



The conundrum of resource sharing in Zimbabwe: Case of academic libraries

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Abstract:

Resource sharing has gained impetus among academic libraries as they seek novel and innovative ways to provide for the dynamic and complex needs of users. Zimbabwe is not an exception to the global trend of resource sharing in support of teaching, learning and research as evidenced by the establishment of sector-specific library consortia. This article explores the challenges and opportunities encountered by academic libraries in their endeavour to provide quality services. It will examine how resource sharing through library consortia, namely the Zimbabwe University Library Consortia (ZULC) and the College and Research Libraries of Zimbabwe (CARLC), have been able to provide for the information needs of their users at a time when budgets are low or inadequate and subscription costs to journals remain unaffordable. The article will examine the extent to which library consortia are exploiting trendy initiatives, for example Open Access (OA to enhance resource sharing). It will also examine how academic libraries, through resource sharing platforms, have been able to exploit ubiquitous technologies and build on from traditional interlibrary loan (ILL). The article recommends a strategy to strengthen access to scholarship through resource sharing.

Keywords: Resource sharing; library cooperation; open access; networking

Introduction and contextual background to the study

The proliferation of digital technologies has strengthened the capacity of academic libraries to share resources irrespective of time. Igwe (2010) has highlighted the voluminous growth of published documents, increasing cost of information resources, the impact of the global economic downturn, and technological advancements that offer newer methods of information processing, retrieval, and dissemination as some of the factors necessitating resource sharing among academic libraries. Pina (2017) noted that access to knowledge and to culture was becoming more democratised since technological developments were making it easier, regardless of the scale, to access, reproduce, and disseminate works throughout the cyberworld. The proliferation of library ecosystem systems is transforming the academic landscape by blurring geographic and time boundaries. The digital revolution has promoted the creation of organized collections of information stored in digital formats and accessible over a network that, in a broad sense, are known as digital libraries. In the same vein, Muthu (2013) cites the voluminous growth of published documents, increasing cost of information sources, techniques, advancements that offer newer methods of information processing, retrieval, and dissemination as key factors necessitating resource sharing. Lawal, Bassey, and Ani (2008) argued that it was universally impossible for a single library to claim bibliographic completeness in its collection development, but when placed in the context of an academic library's collection, resource sharing serves as a viable option for a library to offer its users. Generally, resource sharing activities among libraries, for example, interlibrary loan or document delivery have long provided access to information resources beyond what is available to a local community (Bailey-Hainer., Beaubien., Posner., & Simpson, 2014). Resource sharing encompasses all the activities that emanate from formal or informal engagements among a collective of libraries to share data, collections, infrastructure, and human resources for the benefit of their users and to realise economies of scale. The ultimate goal of resource sharing is to maximize the availability of materials and services at the minimum expense. Library resources comprise human capital, materials, functions, methods, and services. The essence of resource sharing is underpinned by reciprocity, responsibility, and sharing.

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According to Muthu (2013), the objectives of resource sharing through library consortia are as follows:

1. To share the burden of purchasing materials and processing the materials;
2. To share services and human expertise;
3. To extend the accessibility of resources;
4. To reduce costs;
5. To avoid duplication; and
6. To increase the availability of resources and promote the full utilisation of resources

Academic library consortia consist of those that serve universities and those for polytechnics. This dichotomy has not been helpful in enhancing resource sharing among different types of academic libraries. Resource sharing among academic libraries should be free from any limitations, for example, type of institutions, size, programmes, and resources. The universities and polytechnics have different areas of focus, clientele, and organisational politics. However, the mission of these libraries to support the learning, teaching, and research activities of their parent institutions is a common goal.

The factors mentioned in the preceding paragraph have made it difficult for libraries in developing countries to fulfil the dynamic and complex information needs of users. According to Ali, Owoeye, and Anasi (2010), resource sharing serves as a solution to optimise their resources. Resource sharing in its traditional sense is characterised by interlibrary loans, delivery of locally held materials, and the use of commercial document suppliers to fill borrowing requests. Accordingly, the technological developments in the information landscape have transformed resource sharing from a service to request and deliver physical information resources not available locally to one that delivers a variety of resources in multiple formats with workflows connected to the key library functions (Bean and Rigby 2011). The cooperative purchasing model provides academic libraries irrespective of their location to access databases or journal packages at a discount because of higher volumes of sales. Academic libraries in Zimbabwe can benefit from a cooperative purchasing model irrespective of their geographic location or size. Academic libraries are dotted around Zimbabwe's provinces. The benefits of a cooperative purchasing model would be increased buying power and access to scholarly content at a reduced cost. It is imperative that at a time when academic libraries in Zimbabwe are facing budgetary constraints they can realise economies of scale by collaborating to share resources. However, the challenges of the cooperative purchasing model relate to the different financial capacities of the member libraries. The academic libraries in Zimbabwe differ in terms of size, mandate, infrastructure, and financial capacity. There are academic libraries whose history dates back to the pre-independence era and those established after 1980.

Muhonen, and Saarti (2016) notes that the role of the library will require redefinition to accommodate the changes resulting from the shift from traditional interlending to resource sharing in the post digital era. The shift from ownership to sharing provides academic libraries with an opportunity to integrate their services and bridge the lacunae between the resources endowed and resource starved libraries. It is through cooperation and collaboration that academic libraries can enhance resource sharing and overcome the challenges of the paywall at a time when financial resources are dwindling.

Academic libraries in Zimbabwe are no exception in responding to the growing resource-sharing trend as evidenced by the formation of academic library consortia. Resource sharing in Zimbabwe encompasses sharing costs for the library to access e-resources and shared library materials. The digital era has enabled academic libraries to develop new strategies to overcome numerous challenges such as underfunding and increasing costs of library resources (Chisita, 2017) and Kalbande (2018). Thus, the development of models of library consortia on a global scale has provided lessons for Zimbabwe on how to leverage resource sharing into higher education. The variety of library consortia models adapted in different countries, including but not limited to: the multitype, the tightly knit federation, the regional, and the national centralised models (Chisita, 2017). Posner (2016) noted that libraries were lacking adequate resources to fulfil the information needs of users due to shrinking budgets, rising costs of subscriptions to electronic journals, and the technological challenges of the digital era. However, the little that libraries have is optimisable through adapting resource sharing models for mutual benefit. It is through sharing information and services that librarians can contribute towards knowledge creation. According to Singh (2014) it is impossible for a library to acquire all the bibliographic materials at one place. Singh (2014) and Posner (2016) highlight budgetary constraints due to the liberalisation and privatisation of processes as a factor compounding effective delivery of library services information activities. Economic factors are cited as major reasons why libraries should strategise on how

to do more with less; and resource sharing is an opportunity to realise such a goal (Leon & Kress, 2012).

Although a recent phenomenon, the idea of library cooperation through a consortia has always been rooted in the library profession (Straw, 2004). Library consortia represents the height of library cooperation. According to Galyani Moghaddam, and Talawar (2009, 94-104), library cooperation has several merits: shared access to information, site-wide access to all members, a common interface regarding resources, and possible global impact. The authors cited the duplication of effort and reduced buying power as some of the disadvantages of library consortia. Farrow (2011) noted that library consortia were established through formal agreements in order to improve services and gain mutual benefit through resource sharing. Neal (2012) stated that it was important to ensure that resource sharing is reciprocal by ensuring that each library provided the same level of access to its collections. Moreover, continuous changes in the working environment of libraries have increased the need for and the benefits of cooperation through cost savings and the division of labour between various stakeholders (Farrow, 2011).

Kalbande (2018) notes that Information and Communication Technologies (ICT's) have replaced the traditional methods of information collection, storage, and retrieval. According to Kalbande (2018), libraries are morphing into hybrid environments networked for resource sharing. The emphasis has thus shifted from owning resources to sharing them. The traditional concept of ownership in collection development is being replaced by access to information and knowledge regardless of location and format (Onwuchekwa, 2015).

Library cooperation manifests itself in various forms and phases. Interlibrary loans (ILL) have been the norm since the twentieth century, followed by the rise of consortia after the second world war (1939-1945), regional and cooperative initiatives among libraries in the 1970s, the computer revolution and subsequent development of databases and improved storage devices, the internet, and the digital revolution (Straw, 2004). Lungu (1987) views networking as the most modern form of information resource sharing where ICTs are used to transmit information or data from one library to another. According to the author, the widely used library networks around the world offer the following types of services: shared cataloguing, on-line references, shared circulation, and interlibrary loans. Library resources refer to any materials, functions, and services that constitute a modern library system. They also refer to an amalgamation of processes, people, ideas, materials, and money that forms the substance of a library (Onwuchekwa, 2015).

Statement of the problem

The development of library consortia in Zimbabwe has given impetus to inter-institutional cooperation among academic libraries. However, the absence of a consortium that provides nationwide access to scholarly communication undermines resource-sharing initiatives that cut across different consortia. The gap between the existing library consortia among Zimbabwe's academic libraries threatens the potential to enhance resource sharing. While, ZULC has made tremendous progress to enhance resource sharing among their members through library consortia, the same cannot be said of CARLC. Consortial licences are beneficial to libraries because they provide affordable access to titles. Libraries provide other participating libraries with flexible licence terms for the use of articles for teaching and research. ZULC and CARLC members stand to benefit from consortial licences by offering

members access to scholarly communication to support learning, teaching, and research. The proposed model is useful as it enables affordable access for academic libraries in developing countries like Zimbabwe. The model is also useful for common e-resource procurement for different libraries. The libraries can select one institution or consortium to be the account holder that will then be responsible for the procurement of resources for the other members. The consortium subscription with cross-resource sharing and a universal licence agreement for all members will save costs by pooling funds to access the shared resources required. The consortium can also save the libraries time, as only one common licence agreement needs to be signed with regard to the publishers' terms and conditions.

This article seeks to explore the challenges of resource sharing among academic libraries. It will recommend a strategy that enhances resource sharing among the different groups of academic libraries to support teaching, learning and research. This article envisages a resource-sharing model independent from the fetters of institutional silos.

Research questions

The study will be guided by the following research questions:

1. What is the status of resource sharing among academic libraries in Zimbabwe?
2. What are the barriers that undermine resource sharing?
3. What is the role of library consortia in resource sharing among libraries?
4. How can resource sharing among academic libraries be enhanced?

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Research methodology

The researchers opted for a multi-method approach to collect data for the study. The multi-method approach provided the researchers with qualitative and quantitative data. Multi-method approaches are useful in studying complex social phenomena. A purposive sample of 32 participants drawn from 10 academic librarians located in Zimbabwe's ten provinces was used to collect the information. The participants were chosen because of their involvement in resource sharing activities. The participants were drawn from the two library consortia, namely: The College and Research Libraries Consortium (CARLC) and the Zimbabwe University Libraries Consortium (ZULC). The research sample consisted of 22 participants drawn from ZULC and 10 drawn from CARLC. Data for the study was collected using structured interviews and literature review. The literature review enabled the researchers to develop an understanding of the subject and as a tool for data gathering. The interview questions were designed to seek answers to current issues surrounding resource sharing among academic libraries. The research questions covered the following themes: status of resource sharing, factors affecting resource sharing, role of library consortia in resource sharing, and strategy to enhance resource sharing among academic libraries in Zimbabwe. Thematic analysis (TA) was used to analyse the qualitative data. TA provides an interpretation of participants' meanings (Crowe, Inder and Porter, 2015).

Literature review

According to Mavodza (2014), cooperation and collaboration at institutional, national, and international levels is key for the success of academic libraries. The author cites the International Network for the Availability of Scientific Publications (INASP) and the Electronic Information for Libraries (EIFL.Net) as classic examples of partnerships that have contributed towards resource sharing in Zimbabwe. The Open Society Institute of Southern Africa (OSISA) encouraged and supported the establishment of the first library consortia - the Zimbabwe University Libraries Consortium (ZULC) - in 2001 to promote cooperation and resource sharing among academic libraries. It was the International Network for the Availability of Scientific Publications (INASP) that introduced electronic resources through their Programme for the Enhancement of Research Information (PERI) and sponsored many training programmes for librarians (Ndlovu, 2011). According to Munatsi (2009), ZULC stands out in Zimbabwe as the most successful e-resource project. Another consortium was also formed, The College and Research Libraries Consortium (CARLC), which was formed in the early years of the 21st century to provide library services for college and research libraries.

According to the INASP (2015) report, the organisation initially worked to strengthen library consortia in developing countries through the Programme for the Enhancement of Research Information (PERI, 2002–2013). The Strengthening Research and Knowledge Systems (SRKS) programme (2013–2018) replaced the PERI project. The purpose of the SRKS programme is to enable library consortia to secure, provide and manage access to online research literature. The PERI and SRKS programmes are aimed at supporting access to e-resources and promote resource sharing among academic libraries in Zimbabwe. According to Mavodza (2019), partnerships between academic libraries in Zimbabwe and INASP facilitate access to national and international scholarly information and knowledge in support of learning, teaching and research. It provides an opportunity to optimise information and communication technologies (ICT) usage for wider access to scholarly research. The shifting landscape of resource sharing is manifested through strategy and initiatives in the deployment of dynamic and new discovery-to-delivery systems, in the evolution and development of best practices, and in the new roles for resource-sharing practitioners, as well as in new innovative models for collaboration (Bailey-Hainer, Beaubien, Posner, and Simpson, 2014).

According to Khiste (2017), ICTs are an integral part of all aspects of the library and their adaptation in libraries has enhanced resource sharing. According to the author, the changing dimensions of library resources have also radicalised the modes of resource sharing for better results. For Khiste (2017), e-resources remain key to online resource sharing, with the e-journal assuming a central role in the process.

The need for access to information to support academic activities depends on but not limited to the availability of money, work force, library resources, space, commitment, and internet connectivity. As a result, libraries started organising networks and consortia with the aim of resource sharing (Geronimo and Aragon, 2005).

According to Ali, Owwoye, and Anasi (2010), the traditional concept of ownership in collection development is fading and making way for access to information and knowledge without regard to location and format. Thus, resource sharing among libraries is a strategy for survival at a time when resources are scarce.

Library consortia operate as buying clubs even though they can be developed into platforms for sharing valuable resources available in different libraries of the country in multi format (Muthu, 2013). They are also useful in initiating several other activities for the mutual benefit of the participating libraries.

The essence of cooperative library work is the ability to access resources, services, and expertise from other places (Straw, 2004). Therefore, some of the critical issues that have shaped resource sharing initiatives in its genesis were interlibrary lending, uniform cataloguing, and a central borrowing library.

Goldner and Birch (2012) view the internet as a competitor for the library and as a special vehicle for increasing the value in service delivery. They thus underline that it is important to work together to leverage all shared resources such as materials, data, workflows, software, and expertise in order to keep pace with the changes in the information landscape.

The object of resource sharing has thus revolutionised resource sharing due to the multi-dimensional growth of published documents in the recent past, the increasing cost of books and subscribing to periodicals, the advancement of new technology for information processing and dissemination which are some of the fundamental factors that require information resource sharing among libraries (Muthu, 2013).

Goldner and Birch (2012) note that the transition from print to electronic collections has brought new challenges for resource sharing. They believe that the search for what is electronically available in other libraries is currently labour intensive because of the lack of a union catalogue.

According to Muthu (2013), resource sharing in traditional libraries is affected by barriers of information communication such as the indifference of the lending library, conservative attitudes, distance, language, cost, and time. However, the barriers may be eliminated by a digital interlibrary loan system. Muthu (2013) observed that in traditional libraries open access to shared resources was impossible, service was dependant on library performance, and access to shared resources was costly.

Status of Resource Sharing Among Academic Libraries in Zimbabwe

Resource-sharing activities among ZULC members take different forms that include interlibrary loan (ILL), e-resource sharing, conferences, workshops, and workplace learning. Interlibrary loan still plays a central role for libraries despite the advent of digital technologies, and they continue to provide for the unmet needs of users. Williams and Woolwine (2011) distinguish between two types of ILL transactions, namely where the library as an institution borrows material from another institution, and where the library as an institution lends material to another institution. Their study conducted in the United States of America confirmed that even though libraries subscribed to licensed databases with full-text content, ILL remained a constant for service. The response of the participants of the study confirmed that ILL remains an important resource-sharing activity as either academic libraries borrow material from other institutions or they lend to other institutions. The responses from the participants indicated that ILL was still being practiced even though there were no formal arrangement to support it: "...ILL has been the cornerstone of resource sharing but however with the advent of digital technologies, we share resources through the

consortia” (ZULC participant). The second participant also echoed similar sentiments “our resource sharing model has changed as a result of current development in the information landscape, for example, through ZULC, we share resources to access electronic scholarly communication for the benefit of our students and researchers” (ZULC participant) . This corroborates the findings of other recent studies done by (Khiste, 2017) and (Williams, and Woolwine, 2011). Interlibrary loans are thus still popular among academic libraries. The form of ILL is characterised by informal arrangements between libraries according to the participants of this study. Even though the advent of digital technologies heralded the demise of traditional ILL, academic libraries nevertheless continue to be engaged in key functions that have characterised the library service for ages.

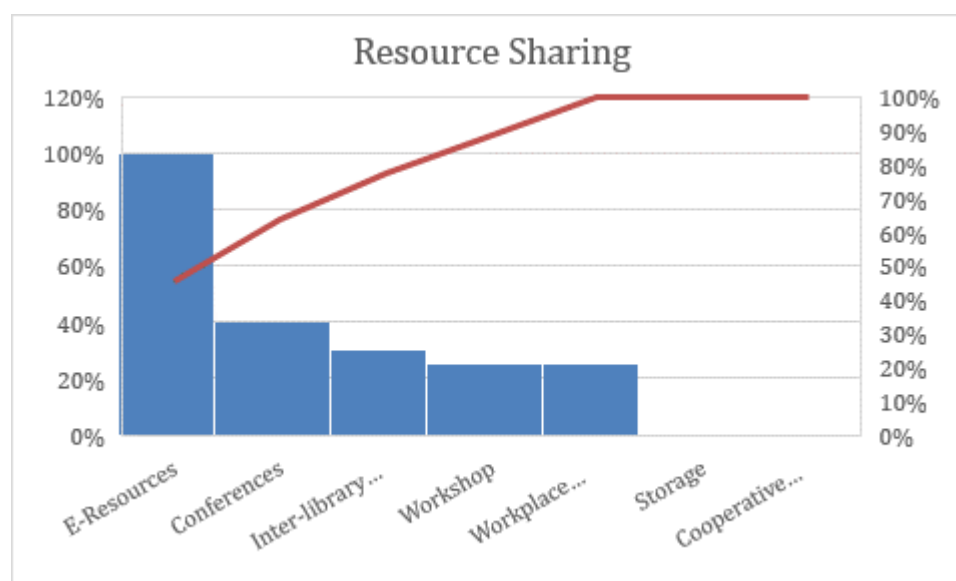


Figure 1: Resource sharing activities among ZULC

The other resource sharing activities among ZULC members include conferences (40% n=8), workshops (25%, n=5), and workplace learning (25%), n=5. It is worth noting that other potential areas for resource sharing, for example shared storage and cataloguing have not yet been exploited because of a lack of adequate resources. However, respondents confirmed that shared storage and cooperative cataloguing were some of the areas members were looking forward to exploiting as part of their future development plans. Bailey-Hainer, Beaubien, Posner, and Simpson (2014) note that major libraries and multi-type library consortia are deploying shared discovery and delivery platforms that bring together catalogues from partner institutions under one search. In a study of Australian library consortia, (Bailey-Hainer et al. (2014) noted that libraries worked together to develop ISO-ILL interoperable systems making it possible to share resources across national borders.

According to the INASP (2016) report, ZULC serves as a network for shared knowledge and experience, whereby the more established organisations are able to offer advice to those still growing. Knowledge is shared through conferences, workshops, and mentorship programmes. The participants from ZULC confirmed that “...conferences serve as knowledge sharing platforms and every year we participate in the annual conference to share knowledge on current trends in resource sharing” (ZULC, participant).

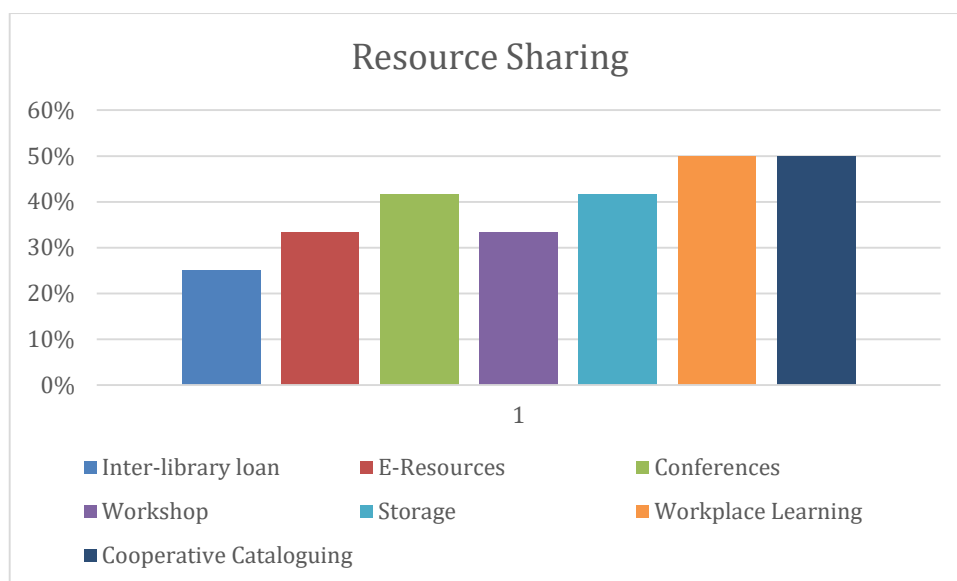


Figure 2: Resource sharing activities CARLC

Interlibrary loans constitute a significant percentage (25%, n=3) of resource sharing activities among CARLC members because most of the institutions have not yet embraced e-resources to the fullest when compared with ZULC. Interlibrary loan activities are not formalised but rather primarily function through informal arrangements between librarians. The tradition of interlibrary loan has been carried over as a tradition since the establishment of libraries in Zimbabwe in the 1890's. As a resource-sharing activity, ILL are infrequent and librarians respond to requests as they come. E-resource sharing is still in its infant stage because CARLC is still developing and its ICT infrastructure is not yet fully developed to support a robust e-resource sharing programme. The digital era provides opportunities for academic libraries to share e-journals through interlibrary loan. The adaptation of a consortium purchasing model can enable wider access to E-journals. Such resources can help to fill interlibrary loan requests for the benefit of library users as well as eliminating the time used to scan or photocopy requests. However, this implies that contracts for e-content should be negotiated with copyright considerations that accommodate interlibrary loan. One participant from CARLC noted "our institutions need to learn from ZULC on how best to develop capacity for sharing electronic resources..." (CARLC, respondent). The participants confirmed that the costs of internet connectivity were high making it unaffordable for them. However, there is an alternative for CARLC and ZULC to take advantage of non-commercial internet service providers, for example the National Research and Education Networks (NRENS). Generally, NRENS serves as a specialised internet service provider dedicated to supporting the needs of the research and education communities within a country. Currently, Zimbabwe has two NRENS, namely the Zimbabwe Academic Research Network (ZARNET) and an emerging Zimbabwe Research and Education Network (ZIMREN). It was found that there was need for academic institutions to subscribe to appropriate bandwidth packages that are commensurate with the number of students enrolled at the particular institution. Resource sharing through e-resource projects was highlighted by the participants as one of the most popular ways of accessing knowledge (100%, n=20). The academic libraries targeted for the study all belong to the Zimbabwe University Library Consortium (ZULC), which is a pioneer in resource sharing. ZULC was formed in 2001 to promote access to knowledge and promote information resource sharing and networking in support of 'human capital development'. E-

resource sharing activities among ZULC members date back to 2001 when academic libraries collaborated on the Electronic Information for Libraries Network (EIFLNET). This partnership has enabled academic libraries to provide access to a wide range of scholarly e-resources. The consortial package consists of access to e- journals and databases. It is interesting to note that these resources do not only benefit ZULC members but also the affiliate members drawn from the CARLC membership. The only disadvantage is that it is the bigger universities that benefit because they have more programmes covering the humanities, commerce, arts, and science engineering and technology (STEM), while the small universities or affiliate institutions are limited by their mandate since they only focus on specific areas. Secondly, not all CARLC members are affiliates of ZULC.

EIFLNET E-RESOURCE PACKAGE FOR ZULC	
Resource	Description
ASTM	Collection of ASTM's industry-leading standards, 1,700 technical e-books, 8 journals, and assorted research information.
Cambridge Journals Online	An extensive peer-reviewed publishing list comprising 45,000 print titles covering academic research, over 24,000 e-book titles and more than 300 research journals in a wide range of subject areas.
EBSCO	EBSCO is a global aggregator of full-text journals, bibliographic databases, magazines, and other resources, providing quality database products and services.
JSTOR	This is a digital library of more than 2,000 academic journals, 20,000 books, and 2 million primary source objects.
Oxford University Press	Oxford publishes over 4,600 new books each year. It provides access to online information to libraries, institutions, and individuals worldwide.
SAGE	SAGE publishes more than 1,100 journals. It has an expanding range of online databases.

Table 1: Sample of EIFLNET e-resource package for ZULC

The figure below illustrates the percentages of the EIFLNET e-resource package for ZULC members. There are 10 databases that constitute 37% of the package, for example, the AST Compass provides ZULC members with access to a full collection of ASTM's industry-leading standards, 1,700 technical e-books, 8 journals and assorted research information.

eIFL.NET e-resource package for academic libraries in Zimbabwe

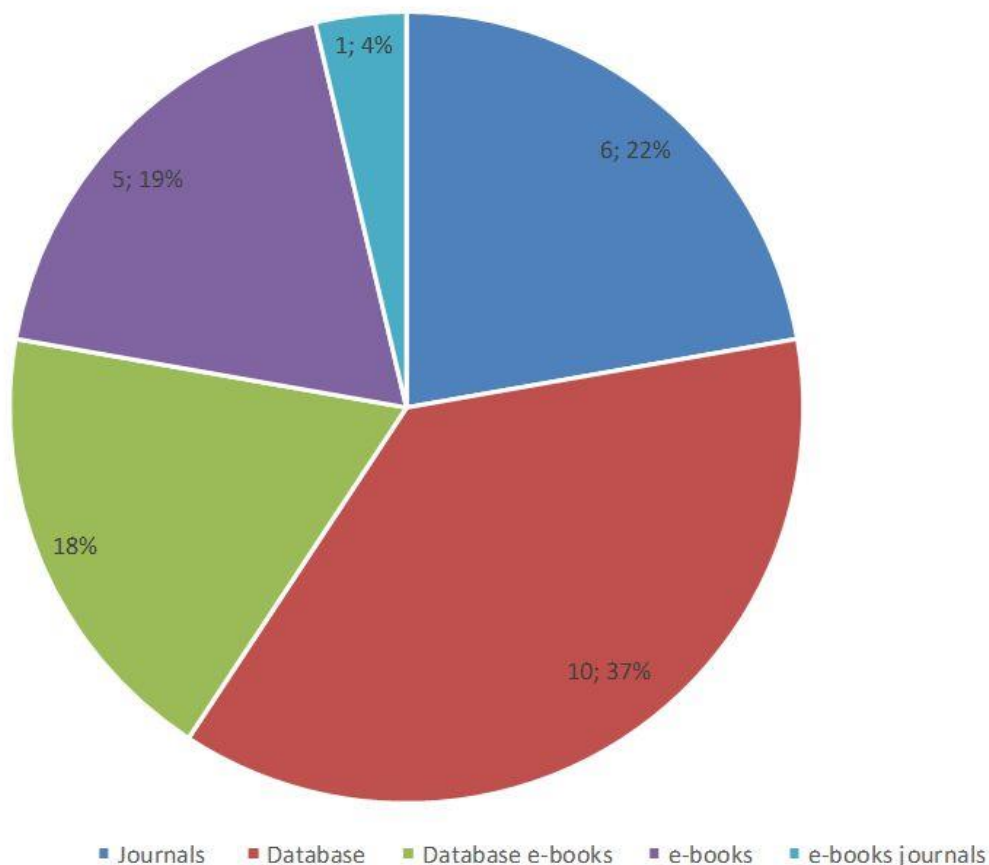


Figure 3: EIFLNET e-resource package for ZULC

Screenshot Eiflnet licensed resources for ZULC

The screenshots below show that the ZULC and EIFLNET partnership has paid off dividends. One can see that there are more than ten databases with links to a number of scholarly journals. Furthermore, EIFL has promoted an awareness on national and institutional level regarding open access and advocacy workshops resulting in a number of open access repositories in the country. In fact, EIFL supported the first open access electronic thesis and dissertations (ETD) mandate in Zimbabwe. Currently, there are over 19 universities with ETD using DSPACE. However, CARLC members have not yet developed institutional repositories (IRs) nor ETDs despite having a web presence. It is also noted that since CARLC members do not have access to e-resources from online publishers of scholarly content, they only have e-resources available within their institution's network infrastructure. This points to a need to adapt a virtual private network (VPN) link in order to enable students to have access to the electronic resources from outside the university network.

PRODUCT NAME	PUBLISHER	TYPE
ASTM Compass	ASTM International	Database, E-books
Bookshare	Bookshare	E-books
Cambridge Journals Online	Cambridge University Press	Journals
Credo Online Reference Service, Academic Core Collection	Credo	Database, E-books
EBSCO eBook Academic Subscription Collection	EBSCO Information Services	E-books
Edward Elgar Publishing Journals and Development Studies e-books	Edward Elgar Publishing	E-books, journals
IMP eLibrary	IMP Publications	Database
Intelect Journals Collection	Intelect	Journals
JSTOR	JSTOR	Journals
MyLOFT	Eclat Engineering	
OpenEdition Journals	OpenEdition	Journals
Oxford Art, Music, and Fashion Resources	Oxford University Press	Database, E-books
Oxford Bibliographies	Oxford University Press	Database, E-books

Figure 4: Licensed resources for ZULC

Screenshot Eiflnet licensed resources for ZULC (cont'd)

Oxford Medicine Online	Oxford University Press	E-books
Oxford Reference Resources	Oxford University Press	Database, E-books
Oxford Scholarship Online	Oxford University Press	E-books
Passport	Euromonitor International	Database
Remotels	Eclat Engineering	
Research Monitor	Euromonitor International	Database
Royal Society Journals Collection	Royal Society Publishing	Journals
SAGE APCs for Open Access Journals	SAGE Publications Ltd	
SAGE Research Methods	SAGE Publications Ltd	Database
SAGE Research Methods Cases	SAGE Publications Ltd	Database
Taylor & Francis APCs for Open Access Journals	Taylor & Francis	
URKUND plagiarism checker	Prio Infocenter AB	

Figure 5: Licensed resources for ZULC

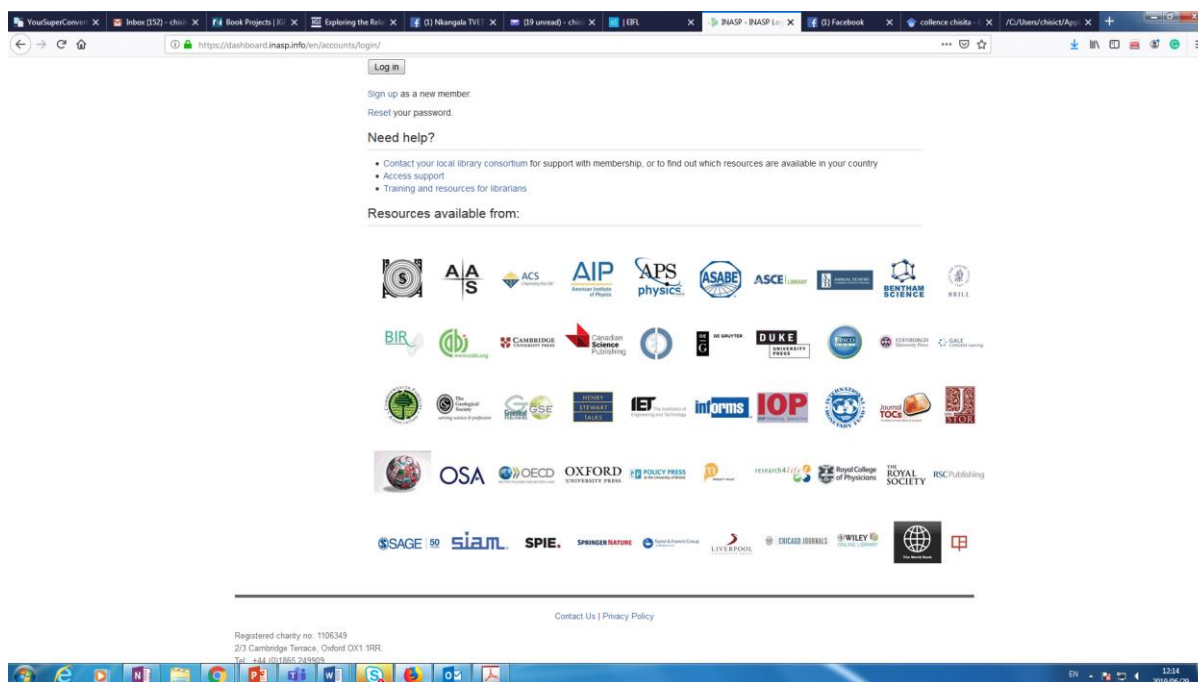


Figure 6: Screenshot INASP access to online research dashboard (adapted from *Welcome to INASP's Access to Online Research Dashboard*, INASP, 2019)

The above screenshot reflects the various publications that the INASP in collaboration with the library consortia has facilitated in support of teaching, learning and research in Zimbabwe. The INASP has collaborated with national library consortia to negotiate affordable access to research. The INASP negotiates with publishers across many disciplines to provide researchers and libraries in developing countries with the journals, books and databases that they need at affordable prices.

What are the barriers that undermine resource sharing?

There are a number of factors that affect resource sharing among academic libraries in Zimbabwe, for example, the lack of technological complexity, geographical and economic barriers, legal imperatives, and restrictions in lending library materials, poor internet connectivity, bureaucracy, retrogressive policies, inadequate ICT infrastructure, and a silo mentality. However, ZULC has proved that such barriers can be eliminated or overcome through adopting silo-busting strategies that emphasise how the benefits of cooperation outweigh disunity.

What is the role of library consortia in resource sharing among libraries?

The development of library consortia has been spurred by a variety of factors including the need to find efficient ways to acquire and share e-journals and books. The consortium thus serves as a special vehicle or instrument for sharing multi-format resources to support teaching, learning, and research in academic libraries. Library consortia in Zimbabwe namely ZULC and CARLC have been instrumental in promoting access to e-resources using web-based platforms. ZULC is a classic example of a consortium that has managed to build a platform for sharing e-journals and books for its members, while CARLC is still in

developing its ICT infrastructure to realise effective and efficient systems for resource sharing. The consortia are involved in the cooperative processing of resources acquired through a purchasing license for the benefit of members. However, they are still working towards the development of a virtual library that will provide access to all the resources of its members. Academic libraries should move beyond just sharing costs for e-resources but sharing other resources that each library has, for example, the printed books, space, and expertise. The researchers noted that even though library consortia in Zimbabwe were benefitting their members through the consortia purchasing license, there was still more to be done to add value to the cooperation. The development of a network or document delivery system for sharing print and electronic resources would widen access to library resources for the benefit of library users. However, library consortia have been successful in encouraging members to develop institutional repositories and digital collections of electronic thesis and dissertations. The research findings confirm that all members of ZULC have developed institutional repositories and collections of electronic thesis and dissertations, while CARLC members are still working to develop such platforms. The other area of focus for library consortia is the development of interoperable systems to enhance resource sharing among members' information systems and databases.

Findings regarding the question, 'How can resource sharing among academic libraries be enhanced?'

The study recommends an inclusive resource sharing model based on a consortial licence that enables libraries to access content based on a single licence. The group usually establishes a negotiating team with appropriate legal counsel. The responses from a CARLC participant indicated that "...there is need for a common license to enable our members to access electronic scholarly publications..." The participating libraries then enable their users to access the resource. This model can accommodate homogenous and heterogeneous libraries, for example, academic, public, and special libraries. When these libraries work as a consortium they will be able to negotiate collective licences for the use of electronic scholarly content and other forms of digital information. Roth (2013) argues that there is power in numbers when negotiating with vendors. The cooperative purchasing model has been adopted due to the following factors:

1. The growing demand for information to support learning, teaching, and research
2. Licence negotiations between publishers and consortia rather than with individual libraries
3. An increase in the volumes of digital scholarly communication
4. The need to bust institutional silos and bureaucratic hurdles
5. Its ability to provide for the diverse needs of academic libraries considering the variations of size and financial capacity
6. The model's ability to promote equal access to scholarship
7. Opportunity for cross-resource sharing

ZULC members do share library resources through the consortium. They share financial, material, physical, infrastructure, and human resources for capacity building. According to INASP (2015), ZULC among many other consortia in Africa has been successful because it used economies of scale to negotiate with publishers: "the subscriptions and e-resources have been a major success for our respective institutions. We have saved many a dollar through cooperative acquisition schemes. Our institutions have been able to afford taking out subscriptions to a whole suite of online research". (INASP, 2015)

According to INASP (2015), library consortia in Africa have shown a confident and coherent approach in response to manipulative publishers by utilising social media groups to share experiences and agree on a common response to negotiate deals. The consortia are now in a position to build on and develop the management of their online research literature for advocacy purposes (interview with the chair of ZULC).

The following are some of the advantages of consortial licensing:

1. Provision for prompt infiltration of electronic scholarly content and an increase in the utilisation of the content for research.
2. Member libraries will have access to an infinitely increased pool of content and users will be able to access a wide range of resources.
3. There is a return on investment with regard to developing resources for supporting research and improvements in research output for the academic institutions.
4. Libraries can benefit from budgetary stability and manifold year deals with agreed-upon inflationary increases.
5. Opportunities to access servers and software that are part of the big-deal arrangements.
6. There is always room for negotiation for better deals.

The following are some of the disadvantages of consortial licensing:

Big deals may result in low quality journals dominating the collection and this might consume a big portion of the budget leaving little to buy other important titles from other sources. Particular disadvantages are listed below:

1. The future trajectory of collection development may be undermined by a lack of collection development and opportunity for self-archiving.
2. The collection may consist of e-resources without a core collection in the traditional sense of practical librarianship.
3. The 'big deal' does not provide libraries with possibilities for preservation and guarantee of perpetual access.
4. The 'big deal' leaves library consortia vulnerable to monopoly publishers.

However, despite the success of library consortia in enhancing resource sharing in Zimbabwe, there are still challenges that require the concerted effort of all academic institutions in coming up with a model that best provides for the diverse needs of members with regard to resource sharing. Some of the challenges are the following:

1. The failure to pay for online subscriptions for online scholarly content by some members will undermine efforts to ensure unlimited access.
2. Economic instability may prevent members from being consistent in remitting membership dues.
3. Dependency on development partners should have its limits and thereafter a consortium should be able to sustain its activities through membership funds and other infopreneurial activities apart from grants from parent institutions.
4. High costs of internet connectivity by commercial internet service providers.
5. The exclusion of other academic institutions (technical and vocational colleges) from resource sharing initiatives.

The proposed consortia model as illustrated in figure 4 provides for the interests of institutions that have different sizes of user populations and the members may have different financial capacities. It is thus a cost-sharing model that will take into consideration the size of the academic institution. This will provide a formula for determining the payment model. ZULC members have advocated for a rethink on the current situation of cost and resource sharing and have proposed a cost-sharing model that will benefit all members depending on their resources and population. The lead account holder can be a ZULC institution since it is at an advanced stage in terms of experience and capacity. ZULC will help or assist CARLC to develop its capacity to manage resource sharing projects in support of teaching, learning, and research. The proposed model will be based on a cross-resource sharing structure and will take into account the abilities of members. It will also accommodate members from CARLC who have to date not been able to benefit from any resource-sharing initiatives.

Proposed model for resource sharing among academic libraries in Zimbabwe

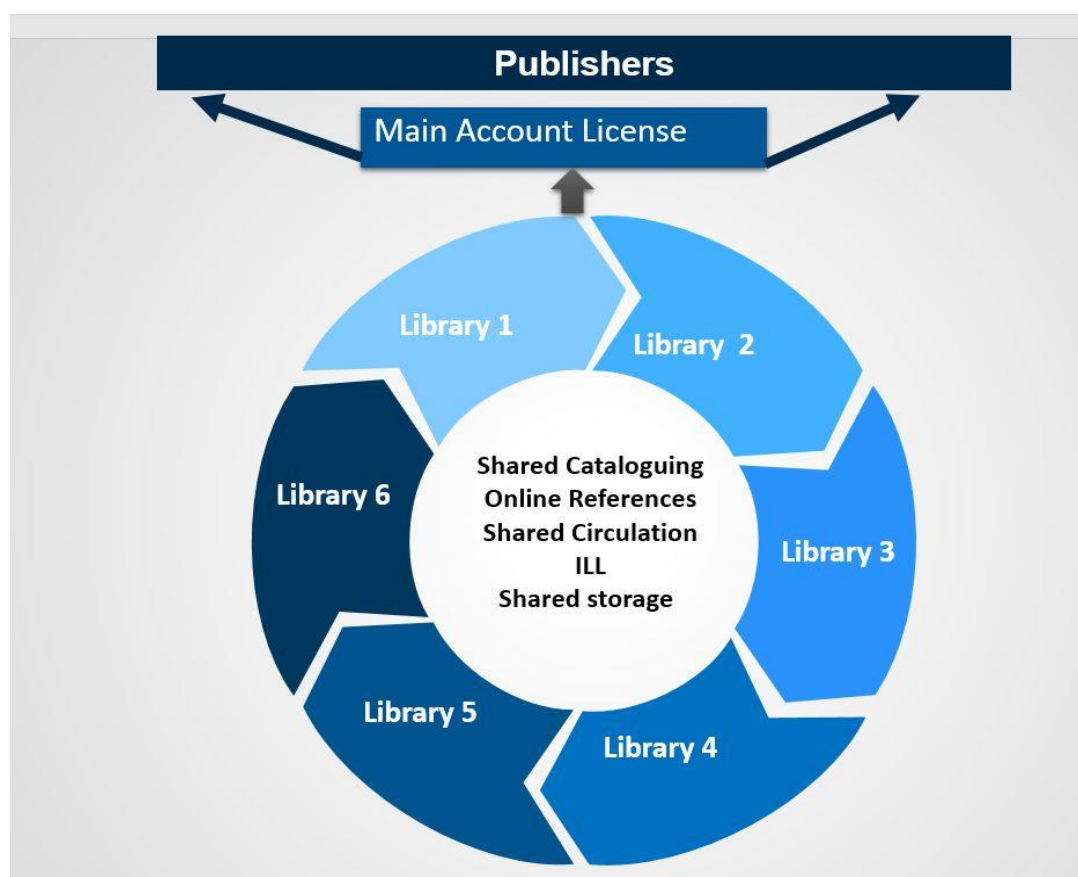


Figure 7: Proposed model for resource sharing among academic libraries in Zimbabwe

The proposed model places member libraries on the same level despite their status in terms of funding and other resources. The model is a strategy based on the principle of egalitarian access to scholarship. It builds on the strengths of all members to build capacity for self-sustenance and bargaining power in negotiating a licence to scholarship. It serves as a bulwark against the paywall by building capacity to share resources among libraries in a developing country. Gunjal (2020) argues that, due to the lack of adequate funds and growing users' demand for resources to support the core academic activities, the adoption of a single

subscription with cross-resource sharing among similar institutes and a universal license agreement for all institutions will result in economies of scale and duplication of effort among consortia members. The model envisages a consortium working in collaboration with the National Research and Education Network (NREN) for affordable access to internet connectivity. It requires academic libraries to work together to overcome the monopoly by commercial internet service providers. The cooperative purchasing model can be customised to accommodate the specific subject areas of interest for each participating member library and also eliminate replication of effort in collection development. The participating member libraries should nominate a resource endowed library to undertake the technical processes of acquiring resources on behalf of the members. The advance towards the sharing economy and collaborative consumption provides academic libraries with an opportunity to rethink strategies to overcome institutional insularity and paralysis. This implies innovative mind-sets in order to leverage on already existing grey literature. The open access initiatives should serve as pillars in the long cherished goal to provide an egalitarian model for wider access to scholarship in Zimbabwe. It is through collaboration that limitations to access of scholarship can be demolished and a new future free from the caprices of market forces will emerge courtesy of resource sharing initiatives that support the survival and sustenance of libraries, scholarship, and inclusivity.

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