

BUILDING A RESEARCH CULTURE

Pakistan's National Digital Library Programme

2009

Over the course of five years, Pakistan saw a dramatic rise in the number of articles published by Pakistani researchers and the number of research institutions. Building and strengthening the research culture in Pakistan was a key area of development in Pakistan and through initiatives such as the National Digital Library Programme (NDLP), activity has increased by massive numbers in a short period of time.

Pakistan's National Digital Library Programme (NDLP) was introduced in 2003 as part of the Higher Education Commission's (HEC) mission to build and strengthen research culture in Pakistan. Since its inception, the NDLP has had an impressive impact on the country's research output and accessibility.

One of the core functions of the HEC (established the preceding year) is strengthening both the science system and institutions of which it is comprised. The HEC's ICT strategy has been developed to provide the infrastructural backbone necessary for this.

As an integral part of this process, the NDLP was designed in collaboration with phase one of INASP's Programme for the Enhancement of Research Information (PERI).

Since then the NDLP has experienced great success, proving to be a very effective mechanism for increasing access to online resources to a broad audience. Approximately 400 journals are currently published in Pakistan with over 150 of those also being published online. These journals cover a number of fields including Agriculture & Plant Sciences, Medical Sciences, Engineering, Information Technology and Soil Sciences.

The programme includes universities (public and private) and also national institutions with a not-for-profit remit, engaged in education and research.

The objectives of the NDLP are to:

- ensure users' knowledge and awareness of the Digital Library's resources
- ensure that users have the right training and skills to use the Digital Library
- ensure that users of the Digital Library use the resources to maximum effect
- build an institutional research community of Digital Library users and researchers

Inclusion in the programme enables access to over

20,000 publications online from any computer terminal on a LAN (local area network). An agreement with the British Library Document Delivery Service ensures that content not available in this manner can be delivered to researchers. The NDLP components are fourfold:

Content acquisition and development

This accounts for over 75% of the total budget allocation. The emphasis on acquisition means that a typical university in Pakistan now has greater access to electronic journals than most universities in both Europe and the United States.

Following an intensive review by the HEC in 2004, a workshop was held, involving librarians and IT professionals from all over Pakistan, to establish resource requirements. This event was essential to determine demand for journals and assess the status of off-line research materials available to various libraries.

Because of the varying budgets available to libraries, the transition from print to online information resources was centralised at national level, taking a consortium approach to acquiring online resources. The HEC now represents all public and private-sector universities as well as research and development organizations in negotiations with publishers. Public universities are fully funded through the HEC whilst private universities share 50% of the cost of acquiring specialist resources.

User training

A comprehensive training strategy was devised whereby a core of intensively trained 'Master Trainers' conducted travelling workshops and seminars across Pakistan in 2005/6 to promote awareness in the usage of Digital Library resources. The training has been spread through all the main regions of Pakistan, and teams of two or three members have actively conducted on-site promotion and training activities for users. All 43 public sector institutions have been provided with initial training, as have selected private institutions. In this way, approx 7,500 faculty members and students were trained in 2005, in addition to higher-level, subject specific training

being delivered where necessary.

Technical support

The technical support team ensures continuity of communication channels through a central database of IP addresses and contact details, acting as the first point of contact for problems. Specific objectives include:

- ensuring the availability of resources
- ensuring secure and ethical use of resources
- monitoring usage by participating institutions

Marketing and promotion of e-resources

Promotional materials include posters, pamphlets and bookmarks, which have been distributed throughout the campuses of participating institutions. A comprehensive website has been developed presenting a user-friendly interface, detailed content information and useful links to open-access resources. A one-window search interface known as the ELIN (Electronic Library Information Navigator) system has been developed by the HEC in conjunction with Lund University Libraries in Sweden and a more recent development is the introduction of a distance learning module enabling students to learn about the programme at their own pace from the comfort of their home or office.

Progress and achievements

At a seminar held in Tehran, Islamic Republic of Iran during December 2008, Hassan Zaidi, Project Coordinator, NDLP, HEC, Pakistan, presented the following facts:

- There has been a 161% increase in physics research papers alone produced between 2004 and 2007. This continues to increase with all having been produced in peer-reviewed international journals
- More generally, between 1997-2001 (pre-HEC) 3,260 articles were published whereas in the 6 years post-HEC 8,224 articles have been published - this represents an amazing 152% increase (see Fig. 1)

Other findings

Not only is the number of published journal articles increasing but the number of institutions producing publications is also increasing

A joint Ministry of Science & Technology (Pakistan) and State Dept (USA) initiative through National Academy of Sciences in Washington, DC has been established, providing access to journal content from leading American scientific societies and prestigious US-based academic publishers

Consistent feedback mechanisms allow the HEC to remain aware of the institutional requirements

E-databases are now available covering subjects such as Physics, Chemistry, Mathematics, Engineering and Microbiology.

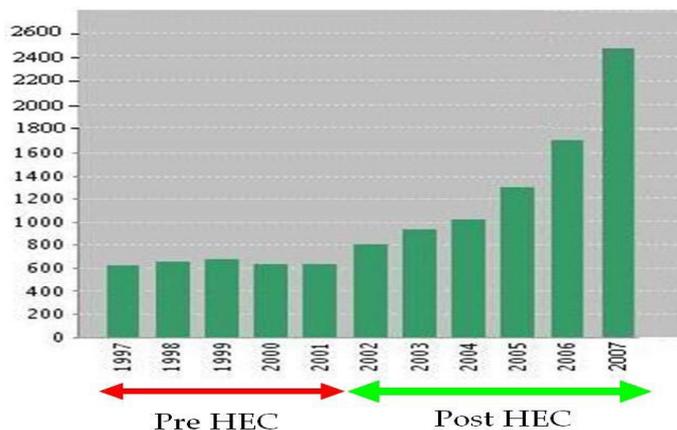


Fig. 1 Articles Published in Pakistan 1997-2007. Highlighting Pre and Post HEC publications

What's next?

Some of the next steps and challenges for the HEC include investigation into the creation of an open-access, online portal (Journals Online); Development of a national research archive, the Pakistan Research Repository; Increasing awareness and use of the resources acquired

Journals Online

Investigation into the creation of an open-access, online portal where journals published in Pakistan can be made available electronically worldwide. INASP has already implemented six Journals Online (JOLs): Africa (AJOL), Bangladesh (BanglaJOL), Nepal (NepJOL), Vietnam (VJOL), the Philippines (PhilJOL) and Sri Lanka (SLJOL). If implemented, Pakistan (PJOL), will have a fully searchable web interface. For more information about the Journals Online programme visit www.inasp.info/jols

Increasing awareness and use

Librarians are the catalysts in this and bridging the gap between the HEC and the end users. Responses to the questionnaire indicate that they have been a powerful catalyst in spreading the word and bridging the gap between HEC and end users. They have also been responsible for conducting a number of internal workshops. However, these processes need to continue.

For a full list of e-resources available through the Pakistan Digital Library Programme visit: www.digitallibrary.edu.pk

For more information on Pakistan's digital library, see: Accessing Electronic Information: A study of Pakistan's digital library by Amina Said. www.inasp.info/accessing-electronic-information

For more information on INASP and the second phase of the Programme for the Enhancement of Research Information, visit: www.inasp.info