Cooperative Electronic Networks of Academic Libraries in Southern Africa

The development of cooperative electronic networks and consortia by academic libraries in Southern Africa allows them to provide seamless access to electronic information resources while sharing the cost of access.

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INTRODUCTION

Today, libraries are operating in a rapidly changing environment, dictated by a number of factors, which occasion the rise in consortia activities. 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 the traditional 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 only 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 (Dorner, 2000).

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 and location. 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 (Dorner, 2000).

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 benefits that have been recorded from such cooperative utilization of electronic networks. For this purpose, a review of the literature was carried out and the websites of such projects visited to ascertain the extent of their operations.

THE 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 according to Dorner (2000), libraries have encountered serious reductions in funding coupled with increasing costs of information resources. 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. Librarians are thus faced with the challenge of providing better services with shrinking budgets.

The political approach of successive governments in
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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 are no longer sufficient to 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 of 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 are 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 (Tonta, 2001). It has allowed the sharing of cost of access to electronic information resources by library and information services.

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 (Muswazi, 2000).

Fairly advanced information technology (IT) applications have 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 Muswazi’s 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, located 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 (Muswazi, 2000).

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

LIBRARY COOPERATIVE NETWORKS IN SOUTHERN AFRICA

In spite of the strategic positioning of the libraries in this respect, there are few functioning cooperative electronic networks in Southern Africa. This may perhaps be due to a lack of coordination among the libraries to initiate this kind of venture. Some institutions are considering becoming members of existing consortia, while others are contemplating forming new ones. In one example, efforts were being made to establish a cooperative electronic network for special libraries in Botswana. The aim was to harness the various strengths of the participating libraries towards satisfying user needs. This effort seems to have been overtaken by the formation of a new and broader
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consortium for the country, the Botswana Library Consortium.

There are currently five major regional academic library consortia in Southern Africa, all concentrated in South Africa. They are the:

- Gauteng and Environ Library Consortium (GAELIC)
- Free State Libraries and Information Consortium (FRELICO)
- Cape Libraries Cooperatives (CALICO)
- Eastern Seaboard Association Libraries (ESAL)
- 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 (Nfika, 2002). This concentration of electronic information networks in South Africa obviously is a result of the more advanced technological infrastructures in South Africa as 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 African continent, being in the top twenty Internet usage countries worldwide. There are about 75 public dialup Internet access providers in South Africa serving approximately 650,000 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 (AISI-Connect, n.d.).

GAELIC, the first major project of FOTIM (Foundation of Tertiary Institutions of the Northern Metropolis), came into being in April 1996 and is the largest academic library consortium in Southern Africa. FOTIM itself is a consortium formed in 1996 by seven universities and five technikons (polytechnics) resolved to foster regional collaboration. FOTIM offers member institutions opportunities for better cooperation, 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 (FOTIM, n.d). GAELIC, which therefore operates under the auspices of FOTIM is based in Gauteng, and has grown to sixteen members (ten university and six technikon libraries).

FRELICO was established in 1996 and comprise three university libraries, one technikon, one public/legal deposit library and one technical library. FRELICO serves more than 25,000 students, faculty and researchers affiliated to member institutions in addition to more than 7,000 distance education students scattered throughout the rural Orange Free State (FRELICO, 2002). 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.

ESAL, initiated in 1992 and based in KwaZulu-Natal province, is a partnership of three universities and three technikons.

SEALS is a consortium of the academic libraries in the Eastern Cape province. Membership consists of seven universities and technikons.

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 regions 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
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- facilitating access to information through shared computer systems and networks
- utilizing appropriate and up-to-date technology and keeping abreast of new technological developments
- improving information literacy among clients and sharing training resources and expertise where appropriate.

These objectives are being achieved via the utilization 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.

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 (Edwards, 1999; Darch and Underwood, 1999). The Kellogg Foundation also made a substantial infusion of funding of the ESAL consortium to facilitate networking (Kaniki, 2002). The funding is vitally important in view of reduced funding to these libraries by the national government.

THE COOPERATIVE PROJECTS

The emphasis on common library software and resource sharing provided an 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 (GAELIC, 1998, 1999). 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 cooperate 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 and the 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 (File Transfer Protocol) or MIME (Multipurpose Internet Mail Extensions) e-mail, and convert them to PDF (Portable Document Format) 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 specialized 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. Two GAELIC institutions (the University of Witwatersrand and the University of South Africa) assisted the University of Botswana in arriving at the decision to purchase and implement the INNOPAC system. As at 1999, the University of Botswana was considering becoming a member of GAELIC (Darch and Underwood, 1999); however, the current FOTIM website does not include the University of Botswana as a GAELIC member (FOTIM, n.d.).

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 (FRELICO, 2002). 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, the University of the Orange Free State and Technikon Free State, also implemented INNOPAC as part of GAELIC phase 2 (GAELIC, 1999). 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
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General Business File full text electronic database is a joint decision of GAEIC and FRELIICO.

SEALS has installed the INNOPAC Millennium system of Innovative Interface at member institutions. SEALS major projects include the purchase of software and associated hardware for co-operative Electronic Theses and Dissertations (ETD) project, which 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 member libraries. The participating libraries will have seamless access to, and be able to download records from, international databases, other consortia databases, and SABINET (SEALS, 2001).

CALICO opted for the Israeli ALEPH 500 software, which has had significant successes in Europe and Latin America (Darch and Underwood, 1999). Areas of activity 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 (Seck, 2003). The joint information literacy course INFOLIT (with a standard subject content and expected outcomes), is taught both via the Internet and through class contact by the participating institutions.

ESAL opted for the Urica system, through which it implemented a range of interlibrary 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 (Kauki, 2002).

ESAL intends to set up a broadcast enquiry function between its seven bibliographic databases (Darch and Underwood, 1999).

INASP AND eIFL DIRECT PROJECTS

The International Network for the Availability of Scientific Publications (INASP) is another relatively new cooperative network having some impact on the region. It was established in 1992 by the International Council for Science (ICSU), as a programme of the Committee for the Dissemination of Scientific Information (CDSI). The mission is to enhance the flow of information within and between countries, especially those with less developed systems of publication and dissemination. It aims to promote the development of African university libraries, institutional support to professional associations and the provision of access to information and knowledge for the public in Africa.

Through the sponsorship of INASP, countries in the Southern African region have become involved in its Programme for the Enhancement of Research Information (PERI) Project (INASP, 2004). The PERI project is also a consortium building effort with the objectives of providing access to scientific and scholarly information; dissemination of national and regional research; enhancement of ICT skills; and strengthening local publishing (books and journals, both print and electronic) initiatives such as supporting the African Journals On-Line Publishing Project (AJOPP) which is still a pilot project aimed at offering full-text electronic delivery to ten African journals. PERI is being implemented in a planned and phased manner. Countries involved in one or more components of PERI in Southern Africa include Botswana, Congo-Kinshasa, Lesotho, Malawi, Mauritius, Mozambique, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe. The project has assisted with funding subscription and training in many of these countries as well as support libraries consortium building.

The eIFL (Electronic Information for Libraries) Direct Project is a joint initiative of the Open Society Institute (OSI) and the EBSCO publishing company aimed at bridging the digital divide. The project started in October 1999 with the aim of providing libraries in 'countries in transition' with access to a menu of electronic resources, mainly in the social sciences, the humanities and business (Open Society Institute, n.d). OSI has now has included other vendors in the project. In Southern Africa, the countries involved are Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe (eIFL Direct, n.d).

Under the eIFL Direct project, eIFL provides to subscribers 3,000 full-text journals, newspapers and news wires as well as over 1,300 pamphlets and full-text reference books, mostly in the social sciences and humanities, at reduced cost. These resources are delivered electronically to all participating institutions. In the year 2000, the OSI paid for access to EBSCO host for all the Southern African countries involved in the project, except South Africa. Ninety-one are currently registered as users in the region, although the number is changing all the time. South Africa is responsible for about 35 percent of total usage within eIFL. Maintaining the subscription to the database has not been easy for many of the libraries in the region. Although
all the participating countries were expected to pay for themselves by 2001, few Southern African countries were able to do so, with the exceptions of Botswana (paid for by the University of Botswana), Namibia and South Africa. In 2002, OSISA (the Open Society Initiative for Southern Africa) therefore funded participation by many of the Southern African countries once again.

One positive result of the OSISA initiative is the encouragement and formation of national consortia that would then cooperate and, among other activities, share the cost of subscriptions to databases such as EBSCOHost. In Southern Africa, the following have been formed: the Botswana Library Consortium (BLC), the Lesotho Library Consortium (LELICO), the Malawi Library Consortium (MLC), the Zambia Library Consortium (ZLC) and the Zimbabwe University Libraries Consortium (ZULC).

**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 for South Africa. It also provides online access to bibliographic databases, which supports the acquisitions and cataloguing processes of libraries (SABINET, 2004). SABINET hosts the new South African national union catalogue, SACat, and the National InteLibrary 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 GAEICL 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.

**COALITION OF CONSORTIA**

There has also been partnership among the consortia. The Coalition of South African Library Consortia (COSALC) was formed on 2 July 1999 by representatives from the five regional academic library consortia in South Africa and other stakeholders (COSALC, 2002, n.d).

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 cooperation. Membership consists of representatives of the five regional academic library consortia discussed above (COSALC, 2002, n.d). The main COSALC current project is access to electronic information.

Both GAEICL 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 (Darch and Underwood, 1999).

**BENEFITS OF THE COOPERATIVE ELECTRONIC NETWORKS**

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. 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 have also advanced the aim of wider accessibility and more efficient dissemination of knowledge and information.

**CONCLUSION**

In spite of 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 and consortia, 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 networks. Academic libraries and others are advised to embrace the concept of cooperative electronic networks in order not to lose their relevance, thereby causing users to go elsewhere.

Sustainability of these projects, however, can be a problem. For instance, many countries did not renew their EBSCOHost subscriptions for 2003 and OSI had to cope with their own. Financial support from donor organizations is also crucial. It is important that funding proposals be well written in such a way as to attract funding. The idea must be sold such that organizations would be willing to buy into the electronic information cooperative projects. It would therefore be best to consult with the established consortia to achieve this goal.

References


Abstract

Describes the development of the major cooperative electronic networks or consortia among academic libraries in Southern Africa: Gauteng and Environs Library Consortium (GAELIC); Free State Libraries and Information Consortium (FRELICO); Cape Libraries Cooperatives (CALICO); Eastern Seaboard Association Libraries (ESAL); and South Eastern Academic Libraries’ System (SEALS), all concentrated in South Africa. Also discusses cooperative activities in the region of the International Network for the Availability of Scientific Publications (INASP) and the eFIL (Electronic Information for Libraries) Direct Project. Describes the strategic importance of the (South African Bibliographic Information NETwork (SABINET))
for cooperating libraries, and the formation of the Coalition of South African Library Consortia (COSALC). Advises academic and other libraries to embrace the concept of cooperative electronic networks in order not to lose their relevance, but notes that the sustainability of such projects can be a problem due to resource constraints.

Keywords: Library consortia; Library cooperation; Electronic networks; Academic libraries; Southern Africa

MORE ON LIBRARY CONSORTIA

Nationwide library consortia life cycle.

Library consortia development processes were examined from an ecological approach, combining historical perspective, dynamic developmental approach, and social structure, stressing the issues of permeable boundaries in library consortia and the manifestation of inter-organization relationships. A comparative analysis of several nationwide consortia (from Australia, Brazil, China, Israel, Italy, Micronesia, Spain and the U.K.) using six criteria enables delineation of a developmental pattern. Additional support for the model is based on a study of U.S. statewide consortia conducted by Potter in 1997. A four-stage life cycle sequence is outlined: embryonic, early development, development, and maturation. In addition, the ecological approach stresses founding and disbanding processes, suggesting disbanding as a fifth stage. The contribution of this paper to developmental theories at other levels of analysis (individual, group, organization) is in proposal of an inter-organizational life cycle model.

Current developments in library cooperation among special libraries in Botswana


Library consortia and formal resource sharing though commonplace in some parts of the world, are not developed in Botswana. Librarians have operated on informal networks in the facilitation of resources sharing especially in the form of Interlibrary Loans (ILL). One group of librarians are advocating for the formation of a nationwide library consortium to overcome cost of licensing fee for electronic databases. Librarians working for special libraries in Gaborone, the capital city of Botswana are planning to form a consortium for special libraries. Their vision is to develop a full text database of information produced in Botswana in the subject areas that the libraries represent. It is hoped that more special libraries will join in and that the database will be a base for a national full text database that will help narrow the digital divide between the global North and South. The database will also preserve national indigenous information and ease its accessibility. Challenges facing the group include lack of funds and lack of expertise. A proposal will be drafted to source funds from donors and external expertise will be sought.

(From *Library and Information Science Abstracts*)