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**HEC Digital Library and Higher Education: Trends and  
Opportunities for Faculty Members at the Islamia University of  
Bahawalpur, South Punjab, Pakistan**

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# **HEC Digital Library and Higher Education: Trends and Opportunities for Faculty Members at the Islamia University of Bahawalpur, South Punjab, Pakistan**

## **Abstract:**

Digital library resources have radical impact on the changing higher education environment. This study investigated the tendency of using DL including purposes, patterns, use of databases, e-journals and e-books that they use, DL usage places preferences, impact of DL on their teaching and research and the problems faced by faculty members at the Islamia University of Bahawalpur, South Punjab, Pakistan.

A structured questionnaire was utilized to collect data from the 120 faculty members from Faculty of Arts, Sciences, Education, and Islamic Learning. Data were analysed using descriptive statistics: frequency counts and percentages. The study showed that the majority of faculty members of the Islamia University of Bahawalpur do not make the most productive use of HEC digital library as they ought to be. Of 120 respondents, 20% of faculty members research followed by 19% for doing MPhil and PhD. 13% are shown to consult DL for teaching purpose and 10 % for guiding their research students. The responses regarding the use of DL sources revealed that 24 % use databases, followed by e-journals by 23%. E-Books are preferred to use by 18% followed by abstracting and indexing services by 16% of faculty members. They have not been positively motivated due to some factors i.e. lack of computers, slow speed, overworked and electricity failure etc. It is interesting that DL use among faculty members in the Faculty of Science at the Islamia University of Bahawalpur is much higher than their counterparts in the faculties of Social Sciences, Education and faculty of Islamic Learning. It is broadly used for teaching and research purposes. The other issue was lack any formal training about how to locate these resources by saving time and efforts, English language problem, and lack of access from home are found to be the major problems. The Islamia University of Bahawalpur needs to improve its IT infrastructure, including providing more computers at workplace and the library. It also indicates the needs for organizing formal digital literacy programmes for teaching the users the art of searching pertinent information on the HEC digital Library.

**Keywords:** Higher Education Commission, HEC Digital Library, teaching and research, Faculty members, the Islamia University of Bahawalpur

## **Introduction**

Bekele (2002) indicated that the digital library has positive impact on professional learning, information sharing and thus supporting research activities. According to Borgman, C. L. (1999) “studying DL use in academic and corporate settings, we should include research into how DLs transform home life, the workings of

local communities, and the activities of small community organizations, all of which are important in determining how we stitch together our days”. Dorner (2004) maintained the benefits of digital library and its impact on teaching and research development. He discussed the day by day increasing use of digital library resources has brought high interest in conducting research.

Higher Education Commission, Pakistan started its Digital Library services in February, 2004. Initially it subscribed eight databases, with the assistance of the UK's International Network for the Availability of Scientific Publications (INASP), in association with the execution of their Programme for the Enhancement of Research Information (PERI). The databases consist of mainly the field of science and technology, and include peer reviewed journals and abstracting services. Other resources include subject and multidisciplinary databases, resources in social sciences and humanities, e-books that use the McGraw-Hill platform, Oxford University Press and Taylor and Francis journals and reference works, and open-access e-books and journals. The HEC has acquired e-resources using a consortium (Higher Education Commission of Pakistan (n. d.).

HEC National Digital Library (DL) is a programme to provide electronic resources to researchers within public and private universities and non-profit research and development organizations in Pakistan. It gives access to international scholarly literature based on electronic (online) delivery, providing access to high quality, peer-reviewed journals, databases, articles and e-Books across a wide range of disciplines. HEC DL has launched e-brary and McGraw Hill Collections to provide around 50,000 online books in addition to more than 24,000 journals that have been made available. The e-books support programme will allow researchers to access most of the important text and reference books electronically in a variety of subject areas (Higher Education Commission of Pakistan (n. d.).

### **Accessing HEC Digital Library’s databases, e-books and e-journals**

The main objective of the DL is to support and strengthen the learning activities of students in Pakistan. The students, faculty and staff will have the access of E-books and all of the powerful research technologies offered through this platform.

Over 220 leading international publishers have been identified for the access including Oxford University Press, Taylor & Francis, Blackwell Synergy, BMJ publishing Group, Cambridge University Press, Emerald, John Wiley & Sons, The McGraw Hill Book Companies, MIT Press, Springer Publishing Company, Stanford University Press and Sybex Inc, United Nations University Press etc. containing a vast collection in varied disciplines, such as Business and Management, Information Technology, Engineering, Health and Biomedical, Life and Physical Sciences, Social Sciences, etc (Higher Education Commission of Pakistan (n. d.).

The salient features of the DL service include automatic save links to highlights, bookmarks and notes and storing them in personal bookshelves. The bookshelves can be shared by patrons, teaching staff, and administrators and items can be deleted at any time.

Moreover, InfoTools instantly links patrons from the full-text to other content within Ebrary databases, online resources within the subscribing library (federated search engines, ILS, dictionaries, encyclopedias, and third party databases), information on the web such as definitions, translations, maps, web search engines, and bibliographical information. InfoTools also allows patrons to highlight, annotate bookmark, print, copy and paste text from any document into any text application, complete with customizable bibliographical citations (Higher Education Commission of Pakistan (n. d.).

### **Objectives of the Study:**

The objectives of the study are:

- To explore the extent of HEC Digital library usage by the faculty members teaching and research.
- To solicit their purpose of seeking information on DL.
- To investigate the kind of resources consulted by faculty members.
- To find out their preferred place for DL usage and time spent per week.
- To identify the impact of DL on their teaching and research
- To find out what problems are faced by faculty members in seeking information HEC DL.

### **Research Design**

A survey research method was used to collect needed information in order to achieve the objectives of the study. The questionnaire was pilot tested on 18 faculty members and the data for this study was acquired from 120 faculty members from all four faculties of the Islamia University of Bahawalpur: Faculty of Arts, Faculty of Islamic Learning, Faculty of Education, and Faculty of Science. Moreover, a comprehensive review of related literature was conducted for the study.

## **Literature Review**

### ***The Importance of Digital Library for Teaching and Research in Academic Institutions***

Abdul Mannan and Naved (2009) studied the purpose of using e-journals, the level of information, problems faced by researchers and impact of e-journals on researchers' work. It shown a good level of awareness and motivation to using e-journals among most of the respondents educational and research purposes.

The use of Science Direct online resources and alert services among the patrons in India were studied by Munnolli (2005). It concluded that users show an overwhelming response towards Science Direct online resources and alert services and considered it very useful for information searching, accessing and retrieval. The limitations identified were inadequate awareness about the advanced techniques of online databases thus recommended the regular provision of user education and library orientation programs regarding online databases for enhanced usage.

Another study by Borrego et al.(2007) discuss the users' awareness, preferences and extent of satisfaction with electronic resources at Catalan University. The study indicated a good level of awareness and adoption and utilization of electronic resources to fulfill their information needs.

A study aimed at exploring the use of the digital library and e-resources among faculty members and instructors of 119 higher education institutions in United States by McMartin et al. (2008) concluded that most of the experienced faculty members do not rely on the digital library for their research needs. Lyn (2007) concluded that e-resources had little impact on toxicology literature.

The advent of new information and communication technologies in Pakistani academic institutions and their libraries is creating an environment that is continuously changing. Pakistani universities have to meet global academic standards and inculcate universal academic values by using new information and communication technologies; on the other hand, they have to respond to the peculiar demands and needs of their society. Bhatti and Chohan, (2013) indicated that “Higher Education Commission has played a considerable role for the up-gradation of education and research in the country keeping in consideration of the demands of modern era”.

At the same time, the teaching-learning process and research functions of in all academic institutions worldwide have become more exigent and challenging. Academics, researchers and students need extensive and well-timed information that is accurate, valid and current; these can be achieved by using digital libraries and Internet. The information users are becoming responsive to the potential benefits of digital libraries, and bet exploiting the database for teaching, learning, research and keeping abreast with the recent trends. Having considered that, there is a need to analyse the purpose of utilizing DL resources in order to provide relevant resources, services and digital library system design. Such studies on digital library usage pattern also facilitate library professionals to provide effective services by modifying old information provision process by using electronic tools. The need for new, more effective, methods and techniques of facilitating users in developing countries (Pakistan included), which will involve new ideas and new technology in libraries, can no longer be escaped.

Although little emphasis is placed into the curricula of most higher education institutions on educating library and information users in information retrieval techniques on digital library, significant activity has been taking place in educationally advanced countries. In this paper the authors appraise, through a study of HEC Digital Library usage patterns, purposes, impact and difficulties faced by the faculty members in the Islamia University of Bahawalpur. Previously published work on the subject is scanty and superficial. The researchers’ efforts form a significant and original contribution to the professional literature in the field.

The quality of higher education in Pakistan requires ongoing changes and development in the teaching-learning process. Faculty members in universities need to get involved in doing the research that is the pillar of development for all the nations. But unfortunately, the amount of research by academics into their disciplines is simply inadequate. Mohammad Asghar (1992) listed some main problems as the lack of opportunities for proper training, appropriate guidance, availability and access to information sources, financial assistance and sponsorship, encouragement, publication or dissemination of research findings, and personal interest and initiative. The problems of unavailability and access to information as mentioned by M. Asghar in 1992 seemed to be solved by HEC Digital Library in Pakistan.

The Nasser Al-Saleh (2004) identified some main obstacle for making efficient use of digital library that include the and insufficient availability of computers and computer labs, lack of professional librarians, lack of awareness instructions for accessing or retrieving information (pp. x-xi). Asghar and Bhatti (2011) identified that “marketing can be applied in libraries like any other profit organizations. It is necessary for involvement of users in development process of new library services and products and maximizing library usage. New channels for information provision should be used for timely delivery of services and products”.

The countries with advanced education systems developed extensive teaching learning strategies, planned to train their students for a wider market place, through the ways of lectures, seminars, workshops, handouts, and Web-based tutorials. The faculty in Pakistan must identify and use new teaching strategies designed to support the teaching, learning, and research goals of the university. The further inducement for such a change have been the explosion and proliferation of information in various formats, changing patterns of information seeking and retrieving, hence the need for investigating DL usage in this changing higher education environment. This is the first attempt to study the use of the internet by the university faculty. Its findings should help the University in its plans and programmes related to e-learning and strengthen pertinent resources and services of its libraries.

## **Data Analysis**



## Demographics of Respondents

The responses received from one hundred and twenty faculty members in the Islamia University of Bahawalpur. The population consisted of fifty lecturers, fifty Assistant professors, ten Associate professors and ten professors. The data shows that seventy five members of academic staff hold Masters Degree, twenty of them possess M.Phil, and ten has got the Doctorate. Of 120 respondents fifty were female and seventy were male. Almost half of the respondents (50%) are working more than fifteen years and 25% for ten years and the remaining 25% are working for more than five years.

## Use of Higher Education Commission Digital Library by faculty members at the University

### Purposes for using HEC Digital Library by faculty members

The data showed that the faculty members at the Islamia University of Bahawalpur have a variety of purposes for using the HEC Digital Library. Of 120 respondents, 20% of faculty members research followed by 19% for doing MPhil and PhD. 13% are shown to consult DL for teaching purpose and 10 % for guiding their research students. Frequencies are presented in Table 1.

	<b>Options</b>	<b>Frequency</b>	<b>Percentage</b>
1	Research purpose	25	20%
2	For doing M.Phil and PhD	23	19%
3	Teaching purpose	16	13%
4	For writing a research paper for a journal or conference	15	12%
5	Guiding researcher students	12	10%
6	Developing up-to-date knowledge	10	08%

## Sources of information used on HEC Digital Library

The responses regarding the use of DL sources revealed that 24 % use databases, followed by e-journals by 23%. E-Books are preferred to use by 18% followed by abstracting and indexing services by 16% of faculty members. The use of all these resources was found to be higher among the faculty members from the faculty of Science than the other faculties. The frequencies of responses are shown in table 2.

<b>Table 2. Sources of information on HEC Digital Library</b>			
	<b>Options</b>	<b>Frequency</b>	<b>Percentage</b>
1	Databases	30	24%
2	E-journals	28	23%
3	E-books	22	18%
4	Abstracting & indexing services	20	16%
5	E-encyclopedias	18	15%

### **Time Spent on HEC Digital Library per Week**

The responses regarding time spent for consulting HEC DL resources per week showed that 40% of respondents spend 08-06 and 06-04 hours a week. Of 120 respondents only six faculty members (5%) use it for 20-15 hours per week. Other responses are presented in table 3.

<b>Table 3. How Many Hours per week</b>			
	<b>Options</b>	<b>Frequency</b>	<b>Percentage</b>
1	20-15 hours per week	06	05%
2	15-10 hours per week	10	08%
3	10-8 hours per week	16	13%
4	8-6 hours per week	24	20%
5	6-4 hours per week	24	20%
6	4-2 hours per week	20	16%

### **Preferred Places for HEC DL Usage**

Faculty members were asked about their convenient places for consulting HEC DL resources and databases. The data shows that 24% use these resources at their

workplaces followed by 20% at the university computer laboratories. University main library and departmental libraries are being used by 14% and 12% respectively. Respondents mentioned that it is hard to get access HEC digital library resources at their homes.

### Preferred Places for DL Usage

	Options	Frequency	Percentage
1	Workplace	29	24%
	Computer Lab	25	20%
2	University Main Library	17	14%
3	Departmental library	15	12%
4	Home	0.00	0.00%

### Impact of HEC Digital Library as perceived by faculty member

The purpose of this question was to solicit faculty members' opinion regarding the impact of HEC DL resources. The detail of responses is presented in the following table:

	Options	Frequency	Percentage
1	Saves from troublesome browsing of print material	33	27%
2	Less time	32	26%
3	Fast access to unlimited resources	30	25%
4	Faster and easier communication	30	25%
5	Less effort	28	23%
6	Useful for accessing distant publications	26	21%
7	Helps developing up-to-date knowledge	19	15%
8	Makes independent in searching all types of resources	12	10%
9	Automatically saves links, highlights, bookmark and notes and storing	12	10%

## Difficulties while seeking information

A question was asked regarding the difficulties faced by SS while using the HEC DL. Majority (58%) complained for the shortage of computers in the university library and their departments, followed by 55% who said that electricity load shedding is the main problem. Of 120 respondents 51% pointed out the difficulties they face are; lack of time and 46% considered slow speed. 37% pointed out that lack of awareness and training about digital information retrieving techniques is a major problem. 29% mentioned lack of user education and 40% thought that all the material on digital library is in English language. Their responses are presented in Table 8.

	Options	Frequency	Percentage
1	Inadequate number of computers	70	58%
2	Electricity failure	67	55%
	Lack of time	62	51%
	Overworked	58	48%
3	Slow speed	56	46%
4	English language problem	48	40%
5	Lack of awareness	45	37%
6	Lack of technical support and security	44	36%
7	Lack of user education	35	29%

## Discussion and Conclusion

The study showed that faculty members of the Islamia University of Bahawalpur do not make the most productive use of HEC digital library as they ought to do. As literature is evident that digital library resources have radical impact on the changing higher education environment in developed as well as developing countries; faculty members have not been positively motivated due to some factors i.e. lack of

computers, slow speed, busy schedule and load shedding problems. It is interesting that DL use among faculty members in the Faculty of Science and Faculty of Management Sciences at the Islamia University of Bahawalpur is much higher than their counterparts in the faculties of Social Sciences, Education and faculty of Islamic Learning. It is broadly used for teaching and research purposes. The faculty members in the Faculty of Science are making most use of the Internet facility; however, faculty members from other faculties also showed an increased interest into internet resources. Academic resources offered online in their disciplines are reported to be inadequate (as compared to online academic resources in Sciences) and mostly in English language. The other issue was lack any formal training about how to locate these resources by saving time and efforts. Slow speed, lack of computers, lack of time, and lack of access from home are found to be the major problems. For this purpose, The Islamia University of Bahawalpur needs to improve its IT infrastructure, including providing distance access. The use of electronic information sources for study and research purposes must be encouraged and proper training should be provided.

The study also pointed out that that the HEC Digital Library in IUB has gradually been changing the way faculty members seek, retrieve and use information. Due to fact that the DL provides better and faster access to sources of information, the Faculty members tend to moving towards it step by step. The data acquired through this study showed a realistically positive picture of DL use. Majority of faculty members at IUB seemed to realize the fact that in order to survive in new information era they are willingly ready to cope with the challenges posed by new information and communication technologies. Faculty members do not rely only on print sources of information any more rather exploiting the internet for teaching, research, doing MPhil and PhD, guiding research students, writing and submitting articles to journals and conferences. Another factor that is leading them towards internet is the inadequacy of latest books, journals and reference material in the university main and departmental libraries. They understand the value of it for keeping themselves up-to-date and well informed of the latest trends in their fields of interests. Though not totally satisfactorily, but a reasonable number of respondents are aware of the usefulness of E-journals E-books, E-encyclopedias, E-dictionaries, Online abstracting

& indexing services, Online bibliographical services and databases for teaching, research and other purposes.

This is the first comprehensive study of the use of the DL by the University faculty. It is hoped that its findings would help the University and its libraries in its policies and programmes related to e-learning to facilitate teaching and research. Advancements in computers and other information and communication technologies have drastically changed the library and information environment. Now there is a paradigm shift from traditional libraries to library and information networks, available via the Internet, can provide end-users with a seamless connection to Internet-based services. Moreover, we are surrounded by automated, digital, and virtual libraries as well as by networked data, specialized networks, and library networks. Digital libraries, databases and the Internet have further made the job of library and information professionals more challenging.

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