

COLLABORATION IN RESOURCE SHARING AMONG MALAYSIAN ACADEMIC LIBRARIES IN A DIGITAL ENVIRONMENT

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Abstract

The need for resource sharing among libraries has become even more important today with constraints of finance, space, and manpower. Traditional forms of resource sharing – inter-library loans and document delivery – are more suited to a print environment than a digital environment. The digital environment however provides many new opportunities for resource sharing, and the literature suggests many emerging models. This paper examines the views, practices, and plans of resource sharing among Malaysian academic libraries. From the interviews conducted, it was noted that librarians were aware of and support the concept of resource sharing. Current resource sharing activities in Malaysia centre on inter-library loans and document delivery services. Resource sharing in the digital environment is based on existing collaborative projects, and the proposed Consortium of Malaysian Libraries. Factors that influence success in resource sharing include the need for a shared commitment, the willingness to contribute, technologically skilled staff, and a need to understand legal implications.

Introduction

A library is often described as a collection of books and/or other print or non-print materials, organized and maintained for use (reading, consultation, study, research, etc.). Institutional libraries, organized to facilitate access by a specific clientele, are usually staffed by librarians or other personnel trained to provide services to meet users' needs (Reitz, 2005). A key element in this description of a library is the "collection" of materials, which is often taken to mean the total holdings of the library, or the books, journals, audio-visual materials, CD-ROMs, etc., owned by it.

Today, a library does not necessarily own the materials it provides to users. With online materials, Internet sites and databases becoming increasingly common, modern libraries serve as gateways to materials that may be located away from the library, being housed on a computer in another building, city, or even in another country. Also, no library can have a collection of everything. The amount of materials

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available has become so large that it is no longer possible for a library to acquire every single item for its collection. Even the Library of Congress is reported to have a collection of approximately 128 million items, including 29 million books and other printed materials (Library of Congress, 2004). It is thus more appropriate to describe those materials as “resources” to encompass those owned by the library and those made accessible from remote locations.

Irrespective of whether the resources are housed within a library or accessed from a remote source, there is a limit to the amount of resources that a library can provide access to. Constraints of finance, space, manpower to select and process the resources, declining purchasing power, etc., all result in libraries having to limit the number of resources they can make available to the users. However, users’ needs have increased in quantity and quality. Users today demand more information, and information that is accurate, authoritative and fast, irrespective of where the information comes from.

Libraries have responded to the issue meeting increasing user demands within the constraints of limited resources in various ways. One way is to share the resources. Resource sharing entails making available to other libraries the resources owned by a library, the information contained in those resources, and the staff expertise required to make available the information or the resources (Provincial Resource Sharing Policy [Alberta], 2005). Resource sharing includes the common use of equipment, staff knowledge and expertise, materials, facilities, and/or information resources, by two or more libraries. In common usage, resource sharing refers to the transactions by which a library makes its materials available to the user of another library upon request. The purpose of resource sharing is to obtain, upon request of a library’s user, materials not available in the local library.

Traditional forms of resource sharing have included inter-library loans, document delivery services, and union catalogs. An interlibrary loan is a transaction in which library material, or a copy of the material, is made available by one library to another upon request. A document delivery service is one that allows users to request copies of materials, usually journal articles, via an online communications link. The document may be delivered by mail, fax, email, or sent directly to the user’s workstation (University of Connecticut, 2005). A union catalog is one which lists the materials held by a group of libraries.

These traditional forms of resource-sharing were designed for a print-oriented world, and served the needs well. However these traditional means are slow and ineffective in today’s technological world where users demand instantaneous information in a variety of formats. Traditional models of resource sharing, in particular inter-library loans and document delivery, have high costs, high turnaround time, low fill rates, and varying user satisfaction. Fortunately, the technological developments have also facilitated resource sharing.

Technological developments have resulted in libraries today existing in a digital environment. The term “digital environment” encompasses the infrastructure, resources, and channels of transmission based on Internet-related technologies. The digital environment is characterized by information and communication technology (ICT)-based content and transfer of information.

Resource sharing in a digital environment provides many opportunities to libraries, librarians and users. In a digital environment, more information is available to users. Library staff are able to use technology to locate the information more effectively and efficiently. The digital environment also enables the library to streamline and automate many services, thus saving time and money. The digital environment also creates new opportunities for services that benefit the users.

This paper examines the potentialities, efforts towards collaboration, and practices of resource sharing in a digital environment. Beginning with a review of selected professional literature on current models and practices in resource sharing, the paper looks the findings of a small study on the practices and plans for resource sharing among Malaysian academic libraries. The paper attempts to relate the discussion to the CONSAL 2006 theme, *Challenges for Greater Regional Cooperation*.

The Need for Resource Sharing

The need for resource sharing stems from four underlying trends of modern society: the growth of all forms of literature, increasing reliance on information for society to function effectively, inflation in the cost of materials, and the increasing availability of technology. These trends have made it economically imperative to consider sharing resources (American Library Association, 1993).

Resource sharing plays a crucial role in enabling libraries meet their goals in promoting education, democracy, economic growth, health and welfare, and personal development. It facilitates access to a wider range of information, which would not otherwise be available to the user or library. Resource sharing is not a mechanism to reduce costs, but rather to expand availability for those who cannot have access to the information directly for economic, technical or social reasons (International Federation of Library Associations and Institutions, 2000).

The need for sharing of resources has increased with time. In the early years (1950s – 1985), the rapid growth of library collections, and the better management of the collections led to attempts at cooperative collection development. In the later years (1985 – 2000) economic constraints, changing expectations and needs of users, changing communication patterns, limitations of library staff, and the emergence of digital information resources, contributed to the need for better collection management and resource sharing (Branin, Groen and Thorin, 2000).

While no figures on resource sharing could be located for the CONSAL member countries, a parallel can be drawn from the Association of Research Libraries statistics which indicate that, for the years 1986 – 2004, faculty numbers increased by 22%, graduate student numbers increased by 91% and total student numbers increased by 29%, all pointing to increased users. On the other hand, monographs purchased by the library members decreased by 9%, serials purchased increased by 42%, while inter-library lending increased by 111% (Kyrillidou and Young, 2005).

In other countries however, the inter-library lending has decreased. In Australia, it was estimated that there were about 150,000 interlibrary loan transactions in 1964. A study in 1986 found that this figure had risen to between 800,000 and one million

transactions. This rise peaked in the early 1990s and the trend has been downward ever since. Today there are estimated to be about 800,000 transactions per annum in Australia (Missingham, 2005).

Part of the decline in Australia is attributed to availability of e-journals and e-prints from the user's desktop, the increasing availability of preprints and conference papers through the web, and the development of Open Access or Open Archives, which provide repositories for preprints and postprints of research material free of charge to users through the web (Missingham, 2005).

The above figures and clarification is an example of how the digital environment is shaping resource sharing activities. The digital environment provides libraries and librarians with opportunities to share their resource more effectively and in newer ways. Better national infrastructures enable libraries to communicate with each other more effectively. The development of union catalogs enables one library to know of others' holdings. Users are now able to request resources on interlibrary loan from their desktop, thereby reducing the barriers. Users' expectations are also being influenced by their experiences with the Internet, Google and Amazon.com. Users want instantaneous information they are used to from cell phones and short message services (text services). Libraries are then expected to meet user demands of online ordering, convenient delivery, and immediate access (Bailey-Hanner and Wanner, 2005)

The conveniences of a digital environment are not confined to resources only. ISO and NISO standards enable libraries to better communicate with users and with each other. The Z39.50 standard specifies a client/server-based protocol for information retrieval. It specifies procedures and structures for a client to search a database provided by a server, retrieve database records identified by a search, scan a term list, and sort a result set. The Directories Standard ISO 2146 provides an information model of the data describing the collections, services and activities of libraries, museums, archives, information and documentation centers, and document suppliers. The NISO Circulation Interchange Protocol (NCIP) Z39.83 defines various transactions needed to support circulation activities among independent library systems and facilitates direct patron borrowing, remote patron authentication, on-line payment, and controlled access to electronic documents. The Interlibrary Loan Protocol ISO 10160/10161-1 provides a set of messages and associated behaviors that can be used by libraries to perform resource-sharing activities in a distributed network environment. It includes the capability to request the loan of returnable bibliographic items, such as books, or to request non-returnable items, such as photocopies of journal articles (Canadian Library Association, 2004).

Models of Resource Sharing

There are many ways in which resource sharing is being implemented. Chavare (2002) categorized them into four basic models:

- Centralized collection development and services at national or regional level,
- Centralized collection development and services by subject,
- Centralized collection development at organization level, and
- Co-ordinated collection development at institutional level.

These models deal with sharing of collections. However, the digital environment allows for distributed resources which can be accessed remotely. As such, other modes can be added to these four basic models. These include:

- Document delivery services (DDS)
- Mediated interlibrary loan (ILL)
- User-initiated inter-library loans
- Direct consortial borrowing/remote circulation
- Consortial licensing

Current trends in resource sharing include reciprocal access and borrowing services, sharing of digitised resources and sharing of online resources, with many of these features being available from one main portal.

The success of such models is evident in many parts of the world. Much can be learnt from the efforts and success stories in developed countries. Some examples, based on professional literature, of ongoing successful consortia include:

- The Washington Research Library Consortium (WRLC) <http://www.wrlc.org/> is made up of eight academic libraries in Washington DC. WRLC library resource-sharing programs include reciprocal borrowing based on a shared online catalog, consortial licensing of online resources, cooperative collection development and shared virtual reference services
- Ohio Library and Information Network (OhioLINK) <http://www.ohiolink.edu/> is a consortium of 84 Ohio's college and university libraries and the State Library of Ohio. Their electronic services includes a library catalog of books and materials owned by all the OhioLINK member libraries, online request of items, search of the collections of full text research journals, storage and access of digital media collection, and access to electronic theses and dissertations.
- Cooperative Action by Victorian Academic Libraries (CAVAL) <http://www.caval.edu.au/> is a consortium of the Victorian University Libraries and the State Library of Victoria, Australia. Their resource sharing programs also include a reciprocal borrowing arrangement and provide virtual union catalog (COOLCAT) services.
- The North West Academic Libraries (NoWAL) <http://www.nowal.ac.uk/> is a consortium of UK University and Colleges of Higher Education libraries in Cheshire, Cumbria, Greater Manchester, Lancashire and Merseyside. The consortium aims to provide services to users through reciprocal access and borrowing policy, access to online databases and consortia procurement of library resources and staff training programs.

Resource Sharing in Malaysian Academic Libraries

Clearly there are success stories in the literature of resource sharing in a digital environment. To what extent are these being practiced or planned in a developing country, like Malaysia? In the current digital environment, Malaysian academic libraries are striving to provide digital resources to their users, either by purchasing the resources or digitizing their resources. However, these can be very costly. Developing countries do not have the resources available to the more developed countries, and therefore must make best use of the limited funds, expertise, and technology available to them. What are the current developments in resource sharing initiatives among Malaysian libraries in the digital environment?

To answer these questions question, a small study was carried out to look at the awareness, practices, and plans of Malaysian academic libraries in relation to resource sharing. Information was sought from Chief Librarians or Senior Librarians from selected academic libraries in Malaysia. Academic libraries were chosen because it was felt they were more progressive and better developed among the libraries in the nation, they had trained professional staff, and they had a compelling reason for providing wider resources and quality services to serve their teaching and research constituents.

In Malaysia, academic libraries are growing with the corresponding growth of public higher institutions. At the end of 2005, there were 18 public university libraries in Malaysia. Most of these institutions have incorporated the technology into their libraries. Although the technology has been included in their infrastructure, many libraries are still constrained by limited funds, inadequate staff, poor support from parent organisations, and increasing costs of resources. The increasing numbers and sophistication of users, rising prices of materials, and tight controls in spending all place constraints on the resources and services that can be provided in the digital environment. This has led to Malaysian academic libraries meeting these challenges through various forms of collaboration.

Approach to the Study

The study used structured interviews of Chief Librarians (or similar designation) or Senior Librarians as a data collection method. Selected academic libraries were identified based on the size of collection and clientele. These universities libraries were active members of the Malaysian Standing Conference of National and University Libraries (commonly known as PERPUN in Malaysia). Interviews were conducted with their Chief Librarians or Senior Librarians in person, through telephone, or via e-mails.

A total of 7 respondents were interviewed or sent in their responses through e-mail, comprising librarians from University of Malaya, International Islamic University, MARA University of Technology, Northern University of Malaysia (*Universiti Utara Malaysia*), and University of Malaysia, Sarawak.

Findings

The responses of the librarians were recorded and analyzed based on similarity of words and themes. The findings revealed high awareness, a positive outlook, support for collaboration efforts, and some upcoming projects.

These findings are discussed in three sections, namely:

- Early practices of collaboration in resource sharing,
- Current trends/initiatives of resource sharing in the digital environment, and
- Success factors for collaboration and resource sharing.

Early Practices of Collaboration in Resource Sharing

Tracing the history of collaboration, Malaysian libraries and information centers have been cooperating formally since the early 1970s. Collaboration and resource sharing among academic libraries in Malaysia began in 1977 when MALMARC (**Malaysian Machine Readable Catalogue**) was started. MALMARC was a union catalogue comprising approximately 480,000 bibliographic records of the National Library of Malaysia (NLM) and all academic libraries in Malaysia. This project was coordinated by the Science University of Malaysia (*Universiti Sains Malaysia*, USM) and with a financial grant from UNESCO. However the progress of MALMARC slowed over time due to lack of funds and changes in the library scene. Many libraries started to automate their library systems and began to focus on improving their own individual library systems, which resulted in efforts towards a collaborative catalogue beginning to wane. In the early 1990s, the MALMARC project was abandoned. All the tapes were handed to NLM to continue the project. However, a lack of funding and trained personnel in the required technologies at NLM resulted in the project being put aside.

Various mechanisms have evolved since the 1970s to coordinate collaboration among academic libraries. A Standing Committee of National and University Libraries in Malaysia (*Persidangan Perpustakaan Universiti dan Perpustakaan Negara*, PERPUN) comprising the National Library of Malaysia and academic libraries was formed to look into the matters of collaboration and resource sharing. Inter library lending and document supply were the main concern of resource sharing at that time. Request for Interlibrary Loans (ILL) and Document Delivery Services (DDS) were done manually. Items were picked up and sent by selected PERPUN member's vehicle, which was scheduled on a rotation basis.

In 1988, a document delivery consortium among libraries was formed, initiated by the National Library of Malaysia, with the objectives of encouraging local delivery services and enable easy access of information at local and international levels. The document delivery system was part of the National Availability of Publication, which in turn was part of the Universal Availability of Publications (UAP) program initiated by IFLA and supported by UNESCO (Raja Abdullah, 1999). The ILL/DDS functions with the co-operation of institutions from Brunei, Singapore, Australia and the British Library. The numbers and categories of libraries involved in this initiative are listed in Table 1 below:

Table 1: Members of the Inter Library Lending System, Malaysia

Type of Library	Number
Statutory Bodies	45
Public Academic and university libraries	43
Private Academic and university libraries	6
Government Departments	138
Commercial Agencies	110
NGOs	9
Total	341

Although member libraries collate their own data on ILL/DDS and submit it to NLM annually, there has been no study done on the effectiveness or changing trends of ILL/DDS in academic libraries. Raja Abdullah (1999) carried out a survey at the

[then] MARA Institute of Technology Malaysia on its ILL service and found that the most prevalent problem associated with the success of the service was lack of staff, and that contributed to the turnaround time, which ranged from 2 to 3 weeks.

Resource Sharing Initiatives in a Digital Environment

As libraries face up to the challenges of the electronic resources, Malaysian academic libraries are also striving to keep pace with the information explosion. As a result, new efforts of collaboration have emerged. The interviews revealed some of the collaborative projects initiated and carried out over the last five years were:

i. PERDANA

PERDANA is a project to develop a [Malaysian] National Digital Library system under the co-ordination of NLM. Launched by the Deputy Prime Minister of Malaysia in early 2000, the project aims to encourage collaboration among all Malaysian libraries in sharing their local and international digital resources.

ii. MYLIB

MYLIB, a pilot project of PERDANA, is a portal for commercial databases, theses, library catalogues, abstracts and indexes. The project is managed by NLM and the focus is on public libraries and special libraries in Malaysia.

iii. I-resources

I-resources is a subject-specific portal. Each participating public university library, and some research libraries such as the Malaysian Palm Oil Board (MPOB), Standards and Industrial Research Institute of Malaysia (SIRIM) [now known as SIRIM Berhad], Malaysian Science and Technology Information Centre (MASTIC), etc., has been given a particular subject area in which the members are to contribute relevant Internet resources to the portal.

Generally, the above-mentioned initiatives, though having good intentions, have not been totally successful. Interviews with some librarians revealed that the main causes were inadequate planning, lack of funds, and lack of coordination. The initial planning had not foreseen certain management issues and sources of funding for the project. As one librarian stated:

“Most libraries were under the impression that a particular institution would obtain the funding and others were to contribute in terms of resources only. However it turned out that there was no central budget and each institution was to secure their own funding, especially in the digitization of materials. At this stage, some innovative libraries managed to secure funds. However the majority only had limited funds for operational running of the libraries and could not afford to set aside a substantial budget for the project”

Another two Chief Librarians mentioned that the lack of ICT expertise of the library staff was also a contributing factor to the slow progress of these projects. No special allowance was made for staff training and development, especially in areas of web development, digitization, electronic publishing, etc. As a result, the libraries have held on to their own resources and formed their own ‘digital’ or ‘electronic’ libraries

for their own clientele. Collaborative efforts to share these electronic resources have not reached the desired outcome.

iv. Formation of Consortium of Malaysian Libraries

Increasing pressure on academic libraries to offer electronic resources led every library to purchase as many online databases as their budgets would allow. As a result, Malaysian public university libraries spent almost RM 22 million (approx. US\$ 5.5 million) to purchase online databases, and most of the titles were deemed very expensive and overlapping (Hafsah Mohd, 2001). The 9 -12 % annual increase in subscription fees was also a burden to academic libraries. Many libraries tried to reduce their purchasing costs by reducing print subscriptions. However this did not help the tightening budget.

In 2000, a Committee for Commercial Electronic Databases was formed as a platform for university libraries to evaluate, select, negotiate and manage the online electronic journal databases. This Committee was to be responsible for the:

- Selection of electronic journal databases
- Negotiation of the price and cost of service, including increases in price, licensing and agreement, training, contract, and tender.
- Ensuring the purchase of databases was in accordance with the set guidelines, approved by the university management
- Building a union catalog of electronic journal subscription.

This Committee succeeded in negotiating for the subscription of electronic journal databases. The Ministry of Education allocated RM1.4 million (approx. US\$ 350,000) in 2002 and RM 1.9 million (approx. US\$ 475,000) in 2003 for the subscription of three online databases [ProQuest Education, EBSCOhost BSP, Science Direct] to be shared among 13 member universities. However this financial aid was discontinued in 2004. The Committee and negotiation among the members still exists, and over the years a number of new databases, such as IOP, INS Physics Journal, have been purchased by members who could afford using their own budgets.

This Committee did succeed to a certain level in ensuring a better deal for academic libraries. However the merger and takeover of publishers, such as Academic Press and Harcourt being taken over by Elsevier Science and the high subscription costs of commercially available academic journals, are problems that academic libraries cannot put off. These complications have made PERPUN realize that there is a need for a formal consortium to be formed if collaboration among academic libraries was to succeed. In July 2004, PERPUN members decided to form a National Consortium of Malaysian Libraries, following the example of some developed countries.

This consortium would coordinate the purchase/subscriptions, management and monitoring of the electronic journals online databases, and carry out information sharing projects that would benefit all libraries involved. Currently the formation of this Consortium is in its final stages. The Consortium is to be placed under Multimedia Technology Enhancement Operations (METEOR) Sdn Bhd., a subsidiary company owned by all public universities in Malaysia. The Board of Directors of the Consortium will comprise of members from the 11 public university libraries, members of other university libraries, Director-General of the NLM, and a representative from the Ministry of Higher Education. An Executive Officer is to be

appointed for the management of the Consortium, especially in terms of electronic databases purchase. Since funding is critical to the success of a project, it has been suggested that all members wishing to be part of the Consortium should pay a minimal membership fee, depending on the category of the library. Categories are to be decided based on the size of the library, number of students, number of services offered and other criteria to be finalized.

Functions of Consortium of Malaysian Libraries

The main functions of the proposed Consortium of Malaysian Libraries are expected to be:

- Act as an agent for negotiating database subscription prices
- Negotiate contract and licensing terms
- Act as an agent for collective purchases
- Prepare the ICT infrastructure
- Prepare a portal on the training and management of electronic products
- Improve resource sharing through better ILL/DDS
- Develop projects for all member libraries
- Carry out activities to generate income

The consortium would provide better bargaining power for negotiation of database subscriptions, and cost-effective purchases based on collective purchase. Thus, the purchase of new products would be possible at a better price. The network of collaboration among information services in the country and availability of a common server by the consortium will allow wider access to electronic materials, local and international information sources. It is hoped that this centralized information centre will further promote learning in Malaysia.

v. Electronic ILL/DD Delivery System

One Chief Librarian stressed that there was a need to improve and change the current ILL system at various stages, especially in terms of its management/operations and fees. An open meeting among the PERPUN members has agreed to provide copies of documents free of charge to each other. Initially, new libraries will benefit from this arrangement, but over time the interdependency will be greater and this initial disadvantage to the older and bigger libraries will be overcome. With these changes, members are opting for a better delivery method of documents.

Currently, most of the academic libraries have automated their ILL/DDS in terms of receiving requests. However, delivery of the documents is still on a manual basis. Discussions have been on going to scan the documents and deliver them electronically. The International Islamic University (IIU) has started scanning documents and delivering them by email. Other libraries are a little slow to adopt this method due to manpower shortage and lack of funds to invest in the proper hardware required. It is hoped that over time with this new development, the turnaround time will be reduced and greater user satisfaction be achieved, as well as reducing the delivery and print costs.

On whether there were any intentions to share e-books or electronic articles which are available in the subscribed online databases, most librarians responded that resources available in the electronic databases were not currently shared. Only print resources

were shared among the ILL members. Sharing of electronic resources was limited because licensing agreements were stringent and did not allow this

vi. PERPUN Portal

A portal to be developed by a selected university library to provide information about PERPUN activities and to serve as a one-stop access point for all higher learning institution libraries. The following services would also be made available through the portal:

a. Union List of Serial Holdings

The current list of serial holdings is out of date and a newer online list for journal holdings is being developed. The University College of Engineering and Technology, Malaysia (*Kolej Universiti Kejuruteraan dan Teknologi Malaysia, KUKTEM*) is coordinating a union list for print and electronic journal holdings of all academic libraries.

b. Union List of Theses

Other income generating projects planned include the development of a Union List of Malaysian Theses. Currently the Multimedia University (MMU) is coordinating a listing of all theses (Masters and PhD). This list will be passed on to the Consortium later to be marketed.

c. National Union Catalog

Efforts to push for a National Union Catalog have also been carried out. NLM has received funding for this project and is currently looking for a suitable system that can be shared by all participating libraries. Records should be automatically updated. This will allow easy access to all library holdings.

d. A single access point to all research publications

This project is currently undertaken by the Ministry of Science, Technology and Innovation (MOSTI) Malaysia with the cooperation of all institutions of higher learning and research institutes.

Views on Success Factors for Collaboration among Academic Libraries

From the interviews, it was gathered that if the Consortium of Malaysian Libraries is to be successful, there has to be financial support from the Ministry of Higher Education even if member libraries pay a membership fee. This was done by Northwest Academic Libraries Group (NoWAL) in 1997, where the consortium asked the British authorities to help in the purchase of online databases, the price of which rose to almost GBP 350,000.

Other suggestions brought up by the interview respondents on factors important for the success of collaboration included:

- Members of the Consortium must include a lawyer so that issues of licensing, contract and agreements can be scrutinized. Many consortia in developed countries, such as OhioLink and WRLC, make use of legal services.
- Every academic library should contribute its heritage of local resources to be shared among the libraries. There has to be trust and a willingness to share among the members. It may prove difficult to get every member to agree initially, but if the majority is agreeable, the project should be carried out. Others will join in as the success is evident. Most important is the financial support.

- Library and information services staff have to be trained in technological know-how and the management of electronic resources, including the marketing of services to generate income for continuity of the projects.
- Increased collaboration in ILL/DDS must be based on an analysis of all participating libraries on the document supply transactions and the patterns of supply. There has to be sufficient knowledge of the demand to be met before a strategy on how to meet the expectations and demands is made.
- Regular input by participating members is crucial. All participating libraries must be committed to the collective sharing and each must consistently fulfill its responsibility regardless of changes in management.

Conclusions

Based on the preceding discussions and findings, the future of resource sharing in the digital environment among Malaysian academic libraries is beginning to take shape. Libraries are aware of the need for resource sharing and emerging trends, and are making a commitment towards newer methods of resource sharing. Consortium-based arrangements are preferred and a Consortium of Malaysian Libraries is almost a reality. Based on the responses of the Chief Librarians and Senior Librarians, the future of collaboration seems promising with an increasingly strong involvement and cooperation among the academic libraries. Although commercial document delivery systems are having an impact, they are not eliminating the need for traditional interlibrary loans, particularly for printed materials. Traditional models will continue to be used, but newer models for digital resources will also be implemented.

There is also a need to look at newer models of resource sharing, especially from the experiences of developed countries. Lessons learnt from these countries suggest that a strengthening of bibliographic control is crucial to effective and efficient resource sharing. Malaysian academic libraries must be encouraged to update their holdings on the National Union Catalog and contribute to this national project. The National Library of Malaysia will need to monitor closely the development of this National Union Catalog.

In conclusion, Malaysian academic libraries are well aware of and strongly support resource sharing initiatives. Working together, with ongoing commitment to support the National Library, contributing to the bibliographic national database, developing union lists of resources, responding to the need for electronic delivery of documents, and a realization that resource-sharing is a shared responsibility among libraries, are the factors Malaysian academic libraries will need to succeed in the future.

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