



NLW
106,1218/1219

Community informatics in libraries in Pakistan

Current status, future prospects

532

Noor Shed Khan and David Bawden

Department of Information Science, City University London, London, UK

Abstract

Purpose – This paper reports a study into the current status of, and future prospects for, community informatics (CI) services in libraries in Pakistan.

Design/methodology/approach – It is based on a questionnaire survey of academic and public libraries, and community centres, in the major cities of Pakistan, backed up by interviews with librarians and community leaders.

Findings – It is found that while most libraries provide community information services, these are of traditional kind, and there are very few examples of information and communication technologies-based CI. There is enthusiasm for developing such services among librarians, and high regard for library services in the community. Essential factors are funding for provision of equipment and training, and awareness raising in the community.

Research limitations/implications – The study was limited to a sample of libraries in large cities.

Practical implications – Proposals for development of a government-sponsored CI initiative are presented.

Originality/value – This is the only study to date which investigates the role of libraries for CI provision in Pakistan, and one of very few which studies this topic in a developing country.

Keywords Public libraries, Pakistan, Developing countries, Internet, Information

Paper type Research paper

Introduction

This paper reports a study of the potential contribution which libraries, specifically public libraries, might make to the development of community informatics (CI) in Pakistan.

It is drawn from a dissertation presented as part of a Masters' degree at City University London (Khan, 2004), which contains full details of material summarised here. This dissertation is available in printed and electronic form from the library of City University London (www.city.ac.uk/library).

CI provides new ways, based on a variety of enabling technologies, of approaching old problems of community development and enhancing civil society (Pigg, 2001). CI, according to Rathswohl (2003), is “the science and application of information and communication technologies (ICTs) to support human communities and their processes”, and very similarly Gurstein (1999) has defined CI as “the application of information and communication technologies to enable community processes and the achievement of community objectives”. Aspects of CI include community internet access, provision of community information, access to government information and services online, online civic participation, community economic development, access to teleworking opportunities, and online education and training.



Gurstein (1999) notes that CI is not simply concerned with responding to the “digital divide” issue, but it is also directed to examining how and under what conditions ICT access can be made usable and useful to the range of users including excluded populations and communities and particularly to support local economic development, social justice, spreading education in masses and political empowerment using the internet and other telecommunication and ICTs. The relevance to the situation of developing countries is clear.

Libraries, particularly public libraries, should be well-placed to take a major role in the development of CI in their localities. They have provided information as an integral part of their services ever since they were established and their central place in the community, their neighbourhood base, and their neutral image should make them the ideal place for the provision of information, and for the support of other local advice and information agencies (Tikekar, 2000; Elbeshausen and Skov, 2004; Santoro, 2004; Westbrook and Worcester, 2004; Hillenbrand, 2005; Roddy, 2005). They are also better placed than other agencies to develop initiatives on the basis of an understanding of user behaviour and the information needs of various user groups. (For some recent relevant examples, see McKenzie, 2003; Okiy, 2003; Westbrook and Worcester, 2004; Ikoja-Odongo and Ocholla, 2004; Brown, 2004; Culbertson *et al.*, 2005.)

The purpose of this study was to assess the preparedness of libraries in the major cities of Pakistan to take such a role, in respect of ICT capabilities and staff attitudes, and to suggest a model for further developments.

Background

As with most developing countries, Pakistan has been relatively slow to take widespread advantage of new ICTs. However, Pakistan has certain advantages among the Southern Asian countries, including internet coverage and cost (Rizvi, 2003; Khan, 2004). There are encouraging developments in areas such as e-commerce and e-government (Khan, 2004; Ali and Proctor, 2005), and the number of internet users has been rising rapidly since the end of the last century (Saeed *et al.*, 2000). Commercial cyber cafes are appearing in major cities in Pakistan, and some community telecentres have also been established by public bodies. The purpose of the community telecenters is to provide training for facilitators and support staff, covering not only the technical aspects of ICT, but also the strategic utilization of digital technologies for social change. These are the places for social contact, for learning, for personal growth and for mobilizing efforts to address community problems and needs.

The government of Pakistan is supporting various measures under a National IT Policy 2000, including the establishment of seven “IT universities” and one virtual university to increase the supply of qualified professionals. Similarly, the National Education Policy for 1998-2010 seeks to modernise education in Pakistan through use of IT, and to ensure that children of all ages become aware of ICTs. More detail is given by Khan (2004), and an example is given by Ali and Proctor (2005).

The role of libraries in this respect has been limited, due to the considerable limitations of the availability of ICT equipment and services in libraries of all kinds, and a lack of training for librarians in their use. Saeed *et al.* (2000) investigated the use of internet in the university libraries of Pakistan. Only 50 percent of university libraries had access to the internet, and most of these had only one terminal for this facility. Only three libraries were equipped with more than one computer for internet access. The study

also discussed the problems that were hindering wider use of internet in university libraries. Availability of funds and lack of IT infrastructure were reported by a majority of the respondents. Similar results were found in a later study by Haider (2004).

In a study of academic and research libraries in Pakistan, which might be expected to be the best equipped with ICTs, Ramzan (2004a) found that 57 of out of 244 libraries did not any have any computers. The majority, 129 libraries have fewer than 5 computers each, 48 had 5-20, and 10 libraries had more than 20 computers in their libraries. Only 57 percent of academic and research libraries offered e-mail, and 53 percent had internet facility in their libraries. His studies also revealed a generally low level of IT knowledge among librarians (Ramzan, 2004b). A similar picture has been found in a recent study of Indian libraries (Ghosh, 2005).

This limitation is confirmed by a survey by Mahmood (2003), which found that ICT capabilities were rated the most important competencies for librarians in Pakistan. At the same time, these skills were poorly dealt with in formal LIS education, library schools having few, or no, ICT training facilities.

Only a few libraries in Pakistan are offering any kind of community information services (Khan, 2004). Important among these is a network of Provincial, District, and Tehsil (community) level public libraries. These are the only source of current and old recorded information for the general public in Pakistan. People from all walks of life go to these libraries to read daily newspapers, weeklies, find business data, light reading, use internet and few of these people do visit these libraries for their research work. These libraries are equipped with audio-visual materials, internet, microfilm and microfiche readers, photocopiers, books, periodicals, indexes, and some of them have CDs and other electronic sources of information. Access to these libraries is open to every citizen irrespective of religion, race, or locality. Mobile library services are also important in rural areas. There are some "Paisa Libraries", small fee-charging libraries operating mostly in urban areas, which also act as community information centers. In rural areas of Pakistan, multipurpose community telecentres have been suggested as an alternative to public libraries, in providing community information for rural development (Mahmood, 2005).

In Pakistan, public libraries generally lack the facilities of community telecentres, which serve the local community and provide ICT-based learning services and internet facility. Public libraries serve their communities and offer the opportunity to share their knowledge, culture and use of libraries as an integral component of a democratic society where access to free information has been anticipated. However, public libraries in Pakistan are mostly working in isolation and offering primarily printed knowledge resources, with staff waiting for library patrons to come and issue or return books and reading materials. These libraries are still working as only repositories of knowledge resources and all the library operations are run manually. The causes for this are usually quoted as limitations of equipment and funding, and also that public librarians lack adequate knowledge of community-based information services. There seems to be a shortage of ICT tools and techniques to produce and establish capable community information services for the ultimate benefit of economic, civic, and social development of Pakistan's local communities.

Similarly, most community centres, located in various local authorities, are just common buildings where only a few newspapers are being subscribed for reading and consultation by the local communities, lacking any ICT facilities.

The study reported here aimed to make a closer analysis of the situation of libraries and community centres, in order to provide a model for enhancing their role in CI provision.

Research methods

The study used three methods: literature review, questionnaire survey and interviews. Full details may be found in Khan (2004).

A review of the literature, and of documents produced by the government of Pakistan, gave an initial background insight into the situation studied.

A questionnaire survey was sent by e-mail to 100 libraries (academic and public) and community centres in the four main cities of Pakistan: Lahore, Karachi, Peshawar and Islamabad/Rawalpindi.

It should be noted that, while this survey focused on provision in large cities, this is by no means the only, or the most important, environment for CI services in libraries. Such provision is equally important in rural areas. This survey focused on the cities because these are the environment in which provision of ICTs in general is best developed, and access most widely available, and hence in which CI applications in libraries have had the best chance for development. The inclusion of public libraries and community centres makes this survey a useful complement to that of Ramzan (2004a, b) and Saeed *et al.* (2000), which focused on academic and research libraries.

In designing the questionnaire attention was given to the fact that the librarians and information professionals would have little time to answer lengthy questions. Care was taken to ensure that the questions were clear and unambiguous. In order to allow for clear answers, the questionnaire was tightly focused, with mainly closed "tick box" questions. There were 15 questions, concentrating on available and planned ICT facilities, provision of CI services, and the respondents' attitudes to these topics.

The target libraries, and the name of the most appropriate individual recipient, were chosen from the entries for the relevant cities in a national library directory, updated by checking listservers and an online forum. Seventeen questionnaires were returned of 100 distributed, of which 70 gave sufficient useful information to be included in the analysis. A valid response rate of 70 percent is unusually high for a survey of this kind.

The questionnaire data was analysed using Microsoft Excel, relying on displays of data, and simple descriptive statistics, to bring out the major findings.

As a means of "triangulation", i.e. assessing the validity of the data obtained from the questionnaires, a series of semi-structured, telephone interviews were conducted. Five public librarians and five members of local communities were interviewed. The questions were closely related to those in the questionnaire, but allowed more open-ended responses.

The data collection and analysis process was helped by the main researcher (Noor Shed Khan) being an established member of the library community in Pakistan. This enhanced both his understanding of the issues, and his credibility in carrying out the investigation, and helped to improve the response.

Findings

The following section provides a summary of findings under each of the six areas of investigation covered in this study:

- (1) availability of ICT tools in libraries;
- (2) internet utilization in libraries, personal usage of ICTs, details about network availability;
- (3) establishment of telecenters in libraries and ICT facilities in existing telecenters;
- (4) provision of CI services and online CI service provided by local authorities' web sites;
- (5) attitude of librarians towards ICT applications; and
- (6) problems in ICT/IT application in Pakistani libraries.

Fuller details of the results are given by Khan (2004).

Availability of ICTs in libraries

These included computers and associated hardware, software, e-mail and internet access.

The study revealed that 36 percent of the respondents did not have any computers, 67 percent did not have e-mail facility, and 65 percent did not have internet access. This reflects a rather discouraging position with regard to the availability and usage of even the most basic ICT tools, particularly when one considers that the environment studied – the major cities of the country – is likely to be the best served in this respect.

The position with relatively more sophisticated ICT/IT applications was even more discouraging. For example, CD-ROMs were not available in 32 percent of the libraries, and 59 percent of the respondents had no network server.

With respect to hardware, key tools such as video/digital camera, CD-Writers were available only in a very small number of cases. Some of the respondents were even without photocopying facilities and printers.

This rather poor availability of ICT access and use is in accordance with that found in earlier studies (Saeed *et al.*, 2000; Ramzan, 2004a, b), and indicate that the situation has not improved over time, even in the large cities on which this study focused. This is a discouraging background for CI development, and would need to be addressed before any major improvements could take place.

Internet utilization in libraries, ICT use, network availability

Forty-two percent did not have any internet terminals available for use of internet, 29 percent did not have any internet users in their libraries, 61 percent did not provide any ICT training or orientation to their users for use of internet, 69 percent did not provide any ICT training regarding the use of internet to their library staff.

With respect to the ICT usage for various purposes, the data revealed that 60 percent had users of e-mail, but only 27 percent had users who for retrieved information via ICTs. Only 13 percent used search engines, meta search engines or internet directories. Twenty-one percent of participants had never used e-mail themselves, and 39 percent had never used the world wide web. This lack of awareness and experience among librarians themselves is a discouraging factor for their role in promoting CI in their locality, and is another issue seemingly in need of urgent attention.

Thirty-three percent of the respondents did not have a local area network (LAN), 73 percent did not have a wide area network (WAN) and 94 percent had no wireless network facilities in the libraries and related offices.

These results are indicative of a very unsatisfactory position regarding the status of network facilities and use, both by the librarians themselves and their users.

Telecentres in libraries and ICT use

The study revealed low numbers of separate telecentres (multiuser environment) for community use. Ninety-one percent did not have any telecentre or public internet access points for the use of the community. Of the 9 percent who had telecentres, all were funded by private means or commercially, none by the government. The major usage of these telecentres was for education and health purposes, with some for local economic development.

This shows a currently discouraging situation relating to the provision of CI in these situations. Presence of telecentres in libraries is clearly a factor likely to promote the link between CI and libraries, and its absence is disappointing.

Existing community information services and online CI services provided by local authorities' web site

Seventy percent of the respondents are providing conventional information and referral services to its community, while 14 percent are offering advice services and 16 percent are offering inquiry services. While the 70 percent figure may seem encouraging, these services are largely traditional in nature, and not ICT-based. Eighty-seven percent did not even have access to any local authority web sites for providing online community information services. This indicates a considerable gap between the desire to provide community information, and the ability to make use of modern technology to do so.

Attitude of librarians towards IT/ICT applications

Ninety percent of respondents showed very positive and optimistic attitudes towards adoption of ICTs in libraries. This indicates that the poor adoption of ICTs so far is not due to explicit discouragement from the local library profession. It is somewhat in contrast to the low levels of ICT knowledge identified by Mahmood (2003) and Ramzan (2004b), and suggests that what is lacking is funding and detailed technical training, rather than awareness. This is supported by the figures given above for the considerable proportion of librarians who did not use the web and similar services, or who made very limited use; their lack of practical experience prevents their enthusiasm from being translated into real service provision.

Problems in ICT/IT applications in Pakistani libraries

The respondents identified numerous problems hindering the implementation and application of ICTs in academic and public libraries and community centers in the four cities. The majority mentioned lack of funding/budget as their number one problem, along with non-availability of standard library software, and of skilled human resources. A significant number of librarians reported negative receptivity of their managements towards applications of ICT, a contrast with the views of the librarians themselves. This strongly reflects the attitudes in the university libraries of Pakistan, identified by Haider (2004), and suggests that this is indeed a reliable estimation of the main problems.

Interview perspectives

The data from the ten interviews indicated that the interviewees – coming both from providers (librarians) and recipients (community members) – were keenly interested in the establishment of separate telecentres and public internet access points within the premises of libraries (public and academic) and of community centres. They identified problems with funding and a lack of skilled staff as the main issues to be overcome. From the community members, although there was strong support for the libraries' activities in general, there was little understanding of the potential role of libraries for CI.

As well as reflecting the practical problems identified above, this gives a further indication of how a general enthusiasm for the role of the library in the community, and of the promise of ICTs in general terms, does not lead to a realistic appreciation of the contribution which library services can make in this regard.

Summary of findings

These results confirm the rather discouraging picture set out earlier in this paper, which reflects other studies of various library environments in Pakistan. There is a low level of access to even the most basic ICT tools which could be used for CI purposes, and usage is correspondingly low. Community information is widely provided by libraries, but only in the most "traditional" and reactive manner. Public access internet points, and community telecentres, are still very rare in library settings.

There is enthusiasm among librarians for a more pro-active and ICT-based CI provision, but little understanding of this among supporters of libraries in the community. While many of problems can be overcome by increased funding and training within libraries, the informed participation of the community is essential, and this requires promotion and consciousness-raising. The public library service is well-placed to build upon its reputation as a neutral and respected environment, in being a focus for these new developments.

Conclusions and recommendations

This study shows that there is great scope for the expansion of CI services in libraries in Pakistan, as the situation as yet is very poorly developed.

If CI applications in libraries, particularly public libraries, in Pakistan are to develop appropriately, then there must be a government-led initiative. This should involve adequate funding for the initial establishment of telecentres, with public internet access points, in public libraries and community centres. Training for providers, and to some extent for users, is vital. Local community committees involving community leaders, librarians and IT professionals should be established in each district, to oversee these developments.

On the basis of the results described above, a ten-step process for the establishment of a library-based CI initiative in Pakistan may be presented (This is described more fully by Khan, 2004). This process aims to overcome both the lack of resources and the lack of understanding of CI. In brief, the steps are:

- (1) identify and characterise users, including particular groups such as students, teenagers, teachers, professionals, farmers, older people, unemployed people and disabled persons;
- (2) identify the information needs of individuals and groups;

- (3) identify funding sources: government agencies and other donors;
- (4) establish a National ICT Initiative Board, under the patronage and supervision of Federal Ministry of local government, involving community political leaders, IT specialists and librarians, to take responsibility for funding, facilities, equipment, staff and other related issues;
- (5) identify appropriate service providers, including librarians and community information centre workers;
- (6) plan training for staff and other providers;
- (7) provision of appropriate hardware and software;
- (8) develop initial services, such as community portals, and web pages for health information, employment information, etc.
- (9) marketing and promotion of these services, including training for users where necessary; and
- (10) updating and expansion of resources, to meet developing needs and expectations of users.

The second of these points, the need to gather more information about the most important wants and needs of potential users in Pakistan, in both cities and rural areas, is crucial. If the general support of community leaders for the well-respected public library service is to translate into active support for CI initiatives, this will require awareness-raising programmes based on a detailed and realistic understanding of people's needs. The rewards for such an initiative, both in economic and social terms, could be very great. Its feasibility depends, as with all such initiatives, on the support of central and local governments, and on the availability of scarce resources.

References

- Ali, I. and Proctor, J. (2005), "Information and communication technology (ICT) education in The City School, Pakistan", *Aslib Proceedings*, Vol. 57 No. 2, pp. 123-30.
- Brown, A. (2004), "Reference services for children: information needs and wants in the public library", *Australian Library Journal*, Vol. 53 No. 3, pp. 261-74.
- Culbertson, M., Ernest, D.J. and Level, A.V. (2005), "Information seeking behaviour for recreational activities and its implications for libraries", *Reference Services Review*, Vol. 33 No. 1, pp. 88-103.
- Elbeshausen, H. and Skov, P. (2004), "Public libraries in a multicultural space: a case study of integration processes in local communities", *New Library World*, Vol. 105 Nos 3/4, pp. 131-41.
- Ghosh, M. (2005), "The public library system in India: challenges and opportunities", *Library Review*, Vol. 54 No. 3, pp. 180-91.
- Gurstein, M. (1999), "Introduction. Community informatics: enabling community uses of information and communications technologies", in Gurstein, M. (Ed.), *Community Informatics: Enabling Communities with Information and Communications Technologies*, Idea Group Publishing, London, pp. 1-31.
- Haider, S.J. (2004), "Perspectives on coping with change: issues facing university libraries in Pakistan", *Journal of Academic Librarianship*, Vol. 30 No. 3, pp. 229-36.
- Hillenbrand, C. (2005), "Public libraries as developers of social capital", *Australasian Public Libraries and Information Services*, Vol. 18 No. 1, pp. 4-12.

- Ikoja-Odongo, R. and Ocholla, D.N. (2004), "Information seeking behaviour of the informal sector entrepreneurs: the Uganda experience", *Libri*, Vol. 54 No. 1, pp. 54-66.
- Khan, N.S. (2004), "Community informatics: the contribution of library/information services to the development of community informatics", unpublished MSc dissertation, City University London, London, available at: www.city.ac.uk/library.
- McKenzie, P.J. (2003), "A model of information processes in accounts of everyday-life information seeking", *Journal of Documentation*, Vol. 59 No. 1, pp. 19-40.
- Mahmood, K. (2003), "A comparison between needed competencies of academic librarians and LIS curricula in Pakistan", *Electronic Library*, Vol. 21 No. 2, pp. 99-109.
- Mahmood, K. (2005), "Multipurpose community telecenters for rural development in Pakistan", *Electronic Library*, Vol. 23 No. 2, pp. 204-20.
- Okiy, R.B. (2003), "Information for rural development: challenge for Nigerian rural public libraries", *Library Review*, Vol. 52 No. 3, pp. 126-31.
- Pigg, K.E. (2001), "Applications of community informatics for building community and enhancing civil society", *Information Communication and Society*, Vol. 4 No. 4, pp. 507-27.
- Ramzan, M. (2004a), "Levels of information technology (IT) applications in Muslim world libraries", *Electronic Library*, Vol. 22 No. 3, pp. 274-80.
- Ramzan, M. (2004b), "Effects of IT utilization and knowledge on librarians' IT attitudes", *Electronic Library*, Vol. 22 No. 5, pp. 440-7.
- Rathswohl, E.J. (2003), "Introduction to the special series on community informatics", *Informing Science Journal, Special Series on Community Informatics*, Vol. 6, p. 102.
- Rizvi, H. (2003), "Tele-community centres and ICT applications for communities", available at: <http://wsis.sdnpk.org/Proceedings.htm> (accessed 12 October 2004).
- Roddy, K. (2005), "Community profiling", *Library and Information Update*, Vol. 4 No. 5, pp. 40-1.
- Saeed, H. *et al.*, (2000), "Internet use in university libraries of Pakistan", *Online Information Review*, Vol. 24 No. 2, pp. 154-60.
- Santoro, M. (2004), "Digital domains (in Italian)", *Biblioteche Oggi*, Vol. 22 No. 3, pp. 26-41.
- Tikekar, A.C. (2000), "Rural public libraries and community information centres", *Herald of Library Science*, Vol. 39 Nos 3/4, pp. 198-201.
- Westbrook, L. and Worcester, L. (2004), "Ways of knowing: community information needs analysis", *Texas Library Journal*, Vol. 80 No. 3, pp. 104-7.