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Fall 11-30-2020

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Mr. Javed Iqbal Rana
Central Public Library Bahawalpur, Pakistan, javedranaiqbal@yahoo.com

Rubina Bhatti Professor Dr.
Chairperson, Professor, library & Infromation Scienece, the Islamia University of Bahawalpur, rubytariq@gmail.com

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Javed Iqbal Rana
Chief Librarian, Central Library Bahawalpur, Pakistan
Also Ph. D Scholar at The Islamia University of Bahawalpur, Pakistan
javedranaiqbal@yahoo.com
Prof. Dr. Rubina Bhatti
Chairperson, Department of Library & Information Sciences
The Islamia University of Bahawalpur, Pakistan
rubytariq@gmail.com

Abstract
*Objectives of the study***:** This study is about the assessing of use of Information Communication Technologies (ICT) in Collection Management (CM) of Public Libraries in Punjab (PLsP), Pakistan.
*Research Design***:**The study was conducted in seventeen PLsP. Target population was the Head Librarians(HLs) of the selected PLsP. Data regarding current status of ICT apparatus, IT staff, available ICT resources and usage of ICT in CM was collected from the concerned HLs through a comprehensive questionnaire. The questionnaire having mostly closed ended questions was constructed in the light of extensive literature review. The data collected from HLs was analyzed and interpreted manually.
*Key Findings***:** Present status of ICT apparatus, IT staff & available ICT resources like internet in PLs was found unsatisfactory and lack of IT professionals & skilled IT staff was note over there. The respondents found convinced about the importance of ICT in CM. Status of usage of ICT in CM was found poor. Absence of required ICT related staff training was also noted. Scarcity of needed funds for ICT and interrupted power supply were found as the pressing issues in PLsP.
*Practical Implication***:** PLsP were recommended to develop their ICT apparatus, ensure qualified IT staff, and enrich their available ICT resources to improve their status of usage of ICT in CM. ICT training of staff, availability of needed funds and arrangements for uninterrupted power supply were also recommended.
*Keywords***:** Public Library, ICT, Use of ICT in Public Library, Collection Management, In-service staff training, Funds for ICT in Public Library.

1. Introduction of Public Libraries in Pakistan

During the first half of the 19th century, some Public Libraries (PLs) were established in the Indian subcontinent for the provision of reading pleasure to educated people in their leisure time (Mahmood, 2008). L.C. Key (1956) observed very poor position of libraries in early days of Pakistan having no active role in enhancing literacy in the society. Khurshid (1990) noted slow library growth in Pakistan and disclosed that libraries had somehow improved their role and provided more opportunities to the people especially the masses at grass root level for availing

the facility of books reading. Mehmood (2008) claimed that some development have been observed with the libraries which introduced information and communication technology (ICT) in library operations and services to keep pace with the time. Resultantly, that innovation gave boost to their service level and they were successfully developing their image for their survival in the modern world.

1.2 Public Libraries and Information Communication Technology (ICT)

Libraries were found fulfilling their responsibility towards abridging digital divide and promoting information literacy (Harada &Tepe, 1998; Salter & Salter, 1991). Oliver et al. (2007) discovered that PLs could play an active role in devising an information literacy program of a suitable level as per need of the community to deliver a low cost IT literacy training to the community members. It was claimed that PLs were considered having the enough potential to perform the role of IT literacy training centres. Public library's traditional role to promote information literacy was recognized to that they have full knowledge about reading behaviors, peoples capacities to absorb and reading requirements of the members of the community. Libraries abridged the information and learning gap and were imparting training to the masses not only to make them learn how to read and write but also to know the methods of finding their required information and using it properly (Harada & Tepe, 1998; Salter & Salter, 1991). Horakeri & Mulimani (2013) contented that the prime objective of a public library was helping people in information literacy and making them know the latest progress in ICT and its proper use. Khan & Bhatti (2017) asserted that it is required that the libraries were required to develop and harness web- based services for bringing back to a broader scenario of digital environment the information seekers community which had confined itself to handy devices of web-based services.

2. Literature Review

Ramzan (2004 b) maintained that the application and use of information technology was national asset. So, the nations which were not keeping pace with the time and were behind in getting the benefits of IT were out of competition in the comity of nations. He also checked the status of IT and IT related apparatus present in libraries and information centers of Pakistan and did not find it satisfactory. Gould & Gomez (2010) established that libraries were the most trusted and well reputed public access ICT venues as they had enough potential and could perform a vital role in minimizing digital divide subject to the condition that their services provision level in respect of ICT be standardized. Chourasia et al. (2015) informed that in the rapidly changing times, libraries had established themselves as the best places of information literacy for adults and aged users to keep themselves in touch with the evolution process. Bakeri et al. (2002) pointed out that after paradigm shift; libraries were passing through a transitory phase to arrive at the ultimate destiny of digital form. Print to hybrid and then to fully digital environment would be their optimum approach. It was claimed that the new approach had been expected to play a revolutionary role in effective and efficient collection management and better service delivery to users. Soroya & Ameen (2018) claimed that millennial (people born during the 1980's and late 1990's) in Pakistani perspective desired to avail hybrid library services with better library timings. Shuva (2005) informed that in transforming the world into a global village,

ICT had been playing a revolutionary role. Resultant revolution had brought about big changes in the operations and services of PLs. It is asserted that with the support of ICT, library operations had been performing expediently and efficiently and library services had become manifold and reader's friendly. Adeleke & Olorunsola (2010) found online technical processing useful, easier and far better than manual cataloguing and classification. He also recommended refresher courses and workshops for the library professional staff to up-date their knowledge about use of online tools for classification and cataloguing. Greiner (1998) described that automation in libraries had deeply influenced users, services and library operations to move them successfully into 21st century. Information technology, during recent past brought about revolutionary changes in library operations and services at international level. ICT had deep impact on library operations like assessment of users need, selection & procurement of library material, technical preparation of printed & other information material, digitization process and inter library loaning mechanism to library services like circulation of library material related processes, on line searching, retrieval, reference and provision of information systems (Nicholas & Rowlands, 2008; Dorner, 2000). With the blessings of Internet, digitization and ability to the easy access of library material had brought myriad changes in distant learning, non-formal education and forms of information itself (Dunlap, 2008; Ramzan 2004a). Vrana (2010) claimed that in Croatia, feeling the importance of digitization in public libraries, efforts were under way to enlarge the available small collection of digital objects in public libraries. Public libraries over there having potential and taking initiative by their own to make addition in their digital collection or digitizing their printed material were being encouraged. Notwithstanding all that it had been found that there was a lack of proper education and relevant training of staff for developing digital collection and digitizing available printed material. Abbas (1997) visualized that this world had become an interconnected and inter-dependent global village and the advent of Internet had changed all the standards of procedure and descriptions of duties and values regarding libraries and librarians. Milnor (1998) informed that less attention in library literature was paid towards harnessing internet facility for improving library services and operational standards. The internet had positively influenced the overall process of collection management and budget saving mechanism in public libraries. Mirza & Mahmood (2013) examined the impact of ICT on human resources in libraries. It was explored that library staff, on one side admitted that application of ICT enhanced sharing of mutual experience among them and found satisfied while working in automated environment and had more opportunities to become aware of latest approaches, progress and developments in the profession world over. On the other side, the library staff apprehended that due to less manual work load, their employment positions were jeopardize as most of the library operations and services were rapidly shifting from manual to automation, Resultantly, they were found hesitant to welcome the adoption of ICT in their libraries despite admitting that awareness about the profession was increased due to information technology. Thanuskodi (2011) explored that public libraries' role for provision of information and knowledge to common man even to a villager had ever been established. After paradigm shift, application of ICT in public libraries had become indispensible not only for a learning

society but also for a common man to keep all the abreast about the progress of country in all fields of national development and technological changes. Barreau (2001) described that although various tools were used for selection of library material, however computers had come up as the better selectors for assessing clienteles' needs, obtaining more information about the library material available in the market and collecting needed material without unnecessary delay. Resultantly, the professionals were found on their ease while working in the electronic supported environment. Kasalu & Ojiambo (2012) asserted that the collection development and management was the backbone of library services. A lengthy process had to be adopted for building comprehensive collection development and its maintenance. Applications of ICT in collection development had saved libraries from unnecessary formalities, gave it accuracy and save the CD policies and procedures from critical problems which were the part with traditional CD. So, ICT played a vital role in overall collection management. Kelly (2015) asserted that observing the collection development policies in the process of acquisition of material in library is a beneficial professional activity due to which transparency and professional objectivity was developed in it. Occasional relaxation in following the standard CD polices was noted on the pretext to focus on local issues and material centered approach. However, supporting the exact information needs of the users and other related issues was considered a complex matter to solve. Buck et al. (2006) explored that periodical collection development and management in various sized public libraries raised questions of similarity and difference of service provision levels with a sense to enable periodical collection to serve all in line with the public library mission of open/free for all. Barreau (2001) explored that the librarians engaged in serial acquisition were found harnessing information systems and electronic resources for serial collection development and management. Such librarians were found comfortable and satisfied in electronic environment while performing the functions of selection and management of needed and alternative material. ICT had made assessing users need, gathering relevant information and obtaining required material much easier as compare to using of manual mechanism. Aiyebelehin (2011) explored that ICT had highly facilitated collection management by making available latest computers, internet, printers, RFID, cell phones, tablets and spine labeling machines. ICT had also much assisted collection development and management processes to make it faster and resultantly ICT had proved itself as a time saving factor in provision of library services and operations. So, ICT helped librarians to develop quality collection in library to satisfy myriad needs of library users. ICT was found the sole source of support through which professional individuals in librarianship could maintain and develop standard collection for information services delivery. Rahman et al. (2004) described that most of the library resources and service improved tremendously with the advent of Information Communication Technology (ICT). Collection development and management had a greater advantage in a way to gradually shift from individual system to consortium concept of resource sharing thus saving budget utilization for duplication. ICT multiplied the chances of availability of required material from more than one source. Miele & Medina (1984) informed that library department in Alabama had introduced so many statewide programs in public libraries to standardize and improve library collection over there. Resource

sharing mechanism and budget system for acquisition of library material were given special attention. In connection with resource sharing drive, library networks for resource sharing, computer-output-microfilm union catalog, reference and interlibrary loan program had been introduced successfully. Khan & Bhatti (2017) maintained that information demands of the clients and shapes of information had changed due to revolutionary advancements in IT field. In view of the above, librarians were required to enhance their knowledge and skills of ICT up to expertise level to meet the challenge of better collection management for better service devilry to users. Hamid & Soroya (2015) and Ameen (2011) observed that required skilled manpower was not present in public libraries to boost the growth of librarianship. In developing countries like Pakistan, public libraries had been found suffering in the fields of resources and services due to non-professional and unskilled ICT staff. Anwar (1993) also noted that majority of librarians were not computer literate, so their disinterest and hesitance towards ICT was natural and an obstacle in adoption of library automation. Walia & Momeni (2011) asserted that in the world, ICT was playing pivotal role in dissemination of information and knowledge. Though, it had positively influenced the whole information scenario yet public libraries were not harnessing the ICT in the befitting manners due to lack of their membership position. Owing to which users of public libraries were suffering badly regarding ICT facilities. Ayoku & Okafor (2015) explored that library managers though possessed working knowledge and basic practice of ICT yet they were not experts of the field and even not well familiar with extensive tools and techniques of research and information retrieval. Mahmood and Khan (2007) recommended IFLA/UNSCO guidelines for development of public library service which stressed upon the training of librarians as an essential responsibility of a public library. The guidelines required public library to make proper arrangements for continuing education and in-service training of its staff on regular basis. The guidelines recommended that in larger library, a responsible officer should be appointed and sufficient budget be allocated for organizing the training program and implementing it there. Need of an extensive continuing education of LIS professionals in Pakistan was stressed upon. It was further explored that basic knowledge of ICT was present with the professionals but it needed to be enhanced up to the expertise level. It was found there that professionals were willing to improve their skills in ICT and looking towards LIS schools and professional associations to organize CE & ICT training programs round the country. Behera & Singh (2011) established in-service training of staff regarding information technology and its ever progressive features as essential through continuing education. Spacey et al. (2003) explored that attitude of library staff did matter in successful implementation of ICT in public libraries. It was noted that a suitable training enabled the staff to accommodate technological changes in the field. An effective training required having full knowledge of needs of staff and appropriate ways and methods to train the staff. Resistance in the way was needed to be taken as natural factor and the managers are required to be conscious about the time of its occurrence.

2.1 State of Affairs in University and Special Libraries

Use of Computer and internet for library operations and services in public libraries is in embroiling state. Public libraries are an ignored sector whereas the university libraries in

Pakistan are leading bodies in the profession regarding use of ICT. Qutab et al. (2014) noted that most of the university libraries were not fully harnessing ICT in their operations of collection management and service delivery to users. However, a few libraries were exception. Most of the university libraries were found engaged in routine library tasks through ICT like books and serial searching for purchase, on line subject heading and classification etc. Library marketing and provision of reference service in university libraries through ICT were flourishing but not yet up to the mark. Kasalu & Ojiambo (2012) found that despite the availability of information and communication technology (ICT) in private universities in Kenya, it had not been adequately harnessed in practices of collection management to develop users' need based collection over there. The study "the impact of information technology (IT) on collection development and management in the Delta State University, Abraka, Toyo (2017) explored that the benefits of ICT, a huge money is being spent on generating, processing and disseminating of information. The study endorsed the use of ICT in library services and operations to confirm the Dr. S. R. Ranganathan's law "save the time of the reader/ staff". Positive impact of ICT in library domain is established provided that ICT systems be upgraded to keep pace with time and in accordance with the ever changing and increasing needs of the users. Khademizadeh (2012) analyzed the use of ICT in special libraries of Iran. It was established that research libraries in Iran were properly harnessing ICT to enhance their role in information identification and its timely retrieval. Instead of confining to traditional mode of action, developing countries needed to adopt the policies which lead to digital environment. It was further recommended that novel acceptance role of librarian regarding ICT needed to be developed through orientation, motivation and training to make the maximum use of traditional as well as electronic collection of libraries. Lee (2005) pointed out that before the advent of ICT, visually impaired people were dependent of others to search their required material but now ICT had enabled those to make vast raged search independently in the disciplines of their own choice.

2.3 Problems Regarding Application of ICT in Libraries

A number of problems were pointed out for making the ICT a success in CM of libraries of Pakistan. Mirza & Arif (2016) explored that libraries in Pakistan are far behind in IT field as the librarians were not provided opportunities to upgrade their knowledge in IT which is making progress overnight. Having no such facility of upgrading their knowledge through continuing education and in-service training, they lack IT skills and found hesitant to welcome the innovations in the field and adoption of ICT in even their university libraries in Pakistan.

King et al. (2006) pointed out that ICT trouble shooting aspect in training programs for librarians was ever found missing. This deficiency required such a training program which was especially designed in context of queries and problems confronted by the library staff while providing the ICT related services in public libraries. Eisenberg et al. (2010) found that present information systems were developed by IT experts keeping in view the anticipated needs of the library users where as it was suggested that the systems should be developed by the users themselves rather than the IT experts alone so that end users can avail with ease the maximum benefits of ICT while using the services and resources of the library. Shafique & Mahmood

(2007) explored that issue of purchase or develop of some software in library was of crucial importance. The study claimed that soft wares in libraries of Pakistan were mostly purchased or developed without expert advice or prior experience of the same. Scarcity of relevant previous and fresh literature in Pakistani perspective regarding selection and evaluation of needed software was also observed. Aiyebelehin (2011) pointed out issues such as delay in delivery, foreign exchange problem, poor bibliographic control, transportation problems in collection development in libraries. He was found convinced that solution of all such problems laid in application of ICT in collection development process in libraries. However, it was noted that interrupted power supply mostly disturb the use of ICT in myriad functions of collection management in libraries. Shuva (2005) discussed the importance of ICT and noticed that in developing countries many problems like shortage of funds, skilled manpower and other logistical support were noted as bottleneck for public libraries to keep their pace with the time to satisfy their users with the benefits of ICT. Nilsen (1994) noted that lack of interest of professional individuals in developing standard collection (print & electronic) in public libraries had been among the serious problems in the practicing field of librarianship. For knowledge management and its dissemination, libraries played a fundamental role. In developing countries like Pakistan with unstable economic situation, the role of libraries was though vital yet they were not found delivering satisfactorily (Shafiullah & Midrarulllah, 2011). Riatt & Oduwole (2005) was also of the view that interrupted power supply was a hindrance in better use of IT even in university libraries. Scarcity of funds was also felt as an obstacle in the way of adoption of ICT in libraries. The studies of Mulimila (2000), Younis (2005) Engstrom (2001), Ani et al. (2005), Amekuedee (2005), Nyamboga & Kemparaju (2002), Ramana & Rao (2003), Raza&Nath (2007), Ramzan (2004), andQutab et al. (2014) also pointed out similar problems and bottlenecks in the way of successful harnessing ICT for collection management in libraries.

3. Objectives of the Study

1- To explore the current status of ICT (apparatus, staff & resources) in public libraries of Punjab, Pakistan
2- To access the usage of ICT on collection management of public libraries in Punjab, Pakistan
3- To explore the problems confronted in application of ICT in collection management of public libraries of Punjab, Pakistan.

4. Methodology

A quantitative survey was considered most suitable and convenient to collect the relevant data. The data pertaining to the opinions of the Head Librarians (HLs) regarding status, importance and use of Information Communication Technology (ICT) in collection management of public libraries of Punjab was collected through a questionnaire constructed for HLs. The questionnaire was constructed in the light of extensive literature review. Closed ended and mostly five point Likert scale questions were included in the questionnaire. 17 public libraries from the province of Punjab, Pakistan included in the study are those functioning under

autonomous bodies, non- governmental organizations (NGOs), local government and provincial government of Punjab (Archives and Libraries Department). Criterion for selection/ inclusion of a public library in the research population was that it should possess nearly 20 thousands books and at least 01 professionally qualified librarian. The survey was conducted and the data was collected from 17 HLs about use of ICT in Collection Management of their respective libraries. The response rate was 100%. Collected data was analyzed and interpreted manually.

5 Analysis of Data collected from Head Librarians regarding ICT status (apparatus, staff & resources) and its usage for collection management in public libraries of Punjab, Pakistan

Table 1 shows the list of 17 selected public libraries from the province of Punjab, Pakistan of which each is represented by the capital alphabet letter given against each.

Table 1: *List of Selected Public Libraries of Punjab, Pakistan (n=17)*

Sr. No.	Name of Public Library	Representation
1	Govt. Punjab Public Library, Lahore	A
2	Govt. Central Library, Bahawalpur	B
3	Govt. Model Town Public Library, Lahore	C
4	Govt. Jinnah Public Library, Sahiwal	D
5	Govt. Public Library, Garh Maha Raja, District Jhang	E
6	Quaid-e-Azam Library, Lahore	F
7	Dayal Singh Trust Library, Lahore	G
8	Dar ul Salam Public Library, Lahore	H
9	Jinnah Municipal Public Library, trust Plaza, Gujranwala	I
10	Ghalib Public Library, Sargodha	J
11	Garrison Public Library, Multan Cantonment.	K
12	Municipal Public Library, Vehari	L
13	Govt. RazaFarooq Memorial Public Library, Peer Mehal, Distt. Toba Tak Singh	M
14	Govt. Public Library, Kamalia, Distt. Toba Tak Singh	N
15	Municipal Public Library, CampanyBagh, Sheikhupura	O
16	Municipal Public Library, City Park, Dera Ghazi. Khan	P
17	Chughtai Public Library, Lahore	Q

Table No. 2: *Status of Presence of ICT Related Electronic Apparatus in PLP (n=17)*

Library	Computer	LCDLED	C.D writer	Printer	Scanner	Multi-media Projector	Digital camera	C.C. camera	Photo Copier	Fax
A	45	45	28	10	04	02	02	07	02	01
B	22	22	12	05	01	01	01	06	01	01
C	30	30	18	03	01	01	Nil	10	01	01
D	15	15	10	02	01	Nil	Nil	05	01	01
E	04	04	02	01	Nil	Nil	Nil	Nil	Nil	Nil
F	46	46	36	10	05	03	03	10	04	02
G	42	42	32	08	03	02	02	08	02	01
H	20	20	13	03	Nil	01	Nil	06	01	01
I	15	15	08	01	01	01	01	05	01	01
J	15	15	05	01	Nil	Nil	Nil	Nil	01	Nil
K	30	30	16	04	01	01	Nil	10	02	01
L	04	04	04	01	Nil	Nil	Nil	Nil	Nil	Nil
M	08	08	08	01	Nil	01	Nil	05	01	Nil
N	09	09	09	01	Nil	Nil	Nil	05	01	Nil
O	08	08	05	01	Nil	Nil	Nil	Nil	Nil	Nil
P	05	05	03	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Q	20	20	20	02	01	01	01	10	01	01

Table 2 being self-explanatory shows that very few libraries have enough computers/ ICT related electronic apparatus but majority of PLs have very poor situation regarding presence of ICT equipment.

Table 3: *Strength of Computer Skilled/Literate Staff in PLP (n=17)*

Name Library	I.T Professional Library Staff	
	IT Professional	IT skilled Individuals
A	01	05
B	Nil	01
C	Nil	02
D	Nil	01
E	Nil	Nil
F	01	04
G	01	04

H	Nil	02
I	Nil	01
J	Nil	01
K	01	02
L	Nil	Nil
M	Nil	01
N	Nil	01
O	Nil	01
P	Nil	Nil
Q	01	03

Table 3 being self-explanatory shows acute absence of IT staff in PLs of Punjab, Pakistan

Table 4: *Status of Availability of ICT Resources in PLP (n=17)*

Library	A/V Material	CD ROMs	Internet	Online databases (Subscribed)
A	501-1000	1-500	Yes	None
B	1-500	1-500	Yes	None
C	1-500	1-500	Yes	None
D	1-500	1-500	Yes	None
E	1-500	1-500	Yes	None
F	501-1000	501-1000	Yes	1-500
G	1-500	1-500	Yes	1-500
H	Above 2000	1-500	Yes	None
I	501-1000	501-1000	Yes	None
J	1-500	1-500	Yes	None
K	Above 2000	501-1000	Yes	Above 2000
L	1-500	1-500	Nil	None
M	1-500	1-500	Yes	None
N	1-500	1-500	Yes	None
O	1-500	1-500	Nil	None
P	1-500	1-500	Nil	None
Q	501-1000	501-1000	Yes	1-500

Table 4 shows the strength of A/V material, CD ROMs, Online Databases in each library out of all the seventeen public libraries of Punjab. Govt. Punjab Public Library Lahore has 501-

1000 items in A/V material,1-500 CD ROMs and no online database, Govt. Central Library, Bahawalpur has 1-500 items in A/V material, 1-500 CD ROMs and no online database, Model Town Public Library Lahore has 1-500 items in A/V material, 1-500 CD ROMs and no online database, Jinnah Public Library Sahiwal has 1-500 items in A/V material, 1-500 CD ROMs and no online database, Garh maharaja public library District Jhang has 1-500 items in A/V material, 1-500 CD ROMs and no online database , Quaid-e-Azam Library, Lahore has 501-1000 items in A/V material, 501-1000 CD ROMs and 1-500 online databases, Dayal Singh Trust Public Library, Lahore has 1-500 items in A/V material, 1-500 CD ROMs and 1-500 online databases, Dar-ul-Salam Public Library, Lahore has more than 2000 items in A/V material, 1-500 CD ROMs and no online database, Jinnah Municipal Public Library Gujranwala has 501-1000 items inA/V material, 501-1000 CD ROMs and 1-500 online database, Ghalib Public Library Sargodha has 1-500 items in A/V material, 1-500 CD ROMs and no online database, Garrison Public Library, Multan Cantt has more than 2000 items in A/V material, 501-1000 CD ROMs and more than 2000 online databases , Municipal Public Library, Vehari has 1-500 items in A/V material, 1-500 CD ROMs and no online database, Raza Farooq Memorial Public Library, Peer Mehal has 1-500 items in A/V material, 1-500 CD ROMs and no online database, Govt. Public Library, Kamalia has 1-500 items in A/V material, 1-500 CD ROMs and no online database, Municipal Public Library, Sheikhupura has 1-500 items in A/V material, 1-500 CD ROMs and no online database, Municipal Public Library, City Park, D. G. Khan has 1-500 items in A/V material, 1-500 CD ROMs and no online database and Chughtai Public Library, Lahore has 501-1000 items in A/V material, 501-1000 CD ROMs and 1-500 online databases

Results of this table represents that all seventeen public libraries have a good number of items in A/V material and CD ROMs. Except 04 following libraries; Quaid-e-Azam Library, Lahore, Dayal Singh Trust Public Library, Lahore, Garrison Public Library, Multan Cantt. & Chughtai Public Library, Lahore, no other library has subscription of any online database. Though, the study explored presence of a good number of items of ICT material in PLP but that resource availability position in PLP is not encouraging enough for successful application of ICT in CM of public libraries.

Table 5: *Importance of ICT in CM as Considered by the Head Librarians in PLP (n=17)*

#	Library	Importance of ICT on CM in PLP
1 to 17	All the HLs found agreed with the points given in the front table about the importance of ICT on CM	(a) Helps in assessing user's needs through online survey, (b) Helps in the marketing of library resources to users instantly, (c)Saves time of the readers as well as library staff, (d) Helps the remote searching of library collection,(e) Places a positive impact on the budget and financial management of library, (f) Assists the acquisition of library materials through online orders, (g) Resolves management problems in the library, (h) Helps in the preservation of library holdings, (i) Help in developing OPAC, (j) Solves copyright and licensing problems, and (k) Helps in evaluation and weeding of old, useless & worn out collection (l) helps in technical processing and circulation of library collection. Online

references

According to table 5 all the respondent library managers are well convinced about the importance of ICT for CM in PLP. All library Managers admitted that ICT ; (a) Helps in assessing user's needs through online survey, (b) Helps in the marketing of library resources to users instantly, (c) Places a positive impact on the budget and financial management of library, (d) Assists the acquisition of library materials through online orders, (e)Resolves management problems in the library, (f) Saves time of the readers as well as library staff, (g) Helps in the preservation of library holdings, (h) Helps the remote searching of library collection, (i).Help in developing OPAC, (j) Solves copyright and licensing problems, and (k) Helps in evaluation and weeding of collection (l) Helps in technical processing and circulation of library Material.

Table 6: *Status of Usage of ICT for CM in PLs of Punjab, Pakistan (n=17)*

Sr. No.	Library	Methods employed for assessing user's needs
1	A	(a) Library partially uses ICT in user's needs assessment process. (b) Library partially uses ICT in library material acquisition process. (c) Library partially uses ICT in technical processing of library material. (d) Library partially uses ICT in circulation process of library material. (e) Library partially uses ICT in user's services delivery processes. (f) Library partially uses ICT in marketing of library resources and services. (g) Library provides internet facility to its users. (h) Library have no its websites but have its webpage. (i) Library have no its OPAC. (j) Library partially uses ICT in security and preservation of library material. (k) Library is not using ICT in the process of stock taking and weeding out library material (l) Library partially uses ICT for its administrative purposes.
2	B	(a) Library partially uses ICT in user's needs assessment process. (b) Library partially uses ICT in library material acquisition process. (c) Library partially uses ICT in technical processing of library material. (d) Library partially uses ICT in circulation process of library material. (e) Library partially uses ICT in user's services delivery processes. (f) Library fully uses ICT in marketing of library resources and services. (g) Library provides internet facility to its users. (h) Library have no its websites but have its webpage. (i) Library have no its OPAC. (j) Library partially uses ICT in security and preservation of library material. (k) Library is not using ICT in the process of stock taking and weeding out library material (l) Library partially uses ICT for its administrative purposes.
3	C	(a) Library partially uses ICT in user's needs assessment process. (b) Library partially uses ICT in library material acquisition process. (c) Library partially uses ICT in technical processing of library material. (d) Library partially uses ICT in circulation process of library material. (e) Library partially uses ICT in user's services delivery processes. (f) Library fully

uses ICT in marketing of library resources and services. (g) Library provides internet facility to its users. (h) Library have no its websites but have its webpage. (i) Library have no its OPAC. (j) Library partially uses ICT in security and preservation of library material. (k) Library is not using ICT in the process of stock taking and weeding out library material (l) Library partially uses ICT for its administrative purposes.

4	D	(a) Library partially uses ICT in user's needs assessment process. (b) Library partially uses ICT in library material acquisition process. (c) Library partially uses ICT in technical processing of library material. (d) Library partially uses ICT in circulation process of library material. (e) Library partially uses ICT in user's services delivery processes. (f) Library partially uses ICT in marketing of library resources and services. (g) Library provides internet facility to its user. (h) Library have no its websites but have its webpage. (i) Library have no its OPAC. (j) Library partially uses ICT in security and preservation of library material. (k) Library is not using ICT in the process of stock taking and weeding out library material (l) Library partially uses ICT for its administrative purposes.
5	E	(a) Library is not using ICT in user's needs assessment process. (b) Library is not using ICT in library material acquisition process. (c) Library is not using ICT in technical processing of library material. (d) Library is not using ICT in circulation process of library material. (e) Library is not using ICT in user's services delivery processes. (f) Library partially uses ICT in marketing of library resources and services. (g) Library provides internet facility to its user. (h) Library have no its websites but have its webpage. (i) Library have no its OPAC. (j) Library is not using ICT in security and preservation of library material. (k) Library is not using ICT in the process of stock taking and weeding out library material (l) Library partially uses ICT for its administrative purposes.
6	F	(a) Library partially uses ICT in user's needs assessment process. (b) Library partially uses ICT in library material acquisition process. (c) Library fully uses ICT in technical processing of library material. (d) Library fully uses ICT in circulation process of library material. (e) Library fully uses ICT in user's services delivery processes. (f) Library fully uses ICT in marketing of library resources and services. (g) Library provides internet facility to its user. (h) Library has its website and webpage. (i) Library has its OPAC. (j) Library fully uses ICT in security and preservation of library material. (k) Library partially uses ICT in the process of stock taking and weeding out library material (l) Library fully uses ICT for its administrative purposes.
7	G	(a) Library partially uses ICT in user's needs assessment process. (b)

Library partially uses ICT in library material acquisition process. (c) Library partially uses ICT in technical processing of library material. (d) Library partially uses ICT in circulation process of library material. (e) Library partially uses ICT in user's services delivery processes. (f) Library partially uses ICT in marketing of library resources and services. (g) Library provides internet facility to its user. (h) Library have no its websites but have its webpage. (i) Library have no its OPAC. (j) Library partially uses ICT in security and preservation of library material. (k) Library is not using ICT in the process of stock taking and weeding out library material (l) Library partially uses ICT for its administrative purposes.

8	H	(a) Library partially uses ICT in user's needs assessment process. (b) Library partially uses ICT in library material acquisition process. (c) Library partially uses ICT in technical processing of library material. (d) Library partially uses ICT in circulation process of library material. (e) Library partially uses ICT in user's services delivery processes. (f) Library partially uses ICT in marketing of library resources and services. (g) Library provides internet facility to its user. (h) Library have no its websites but have its webpage. (i) Library have no its OPAC. (j) Library partially uses ICT in security and preservation of library material. (k) Library is not using ICT in the process of stock taking and weeding out library material (l) Library partially uses ICT for its administrative purposes.
9	I	(a) Library partially uses ICT in user's needs assessment process. (b) Library partially uses ICT in library material acquisition process. (c) Library is not using ICT in technical processing of library material. (d) Library is not using ICT in circulation process of library material. (e) Library is not using ICT in user's services delivery processes. (f) Library is not using ICT in marketing of library resources and services. (g) Library provides internet facility to its user. (h) Library have no its website and webpage. (i) Library have no its OPAC. (j) Library partially uses ICT in security and preservation of library material. (k) Library is not using ICT in the process of stock taking and weeding out library material (l) Library partially uses ICT for its administrative purposes.
10	J	(a) Library partially uses ICT in user's needs assessment process. (b) Library partially uses ICT in library material acquisition process. (c) Library is not using ICT in technical processing of library material. (d) Library partially uses ICT in circulation process of library material. (e) Library partially uses ICT in user's services delivery processes. (f) Library is not using ICT in marketing of library resources and services. (g) Library provides internet facility to its user. (h) Library have no its websites and webpage. (i) Library have no its OPAC. (j) Library is not using ICT in

security and preservation of library material. (k) Library is not using ICT in the process of stock taking and weeding out library material (l) Library partially uses ICT for its administrative purposes.

11	K	(a) Library fully uses ICT in user's needs assessment process. (b) Library fully uses ICT in library material acquisition process. (c) Library fully uses ICT in technical processing of library material. (d) Library fully uses ICT in circulation process of library material. (e) Library fully uses ICT in user's services delivery processes. (f) Library partially uses ICT in marketing of library resources and services. (g) Library provides internet facility to its user. (h) Library has its websites and webpage. (i) Library has its OPAC. (j) Library fully uses ICT in security and preservation of library material. (k) Library fully uses ICT in the process of stock taking and weeding out library material (l) Library fully uses ICT for its administrative purposes.
12	L	(a) Library is not using ICT in user's needs assessment process. (b) Library is not using ICT in library material acquisition process. (c) Library is not using ICT in technical processing of library material. (d) Library is not uses ICT in circulation process of library material. (e) Library not uses ICT in user's services delivery processes. (f) Library partially uses ICT in marketing of library resources and services. (g) Library is not providing internet facility to its user. (h) Library have no its websites and webpage. (i) Library have no its OPAC. (j) Library is not using ICT in security and preservation of library material. (k) Library is not using ICT in the process of stock taking and weeding out library material (l) Library is not using ICT for its administrative purposes.
13	M	(a) Library partially uses ICT in user's needs assessment process. (b) Library partially uses ICT in library material acquisition process. (c) Library fully uses ICT in technical processing of library material. (d) Library fully uses ICT in circulation process of library material. (e) Library partially uses ICT in user's services delivery processes. (f) Library partially uses ICT in marketing of library resources and services. (g) Library provides internet facility to its user. (h) Library have no its websites but have its webpage. (i) Library have no its OPAC. (j) Library is not using ICT in security and preservation of library material. (k) Library fully uses ICT in the process of stock taking and weeding out library material (l) Library partially uses ICT for its administrative purposes.
14	N	(a) Library partially uses ICT in user's needs assessment process. (b) Library partially uses ICT in library material acquisition process. (c) Library fully uses ICT in technical processing of library material. (d) Library fully uses ICT in circulation process of library material. (e) Library partially uses ICT in user's services delivery processes. (f) Library partially uses ICT in

marketing of library resources and services. (g) Library provides internet facility to its user. (h) Library have no its websites but have its webpage. (i) Library have no its OPAC. (j) Library is not using ICT in security and preservation of library material. (k) Library fully uses ICT in the process of stock taking and weeding out library material (l) Library partially uses ICT for its administrative purposes.

| 15 | O | (a) Library is not using ICT in user's needs assessment process. (b) Library is not using ICT in library material acquisition process. (c) Library partially uses ICT in technical processing of library material. (d) Library is not using ICT in circulation process of library material. (e) Library is not using ICT in user's services delivery processes. (f) Library partially uses ICT in marketing of library resources and services. (g) Library is not providing internet facility to its user. (h) Library have no its websites and webpage. (i) Library have no its OPAC. (j) Library is not using ICT in security and preservation of library material. (k) Library is not using ICT in the process of stock taking and weeding out library material (l) Library partially uses ICT for its administrative purposes. |

| 16 | P | (a) Library is not using ICT in user's needs assessment process. (b) Library is not using ICT in library material acquisition process. (c) Library partially uses ICT in technical processing of library material. (d) Library is not using ICT in circulation process of library material. (e) Library is not using ICT in user's services delivery processes. (f) Library partially uses ICT in marketing of library resources and services. (g) Library is not providing internet facility to its user. (h) Library have no its websites and webpage. (i) Library have no its OPAC. (j) Library is not using ICT in security and preservation of library material. (k) Library is not using ICT in the process of stock taking and weeding out library material (l) Library partially uses ICT for its administrative purposes. |

| 17 | Q | (a) Library fully uses ICT in user's needs assessment process. (b) Library fully uses ICT in library material acquisition process. (c) Library fully uses ICT in technical processing of library material. (d) Library fully uses ICT in circulation process of library material. (e) Library fully uses ICT in user's services delivery processes. (f) Library partially uses ICT in marketing of library resources and services. (g) Library provides internet facility to its user. (h) Library has its websites and webpage. (i) Library has its OPAC. (j) Library fully uses ICT in security and preservation of library material. (k) Library fully uses ICT in the process of stock taking and weeding out library material (l) Library fully uses ICT for its administrative purposes. |

Table 06 describes that out of total 17 libraries, 11 (64.70%) libraries partially use ICT in user's needs assessment process, 04 (23.52%) libraries are not using ICT in user's needs

assessment process and only 02 (11.76%) libraries are using fully ICT in user's needs assessment process. 11 (64.70%) libraries partially use ICT in library material acquisition process, 4 (23.52%) libraries are not using ICT in library material acquisition process and only 2 (11.76%) libraries are fully using ICT in library material acquisition process. 8 (47.06%) libraries partially use ICT in technical processing of library material, 4 (23.52%) libraries are not using ICT in technical processing and 5 (29.42%) libraries are fully using ICT in technical processing. 7 (41.18%) libraries partially use ICT in circulation process of library material, 5 (29.42%) libraries are not using ICT in circulation process of library material and 5 (29.42%) libraries are fully using ICT in circulation process of library material. 9 (52.94%) libraries partially use ICT in user's services delivery processes, 5 (29.42%) libraries are not using ICT in user's services delivery processes and only 3 (17.65%) libraries are fully using ICT in user's services delivery processes. 12 (70.59%) libraries partially use ICT in marketing of library resources and services, 2 (11.76%) libraries are not using ICT in marketing of library resources and services and only 3 (17.65%) libraries are fully using ICT in marketing of library resources and services. From the total 17 respondent libraries 14 (82.24%) libraries provides internet facility to its users, and 3 (17.65%) libraries are not provides internet facility to its users. 12 (70.59%) libraries have their webpages and 5 (29.42%) libraries have not their webpage. 14 (82.24%) libraries have not their proper website and only 3 (17.65%) libraries have their proper website. Only 3 (17.65%) libraries have their OPAC but remaining 14 (82.24%) libraries have not their OPAC. Only 3 (17.65%) libraries are fully using ICT in security and preservation of library material, 7 (41.18%) libraries are partially using ICT in security and preservation of library material and 7 libraries are not using ICT in security and preservation of library material. 12 (70.59%) libraries are not using ICT in the process of stock taking and weeding out library material, one (05.88%) library is partially using ICT in security and preservation of library material and only 4 (23.53%) libraries are using ICT in security and preservation of library material. 13 (76.47%) libraries partially use ICT for its administrative purposes, one (05.88%) library is using ICT for its administrative purposes and only 3 (17.65%) libraries are using ICT for its administrative purposes.

6. Problems Confronting in the Way of Successful Application of ICT in CM of PLsP

Head Librarians of the understudied 17 public libraries think that non-availability of enough ICT apparatus, absence of IT professionals & skilled staffs, shortage of IT resources, scarcity of needed funds, and interrupted power supply are the pressing issues in the way of successful application of ICT in CM of PLsP. Public librarian themselves have no proper ICT knowledge and expertise. So, due to lack of ICT knowledge and absence of opportunities for them to learn & up-grade their ICT knowledge and training, they are hesitant in application of ICT in CM of PlsP. They also think that ICT may jeopardize their job status as a bigger workload is being shifted from manual to automated system.

7. Findings

Following are the findings of this research article:

- ➢ Heavy majority of the public libraries in Punjab, Pakistan were found not having even sufficient printed material and qualified librarians.
- ➢ Some ICT related apparatus was found present in public libraries of Punjab. But, that too was out dated and was not found enough or successful application of ICT in collection management of public libraries of Punjab, Pakistan.
- ➢ Majority of public libraries in Punjab, Pakistan were found having no IT staff. Only 04 out of 17 selected public libraries have 01 computer professional each with computer skilled staff.
- ➢ Over all condition of availability of ICT resources in public libraries of Punjab, Pakistan was found very poor. Some of the public libraries in Punjab even did not have internet connections. Subscription of data bases in public libraries was rare.
- ➢ Public librarians were found well aware of the importance of ICT in public libraries but due to lack of expertise in ICT, their disinterest to apply it over therein collection management was found.
- ➢ Public librarians were found unable to enhance their knowledge and skill up to the expertise level in the ICT field due to non-availability of in-service trainings opportunities in PLs
- ➢ Interrupted power supply and scarcity of available funds were also found as the most pressing hindrances in the way of successful application of ICT in collection management of public libraries of Punjab, Pakistan.
- ➢ Usage of ICT in collection management of public libraries of Punjab, Pakistan was found nearly absent.

8. Conclusion

This study concluded that public libraries in Punjab (PLsP), Pakistan have very poor condition regarding ICT apparatus, IT staff, available IT resources and its usage over there. Insufficient and out dated ICT apparatus, unskilled staff and poor ICT resources, scarcity of needed funds and interrupted power supply are the main hindrances to apply ICT in CM of PLsP. Public librarians neither have required expertise of ICT applications nor they have opportunities to enhance their required ICT skill through in service trainings so they are hesitant to harness ICT in collection management of public libraries. In the study, frequent in-service trainings of ICT for librarians , availability of needed funds and arrangements for uninterrupted power supply have been recommended for PLsP. PLsP were strongly recommended to develop their present electronic and digital (ICT) apparatus, ensure presence of qualified IT staff, and enrich their available ICT resources to improve their status of usage of ICT in CM.

9. Recommendations

- ➢ Public libraries of Punjab, Pakistan are strongly recommended to develop their present electronic and digital apparatus, ensure presence of qualified IT staff, and enrich their available ICT resources to improve their status of usage of ICT in CM.

> ➢ Public libraries of Punjab, Pakistan are also recommended to arrange frequent in-service trainings of ICT for their librarians and other technical staff to enhance their knowledge and expertise for application of ICT in their CM.
> ➢ Public libraries of Punjab, Pakistan are further recommended to ensure the availability of needed funds and arrangements for uninterrupted power supply for successful application of ICT in their collection management.

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