

Cooperative Electronic Networks of Academic Libraries in Southern Africa

By

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ABSTRACT

The loss of monopoly status, the rapid growth in the quantity of information, and the fact that information can now be digitized and delivered electronically necessitates that libraries combine their efforts in providing a range of new services through cooperative electronic networks. This is with a view to remaining relevant in spite of the serious reduction in funding coupled with increasing costs of resources. This paper, through a review of literature and visits to websites, identifies five well-established cooperative electronic networks in Southern Africa. The paper discusses their areas of cooperation and reports benefits to member institutions. The paper concludes that cooperative utilization of electronic networks is the most practical approach to providing seamless access to electronic information resources by academic libraries in the digital age. However, Internet connectivity and donor support are essential, for such consortia to be sustainable.

KEY WORDS: Library consortium, Library cooperation, Cooperative electronic networks, Academic libraries, Southern Africa.

0. INTRODUCTION

Today, libraries are operating in a rapidly changing environment, dictated by a number of factors, which occasion the rise in consortia activities. Unlike before, information is increasingly being recognized as a commodity; a national resource and the lifeblood of national development, subject to market forces just like any other commodity. It now has commercial value and continues to be seen as something to be bought and sold. And so libraries no longer have exclusive right to its provision. The provision of information is now also being undertaken by businesses that are profit-oriented. The loss of monopoly status by libraries as information providers is accompanied by rapid growth in the quantity of information and the various ways it is being delivered. The amount of information available today is vastly greater than the amount previously available. The print media is no longer the primary means of information delivery as information can now be digitized and delivered electronically. In other words, the rapidly increasing amount of information can go directly to a user's desktop, thus cutting out the library altogether from the information chain. This implies that libraries must develop strategies to remain relevant to their users, and not be seen as a last resort [1].

Thus there is a paradigm shift in libraries from owning specific physical information entities in a local collection to providing access to many information entities regardless of their format. While local collections are still important for heavily used paper-based resources, access to distributed information resources continue to grow in importance. In other words, libraries are challenged more than ever before to continue to offer traditional services while at the same time providing a range of new, often costly, services. And as library users are able to access a variety of resources through electronic means, the relevance of libraries becomes an issue [1]. Dissatisfaction with a limited local collection begins to occur, forcing libraries to look at new ways to provide access to the information needed by users in order to remain relevant, and retain their users. With the development of new technologies therefore, the possibilities of innovative interlibrary cooperation projects emerge: libraries combining their efforts through various cooperative electronic networks are trying to get access to electronic information sources more economically. This paper identifies a number of such cooperatives in Southern Africa; the various cooperative projects that have been undertaken; and benefit that have been recorded from such cooperative utilization of electronic networks. For this purpose, a review of the literature was carried out and their websites visited to ascertain the extent of their operations.

1. EMERGENCE OF COOPERATIVE ELECTRONIC NETWORKS IN ACADEMIC LIBRARIES IN SOUTHERN AFRICA

The number of information sources available both through print and electronic media is ever increasing. Even libraries with sizable collection development budgets are having difficulties in coping with this increase. Libraries continue to find themselves in very challenging economic circumstances. Over the past fifteen years libraries have encountered serious reductions in funding coupled with increasing costs of resources [1]. For example, the number of journals being published and the average subscription rate for those journals continue to rise, considerably. The cost of providing effective information services continue to be on the rise in parallel with the increasing role that information plays in day-to-day activities of organizations. In spite of this, librarians are faced with the challenge of providing better services with shrinking budgets.

The political approach of successive governments in Africa is also not helping as it continues to force public institutions to compete in an environment of decreasing funding. For example, the source of funding for most academic libraries in Southern Africa is government subvention to the university, a portion of which is allocated centrally for library expenditure. However government subventions no longer provide a steady income for the purchase of information resources for the library. While subventions continue to increase for some libraries, the purchasing power has reduced. And for some libraries, the amount continues to decrease year after year. Yet others rely essentially on donations. This trend may be regarded as a reflection of lack of support for these libraries and unwillingness by respective national governments to recognize and tackle the information problem.

Although academic libraries in Southern Africa are beginning to put emphasis on the provision of access to networked information resources, and the integration of local information into the global information infrastructure, they have had to work within very limited budgets. On the other hand, the introduction and use of Information and Communications Technologies (ICTs) in academic libraries necessitate the need for more money to maintain and upgrade both equipment and software, pay software license fees, gain access to electronic journals and online databases, and facilitate Internet connections.

The budget constraints for libraries is forcing academic libraries in Southern Africa (and indeed in Africa) to start looking for alternative ways of providing services at a much reduced cost. The availability of networked information resources is encouraging libraries to streamline their cooperative collection development efforts and set up cooperatives to provide more and varied electronic resources through networks. This practice is increasing libraries bargaining power with publishers of electronic information resources. The introduction of new pricing models by publishers such as licensing rather than subscription, and access fees for electronic information sources has also made the economies of cooperation more visible [2]. It has allowed the sharing of cost of access to library and information services.

2. INTERNET CONNECTIVITY

Internet Connectivity is an essential component in the formation of electronic information networks by libraries. In recent years Southern Africa has witnessed tremendous progress in the development of information and communication technology (ICT) infrastructure and services. Other than Africa's Northern region, it is the most advanced in terms of development of national ICT infrastructure for the public sector. This development has encouraged connectivity to the Internet. For example, all the Southern African Development Community (SADC) countries, made up of Angola, Botswana, Democratic Republic of Congo (DRC), Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia, and Zimbabwe now have access to the Internet [3].

A fairly advanced information technology (IT) applications has also been established in South Africa, Namibia, and to some extent, Zambia. Botswana has also made significant progress in IT application. Of the home pages examined in his study, six academic libraries in Botswana, Lesotho, Namibia, South Africa and Zimbabwe have IT units. Five academic and three public libraries, and one special library in Botswana, Namibia, South Africa, Swaziland and Zambia have also established Online Public Access Catalogues (OPACs) on the World Wide Web (WWW). However, only the Web pages for academic and public libraries in Botswana, Lesotho, Mozambique, Namibia, South Africa, Zambia, and Zimbabwe are said to indicate links to other Internet information resources [3].

Suffice to say that many academic libraries in the region are better positioned to set up cooperative electronic information networks for service improvement and cost saving.

3. LIBRARY COOPERATIVE NETWORKS IN SOUTHERN AFRICA

Literature review revealed that there are few cooperative electronic networks in Southern Africa. While some institutions are considering becoming members of existing consortia, others are contemplating forming new ones. For example, there is currently an effort at establishing a cooperative electronic network for special libraries in Botswana. The effort, which is being coordinated by the Botswana Institute of Development and Policy Administration (BIDPA), is being discussed among special libraries. Planning groups have been formed and responsibilities assigned. The cooperation aims at harnessing the various strengths of the participating libraries towards satisfying user needs. The areas of cooperation that have been identified include: provision of seamless access to special collections held by the various partners, automation, bibliographic databases, serials publications, and online access to databases.

There are currently five major regional academic library consortia in Southern Africa, all concentrated in South Africa. They are: *the Gauteng and Environs Library Consortium (GAELIC)*, *the Free State Libraries and Information Consortium (FRELICO)*, *Cape Libraries Cooperatives (CALICO)*, *Eastern Seaboard Association Libraries (ESAL)* and *South Eastern Academic Libraries' System (SEALS)*. These networks have become important focal points for developments associated with electronic document delivery, electronic journals, and a variety of Web-based facilities that provide access to a wide range of other databases and information resources [4]. The reason for this concentration of electronic information networks in South Africa obviously is as a result of the more advanced technological infrastructures in South Africa compared with other member countries in the region. For example the Internet market in South Africa is very much larger than any other on the continent, being in the top 20 Internet usage countries worldwide. There are about 75 public dialup Internet access providers in South Africa serving approximately 650000 dialup subscribers. The corporate, government and academic networks are also well developed, leasing about 5 000 digital lines to bring up the total users to about 1.8 million [5]

GAELIC, FOTIM's first major project, which came into being in April 1996, is the largest academic library consortium in Southern Africa. FOTIM (Foundation of Tertiary Institutions of the Northern Metropolis) itself a consortium formed in 1996 by seven universities and five technikons resolved to foster regional collaboration. FOTIM offers member institutions opportunities for better co-operation, articulation and utilization of resources through a team approach between member institutions and communities in the northern metropolis of South Africa. This cooperation is meant to meet the future educational and training needs on a regional, national and international level through a flexible delivery system [6]. GAELIC, which therefore operates under the auspices of

FOTIM is based in Gauteng, and has grown to sixteen members (10 university and 6 technikon libraries). Technikon is african language for polytechnic – a college for higher education in scientific and technical subjects.

FRELICO was established in 1996 and comprise three university libraries, a Technikon, a public/legal deposit library and a Technical Library. FRELICO serves more than 25, 000 students, faculty and researchers affiliated to member institutions in addition to the more than 7000 distance education students scattered throughout the rural Orange Free State [7]. Both GAELIC and FRELICO have reached advanced state of development.

CALICO was established in 1992 and consists of five institutions (universities and technikons), and is located in the Western Cape. SEALS are a consortium of the academic libraries in the Eastern Cape province. Membership consists of seven universities and technikons Cape. ESAL, initiated in 1992 and based in KwaZulu-Natal province is a partnership of three universities and three technikons.

4. THE BIRTH OF THE COOPERATIVES

For some, the idea for the formation of the cooperatives arose from the realization of the inherent advantage in libraries exploring common needs, the possibility of purchasing common library software, and the opportunities for cooperation, before deciding to purchase new systems individually. Others saw the utilization of electronic networks as a means of expanding access to research, study and information materials. The mission of the consortia was therefore to fully utilize and develop the information resources of their individual region for the purpose of promoting education, research, and lifelong learning, while the vision is to create a virtual library by linking together autonomous libraries via networks. All the electronic information networks therefore have similar objectives. These include, among others: establishing a formal relationship between the members in order to foster co-operation and contact; supporting the information needs of clients through regional co-operation, while encouraging each member to build good basic collections sufficient to meet the needs of its undergraduate clientele; promoting resource sharing and enhancing access to information; formulating appropriate collection development and acquisitions policies among members and exploring ways of saving costs; facilitating access to information through shared computer systems and networks; utilising appropriate and up-to-date technology and keeping abreast of new technological developments and improving information literacy among clients and sharing training resources and expertise where appropriate. This is being achieved via the utilisation of technology and the linking of member libraries by networks, as well as the sharing of existing resources and exploring ways of cooperation and collaboration particularly in the IT enhanced field.

There is indication that four of the cooperatives received support from donor organizations arising from well written funding proposals. For example, GAELIC, SEALS, ESAL and FRELICO have all received support from the Andrew W Mellon Foundation [8], [9]. The Kellogg foundation also made a substantial infusion of funding of the ESAL consortium to facilitate networking [10]. The funding is vitally important in view of reduced funding to these libraries by respective national government.

5. THE COOPERATIVE PROJECTS

The emphasis on common library software and resource sharing provided immediate focus for the activities of some of the cooperative networks.

For example, member institutions of GAELIC unanimously selected the INNOPAC Library System, developed by Innovative Interfaces, Inc., as the common software system to be implemented in member libraries. Member institutions also resolved to make use of existing infrastructures, and are working closely with SABINET (South African Bibliographic Information Network) Online

that is providing project management services [11], [12]. SABINET Online also provides technical expertise where there is insufficient expertise at local sites. SABINET now implements INNOPAC software. GAELIC members are extremely active and co-operate with each other in the sharing of information, the sharing of expertise, joint workshops, enhanced document delivery, shared cataloguing, and the joint purchasing of full text databases. Current Projects include closer co-operation with other South African library consortia, extension of the courier service for document delivery with the objective of providing information rapidly, cost-effectively, and in accordance with users' needs and expectations. One ARIEL™ workstation has been installed in each member library for this purpose. With Ariel software you can transmit over the Internet any document (articles, photos, electronic images) that might ordinarily be sent by fax, but at higher speed, quality, reliability and lower cost to other Ariel workstations anywhere in the world, using either FTP or MIME (multipurpose Internet mail extensions) e-mail; and convert them to PDF for easy patron delivery. The process is seamless. Other projects include acquisition of additional electronic databases, and enhancements to the INNOPAC system in the form of specialised modules. As part of the efforts to further improve national delivery of information, GAELIC is looking at ways to cooperate with other institutions in Southern Africa. GAELIC institutions (University of Witswaterand and University of south Africa) assisted the University of Botswana in arriving at the decision to purchase and implement the INNOPAC system. The University of Botswana is said to be considering applying for membership of GAELIC [9].

FRELICO has also implemented INNOPAC. The member institutions cooperate in the following areas: Shared Computerized Regional Database/Catalogue, Document Delivery Systems, acquisition of Journals, SA Media (a press cutting service), and technological skills development of users and library workers [7]. FRELICO has also entered into partnership with GAELIC in which all member institutions become a node of the GAELIC database. This has resulted in the establishment of a joint GAELIC/FRELICO database (a virtual union catalogue), with SABINET acting as super host. All FRELICO members' collections were converted and placed on this virtual union catalogue. As a result of the strong link between these two consortia, two major Free State tertiary institutions, University of the Orange Free State and Technikon Free State also implemented INNOPAC as part of GAELIC phase 2 [11]. All members of the cooperative network acquired ARIEL™ workstations to implement an efficient electronic document delivery system. Joint purchasing of hardware and electronic periodical databases has become a feature of the cooperation between the two consortia. For example, the purchase of the General Business File full text electronic database is a joint decision of GAELIC and FRELICO.

SEALS have installed the INNOPAC Millennium system of Innovative Interface at their member institutions. SEALS major project include purchase of software and associated hardware for a co-operative electronic theses and dissertations (ETD) project. The Electronic Thesis and Dissertations project aims to provide electronic access to theses and dissertations produced in the Eastern Cape Province. The project also involves the development of a computer-based information literacy module for these academic libraries. The participating libraries will have seamless access to, and be able to download records from international databases, other consortia databases, and SABINET [13].

CALICO opted for the Israeli developed ALEPH 500 software, which has had significant successes in Europe and Latin America [9]. Areas of activities for CALICO include a shared library system, creation of joint databases, document delivery, shared collection management, and the development of a joint information literacy project [4]. The joint information literacy course INFOLIT (with a standard subject content and expected outcomes), is taught both via the Internet and class contact by the participating institutions.

ESAL opted for URICA system through which it implemented a range of interactive programmes. These include: inter-library loan courier service, cross-institutional membership for staff and graduate students, shared staff development programmes, jointly developed modules for student orientation, and shared journals and abstract holdings [10]. ESAL intends to set up a broadcast enquiry function between its seven bibliographic databases [9].

6. STRATEGIC IMPORTANCE OF SABINET FOR COOPERATING LIBRARIES

SABINET Online with eighteen years' experience in the online information industry is an expert in facilitating electronic access to information. It has an 'Academic and Library Division' dedicated to serving all Academic Institutions, Government Libraries and other Library clients with value-added access to information services, cataloguing- and interlibrary loan support services. It applies the latest technology and excellent people skills in assisting its clients. Resource sharing between institutions through the use of

SABINET's products and services has been preventing the purchasing of unnecessary material and duplication of work, which can mean considerable savings for individual institutions and South Africa. It also provides online access to bibliographic databases, which supports the acquisitions and cataloguing processes of libraries [14]. SABINET hosts the new South African national union catalogue, SAC at and the National Interlibrary Lending System. Many academic institutions in the region subscribe to the services provided by SABINET. There are also indications that SABINET has played significant roles in the success of some cooperative electronic information networks such as GAELIC and FRELICO, and will continue to play such roles. It is as a result of its dedication to serving its clients efficiently and effectively, that it now implements INNOPAC software as stated above.

7. COALITION OF CONSORTIA

There has also been partnership of Consortia. COSALC is the Coalition of South African Library Consortia. Its vision is to enhance access to information and the sharing of resources to benefit the clients of library consortia in South Africa through national co-operation. Membership consists of representatives of the five regional academic library consortia discussed above [11]. COSALC enjoys the Open Society Institute (OSI) support, and is a member of the EIFL (Electronic Information for Libraries) multi-country consortium. EIFL's aim is to provide libraries in "countries in transition" with access to a menu of electronic resources. A COSALC member library has already enjoyed the financial benefits of national and international licensing agreements through national subscription to Beilstein CrossFire/Gmelin. COSALC is also currently negotiating with Elsevier Science for a national site license of Science Direct, which could possibly be developed into a model for other EIFL member countries [15].

Both GAELIC and CALICO are also members of the US-based International Coalition of Library Consortia (ICOLC) and are thus able to follow closely developments with regard to consortia licensing [9].

8. GAINS OF THE COOPERATIVE ELECTRONIC NETWORK

As a result of the cooperative networks, members of the consortia have reported a number of benefits. The adoption of common library software and resource sharing for example has saved member institutions both money and time. Also as a consequence of belonging to the network, a COSALC member library enjoyed the financial benefits of national and international licensing agreements through national subscription to Beilstein CrossFire/Gmelin, which resulted in a subscription cost of 10% of the individual database subscription cost. In addition, based on subscription costs to one of the five databases in the EBSCOHost package, average subscription costs per title also resulted in a reduction from R 2319 to R 72 [15]. And having become the virtual library they hope to be, they now operate in a more cost-efficient and business-like manner, which now forms a sound basis for future growth and development. For example, the document delivery system has succeeded in reducing the turnaround time of information transfer within the different consortia. Skills development is also one of the most important benefits of belonging to these cooperative arrangements. This has been achieved through well-supported Human Resources workshops and through a variety of training initiatives undertaken by workgroups in the various consortia. The shared journals and abstract holdings, has also advanced the aim of wider accessibility and more efficient dissemination of knowledge and information.

9. CONCLUSION

In spite of the dwindling library funding, academic libraries must continue to provide better services. There must be accessibility to the variety of information resources particularly in an environment of proliferating electronic information resources in order to support education, research and lifelong learning. The most practical and beneficial approach is through cooperative utilization of electronic networks, which allows provision of seamless access to electronic information resources while sharing the cost of access. However, Internet connectivity is an essential component in establishing the network. Academic libraries are advised to embrace the concept of cooperative electronic network in order not to lose their relevance, thereby causing users to go elsewhere. Additionally the need for financial support from donor organizations is crucial. It is important that funding proposals must be well written in such a way as to attract such funding. The idea must be sold such that organizations would be willing to buy into the electronic information cooperative project. It would therefore be best to consult with the established consortia to achieve this goal.

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