

# DIGITAL DIVIDE AND DIGITIZATION INITIATIVES IN PAKISTAN: A BIRD'S EYE VIEW

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## **Abstract**

The process of digitization in libraries of Pakistan is at a very initial stage. Pakistan is lagging behind developed countries due to many reasons such as: funding, computer illiteracy and expertise in digitization. However, some institutions like the Higher Education Commission, the Punjab University Library, the National Library of Pakistan and some private organizations are doing digitization. In social sciences, digitization is being done to preserve the cultural heritage of manuscripts and other old literature related to the history and culture of Pakistan. There are nearly 0.15 million manuscripts in Pakistan in Arabic, Persian, Urdu, Pashto, Sindhi and Sanskrit languages. Some are available in libraries of Pakistan while others are in Personal collections. Bibliographies of most of these manuscripts are available. Hence, there is a great need and opportunity to digitize this literature.

This paper presents a status report on digitization initiatives in Pakistan.

**Keywords:** Digital divide; Digitalization; Manuscripts; Pakistan; HEC.

## **1. Introduction**

The term digital divide refers to the gap between those people with effective access to digital information and technology, and those without access to it.

The digital divide is "the troubling gap between those who use computers and the internet and those who do not" [1]. The term initially referred to gaps in the ownership of, or regular access to, a computer. As Internet access came to be seen as a central aspect of computing, the term's usage shifted to encompass not only hardware gaps but also access to the Internet. Recognition of the digital divide as an immense problem has led scholars, policy makers, and the public to understand

the “potential of the Internet to improve everyday life for those on the margins of society and to achieve greater social equity and empowerment”. Advances in information and communication technologies and development of the Internet have in fact, resulted in developing knowledge societies while fueling their growth. The Information Communication Technologies (ICTs) offer compact storage, quick retrieval and fast communication of information.

The growth of the Internet and development of the web have led to an information and communication revolution and facilitated world wide sharing of information resources. The networked digital documents are increasingly accepted as a medium for recording and transmission of information because of their better appeal, elimination of the need for physical storage, economical accessibility, fast speed, and possibility of their simultaneous use by several users. Digital collections have helped to realize the goal of universal availability of publications in the real sense.

Digitization is the process of converting information into digital formats. Digitizing information makes it easier to preserve, access, and share. For example, an original historical document may only be accessible to people who visit its physical location, but if the document content is digitized, it can be made available to people worldwide. There is a growing trend towards digitization of historically and culturally significant data. The process of digitization in libraries of Pakistan is at its initial stage. Pakistan is behind developed countries due to many reasons such as: computer illiteracy and lack of funds and expertise for digitization in libraries. However, a few institutions like the Higher Education Commission, the Punjab University Library, the International Islamic University Library [2&7], the National Library of Pakistan and a few other public and private organizations are doing digitization. While in Pakistan the process of digitization in libraries is in its infancy, the R&D Institutions of Science & Technology have now felt the need and importance in research and are doing digitization.

## **2. The Higher Education Commission [3]**

The Higher Education Commission (HEC) has been set up by the Government of Pakistan to facilitate the development of indigenous universities to become world-class centers of education, research and development. The Higher Education Commission is dedicated towards meeting the development challenges and opportunities that the recent rapid evolution in information and communication technologies (ICT) has brought about, so that these opportunities can be effectively leveraged to address fundamental development challenges of poverty reduction and sustainable economic development. A host of programs have been introduced

to establish a world-class ICT infrastructure which provides high-speed internet connectivity to universities across the country. These initiatives lay the platform for the delivery of a range of ICT-based educational services, including a world-class Digital Library and Video Conferencing Facilities along with many other initiatives. The leveraging of ICT in order to support higher education reform and the development of a research culture in Pakistani universities is essential. By helping to bridge the digital divide between institutions in Pakistan and the developed world, and providing the research community with the tools and skills to maximize the potential of ICT as a mechanism for economic development, HEC is striving hard. The Pakistan Research Repository is an ongoing project of the Higher Education Commission to promote the international visibility of research originating from institutes of higher education in Pakistan and to join global initiatives in promoting open access to scientific literature.

The Higher Education Commission has started the digitization of doctoral & post doctoral dissertations of different universities and colleges. The HEC collects M. Phil and PhD theses and dissertations from Universities of Pakistan. Digitization is being done through outsourcing. The HEC has also established the Pakistan Research Repository. Currently more than 1600 Ph.D. theses published in Pakistan's universities have been made available with full text downloadable functionality. The repository is being uploaded with new theses continuously and is estimated to hold more than 3200 theses by the end of 2008. Digitization of M. Phil as well as Master level theses has also been initiated. Digital Library is a program to provide researchers (in public and private universities in Pakistan, non-profit research and development organizations) with access to international scholarly literature based on electronic (online) delivery, which means access to high quality, peer-reviewed journals, databases and articles across a wide range of disciplines, to over 30 databases and 20,000 full text journals from the world's leading publishers. Digital Library is accessible to approximately 250 institutions (Public Universities, Private Institutions, and R & D Organizations). One million articles were downloaded in 2005. Access to collection of over 150 million items is available through British Library Document Delivery Service. A selection of over 10,000 e-books is available open access for researchers

### **3. National Library of Pakistan [4]**

The National Library of Pakistan (NLP) serves as cultural center of the capital. Library is intended to be a reference library for all purposes, a working place for scholars, Postgraduate students of social sciences and humanities and repository

of national published literature for future historians. The National library was established after almost 46 years of independence. Over a short span of 7 years the library has acquired 130000 books, 555 manuscripts and other collections through purchases, copyright deposits, gifts, exchanges, and donations. These collections include 40100 Pakistani publications received under the provisions of the Copyright Law. Special collections include rare handwritten manuscripts in Persian language relating to history of Kashmir and first copy of *Kulyat-e-Meer* published in 1811 and microfilms/microfiches of all India Census Reports for 1911, 1921, 1931 and 1941. The Library has also acquired copies of about 30 Ph.D. dissertations written in American Universities on Pakistan. NLP has established Digital Information Division for digitization of books and other materials. 10000 rare books, mostly in Persian language are being digitized. NLP saves these in image form. [10]

#### **4. Punjab University Library [5]**

Established in 1882 at Lahore, the University of the Punjab is the largest and the oldest seat of higher education in Pakistan. Punjab University Library is Central library of University of the Punjab Lahore. The library is the largest library in Pakistan regarding its collection and services. Punjab University Library has developed a new I.T. Section, which aims to cope with the coming technological changes, and to transfer all manual services to digital. Manuscripts Section of the library was set up on 31<sup>st</sup> July, 1920 and now it is the largest manuscript collection in Pakistan. It has hundreds of years old rare manuscripts. The number of manuscripts including theses in Urdu, Arabic, Persian and local languages is about 13167. The number of manuscripts in Hindi and Sanskrit is 1871, hence, the total up to September 2002 is 22574 and the number is growing steadily. Sanskrit and Hindi manuscripts are written on Palm leaves. The manuscripts may be consulted within the premises of the section and ordinarily readers are not provided their photocopies. 500 manuscripts have been digitized in image form and are accessible at library premises [11]. In social sciences, digitization is being done to preserve the cultural heritage like manuscripts and other old literature relating to history and culture of Pakistan. Pashto Academy, University of Peshawar is digitizing manuscripts in Pashto language with the help of United States Agency for International Development (USAID) [6]. There are nearly 0.15 million manuscripts in Pakistan which are in Arabic, Persian, Urdu, Pashto, Sindhi and Sanskrit languages. Some are available in libraries of Pakistan while others are in Personal collections. Bibliographies of these manuscripts are available. So, there is a great need

and opportunity to digitize this literature. Some fiction and poetry of Urdu literature has been digitized by Iqbal cyber library [7] and *urdupoint.com*. [8]

## 5. Conclusion

Today, thanks to digitization, knowledge has become very accessible especially due to the free open access repositories that are available. In Pakistan libraries are fully aware of the advantages of digitization and have started digitizing their rare documents. Although this process is at a very initial stage, however, libraries have determined their destination and have taken step forward to the right direction and it is hoped that in near future most of the digitized material will be available on internet and researchers will be benefiting from it in their research works. However, it is recommended that there is a need of "National Commission of Knowledge" for the comprehensive and better results with the following terms of reference:

- A survey be conducted to explore and identify the manuscripts, rare books and other materials available in the personal libraries.
- A comprehensive database be prepared.
- Common Facility Centre should be developed for digitization.
- National Digitization Plan should be developed.
- Library professionals be trained.

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