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DRS Adoption-Barriers in Government and Private Sector University Libraries: An Explanatory Study

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ABSTRACT

Purpose:

The major objective of the study was to know about challenges being faced by University Librarians of Lahore city for the adoption and provision of Digital Reference Services (DRS).

Design/methodology/approach:

Mixed method of research was adopted for this research. Quantitative and Qualitative data were gathered from HEC recognized universities of both public and private sector of Lahore city following census and purposive sample of university librarians.

For quantitative data questionnaire was designed and interviews were conducted for qualitative data, and the gathered data were analyzed by SPSS by thematic approach respectively.

Key finding (s):

The librarians are aware of the importance of DRS and they have a positive attitude towards DRS. Few libraries are in adopting phase of DRS. Librarians are facing challenges of energy crisis, finance and lack of planning in implementation of DRS.

Research limitation (s):

The study was conducted in universities libraries of both public and private sector situated in Lahore City and recognized by HEC.

Practical implication(s):

Owing to different advantages like efficiency, time saving and accessibility trends to adopt DRS is increasing. In spite of all highlighted issues and challenges, DRS has its importance and the librarians working in universities in Lahore city consider it the need of today user, thus they are heading towards DRS and want to offer DRS. It was obvious that DRS had become necessary in academic libraries in coming few years.

Contribution to knowledge:

This study highlights the issues and challenges in implementation of DRS, and would help library professionals in implementation of DRS in their libraries.

Paper Type: Research

Keywords: Digital Reference Services, Digital reference services, Digital Reference Services – Challenges.

1. INTRODUCTION

Few years back when anyone was interested to work as reference librarian, he or she was considered to have smooth knowledge of both print and electronic resources and he could provide better reference services by using all these resources. He used to provide reference services by using face to face conversation, telephone and the latest email while sitting at reference desk. He used to prefer printed reference sources over electronic sources. However emerging technologies has affected the whole library as well as reference services (Lindbloom, Yackle, Peters & Bell, 2006). A survey was conducted by Rehman, Shafique and Mahmood (2011) to know user's perception and satisfaction regarding reference services in the public-sector universities of Punjab. After receiving survey result the researchers found that mostly users were satisfied with reference services, collection and other facilities of libraries to some extent. In other words, it was cleared that the respondents were not fully satisfied with user's services. So many recommendations were made by investigators after receiving this research data. They suggested that libraries should have good reference collection, trained staff, implantation of DRS, and users training programmes. They concluded that by adopting these measurements libraries can improve reference services and can come up to expectations of users.

Youns (2014) concluded that before introducing DRS in a library there should be proper planning. Finance issues must be solved. Proper funds should be allocated for DRS. A written policy for DRS can help a lot in successful implementation of DRS. Libraries should develop proper ICT infrastructure and collection before start of this service. Proper marketing and evaluation is also necessary for the successful continuation of this service. Nadeem (2016) concluded from a survey that library associations should also play their roles in developing DRS concept and its implementation in libraries. Associations should arrange workshops, seminars and information literacy programmes for development of DRS in libraries. He also concluded that by introducing this concept in LIS curriculum, these services can be implemented and maintained easily.

In Pakistan university libraries are adopting new technologies due to availability of resources and finance as compared to public, school, college and other libraries. Some libraries are providing up to date and online services through websites including DRS, while some libraries are planning to adopt these DRS. There is need to study about librarian's perception towards DRS, status and issues which are being faced by them in university libraries. This study has found the current scenario of DRS in university libraries of Lahore. Some university libraries are still offering traditional reference services. This study shows the hurdles and challenges in implementation of DRS in the university libraries of Lahore. Literature review indicated that no proper study had been done about status and challenges of DRS being faced by librarians. This study focuses on different barriers being faced by library professionals towards implementation of DRS. It reveals the trend of adopting DRS in the university libraries of Lahore. This study highlights obstacles in implementation of DRS. It provides recommendations for improvement, implementation, refining and effectiveness of DRS. No comprehensive study has been conducted before on this issue, so it would help to fill this gap also. The emerging technologies have changed the library services nature. Digital Reference Services have become a dire need of the present age otherwise library professionals can't build a good image in the society. This study addresses key issues related to DRS, and will be helpful in redefining DRS in the university libraries of Pakistan.

2. OBJECTIVES

Objective of this study are as following:

- To know the issues and challenges being faced by librarians for implementing Digital Reference Services (DRS) in the libraries
- To suggest recommendations for improvement of DRS in university libraries of Lahore, Pakistan

3. REVIEW OF LITERATURE

Reference Services are influenced by changing disposition of users and sources. A larger number of information is available online. Many students can use these online sources in expert way. New trends to use internet in daily routines of life has made the users skilled in using online research resources. This trend has changed the user's attitude towards reference services (Foster, 2007). Different techniques and technologies like instant messaging and instant conversations are used for DRS. Being new trend the librarian deputed for DRS needs different skills as compared to the librarian providing manual reference services. Specific skills are required to tackle with queries received through DRS. Even skills are required to interact with online queries. Resolving these queries also need expertise. There are no specific standards for evaluation of DRS but libraries have adopted some guidelines to judge services. By evaluating services, libraries can embrace new trends in DRS. It would also help to know user's perceptions and interest towards DRS. Evaluation process would help to improve web-based reference services techniques (Lindbloom, et al. 2008). Trained staff and big setup are required for successful implementation of DRS. Different library software is helpful for managing and finding problems relevant to reference services and electronic queries. The study done by Resnick and Clark in 2009 show that experience and willing to work with electronic sources is required to implement DRS in a better way. A proper paper work or workflow is required before implementing this service (Resnick & Clark 2009).

Resnick & Clark (2009) conducted studies on Texas A&M University Libraries about the implementation of VR services in the same libraries. They concluded that for providing VR

services separate trained staff is required. Use of electronic resources for providing better DRS is possible if proper infrastructure is provided with trained staff. Good communications skills and clear knowledge of technologies are required for providing DRS in libraries. Library personnel should learn the practically implemented methods for better service. The staff handling DRS should be familiar with user's trends, solutions of complicated queries and technology changes (Resnick, Ugaz & Burford, 2010). A librarian should have good communication skills for better DRS, well awareness about objectives of organization and academic environment. Library staff must have sound knowledge of available online sources. Searching techniques should be learnt. Librarian should have sound communications skills to handle users, researches, vendors, publishers and agents according to their knowledge and level. A successful DRS setup depends on skills and access of staff. If staff is well aware of techniques, he can better use online reference sources for accurate DRS. Written policies and work flow charts can help to succeed DRS in a big set up (Resnick, Ugaz & Burford, 2010). A study is conducted to know that how much guidelines provided by RUSA are being followed by academic libraries and their staff in United States. This study showed the actual picture of DRS there and revealed that these guidelines were not useful for every institution. The author concluded that some libraries were below the guidelines while others were superior, because every library has its own objectives and parent organizations, and it has to mould services according to organizational structure. (Platt & Benson, 2010)

With passage of time reference services became so important that in 1957 American Library Association (ALA) established Reference Services Division. Later it was given the name of Reference and Adult Services Division (RASD) in 1972, and it was renamed again in 1996 Reference and User Services Association (RUSA). RUSA is working for adopting and uplifting new trends of reference services. It has also made guidelines for the development and delivery of reference services (Macikas,2010). Reference services through online chat are very productive. This is known as real time reference service. It is not much older concept. In a study at Grand Valley State University (GVSU), it was observed that chat reference queries' average was 30 per week. It was also observed that chat reference queries were declined at weekends, however students get active on Sundays perhaps before start of their academic week (Bravender & Molaro ,2011). Users' training is also necessary for gaining fruitful results from DRS. In a study of New York university library, it was observed that sometimes users do not use accurate search query and as a result they do not find accurate information or they spend much time in searching. Users who

are well aware of different searching skills like Boolean operators can get required information timely and precisely. So, for effective DRS users training is also required. (Collard & Whatley, 2011)

Malik and Mahmood (2013) undertook study regarding DRS implementation in university libraries of the Punjab. They found it much better as compared to past but they also found that some libraries were still offering manual reference. The findings of the study revealed that the most dominating factors were capability, job requirements and IT background. These factors played a good role in technology acceptance behaviors. It was recommended that Web 2.0 technologies should not be ignored as these brought multiple benefits to the library practitioners. These technologies help in providing satisfactory online reference services to the users. In another study Malik and Mahmood (2014) investigated different factors effecting implementation of DRS in university libraries of the Punjab. They studied the readiness of DRS in university libraries of the Punjab. They revealed that only few libraries were adopting or planning DRS while many were very slow over this task. Youns (2014) conducted a study on university libraries of Pakistan. He investigated the nature, different tools, staffing, finance, infrastructure and other facilities required for DRS and availability of the same in universities for implementation and promotion of DRS. He also studied the problems which were being faced by librarians in implementation and use of DRS.

By using different technological methods, users are searching and finding many things. They are doing all this by the help of Google, Google Scholars and many other search engines. However, computer technology is unable to interpret human contacts, thinking and mind communications. Library professionals should have the expertise and skills for online searching. They should know well how to retrieve required results in minimum time. Search engines give broader results. With knowledge of effective searching techniques, the results can be narrowed. Computer programs act according to commands given by computer operators. Computer software does not communicate or observe human behavior as a library professional can. Although the online resources have affected number of reference queries yet reference staff has many queries to be solved. Users prefer to find answers directly by using different search engines but accuracy and authenticity is gained by using different searching technique. Library practitioners should be skilled in satisfying reference questions

of the users. (Bandyopadhyay & Boyd-Byrnes 2016). Khan et. al. (2017) conducted research on factors influencing the adoption of Digital Reference Services. Results of the study showed that reference services through online moods were of great significance in the present age of information and communication technologies. Willingness of the library professionals was an important factor which influenced the adoption of Digital Reference Services in the libraries. Computer literacy was also a leading factor in the implementation of virtual reference sources. Skills of software were mandatory to be grabbed by library practitioners in order to provide efficient services to the users.

Uutoni (2018) conducted study on the provision of Digital Reference Services in Namibia. Findings of the research revealed that specific models were used by the university libraries to answer reference queries of the users. The study showed problems which were a major barrier in the provision of Digital Reference Services to the users. Lack of competency and digital literacy among librarians was a great hurdle to provide reference answers to the users efficiently. The study recommended that librarians should be skilled enough to satisfy the information and research needs of the library users. Trainings should be conducted for the library practitioners so that they could develop essential skills to lead from the front in the present fast changing world. Okeji, Tralagba & Obi (2020) stated that digital skills for the university libraries were of great significance as without learning the emerging technological skills, reference queries of the users couldn't be responded well. The users had become smart and sharp on account of the latest IT tools and they expected librarians to be excellent regarding their expertise in the provision of online services. They mentioned problems being faced by majority of the university libraries. Most of the librarians did not have adequate IT knowledge and skills. They were unable to respond the reference queries through digital moods. They were traditional in their approach and depended on manual reference sources. They were not willing to adapt changes in accordance with the demand of new changes in which technology had replaced the traditional resources and services and the latest methods to provide reference services had taken place.

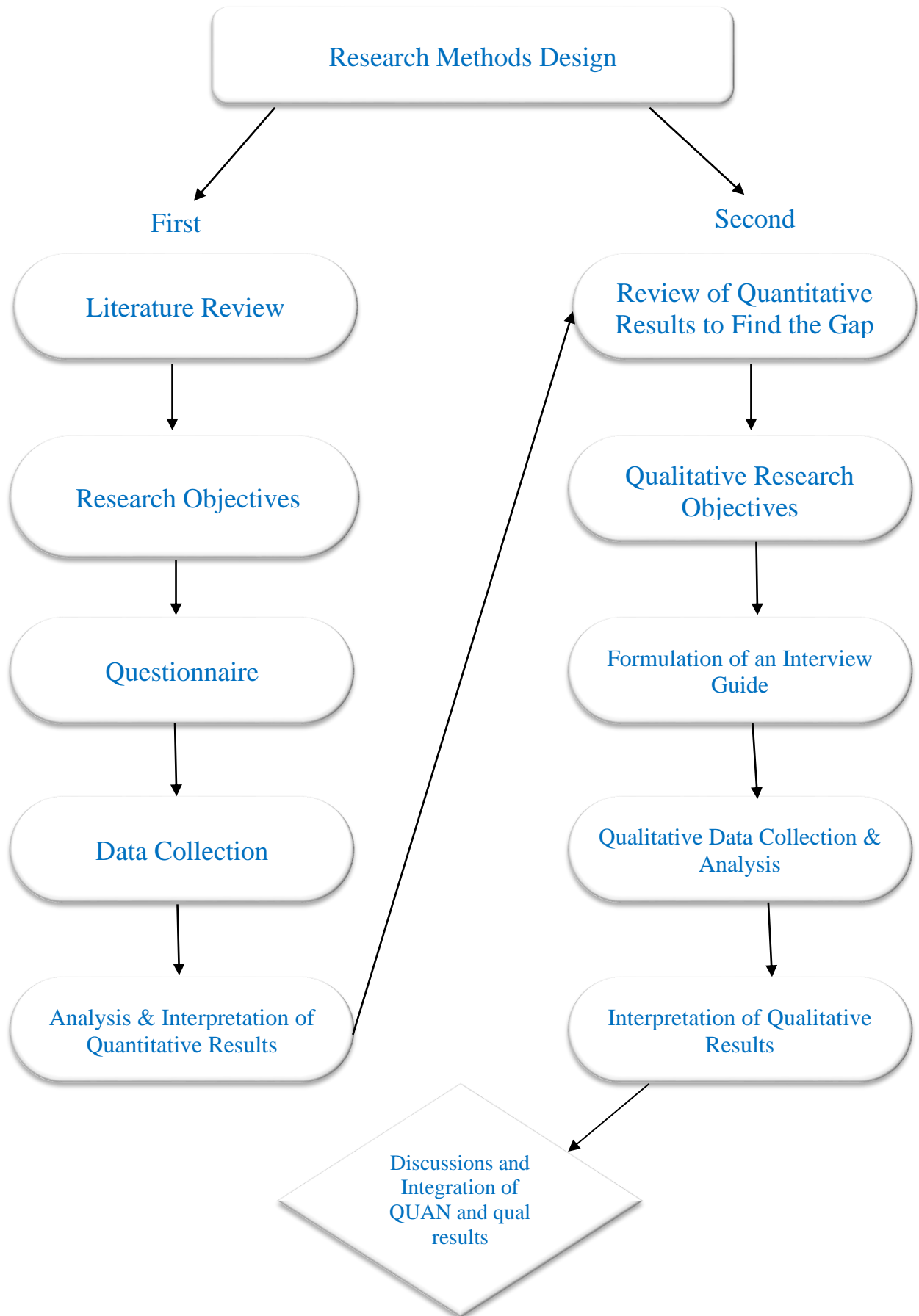
4. METHODOLOGY

Mixed method of research was adopted for this research and survey was done for this study. Quantitative and qualitative data was gathered from HEC recognized universities of both public and private sector universities of Lahore city. The population of this study was the library professionals working in the university libraries of Lahore. The census and purposive sample of the university librarians was taken for quantitative and qualitative data respectively. A questionnaire was designed for quantitative data collection and interviews were conducted for qualitative data. The instruments were validated via experts of the field of library science and pilot testing. The reliability of the questionnaire was ensured through cronbach Alpha and its value was 0.82. After the collection of data, the analysis was done through SPSS. Structured interviews were conducted. Mostly interviews were conducted in Urdu. Thematic approach was used to analyses interviews' data. The data were analyzed according to themes and sub-themes.

The qualitative data depicted that all Chief librarians agree with importance of DRS in libraries. Mostly librarians were in favor of both manual and electronic reference services. Some libraries were in process of implementation of DRS while some have adopted it partially. Librarians were facing problems in providing DRS and due to these obstacles they were refining the reference services. All Chief librarians were in view that DRS has bright future in Pakistan.

Following Figure 1.0 depicts the adopted mixed methods research design of this research:

Figure: 1.0



5. RESULTS AND ANALYSIS

Gathered data have been analyzed here and findings have been furnished too.

5.1 Respondents' types of institution

The table 1 highlights that majority of the respondent 15 (51.7%) were from private sector. 11(39.7%) were from public while 3(10.3%) were from semi government.

Table 1

Respondents' types of Institution

	Frequency	Percentage
Public Sector	15	51.7
Private Sector	14	48.3
Semi Government	3	10.3

5.2 Respondents' experience

The table 2 highlights that 12 (41.4%) respondents had experience of 5-10 years while 6 (20.7%) had experience of less than 5 years. Only 4(13.8 %) were with experience over 20 years.

Table 2

Experience as librarian

	Frequency	Percentage
Less than 5	6	20.7
5-10	12	41.4
11-15	5	17.2
16-20	2	6.9
Over 20 years	4	13.8

5.2 Barriers/challenges for offering Digital Reference Services (DRS)

The results of the Table 3 highlight that one of barrier was lack of training (M=3.93) while less considered barrier was lack of finance (M=3.48)

Table 3

Barriers / challenges for offering Digital Reference Services (DRS)

Barriers	Mean	Standard deviation	Sum
Lack of training	3.93	.842	114
Lack of user's awareness	3.86	.639	112
No planning	3.83	1.022	111
Lack of IT skills of library professionals	3.76	1.023	109
Lack of non-availability of technical	3.55	.870	103
Lack of user's response	3.52	.870	103
Lack of finance	3.48	1.056	101

5.4 Future planning about DRS

The results of Table 5 show that mostly libraries were planning for short messaging services (SMS) (M= 1.76), Video Conferencing (M= 1.66), Email Reference (M= 1.62), Ask a librarian and Online chat /Instant messaging (M= 1.59) and web form (M= 1.48)

Table 5

Planning about DRS

	Mean	Standard deviation	Sum
Short messaging services (SMS)	1.76	.435	51
Video Conferencing	1.66	.484	48
Email Reference	1.62	.494	47
Ask A Librarian	1.59	.501	46
Online chat/ Instant Messaging	1.59	.501	46
Web Form	1.48	.509	56

5.5 QUALITATIVE DATA ANALYSIS

Structured Interviews were conducted to collect information keeping in view the research topic. Interview schedule and questions for interview were finalized. Interviews were conducted in English & Urdu language. Notes were taken during interview. All interviewees were made sure that data would be kept confidential and would be used only for research purpose.

5.5.1 Interview sampling

After receiving and analyzing data from questionnaire, interview sampling was made accordingly. Three public sector universities and three private sector universities were selected.

5.5.2 Data analysis of interview

Structured interviews were conducted. Mostly interviews were conducted in Urdu. Thematic approach was used to analyze the data of interviews. The data were analyzed according to themes and sub-themes.

5.5.3 Importance of DRS

All the six interviewees were agreed with the importance of DRS. An interviewee supporting the idea of DRS said “Virtual reference service has great importance for any modern library to expand their services beyond the library walls especially for remote users, because of easy cheap and fast medium”.

Another interviewee was in the opinion that it is time saving and focuses every researcher as an individual. According to opinion of a public sector chief librarian “Technology has impact on library services, as a result it is facilitating library users. So, we cannot deny importance of Digital Reference Services”.

5.5.4 Difficulties in Implementation of DRS

Interviewees pointed out many factors which were obstacles in implementation of DRS like finance, infrastructure, trained staff.

One interviewee said that “I think the one of the difficulties we faced while providing DRS is copyright law. Sometimes we cannot provide DRS according to copyright laws limitation”

Another interviewee said. “Slow Internet and lack of Wi-Fi facility does create interpretation in providing DRS.”

5.5.5 Problems to provide DRS to users

Interviewees said that DRS was a good service but at present no one was providing this service for 24/7. They were providing services only during working days. At weekend they were bound to limited their activities. One interviewee said that:

“We do not have enough staff to provide this service to user without any delay. We face power failure issue and many times poor internet connection issue. Disconnection from server can delay our services for hours even for days.”

Another interviewee from Public Sector University said:

“Our mostly users are unaware from the use of DRS. They also need some training. Lack of technology culture is obstacle to attract users towards this service”

According to an interviewee from private sector “Lack of environmental support” was pointed out. Another Chief Librarian from public sector said that there was need to increase motivational level of users regarding DRS. He added that problem can be overcome by organizing information literacy programme for users.

5.5.6 Refining DRS

All interviewees were in view that they were refining the DRS, because capacity to refine always existed. One interviewee from private sector said that they had started IM (Instant Messaging) recently and they had plans to introduce some new types of DRS in future also.

Another interviewee from public sector said that “we get opinion from users through survey to refine their all services including DRS”.

An interviewee from public sector said that they were trying to improve their chat reference services now days.

5.5.7 Planning for future.

All interviewees had good plans for future. They all were in view to expand and introduce new types of DRS in their libraries. One interviewee of private sector said that “we are planning to expand it for 24/7 and also we are in process to introduce DRS through what’sapp groups”. An interviewee from public sector said that their plan to adopt some new types of DRS was in pipeline.

6. DISCUSSION:

The quantitative results showed mostly libraries were providing different types of DRS. Some libraries were providing manual reference services along with DRS. Majority of the libraries had professional staff for reference services. Contrary to this, separate reference section was not developed in many libraries. It was attached with another section mostly. However, every library had set up for a separate reference desk. It was clear from findings that in many libraries DRS was at developing stage. Mostly libraries were providing asynchronous DRS, however trends to provide synchronous DRS was also increasing. Results revealed that library professionals did not receive any training to implement DRS in the libraries. They were not enough skilled to adopt latest technological tools for the purpose of implementing DRS in university libraries. They were not sent in training activities. Parent organizations did not provide sufficient learning opportunities. Most of the library professionals were also unaware of the needs of the users keeping in view the changing times. They did not conduct users' satisfaction surveys. They did not have proper awareness of the information needs of library's users thus customized services were not being provided. There was a lack of planning to implement latest technologies in the libraries. Before the launch of any services, proper planning was not made. Stake holders of the libraries were not taking on board to initiate emerging information technologies and launch digital reference services. Library staff was not technologically competent. They were old fashioned. Their schooling was based on old methods of librarianship. They were not updated. They had not upgraded themselves according to the needs of the modern age. Technical assistance was also not provided to the library staff. All tasks related to the implementation of technological tools could not be carried out by library professionals. Technical assistance of the lab staff was also intensely required however in most of the cases, library staff was not supported by technical staff and therefore a number of barriers took place for the successful implementation of DRS in the libraries and end users could not be facilitated through modern-driven-methods, approaches and techniques. The most worth mentioning barrier was related to finance hurdles. Libraries in Pakistan were not provided sufficient funding resources to implement DRS in the libraries. Hardware and software did not exist to launch DRS successfully in the university libraries. The libraries were not on the priority of the government and policy making personalities. Most of the libraries provided only traditional services on account of budget-shortage.

The qualitative data depicted that all Chief librarians were agree with importance of DRS in libraries. Mostly librarians were in favour of both manual and electronic reference services. Some libraries were in process of implementation DRS and some had adopted it partially. Training for staff providing DRS was also being provided in some universities. Librarians were facing some problems to provide DRS and keeping in the view that problems they were refining Digital Reference Services. All Chief librarians were in view that DRS had bright future in Pakistan. The trait of leadership mattered the most in the successful implementation of DRS in the libraries. Active leaders of the libraries could bring ideal changes in the libraries through the implementation of innovative services to facilitate the users and to play a vital role in the uplift of parent organization. Willingness of the top leadership of the Libraries and Universities could implement emerging technological tools to provide efficient services and to enhance the visibility on the whole.

Following Figure 2.0 shows major barriers to adopt DRS in the university libraries in light of the above discussion based upon both quantitative and qualitative results:

Figure 2.0

Major Barriers to Adopt DRS



7. Conclusion and Recommendations

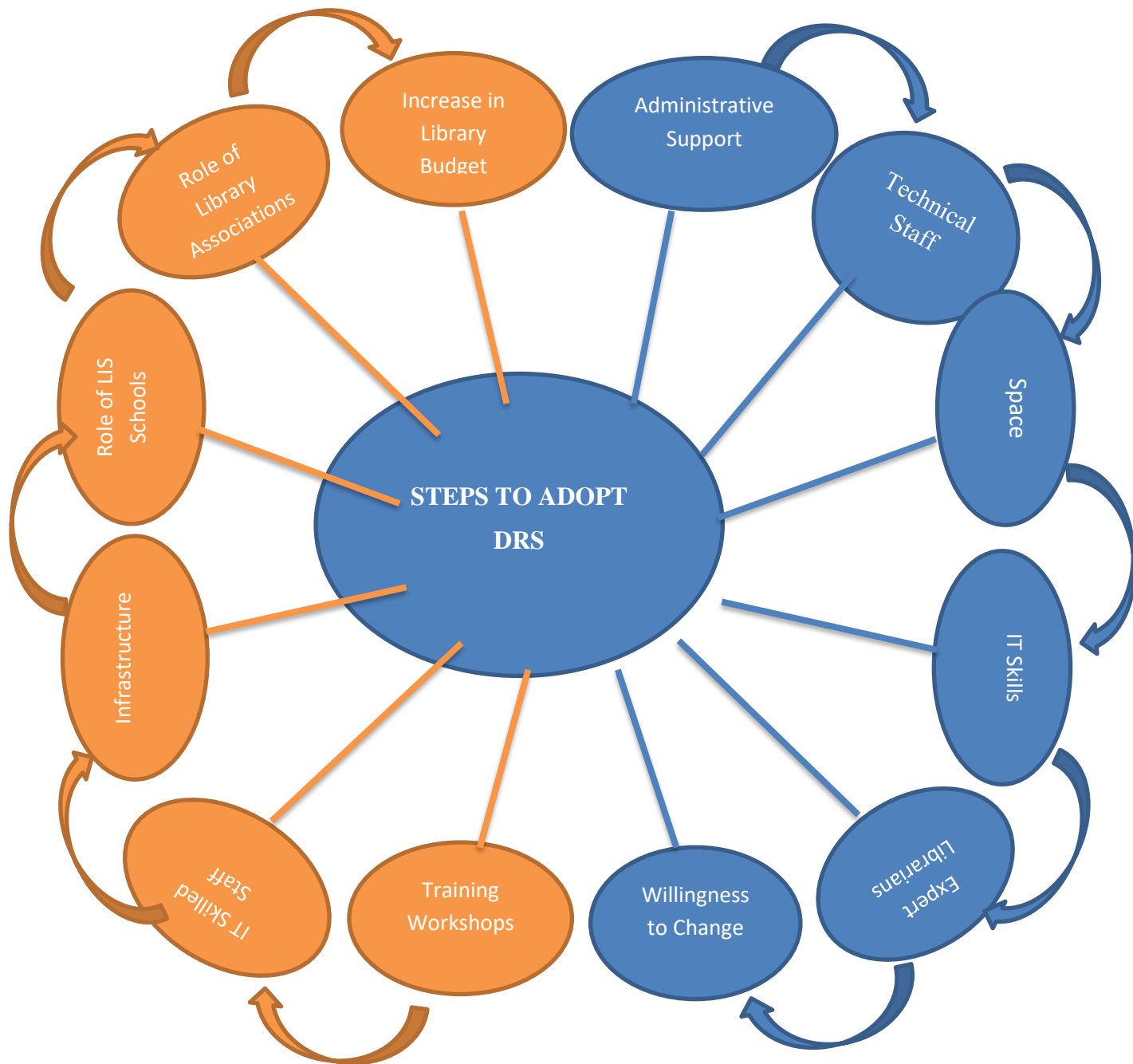
Acquired results reveal that majority of the librarians were providing training to reference staff. They were in favor of organizing information literacy programs. Proper infrastructure was required for implementation of DRS. For this purpose, proper planning and the most importantly finance were required. Majority of the libraries especially in public sector faced finance issue. Lack of computers and other IT equipment were a big challenge for introducing and offering DRS. One big challenge which was pointed out by librarians was unawareness of users. Majority of the users was not aware of the provision of digital reference services. Due to lack of IT friendly culture, users did not prefer online services.

On the basis of conclusion, following recommendations are made:

- Library schools should play their role by arranging information literacy programs about DRS.
- The librarians should try to solve queries through DRS as soon as possible. Possible time of solving query should be given to user or it should be indicated on the web page.
- Librarians should develop electronic separate collection for DRS in their libraries to meet the users' needs.
- The staff engaged in offering DRS must be provided special training so that efficient Digital Reference Services might be provided to the users.
- Finance and budget must be approved before starting any project of DRS in libraries to avoid any inconvenience in future.
- Digital Reference Services should be promoted through social media moods.
- Every library should follow IFLA guidelines for DRS which has clear recommendations and policies for all kinds of libraries.
- Like other library services, there should be written policy for offering DRS in libraries. Proper paper work should be done before implementing DRS.

Measures to adopt DRS in university libraries are also depicted through the following figure 2.0:

Figure 3.0
Measures to Adopt DRS



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