumar (2010) describe the advantages of e-resources which include easy & quick access, free, less usage of space, updated information, reduce the pollution,

usage of minimum natural resources etc.

Ballard and Lang (2007) describe that many libraries have purchased electronic resource management systems to manage their online subscriptions and licenses. Authors state that the effective management of e-resources helps in disseminating the right information and to right people.

Olle', and Borrego (2010) confirms in his study that there is a increase in the reading of academics due to the availability of e-journals. And, there is also a positive change in reading due to the improvements in the tools used for the access of electronic resources.

Dhanvandan, and Nagarajan (2012) concluded in a study to determine the use of e-resources that larger portion of the study's participants were happy about the e-resources and they preferred the e-resources as compared to print resources. Authors highlight that students are the leading users of electronic resources. The problem faced by the users in accessing the e-resources is downloading of the resources and the lack of the knowledge is another problem mentioned by the participants.

Egberongbe (2011) concluded in a study that use of e-resources is very common among the researchers. Author states that the majority of the study's participants are dependent on the e- resources to get their desired information.

Sohail and Ahmad (2011) maintained that there is increasing acceptance of e-journals among the users and academicians. Author describes some of the problems faced by the participants in accessing the e-resources. The highlighted problems include lack of awareness and the power failure.

Method

Quantitative research design was utilized to know the surveyed institution's participants' perceptions regarding IR and data was collected using survey questionnaire. Researchers developed a comprehensive questionnaire on the bases of the literature review.

Author collected the data through his personal visits of the organization. Researcher focused on the coverage of all the populations' elements and collected data from both genders and both types of students such as undergraduate as well as postgraduate. A convenience sampling method was applied and the useable response rate was 84%.

Furthermore, the interviews were also conducted to collect the data to know the impact of e-resources on the respondents' research work. Researcher developed a comprehensive interview guide for interviews after exploring the relevant literature on the topic. A total sample of 10 students of post graduate studies was selected. A convenience sampling method was applied to conduct the interviews. The author conducted the interviews of the users through personal visits of the library and participants' offices. Interviews were recorded through mobile phone. Prior permission to record the interviews was also sought from all the participants. The interviewees were also aware of the fact that the recorded interviews will remain with the researcher for record and report writing.

Results

Respondents were inquired regarding their purpose to access IR. Results show that respondents accessed IR for different purposes including deposit of material. Figure 1 shares the details related to the purpose to access the IR by the study's respondents.

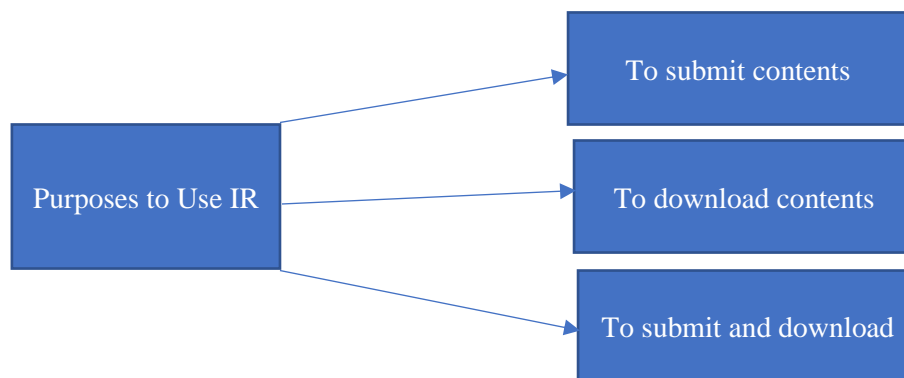


Figure 1. *Purpose of IR's Usage*

Researcher also investigated the contents' type students found in the IR.

Findings highlight that participants of the study find collection related to theses, reports etc. Figure 2 sheds light on the types of the contents available in the IR.

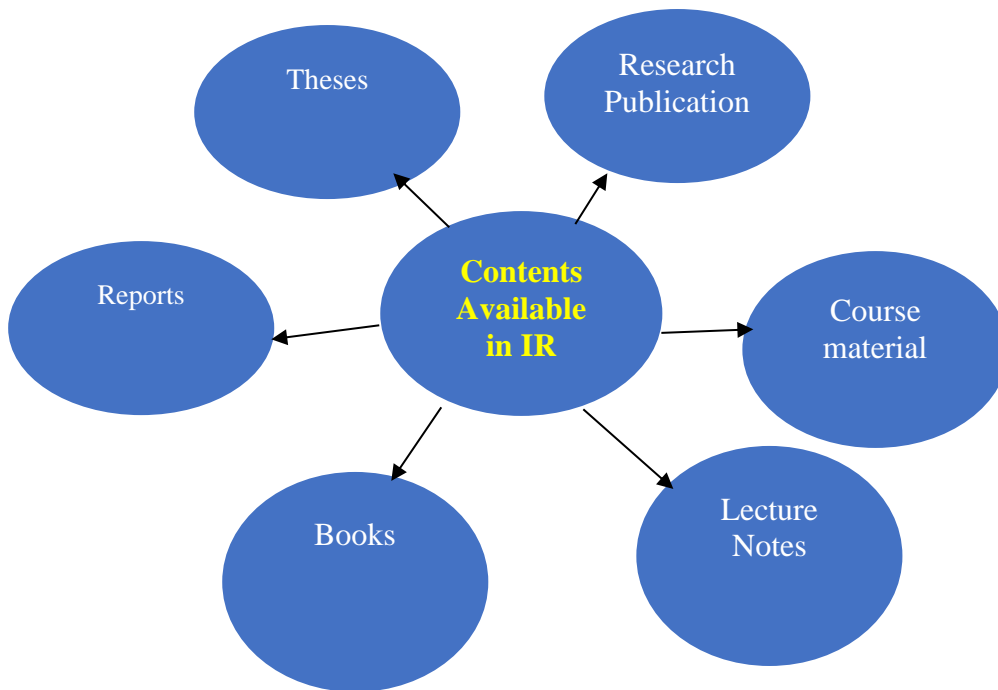


Figure 2. Types of Contents Available in the IR

Respondents were asked to mention about their satisfaction's level with the available material in accordance of their need. Surprisingly, results highlight that majority (Figure 3) of the respondents did not find material relevant to their need.

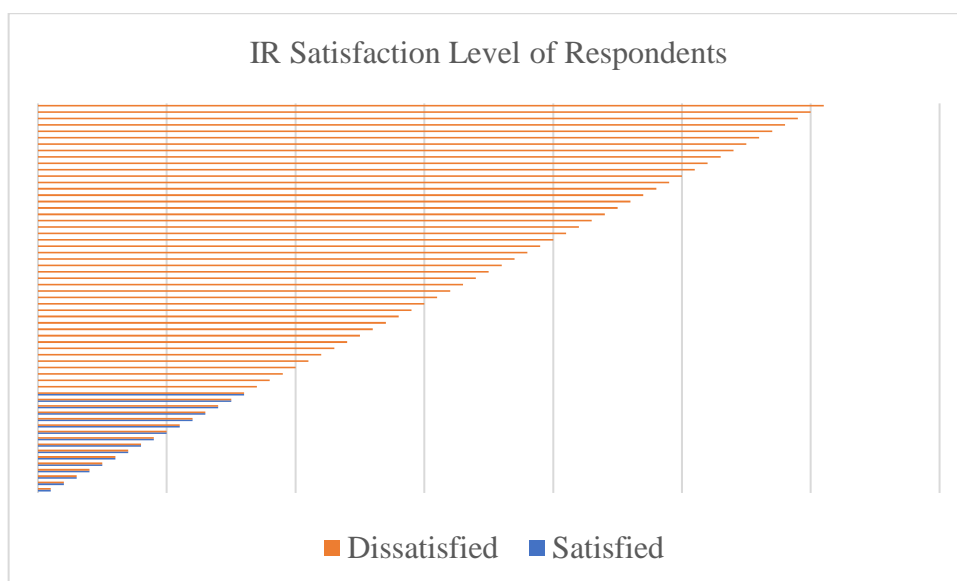


Figure 3. IR Satisfaction Level of Respondents

Participants were requested to mention the problems in the use of IR. Results highlight a number of problems mentioned in the figure 4.

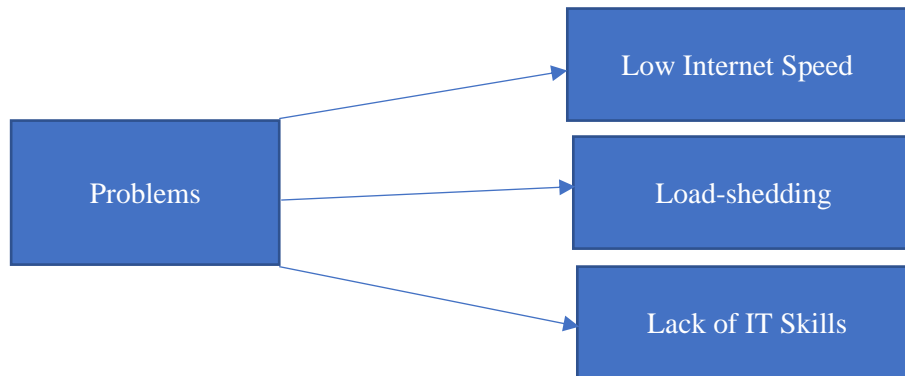


Figure 4. *Problems in the IR's Usage*

t-test was utilized to identify the opinion's difference between the both genders. Table 1 shares the detailed findings regarding the opinions of the students related to both categories.

Table 1. *t-test Findings regarding Opinions of Males and Females*

Sr.	Statements	Mean		T	Sig.
		Male	Female		
1.	IR is helpful	1.75	1.56	1.086	.281
2.	Having IR is of importance	1.78	1.61	.803	.425
3.	IR helps in staying up to date with the recent research	1.72	1.76	-.201	.842
4.	Use of IR is not difficult	2.10	2.00	.364	.717
5.	I like to find the needed information a bit quickly	2.00	2.24	-1.029	.307
6.	The contents are downloadable quickly	2.03	2.11	-.307	.760
7.	I found the material compatible with	2.23	2.00	.833	.408

my system

8. Institutional Repository helps in finding contents early.	2.17	1.88	1.266	.209
9. IR's usage wastes time	3.28	3.17	.306	.760
10. I found contents in the IR which were not helpful for me	3.10	3.29	-.539	.592
11. I faced difficulties while using the IR	3.20	2.94	.792	.431
12. I need training for using the IR	2.67	2.33	1.069	.288

“Note:1= Strongly Agree, 2 = Agree, 3 = Undecided, 4= Disagree and = Strongly Disagree
Significant at $P < 0.05$ ”

The results show that significant difference did not exist between the both genders' perceptions regarding the usage of IR. However, it is also crystal clear that Mean score of male respondents is higher than the female gender regarding majority of the statements devised regarding IR. In contrast, female gender scored higher Mean score as compare to their male counter parts regarding few statements related to IR.

ANOVA helps in identifying the difference among three or more groups. Therefore, researcher utilized ANOVA to investigate the difference among students enrolled in different programs such as BS, MS, and PhD. Table 2 findings confirm that the surveyed groups did not differ significantly regarding the IR's usage as well as importance and, therefore, it can be argued that they (surveyed participants) were on the same page. Results' details are furnished in the Table 2.

Table 2

ANOVA's Results regarding Opinion of Different Programs' Students

Statement		Mean Square	F	Sig.
1. Having IR is of importance	Between Groups	.482	.755	.474
	Within Groups	.639		
	Total			
2. IR helps in staying up to date with the recent research	Between Groups	1.001	1.655	.198
	Within Groups	.605		
	Total			
3. It is convenient to explore Institutional Repository	Between Groups	.732	.704	.498
	Within Groups	1.041		
	Total			
4. I like to find the needed information a bit quickly	Between Groups	.147	.209	.812
	Within Groups	.705		
	Total			
5. The contents are downloadable quickly	Between Groups	.697	.788	.459
	Within Groups	.885		
	Total			
6. I found the material compatible with my system	Between Groups	.213	.206	.814
	Within Groups	1.032		
	Total			
7. Institutional Repository helps in finding contents early.	Between Groups	1.246	1.894	.158
	Within Groups	.658		
	Total			
8. Use of Institutional Repository is just a waste of time	Between Groups	2.899	1.478	.235
	Within Groups	1.961		
	Total			
9. I found contents in the IR which were not helpful for me	Between Groups	3.957	2.410	.097
	Within Groups	1.642		
	Total			
10. I faced difficulties while using the IR	Between Groups	1.570	1.122	.331
	Within Groups	1.399		
	Total			
11. I need training for using the IR	Between Groups	1.406	1.006	.371
	Within Groups	1.398		

Sources of Awareness Regarding E-Resources (N=10)

Respondents were asked to name the sources of awareness regarding the e-resources. According to the results, the majority (N=6) of the participants mentioned the faculty role in the awareness of e-resources' availability. Some of the respondents (N=2) mentioned the name of library & the same strength of participants mentioned the library's role in this connection.

Use of E- Resources (N=10)

Participants were also asked to give the information regarding frequency of their use of e – resources and about half (N=5) of the interviewees responded with the phrases like “very often” or “frequently”. Some respondents (N=2) replied that they use e-resources.

Convenient Place to Access the E-Resources (N=10)

Interviewees were inquired to name the convenient place for them to access the e-resources. The majority (N=6) replied that they consider the library as a convenient place to access the e-resources. Some (N=2) respondents mentioned the hostel as convenient place and same strength named the home as a convenient place to access the e-resources.

Role of E – Resources (N=10)

Participants of the study were requested to highlight the role of e-resources and majority (N=8) used the word “very important” to explain the role of e-resources. One of the participants said “the role of e-resources in research is 100%” and the same frequency (N=1) was of the view that its role is “75%” in conducting the research.

Satisfaction from E-Resources (N=10)

Satisfaction of participants from e-resources was also inquired. Majority of the respondents was satisfied from the e-resources while one of the respondents said “it depends on topic”.

Problems in Using the E-Resources (N =10)

The effort was also made to highlight the problems faced by the users in the access of e- resources. The majority (N=8) of the respondents said that many required information is “priced”. One of the participants named the internet connection, one named the hardware, and same (N=1) named the overload of information as a problem. Participants said “it is very difficult to make selection”.

Possible Ways to Improve the Access of E-Resources (N=10)

Participants were questioned to name the possible ways to improve the access of e-resources. All (N=10) replied that it could be improved by making subscriptions of the research databases. One of the respondents responded that “ I have a friend in foreign university and if I ask him to send me any document, he does not need to be in his university, he can do it from anywhere because he has his unique account form university”

Advantages and Disadvantages of E-Resources (N=10)

Interviewees were also asked to highlight the advantages and disadvantages of the e-resources. While counting the advantages, all (N=10) replied that it is easy to use e-resources. Majority (N=6) replied that it is very fast to use the e-resources and same strength (N=6) said that e-resources provide very up-to-date information. While counting the disadvantages, all (N=10) responded that one of the most disadvantage is the “price”. Half (N=5) of the interviewees said that there is a lot of fake information which is a big disadvantage of the e-resources. One (N=1) said that “it depends on topic”.

Discussion

Findings of this study highlight that students accessed the IR to deposit, retrieve as well as to perform the both actions. Results also made it clear that participants of this study found books, articles, reports, theses and course related material in the repository. However, they faced problems related to lack of IT skills and electricity supply as well as internet speed.

These results are consistent with the previous literature (Abdelrahman, 2017; Ratanya, 2017) which highlighted similar purposes to IR's access and problems (Ratanya, 2017) in accessing the IR. Furthermore, it might be believed that these problems contributed towards dissatisfaction of the students from IR. Therefore, organizations need to work on the possible solutions of the problems being faced by the students to meet their expectations and find organizational goals met regarding production of the quality students as well as to compete the market.

It is also found that the surveyed students got awareness about e-resources through their teachers and library is identified as the convenient place to access these resources. Students also highlighted the importance of e-resources for their studies. Study's participants were also of the view that easy to use and fast access are the major advantages of e-resources. Respondents of the study counted priced contents as a problem for them and suggested the subscription the paid resources. These results are in line with a plethora of studies (Abdelrahman, 2017; Mollel & Mwantimwa, 2019; Mwantimwa & Elia, 2017; Pambayun, 2020; Thanuskodi, 2012) conducted in the past that concluded with the similar findings. Therefore, it can be argued that teachers were playing a vital role in spreading the awareness regarding the availability of e-resources among their students and libraries were playing a vital role in facilitating the users to access and use the available services and resources and, hence, met the target to get endorsement from users that libraries are convenient place for study and research. It is also safe to argue on the basis of the findings of this study that, no doubt, technology has proved that it facilitates in easy and fast access to resources. Similarly, it is also important to note that students highlighted the problem of priced contents. This is one of the important reasons perhaps that institutions have started the subscription of the resources for their researchers. Findings of this study also highlighted that respondents were well-awared about the importance of IR in this technological and information rich era which

is, doubtlessly, an important indicator for libraries and organizations.

Conclusions & Recommendations

Participants stated that they used the IT for submission as well as searching the material. Respondents found different types of material such as theses, reports, books, course material and research publications in the IR. Likewise, respondents also highlighted that lecture notes were available in the Institutional Repository. Participants faced problems such as limited speed of internet, electric shortage, and less information technology related while they used the IR. It is also found that students enrolled in different levels of education as well as male and female did not differ significantly regarding their opinion about the IR. Keeping in view the positive attitude of students, researcher recommends that individuals serving in the libraries must put their efforts towards the marketing and implementing side of the IR. Problems should be eliminated and organizations should encourage the implementation of the IR. Similarly, Researcher also recommend that institutions should take measures to ensure free access to reliable information resources. Respondents were not satisfied from the contents available in the IR. Hence, libraries need to focus and ensure the availability of the contents related to students' interest. In contrast, respondents considered the e-resources important and shed light on the important role of faculty and library regarding the use of e-resources. Participants also mentioned that they prefer to access resources within library premises which is, no doubt, a very good sign regarding the importance of library. Therefore, libraries should continue to play their part towards the satisfaction of the users.

Implications of the Study

This study possesses plenty of implications for library professional and educational organizations. Findings of the study might help the stakeholders: library professionals and institutions understand the current scenario of IR and e-resources and problems in access to

these resources. This understanding can play a vital role in facilitating the stakeholders take necessary measures to find their students satisfied which, doubtlessly, is an ultimate goal of every institution of the day. Students can also gauge benefits from the study's findings.

Future Research Directions

Research in terms of IR and impact of e-resources is deficient in Pakistan. Although, a little research has been conducted by Pakistani researchers in this area, there is a lot to be done in this connection. Therefore, researcher recommend that research should be conducted to investigate the status of IR, available contents and users' satisfaction by collecting data from other parts of the country especially from the educational institutions located in the Sindh and Balochistan province of Pakistan.

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