

# A Zero-budget Strategy for Innovation and ICTs' Promotion in Pakistani Libraries: The Case of Pakistan Library Automation Group (PakLAG)

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## Abstract

This paper presents an overview of the strategy, volunteer initiatives, achievements and innovative approach of Pakistan Library Automation Group (PakLAG) adopted to promote the use of ICTs Pakistani libraries through development and distribution of free and open source solutions according to the needs of the local libraries and their users.

## Keywords

Automation; Pakistan; PakLAG Koha; Information Retrieval; Innovation; Pakistan Library Automation Group; Localization

## Introduction

There are more than 4,000 libraries of all types and sizes in Pakistan. Netherlands Library Development Project was the first big initiative which laid the foundation of library automation and produced visible results through the development and distribution of CDS-ISIS oriented, Library Automation & Management Program (LAMP) software, and establishment of five Computer Training Centers across the country. By the completion of the NLDP the LAMP and CTCs were handed-over to PLA but couldn't sustain due to the discontinuation of donor funding, among other numerous reasons.

Pakistan Library Automation Group (PakLAG) a not-for-profit trust, came in to existence in year 2000, when some young professionals from the field of Library & Information Science wanted to institutionalize their volunteer work. Lahore based activity soon spread all over the country and volunteers from other provinces and cities joined the efforts to promote the use of ICTs in libraries. During the last seven years PakLAG organized its chapters in all four provinces, federal capital and in Azad Jamu & Kashmir. There is no membership fee, no official sponsorship and even PakLAG refused to accept donation offers worth hundreds of thousands of Rupees. The idea was to achieve the objectives by promoting the self-reliance and economical solutions. PakLAG website was initially launched in 2000 by hosting on a free server.

PakLAG's innovations not only provided the local library community a window of opportunity to avail free software &

trainings but also lead them to the adoption of ICTs as their own local facilitation tool.

## Innovations and Achievements

By definition the innovation is *the process of making improvements by introducing something new, the act of introducing something new: something newly introduced* ([The American Heritage Dictionary](#)), *the introduction of something new.* ([Merriam-Webster Online](#)), *a new idea, method or device.* ([Merriam-Webster Online](#)), *the successful exploitation of new ideas* ([Department of Trade and Industry, UK](#)), *change that creates a new dimension of performance* [Peter Drucker](#) (Hesselbein, 2002), *A creative idea that is realized* [(Frans Johansson)] (Harvard Business School Press, 2004). According to the various types of innovation including product innovation, process innovation, radical innovation, incremental innovation, disruptive information and sustaining innovation the PakLAGs achievements can be mostly described as product innovations under the incremental category which are sustaining in nature. All these innovations are mainly end-user driven as the Paklag team members are actual users of these products and services. So the traditional gap between the user-needs and development was bridged-up in a natural way.

## LIMS: The Most adopted Library Management Software in the country

With the discontinuation of LAMP's further development and support mechanism, PakLAG team developed Library Information & Management System (LIMS) and distributed free of cost through its website. This MS-Access based software got a warm welcome from the small to medium sized libraries. More than 100 libraries of different types (including many university libraries) have reported the adoption of LIMS so far, which is higher than adoptions of all other library software collectively. The LIMS facilitates integrated Cataloguing, Circulation, Searching and Reports Printing functions through its simple and user friendly interface.

## Multilingual Web OPAC

By using the open source technologies i.e. Java Server Pages, Tomcat, MySQL and LIMS, Pakistan's first [multilingual web OPAC](#) was developed and deployed free of cost. This application provides simple and advanced search facilities in English, Urdu, Pashto and Sidhi languages. The [Punjab University College of Information Technology](#) Lahore, [Bahria University Islamabad](#) and [COMSATS Institute of Information Technology Islamabad](#) are among the prominent implementations of the PakLAG's web OPAC software.

## Data Converters

Up to the year 2000, most of the computerized libraries in Pakistan using DOS based LAMP software were willing to migrate to the Windows based GUI applications but retrospective conversion was a big problem. PakLAG developed data conversion software facilitated the conversion of CDS-ISIS & LAMP's ISO file data into the MS-Access format. The data in MS Access provided the flexibility of data migration to any other application easily. The same data is easily convertible to Marc format through the MarcEdit Program. The multilingual UTF8 data is not properly entertained by MySQL ODBC connector. PakLAG experts provided the solution through the development of another converter. With the free distribution of the converters PakLAG provided free training and implementation assistance to the willing libraries. University of the Punjab Lahore was helped in the conversion of their 60,000 plus ISIS records. The MarcEdit lead developer Mr. Terry Reis was provided inputs by our experts about the software's erroneous behavior in the conversion of Urdu data into the MARC format. Based on these inputs, version 56 of the software has been improved in the said area.

## LOC Gateway and Zebra Server

[LOC Gateway to Library Catalogs](#) is the largest global single search interface to the OPACs of 520 libraries from all parts of the world. The Zebra Server/Index Data is an open source which facilitates the powerful searching through this LOC gateway Z39.50. One example of its superior capability is the 'Phrase-Searching' which is not even provided by some of the costly off-the-shelf software. Being a free tool it is underutilized as compared to its capability to handle billions of records efficiently as well as data visibility needs and resource constraints of third world countries' libraries.

Out of 520 only 15 libraries are using Zebra Server and most of the libraries are using off-the-shelf solutions for their connection to the LOC gateway. Eleven out of the total fifteen worldwide Zebra Based OPACs are from Pakistan, and the ten OPACs were implemented along with staff training by PakLAG volunteers without charging a single penny from the respective organizations.

## 1<sup>st</sup> mailing list of LIS professionals

PakLAG Electronic mailing list was first in the LIS profession in Pakistan which promoted the communication among the library community. More than 1500 professionals from across the

country and Pakistani library professionals abroad are active members to the discussion group and 3600 plus messages have been communicated so far. The list proved to be an effective forum for knowledge sharing, ICTs promotion, social networking and in the revival of PLA.

## Online Directory of Professionals and Online LIS Newsletter

Online directory of library professionals as well as the Pak LIS Newsletter online are among the initiatives of PakLAG taken first time in the country. Both the Directory and Newsletter played a vital role in the resource sharing and experience sharing among the scattered library community. Following the PakLAG other professionally active groups and organizations started their own online services.

## Training of ICTs and Indexing & Retrieval Tools

PakLAG team has not only been engaged in the development of innovative solutions but also explored the potential of open source software for effective information management and retrieval. Later the same was shared with other interested professionals through the no-profit-no-loss based training programs. National Workshop on Greenstone Digital Library Software, Zebra Server, MarcEdit and EndNote were conducted first time in the country from the PakLAG platform.

## PakLAG Koha

Koha ILS has been ranked on the top among the Opensource ILSs. More than 140 libraries are using Koha worldwide. Surprisingly the majority of this free software are the libraries of the countries with greater GDP and per capita income. Europe is the main user of Koha followed by the North America. In South Asian nations, India is on the top with 12 implementations, followed by Pakistan 02, Sri Lanka 02, and Bangladesh only one, reported implementation.

Libraries and Information Centres in these resource constrained economies have no options other than the Opensource technologies to develop their libraries and to support the research and reading culture for the uplift of their societies. But the need of localization of these technologies is one of the major obstacles of their adoption in the non-English-speaking communities. Language barrier is not only blocking the access to information but also hindering the ICTs literacy in these already have-nots of the globe.

PakLAG accepted the challenge by starting the localization of Koha. In the first phase six regional languages, Urdu, Arabic, Farsi, Sindhi, Pashto and Sariki have been enabled so far. PakLAG Koha is the unique flavor of Koha which allows these languages data uploading, searching, Marc record import, export and offers virtual keyboards for all of them. Capacity building of librarians through trainings and continuous support will enable the libraries in fast adoption of Koha in Pakistan without increasing the financial burden on the tax-payer. Through the

Koha's powerful features Pakistani society will embrace the new library era and afresh image of the information profession.

## **Virtual National Library of Pakistani languages Publications**

Under the ViNLPL project the bibliographic data of publications published in or about Pakistan and in Pakistani languages is being collected from the publishers. This marc data will be available online for searching and marc records import. After the initial launching of ViNLPL the main local publishers will be given login/password for data entry of fresh publications. National bibliographic control, standardization, efficient retrieval and promotion of local literature especially of the regional languages are main objectives of this project.

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