

CHAPTER 1

INTRODUCTION

1.1. General Orientation

Two major developments in the 1980s have enhanced the value of scholarly information and drastically influenced the delivery of information services and the sharing of information, especially among academic libraries, namely:

- ! Advances in computing and telecommunications technology; and
- ! The emerging knowledge society.

Information communications technologies (ICTs) have not only revolutionized the way information is acquired, stored and disseminated but also the information seeking behaviour of library users.

Academic libraries in particular have witnessed tremendous changes in the information profession owing to advances in ICTs. The 1970s witnessed the birth of Machine Readable Catalogue (MARC) standards. The 1980s saw the introduction of integrated online public access catalogues, and the period from the 1990s into the new millennium is considered the age of access, as materials included in online catalogues are brought to patrons in a variety of formats (Jackson 1993:35).

The application of new technologies in the production and dissemination of information have increased the publishing output of scholarly resources and made them easily accessible. This ready availability of information and the rapid retrieval systems have raised library patrons' expectations, and changed their

information seeking patterns. End-users today look for quick and ready access to information while libraries, owing to the proliferation of publications, find it increasingly impossible to own all that is published. Consequently, they are unable to satisfy some of the information needs of their patrons from their own holdings. These developments have led librarians to re-think approaches to providing for the information needs of their clients' academic pursuits. Librarians are convinced that there has to be a paradigm shift from ownership to access, and a move towards greater reliance on external than on internal sources. For this reason, librarians are re-examining the concept of resource sharing as a viable means of providing access to relevant and current information for their users.

The emergence of the knowledge society has placed a high premium on information as an important resource for human development. Castells (1993:68) asserts that in the midst of this knowledge revolution, it is impossible for any country to innovate entirely on its own. He says that there is a continuing need to adapt discoveries made elsewhere to the local environment, particularly in Africa. This is possible only through an effective and sustainable system of access to information resources. According to Davenport (2000:32), two main factors must be prevalent in order to adapt external innovations and create new ones:

- ! Knowledge transfer; and
- ! Sharing of information resources.

Entrepreneurs and society at large depend on information and research to create new products and improve on already operating products and services. This new demand requires highly skilled persons

who can work in a cooperative environment to produce new innovations. This new emphasis on human development means that universities, particularly those in Africa, should impart knowledge to their students in a more systematic way and develop them into highly-skilled persons who can use knowledge for new discoveries. Information therefore becomes a very crucial raw material for sustainable development. It has become essential to determine ways in which the global wealth of knowledge can be tapped by universities and other research institutions and applied to increase knowledge through research (Kaul 2001).

This increased demand to utilize knowledge for societal development requires effective information resource management, with a particular emphasis on resource sharing. Regional, continental, and global information sharing through effective information resource management will assist universities in Sub-Saharan Africa to produce research and the highly skilled personnel that can apply scientific and technological research to solve local and global development problems. University libraries, as gateways to information sources, must therefore engage in joint ventures and collaboration so that information can be transferred to students and scholars in their pursuit of innovations for better living standards for society. Never before has knowledge become so important and increased access to information so valuable than in the present knowledge economy. The United Nations Development Programme (UNDP) underscores its importance thus, “knowledge is like light, weightless and intangible, it can easily travel the world, enlightening the lives of people everywhere” (World Bank 1999:1).

1.2 Factors Leading to the Study.

As indicated above, access to information resources is paramount to the survival and success of any university in the knowledge economy. Information access however requires funding. The economic depression experienced by most African countries in the early 1980s crippled the educational system such that they could no longer receive adequate funding to provide effective access to information resources. Private institutions suffered more since they generally are not financed by the governments of their respective countries, and they rarely receive grants and aid from non-governmental organizations. They could not cope with the downward economic trend and resorted to providing only very basic facilities and services. These basic resources were donations from institutions abroad and from other philanthropic organizations that diverted their book donation programs to the African continent. The reason why this investigation is focused on the libraries of private universities is to show their need to cooperate in adverse economic conditions that are unlikely to improve drastically in the near future.

The university libraries under investigation in this study are:

- ! Babcock University Library, Nigeria;
- ! Bugema University Library, Uganda;
- ! Solusi University Library, Zimbabwe;
- ! University of Eastern Africa Baraton Library, Kenya; and

! Valley View University, Ghana (see map on p.xv).

The university libraries under investigation in this study are all private, and by implication, self-supporting. Budgets are allocated but expenditure depends on revenue from student enrolments. Since these enrolments are low, they do not generate sufficient funds to provide adequate information resources, especially given the growth in scholarly publications and the increase in the cost of publications. A quick examination of the acquisition records of some of these libraries reveals that the bulk of their acquisitions are donations from philanthropic organizations.

Since donated resources are usually not directed to specific academic goals, they cannot support learning and enhance research adequately. Universities such as the University of Eastern Africa Baraton (UEAB) find it difficult to renew their journal subscriptions annually and have to cancel titles from time to time so that expenditure can stay within the budget. For example, journals were not renewed from 1993 to 1995. In 1996, the same library had to cancel 60 titles out of its 500 periodical subscriptions (UEAB Annual Report 1996). Solusi University in Zimbabwe and Babcock University in Nigeria face similar problems of poor funding. As a consequence, the flow of scientific and technological information to these libraries has decreased considerably. This can lead to a decline in the quality of education offered by these universities. Concerted efforts to remedy the situation are necessary if the universities are to continue to produce high-level personnel.

In most parts of Sub-Saharan Africa, telecommunication infrastructures are poor in rural areas. As a result, universities located in rural areas tend to suffer from delayed receipt of information resources whether through the postal mail or through online sources. In most cases, they are unable to take advantage of special acquisition offers, such as:

- ! Pre-publication reduced prices;
- ! Reduced cost of journal subscription offered within a time span; and
- ! Delayed receipt of resources requested through inter-library loan.

Thus, universities located far away from the cities suffer more information deprivation than their counterparts, which are located in the cities. In terms of expenditure, they spend more as they attempt to get mail faster to their libraries through speed post which is expensive. They also incur higher telephone cost and incur more expenses in information technology (IT) than those in the cities. All the libraries included in this study are located in rural areas. It is therefore important to examine ways in which resource accessibility in these libraries can be improved.

Regarding information poverty in these university libraries, the on-going advances in ICTs are potential solutions to the problem. ICT enables new activities to be performed more cheaply and more effectively. In particular, information is rapidly acquired and disseminated through computer networks and by other electronic means. Knowledge has become ubiquitous and is readily available. This new information environment presents cheaper and better ways of providing additional, relevant, and richer information resources to university library patrons, particularly in regions of Sub-Saharan Africa where there is a scarcity of information resources. Access to a large volume of relevant information on a

cooperative basis is very relevant for these libraries if they are to enhance their institutional goals of delivering high quality education and producing high-skilled personnel to foster social and economic development.

In a globalising world where economic growth is driven by highly skilled labour and where fundamental research is necessary to produce new knowledge that can enhance creativity and accelerate discoveries, universities have to provide an educational environment that will expose students to a variety of information resources. According to Hargreaves (1997:17), “the new workplace is hi-tech and highly skilled, so students need to be employed with employability skills”. Information technology (IT) has brought a new dimension into learning and library services. Students cannot acquire employability and self reliance skills in an atmosphere of information poverty. In support of these educational imperatives, Seventh-day Adventist (SDA) universities should be in the fore-front of research activities and the production of highly skilled individuals

There are sound reasons why resource sharing should be of interest to SDA universities. Their libraries constitute a special interest group for the following reasons:

- ! They have a similar curriculum focus;
- ! They serve a similar institutional mission;
- ! They are funded by the same governing body;
- ! They are established purposively to serve a special student body;

! They are basically new libraries, having evolved from a seminary library to the status of a university library; and

! They share a common economic status in Sub-Saharan Africa.

These similarities are potential success factors in resource sharing as long as the libraries involved can define, develop and manage resource sharing plans and the problems of inadequate infrastructure. Despite their similarities, SDA universities reflect diversified cultures owing to the multi-cultural and international nature of their enrolments. It is therefore necessary to provide varied information resources that will cater for the needs of the diversified university community. It has also become necessary to expand the range of scholarly resources owing to the fact that the universities that the libraries serve are evolving from a seminary status to a university status. In the past, the libraries catered for the information needs of seminary students. Logically the bulk of library resources were in the areas of religion and theology. With the change of status from seminary to university, the challenge to provide diversified information resources is greater.

From the circumstances described above there is a compelling case for a comprehensive investigation into resource-sharing practices among selected SDA libraries in Sub-Saharan Africa.

1.3 Motivation for the Study

The previous section argued that both private and public universities should effectively play the role of piloting economic and technological development. Universities have recognised the need to join the knowledge sector through adequate access to global information networks. Therefore many universities

and their governing bodies are making concerted efforts to improve their access to global information by establishing resource sharing consortia that will facilitate wider, deeper and cheaper access to information. Presently a regional network of SDA universities in Africa does not exist, although such a network exists in other regions of the world. For example, Seventh-day Adventist universities in North America have established a consortium named ALICE (Adventist Library Information Cooperative). Its purpose is to provide member libraries with enhanced database access opportunities at reduced costs through collective efforts, and resource sharing within the cooperative. This consortium has enabled the members to acquire more resources through joint purchases and subscription to expensive periodicals than each of them would have acquired on an individual basis. There is also a need to get African SDA universities into a resource-sharing consortium for maximum information flow. This led to the calling of the first World Congress of the Association of Seventh-Day Adventist Libraries (ASDAL) to a meeting in Newbold College, Berkshire, England in 1995. The purpose was to discuss ways in which the Third World tertiary institutional libraries, particularly those in Africa, can have better access to information resources. A snap survey of SDA libraries in Africa conducted after the librarians' meeting revealed that the libraries not only lacked adequate resources to support learning and enhance research but also had no proper management mechanisms for tapping the resources of others libraries to complement their own meagre collections. It is therefore important to:

- ! Examine scientifically the causes of poor sharing practice;
- ! Examine the prospects for resource-sharing; and to
- ! Provide research-based information that will help to determine the best ways by which the libraries can have greater access to information resources.

The research findings of this study will also assist in determining the best ways to establish and sustain a regional network of SDA libraries in Sub-Saharan Africa.

1.4. Statement of the Problem

SDA universities in Sub-Saharan Africa, like state-supported universities, are characterised by inadequate library resources to support learning and enhance research activities. At the same time, they lack sufficient and effective access to regional and global networks of information resources. This is of particular concern in an age when the availability of information resources is paramount to the success of any university. Academic institutions are making frantic efforts to improve their access to information in order to meet societal demands. SDA libraries being private are worse off financially and hence the greater the need to share. For this reason, this study poses the principal question: **What prevents SDA universities in Sub-Saharan Africa from developing cooperative linkages to share information resources across their libraries?** To provide an adequate response, the study will address the following sub-questions:

- ! Is there a crucial need for SDA university libraries in Sub-Saharan Africa to participate in resource sharing ?;
- ! How is resource sharing presently managed in SDA university libraries in Sub-Saharan Africa?;
- ! What kind of cooperation exists between the SDA libraries and other university libraries?;
- ! What resource sharing activities are there in and among SDA libraries?;

- ! What are the resource sharing problems encountered by SDA libraries?;
- ! What are the prospects for improving resource sharing services in SDA libraries in Sub-Saharan Africa?;
- ! What kinds of resource sharing activities are feasible in each library?; and
- ! How can a network of SDA universities in Sub-Saharan Africa be established and sustained?

1.5.Aims of the Study.

The study aims at achieving the following:

- ! To promote and facilitate cooperation and resource sharing among SDA libraries in Sub-Saharan Africa;
- ! To encourage each library to enter into an efficient, cost-effective resource sharing cooperative agreement with libraries in their respective regions or with special interest groups in order to improve the availability of, and access to information resources by library users in the study group;
- ! To explore the possibilities of cross-regional cooperation among SDA universities in Sub-Saharan Africa by providing their collection to form a larger collection accessible regionally and globally;

- ! To explore the barriers to resource sharing and recommend ways of eliminating the barriers in the resource sharing endeavours of SDA libraries in Sub-Saharan Africa;
- ! To design a reliable, cost effective and sustainable resource sharing model for SDA libraries in Sub-Saharan Africa; and
- ! To explore the factors that can enhance sustainable resource sharing practice in each SDA library.

1.6. Significance of the Study

The study will provide useful insights and direction to the proprietors of the universities and other education policy makers in determining appropriate mechanisms to adopt in addressing the issue of greater access to information resources in university libraries.

The study will provide direction for the establishment of a regional network of SDA libraries in Sub-Saharan Africa. The lack of such a regional network has delayed the establishment of a global network of SDA university libraries. Such a network will not only enhance access to information resources, but it will provide sustainable access to SDA unique educational resources. This process will enable the achievement of the Church's education goals for Africa. It will also help to build a coordinated database of SDA information resources for the region.

This investigation of resource sharing practices among private university libraries in Sub-Saharan Africa is among the first in-depth study on the subject of resource sharing in private institutional libraries in Sub-Saharan Africa. Very little study has been done to address the problems they experience as private and self supporting institutions. This research will therefore bridge the gap that exists in the literature of African librarianship on this issue.

SDA university libraries experience problems that are hindering the advancement of effective educational systems which can liberate the region from poverty and unstable economy. A focus on some of the problems could convince educational leaders to seriously consider drastic ways of alleviating them, thereby placing Sub-Saharan Africa on the right path to sustainable development. Since both private and government-funded universities are facing similar problems with regard to resource-sharing, the study and its recommendations will be beneficial to both private and public universities.

Effective information management in the information age is the key to sustainable development. This management is enhanced through ready availability of information for users at all levels. This can only be achieved through reliable regional and global information sharing. Achieving resource sharing and interconnectedness in a sector of the educational system in Sub-Saharan Africa will encourage others sectors to pursue similar goals. This will increase information availability in the region.

Finally, the study will provide useful source for other researchers interested in similar studies. If an SDA

consortium is established and operates effectively, it will provide a project for a long term case study on a faith-based resource sharing consortium. The result of such a study could help to improve and establish other consortia across the continent and elsewhere.

1.7 Definition of Terms.

It is important that certain terms used in this study are explained for the purpose of clarity.

The Church.

This is used interchangeably with Seventh-day Adventist church (SDA). The concept refers to the founder of the institutions included in this study. The SDA church is a Christian church that accepts the Bible as its only creed. It holds 27 fundamental beliefs to be the teachings of the Holy Scriptures. These beliefs constitute the Church's understanding and expression of the Scripture. Two major distinctions between the SDA Church and other Christian denominations are:

- ! The SDA's observance of the seventh day Sabbath as stipulated by Scriptures; and
- ! Strict adherence to a healthy lifestyle.

More information about the doctrines of the SDA church can be obtained from: *Seventh-day Adventists believe...: a biblical exposition of fundamental doctrines 1988*. Hagerstown, Maryland: Review and Herald Publishing Association.

The SDA church came to Africa in 1887. The first missionaries settled and started evangelistic work in

the Cape Colony of South Africa. From there it spread to other regions in Sub-Saharan Africa. During the following century, the Church witnessed tremendous growth in evangelism and in its education enterprise. As of 2004, the Church membership stands at twelve million with 39% of its membership in Africa. Of its over 100 tertiary institutions, 10 are in Sub-Saharan Africa. More information on the SDA Church in Africa can be obtained from: Elineema, K. B. (ed) 1995. *The development of the SDA church in Eastern Africa*, Dar es Salaam, Tanzania: Dar es Salaam University Press. The SDA Website can also be consulted at: www.sda.org.

Document Delivery

This is the physical or electronic delivery of a document in hard copy or digital format from a library collection to the requesting library or patron (<http://lu.com/odlis>). This process completes the inter-library loan (ILL) transaction. In traditional librarianship and before the advent of information communications technologies (ICTs), loanable materials were supplied either by mail or the requesting library sent an emissary to collect the items. But information technology has completely changed the way and manner by which documents are supplied to the requester. Today, documents are supplied easily and instantly through electronic messaging systems such as the Online Cooperative Library Catalog (OCLC) and the British Library Document Supply Cooperation (BLDSC). This eliminates the long delays that frustrated students and researchers in the past.

Interlibrary Loan (ILL)

This term refers to the transaction in which, upon request, one library lends an item from its collection or

furnishes a copy of an item to another library not under the same administration or the same campus (Fong 1996). A request resource may be obtained through using an inter-library loan request form or electronically via the library's Web site (<http://lu.com/odlis>).

Loaning does not necessarily mean that the resource is returned to the lender. Apart from books that are still returned to the lending library, many loanable materials such as photocopies of journal articles are not returned.

Library Consortium

This is a formal association of libraries, not under the same institutional control, which is established to develop and implement resource-sharing among members. The aim is to control and reduce information costs, improve resource-sharing, develop a network information environment and share licensing issues with each other (Morgan 1998: 40-1).

Library Cooperative

This refers to a group of inter-dependent and autonomous libraries banded together by formal agreements or contracts which stipulate the common services to be planned and coordinated by the policy making body of the cooperative (Jalloh 1999(a):162) These services could include acquisitions, cataloguing, inter-library loan, collection development, and others.

Resource Sharing

Resource-sharing as used in this research refers to the building of an infrastructure that will permit

bibliographic access and delivery of one library's materials to another library in an agreement or a consortium network (Spies 2001:173).

1.8 Delimitation of the Study

Although the study focuses on Sub-Saharan Africa, it does not include all the regions. Rather, it covers only some countries in eastern, southern and western Africa. These are countries which use the English language as the language of instruction in their institutions. Co-incidentally, they are the regions of Africa with a large Adventist presence, and where the Adventist educational system has recorded a huge success. Within these regions, the study investigates resource sharing activities in selected private university libraries in Kenya, Uganda, Zimbabwe, Ghana and Nigeria. The libraries of the following institutions are selected for the study:

! University of Eastern Africa Baraton, Kenya (UEAB);

! Bugema University, Uganda (BU);

! Solusi University, Zimbabwe (Sol);

! Babcock University, Nigeria (BA); and

! Valley View University, Ghana (VVU) (see map on p.xv).

These five (5) form the main Seventh-day Adventists (SDA) university libraries in Africa, although there are other tertiary institutions managed by the SDA church in Cameroon, Tanzania, Ethiopia and Rwanda. Owing to financial and time constraints, the study does not include the others. For the same reasons, the study focused mainly on information resource sharing. Other forms of resources and resource management are not emphasized.

The study population consists of second, third, fourth year, and post-graduates students in the universities selected. First year students are excluded from the study because it is felt that they would not have known enough of their new environment to generate reliable and valid data.

1.8.1 Limitations

At the beginning of the study, it was assumed that all libraries had proper and up-to-date records of their expenditures and budgets. While all libraries had records of their budgets, three out of the five did not have complete records for the period under study (1997-2002). The researcher had to rely more on the number of resources purchased to determine the expenditure on library resources.

The study covered a vast area of Sub-Saharan Africa. This made data collection difficult and expensive as it necessitated travelling to the countries where the libraries are located. Funding for the project and particularly for travelling to the various libraries was very difficult to obtain. Questionnaires that were not collected during the time of the visit of the researcher took time to arrive in the mail.

1.9 Research Methodology

This section presents a brief introduction to the method that was used to investigate the management, problems and prospects of resource sharing in selected SDA university libraries in Sub-Saharan Africa.

A detailed analysis and description of the methodology is presented in Chapter 3.

Since libraries deal with people, environment, their information needs, and information seeking behaviour, a study of library users' behaviour and information services is a sociological study. It is therefore important to select a research methodology that will provide structured mechanisms that will enable the researcher to gain the fullest and richest understanding of the resource sharing behaviour of libraries and their users. In this case, the qualitative method is the most suitable (Gorman & Clayton 1997).

Qualitative methods are designed to help researchers understand people, and the social and cultural contexts within which they live (Myers 1997). Mellon (1990:143) describes it as a methodology that enables researcher to know, "how and why people think and act as they do". He argues further that, "without some understanding of the people we purport to serve, libraries will become static information warehouses". Human behaviour varies from one setting or situation to the other. The information situation, and users' behaviour in one setting may not be applicable in another however similar. It is therefore important to study each library situation in its natural setting so that users' behaviour can be understood. The qualitative methodology permits such site-based study and analysis (Tuckman 1999:389). This study focuses on resource sharing in libraries with the goals of exploring library users' information seeking patterns. The variables that influence such behaviour suggest that qualitative techniques are appropriate.

Because libraries deal more with situations, it is very important to have an understanding of how people perceive the library, their information needs, and the prevailing situation in their information environment.

To achieve this, the study commenced with an analytical literature review of publications dealing with the problems and prospects of resource sharing in general and among university libraries in Sub-Saharan Africa in particular. The literature review generated relevant questions and identified all the target groups for questionnaires and interview. This helped to generate important information on how the libraries served their clients, and the problems they faced in resource sharing.

A single method of qualitative inquiry may not elicit adequately the responses needed, given the complexity of human behaviour. A multi-method approach is usually needed to strengthen the study (Tashakkori & Teddlie 1998:22), and to enhance the validity of the findings in terms of their credibility, consistence and confirmability (Fidel 1994). For this reason, the researcher applied complementary approaches to the study by combining types of the survey method which include interview, questionnaire, and document analysis techniques. These three techniques were applied in the study to re-inforce each other. This methodology also provided an inter-disciplinary approach to the study for increased reliability and validity of data (Denzin & Lincoln 2003: 148).

Questionnaires were prepared and distributed to the librarians, the teaching staff and a sample of students in the universities selected for this study, namely:

- ! **Babcock University , Nigeria;**
- ! **Bugema University, Uganda;**
- ! **Solusi University, Zimbabwe;**
- ! **University of Eastern Africa, Baraton, Kenya; and**

! Valley View University, Ghana.

Interviews were conducted with the following officers at each university:

! Deputy Vice-Chancellor for Academics Affairs;

! Business Manager; and

! Deans of each school (heads of departments in the case of VVU).

The persons interviewed above occupied important positions in relation to the development of the library.

The librarian at each university is answerable to the Deputy Vice-Chancellor. He/ she approves the proposals for library development and oversees the library in its provision of access to academic information resources to the university community. The Business Manager allocates budget to each segment of the institution.

Information seeking behaviour of library patrons, in this case, students and lecturers alike, are determined by the library's environment, practices, policies, institutional traditions. Owing to this complexity of determining variables, the researcher adopted a comprehensive approach to investigating resource sharing in each library in order to obtain complete data on the problems and prospects of resource sharing. To achieve this, the study investigated the resource sharing patterns and activities of the librarians at each university, the teaching staff and the students. Since the driving force behind the practice and management of resource sharing is the degree to which lecturers sensitize their students to seek knowledge, the study explored the pattern of the information seeking behaviour of the teaching staff, their attitude to the library and the frequency of their use of information resources.

The library environment and the available resource sharing infrastructure were thoroughly examined for the role they played in promoting or impeding resource sharing. The researcher also investigated the values that librarians placed on resource-sharing and evaluated the efforts they have made at initiating resource-sharing activities with other university libraries. Lastly, the study also investigated university administration's value of and involvement in resource sharing initiatives (See Chapter 3 for a fuller treatment of the research methodology applied in this study).

1.10 Outline of Chapters.

An outline of the study concerning the management, problems and prospects of resource sharing in selected SDA university libraries in Sub-Saharan Africa is as follows:

Chapter one contains the introduction to the study, factors leading to the study, motivation for the study, statement of the problem, aims of the study, significance of the study, delimitation and limitation of the study, definition of terms, and research methodology.

Chapter two contains a review of literature pertinent to resource sharing practices and problems with particular reference to Sub-Saharan Africa. This review revealed the general practice of resource sharing among university libraries in Sub-Sahara Africa, the current state of libraries, consequences of information poverty in African university libraries, the motivations for resource sharing, barriers to effective resource sharing, and ways in which resource sharing among university libraries in Sub-Saharan Africa can be improved.

Chapter three contains the design of the study. This includes the methodology, the selection of the study population, the research instruments and measures of reliability and validity. Methods of data analysis are also discussed in this chapter.

Chapter four presents the analysis of data. It gives the findings of the study obtained through interviews, questionnaires, document analysis and observation.

Chapter five presents the interpretation of the findings. This includes an analysis of the state of the libraries, financial conditions and strategies of funds disbursement. It gives an interpretation of resource sharing management at each library, and the constraints and prospects of resources sharing. Finally, it discusses the types of resource sharing that are practicable in each library.

Chapter six presents the proposal and the structure of the Consortium of Adventist University Libraries in Sub-Saharan Africa (CAULA). It discusses the aims of the consortium, the areas of possible cooperation and the requirements for participation. Finally, it proposes an organizational structure and management model for the consortium.

Chapter seven presents a summary and the conclusions of the study with recommendations for effective management of resource sharing in SDA libraries in Sub-Saharan Africa. It identifies areas of resource sharing that need further investigation.

1.11 Conclusion

This chapter presented an introduction to the study. It gave a brief discussion of the problems and factors leading to the study. It discussed the motivation for the study, stated the problems, and discussed both the delimitation and limitation of the study. It then described briefly the research methodology and gave the rationale for selecting the qualitative research methodology for this study. Finally, it presented an overview of the chapters that this study covered.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Librarians all over the world, and those in Sub-Saharan African universities in particular, are rekindling an interest in resource sharing. The exponential growth in knowledge in the present information age and the steady rise in the cost of publications make it increasingly difficult for university libraries to provide for all the information needs of their clients. Resource sharing appears to be the solution to providing library clientele with adequate volumes of information to support learning and enhance research. This chapter reviews literature on:

- ! The need and importance of resource sharing among university libraries in Sub-Saharan Africa;
 - ! The state of information availability in Sub-Saharan African university libraries;
 - ! The nature of resource sharing practices;
 - ! Problems and constraints of resource sharing among university libraries in Sub-Saharan Africa;
- and

! The prospects for effective resource sharing practices.

Much of the literature reviewed is from practicing librarians who have wide experience in resource management in university libraries in Sub-Saharan Africa, particularly regarding the problem of insufficient availability of resources. The review therefore covers literature on the state of resource availability in libraries, efforts made to provide additional resources through inter-library cooperation, and ways of enhancing cooperative sharing. Literature produced by librarians in Europe and the United States of America who are also well experienced in the practice of interlibrary cooperation, is also incorporated into this analysis.

2.2 Reasons for Resource Sharing

Almost all the literature reviewed on this issue emphasize three major reasons why librarians have to re-examine new ways and methods for effective resource sharing to meet the information needs of their clientele, namely:

- ! Advances in information technology;
- ! Dwindling library budgets due to economic recession; and
- ! The demands of the knowledge society.

Other reasons will be considered in addition to these.

2.2.1 Advances in ICTs

There are new ways of doing old things, and radical ways of doing unimaginable things, particularly ways of acquiring, storing and disseminating academic information. ICTs evolved out of technology-related information transfer systems, such as the telex, telephone, television, and computer software. This development reached a climax with the convergence of electronics, telecommunications, computers, data input/output systems and the combined usage of computers and telephone lines to communicate and transfer data. This convergence resulted in the Internet, a network of computer networks which enables an individual to communicate instantly with people almost anywhere. This new information environment has revolutionized the way information is stored, delivered and retrieved, and its greatest impact is felt in the way scholarly findings are communicated. For well over one hundred years, scholarly research has been disseminated through the printed journal. It was considered to be the fastest way to share research results. With the present developments in ICTs however, this medium of scholarly communication is gradually migrating from a paper-based medium to an electronic one. By using telephone, fax machine, electronic mail, electronic bulletin boards, the Internet and World Wide Web, computerized library catalogue, and other information networks, scholars can instantaneously transmit their findings or discover those of other researchers. This enhanced availability of bibliographic information via electronic media has provided users with ready access to an incredible range of information resources. This, in turn, has affected end-user information seeking behaviour. The library patron in the information age is seeking ready access to information resources and the librarian is pressurized to provide access to the needed resources promptly (Brisson 2000:235).

In the past, cooperation activities suffered some failure because cooperating libraries had no effective

access to the resources available from other members of a consortium. However, library networks based on computer applications and enhanced by the Internet have enabled libraries to provide access to their individual and jointly-owned catalogues (Brisson 2000:236) through electronic access (Thornton 2000:844). These remarkable advances in bibliographic access are expanding the volume of information available to users. Librarians are taking advantage of the transition of information resources from a paper to digital format and of new ways of transmitting information to design effective and efficient resource sharing systems (Shreeves 1997:373).

The new technologies offer new capabilities for the publication and dissemination of information (Ojedokun 2001:98). An exponential growth in scholarly publications both in paper and digital format has caused the proliferation of periodicals. This increase in publications is an opportunity for libraries to increase the breadth and depth of their collection. But the growth is so profound that it is becoming increasingly difficult, financially and physically, to acquire all published items that a client needs. Dwindling library budgets worsened the situation, particularly among university libraries in Sub-Saharan Africa. Jalloh (1999 (a):158) states that no library, however rich, is financially capable of purchasing every item that is published or meeting all the demands of its clientele. This situation has created a gap between what the library has and what is available globally for acquisition. The need to share resources in order to cope with the increased flow of information becomes paramount, more so in Sub-Saharan Africa where resources are limited and where information services are rarely a priority (Brisson 2000:235).

Universities in North America and Europe have examined this problem and have found a solution to bridging the existing gap by developing consortia for information sharing, particularly through online access (Brisson 2000:234). For libraries to survive the growth of resources and to satisfy increasing user demands, there has to be a shift from building library volumes to access and service (Moahi 2002). Kingma (1998:145) maintains that this shared approach tends to focus on joint licensing to very expensive, heavily valued and highly used resources by all members of a consortium. This approach is more appealing to librarians and many are getting involved in joint licensing to expensive periodicals in science and technology. Thornton (2000:844) notes that this system is cost effective as it saves funds. Subscription costs are reduced for each member of the consortium. Siddiqui (1996:16) advises university libraries in Sub-Saharan Africa to devise systematic ways by which this abundant information resources can be tapped to increase knowledge, guide research and formulate policy. In support of this idea, Shreeves (1997:385) advises librarians to subscribe to journals through joint licensing. He asserts that the combined buying power of the consortium can “help waive unfavourable licensing conditions.”

Advances in ICTs have led to the development of modern information retrieval systems, through online databases. This availability of online databases and online searching has empowered the user to identify the needed resource through union lists and other bibliographic sources, and then to request the item from an external source with which the library has a formal agreement. This has intensified resource sharing and given it a prominent place in information services. Among the several computer assisted document delivery systems are Ariel, an electronic imaging system and DocView an image scanning system that can readily scan documents via Ariel (Jackson 1998:46). These enhanced delivery systems are among the

significant contributions that ICTs have made to resource sharing. As Spies (2001:174) argues:

“Resource sharing is achieved only when end-users are able to locate and obtain materials of interest in any format.” Such sophisticated document delivery systems are however not commonly found in most university libraries in Sub-Saharan Africa. Most documents are still delivered either by hand or through the post. But the African university library can take advantage of information technology to digitise their resources, and produce national union catalogues that can be easily distributed to all libraries through computer networks. This will minimise the frustrations that users face in identifying resources available in other libraries.

University libraries like those in Sub-Saharan Africa that have not fully embraced online information services can nevertheless benefit from the potential of ICTs through the use of CD-ROM databases that contain full text documents, abstracts, indexes and journal articles. These can be searched without having to go online. It is becoming increasingly easy to learn about the holdings of a library through its CD-ROM databases. In this way, a union catalogue or directory of locally held CD-ROMs will give much greater detail about holdings than the printed list. A properly organized network of CD-ROM holdings of university libraries in Sub-Saharan Africa at regional or national level will therefore greatly improve information sharing and document supply (Aboul-Faki 2000:10). Documents can be instantaneously transmitted through telefacsimile and e-mail services which are readily available in many university libraries in the region.

2.2.2 Economic Recession

While the growth in information resources is an opportunity for libraries to improve and expand their collections and to improve access to information, the rising costs of resources and dwindling library budgets aggravated by economic recession in most countries in Sub-Saharan Africa prevent their university libraries from benefiting from these developments. In the UNDP/Human Development report (2000:170) for example, Kenya is found at number 1138, one place from the last on the list. The report duly notes that among countries that have suffered economic setbacks since 1990 are Kenya, Zimbabwe, Uganda and Nigeria. University students in these countries cannot afford to purchase books for their personal collection. In cases where they receive educational grants, these are not sufficient and hence there is a heavy reliance on the university library for the provision of educational resources. Moreover, many governments do not offer education grants to students at private institutions. It was not until 1997 that the Kenyan government extended educational loan privileges to private universities. Even so, the grant is meagre and irregular. Thus the students depend heavily on their university libraries to meet their information needs. None of the countries mentioned above could afford to allocate sufficient money for stocking their libraries.

Jalloh (1999 (a):158) observes that some of the library budgets in university libraries in Sub-Saharan Africa are far lower than the salaries budget of libraries in North America and Europe. Funds are not only meagre but very scarce (Siddiqui 1996:16). In general, public expenditure on education is very minimal. According to Unesco (2001:97), countries in Eastern and Southern Africa devote less than 4.8 % of their gross domestic product (GDP) to education compared with 2.6 % in countries in Central and Western Africa.

Because of this meagre allocation and high inflation, academic staff and libraries in universities in Sub-Saharan Africa are unable to monitor the world's information output (Rosenberg 1997:19). Many have cancelled a greater proportion of their subscriptions because of low budgets and reduced buying power (Ojedokun 2000:15). At the same time, the growth in and the need for inter-disciplinary research expand the scope of needed information (Martin & Kendrick 1993).

The rising cost of journal subscriptions far outweighs the annual increase that the periodicals department of many libraries receive. This is a particularly frustrating experience for librarians. As a result of these circumstances, many consortia are emerging in order to increase access to resources. The Republic of South Africa has seen the establishment of a considerable number of consortia, for example; FRELICO (Free State Library and Information Consortium); SEALS (South Eastern Academic Library System); CALICO (Cape Libraries Cooperative), and others (Jalloh 1999 (a):161).

Many universities lack adequate funding not only for the library but for other major infrastructural needs, thereby rendering them ineffective instruments of learning. The effect of this is information poverty of academic libraries. This is aggravated by the African continent's poor publishing output. For example, Africa produces 29 book titles per million of people per year as against North America's 461 (Wresch 1998: 296). This meagre output has necessitated many university libraries in Sub-Saharan Africa to seek foreign sources for collection development (Boadi 1981:96). This situation is not without its causes, most notably the problem of foreign exchange for purchase.

In some countries, foreign exchange is not readily available while in others strict regulations on book imports and customs duties are exorbitant. Where and when foreign exchange is available, extremely low exchange rates of the African currencies to the U.S. \$ for example, reduces significantly the purchasing power of the library budget (Kiondo 2002:15). The Pro-Chancellor of Ahmadu Bello University in Nigeria aptly describes the situation of libraries as follows:

“because of the weakness of the Naira, (Nigerian currency) the cost of imported books has increased six-to ten fold in the last five years and there are grave problems in providing libraries with adequate numbers of current journals and monographs, workbooks, manuals and reference manuals not only in science and technology, but in all other areas of knowledge” (Balarabe 1995:33).

This situation has reduced many library services to a minimum and forced libraries to examine alternative ways to access information resources (Bluh 1993:50; Jackson 1993:35).

With low library budgets and the inability to cope with the high rate of inflation, the buying power of the library budget is reduced to the barest minimum. A result of this is information poverty in the midst of information abundance. Where funds are slim, resources will be scarce. Library cooperation becomes one way of providing access to a variety of resources to patrons (Ojedokun 2000:15; Thornton 2000:846).

2.2.3 Information Technology

The introduction of information technology (IT) in the latter part of the 20th century is having a tremendous impact in the transformation of the economic and social order. In this new environment, social

and economic progress are no longer dictated by labour, land, capital, and machine. Rather, information has become the raw material that propels social and economic advancement. The basic economic resource is no longer capital, nor natural resources but knowledge (World Bank 2000 (b) 7-9). The knowledge economy requires people with specialized knowledge, skills and experienced people who can respond and adapt to changes and innovations, and people who have the capacity to learn continuously. These requirements places a premium on higher education and research while innovation and discovery are key components to success. Consequently, universities face the pressure of producing and generating more new knowledge through competitive research that is applicable to societal growth (Mehta 2000:49). Universities are seen as centres of learning and are the pivotal institutions where socio-economic transformation driven by knowledge can flourish.

This challenge is greater for countries in Sub-Saharan Africa where universities are the main places for the delivery of quality education that can meet the demands of the present labour market (Swartz 2000:41). Crossley (2003:108) asserts that “university development has, for many analysts, come to be seen as the engine for national competitive advancement in the high skills environment of the knowledge economy.” The basic requirement for fulfilling this new role is enhanced access to information resources which in turn will foster research activities. This requirement has brought resource-sharing into the forefront of information service in the universities. Mehta (2000:52) puts it succinctly, “the practice of scientific and technological research at a competitive level requires more than just human resources. It requires access to...up-to-date information from libraries and databases.” He further argues that in the developing world where universities experience numerous limitations to do research, such limitations can be overcome if

universities apply ICTs to boost their access to wider resources through resource-sharing (2000:53).

Davenport (2000:33-34) states in support that one of the ways in which universities can retain their hegemony in knowledge generation is by fostering information resource sharing practices among the universities in their regions. This will foster the development of research activities.

Since the knowledge economy requires innovations and the generation of new knowledge by universities, Sub-Saharan Africa can benefit from the research produced in developed countries by adapting those discoveries to suit their countries' development. This process, however, is impossible without adequate access to information resources (Davenport 2000:32). In support of this view, Ballantyne (2003:5) adds that the modern-day information professional should be able to provide collective access to information and build joint ventures to enable accessibility to knowledge generated both locally and abroad. Modern information professionals will act as "infomediaries" he says, because of their role of fostering effective networking relationships for effective access to needed information.

2.2.4 Other Reasons.

2.2.4.1 Foreign Purchase

The heavy dependence on resources from overseas hampers research activities. There is a significant time lag between the time a publication is released in the West and the time it takes to get to the user in the African university library. Even when resources are sent through expensive speed post they often arrive too late to meet the user's needs. The time of receipt also depends on the location of the institutions as the quality of telecommunication services and other amenities deteriorate as one moves further from the

capital/commercial cities (Adeogun 2003:15). Thus, universities located far away from the cities suffer more information deprivation than their counterparts in the cities. All the libraries included in this study are located far from cities/capitals. They therefore face the challenge of ensuring that their library users get timely access to information resources despite their location.

2.2.4.2 Demographic Factors.

Demographic factors promote resource sharing. According to the Population Reference Bureau of Washington, D.C. in the U.S.A.(2001), Sub-Saharan Africa has the highest population growth rate in the world with 2.6% natural annual population increase. This explains the reason for the proliferation of universities and the increase in the enrolment of the existing ones. UNESCO (1995:102) acknowledged that Sub-Saharan Africa has been witnessing a higher education explosion in universities. Many of these universities, given their slim budgets, cannot provide adequately for the information needs of the growing enrolment (Ajayi, *et. al.* 1996:149). Rosenberg (1997:23) in her summary of the financial state of African university libraries notes: “expenditure per student tended to decrease in real terms, even when the institution is allocated more money, because of devaluation and growth in student numbers.”

Saint (2000) argues that a rapid growth in population and the growing need for university education motivated by increased access to primary and secondary education has resulted in a number of users that is far beyond existing information resources in both quality and quantity (UNESCO 2001:79). Ifidon (1997: 253) in his study of collection development activities of selected libraries in Nigeria argues that the numbers of books and journals per capita are often small, not because of the gross size of the collection

but because the growth rate of the universities is too high and as a result, the student population is too large. Although private institutions came into existence in order to alleviate this problem they are unable to meet the information needs of their students adequately.

2.2.4.3 Knowledge Sharing

African policy makers and organizations have come to the realization that information is the tool for achieving both social and political empowerment. They are therefore examining ways of facilitating knowledge-sharing among professional networks, institutions of higher learning, and policy makers through the African Knowledge Networks Forum (AKNF). This forum believes that an increase in knowledge is inevitable for capacity building on the African continent (ECA 1999).

2.3 Current State of University Libraries in Selected Regions of Sub-Saharan Africa : a General Overview.

In many countries in Sub-Saharan Africa, universities are the fundamental tools for human development. They serve as the principal conduit for information flow and technology transfer between the industrial world and their countries. Thus the ready availability of abundant and relevant information is paramount to the success of universities in the effort to lead their countries toward scientific and technological advancement. Unfortunately, universities in Ghana, Kenya, Nigeria, Uganda, and Zimbabwe as well as other Sub-Saharan African universities are characterised by the un-availability of resources for the support of learning and the enhancement of research. They cannot therefore adequately initiate and support economic and technological development. They are also unable to produce the stream of

academic staff necessary to sustain the university enterprise due to the migration of African intellectuals (Aghion and Williamson 1998:143; Cohen and Deng 1998:214-223). Many have been reduced to glorified secondary schools. This decline in the quality of education has been a cause of concern among university libraries in the region. Citing Wresch (1998: 296), Ojedokun (2000:17) notes that university libraries have few books, few entries in databases, few Web pages and few television sets. A professor in one of the Nigerian universities declares: “Most African academics are suffering from isolation. They have no access to good libraries, and limited funds for new books, access to journals is a luxury (Useem:1999). Rosenberg (1997:14) in her study of both private and government-sponsored university libraries in Africa, notes: “a striking feature of all libraries is that they no longer support research activities.” Her observation is that the libraries are under- resourced. This observation is supported by the statistics of resource availability per student in the libraries she examined:

Table 1. Holdings related to student numbers, 1993/94

Libraries	No. of Monographs acquired per student.	No of monographs purchased per student	No. of Serials acquired per student.
Addis Ababa University, Ethiopia	0.6	0.44	0.04
University of Cape Coast, Ghana.	2.66	1.80	0.13
Catholic University of Eastern Africa, Kenya	1.60	0.20	0.62
University of Eastern Africa, Baraton, Kenya	3.28	0.71	0.51
Kenyatta University, Kenya	0.79	0.29	0.01
University of Zimbabwe, Zimbabwe	1.10	0.53	0.60
African University, Zimbabwe.	20.40	13.27	1.63

Taken from: Diana Rosenberg 1997. **University libraries in Africa: a review of their current state and future potential.** London: IAS., p.14

This table reveals that the University of Eastern Africa, Baraton (UEAB) provides only an average of three monographs per student from its acquisitions which consists of 52% purchased and 48% donated resources. One can infer from this table that the UEAB library depends heavily on donations. Without them, it would not be able to provide one resource per student. This shows that the UEAB library is far from meeting the recommended minimum requirement of six monographs and 3 serials per student, the standard set up by the Association of Seventh Day Adventist Librarians (see Appendix 4). The UEAB was an affiliate of Andrews University, Berrien Springs, Michigan, U.S.A. That institution set up a standard by which all its affiliated institutions and those offering its extension programmes are regularly evaluated. These standards were adopted by the UEAB after it became an autonomous university.

Several economic crises have led to a decline in the funding of university education by both government and private stakeholders in education. UNESCO (1997:233) emphasised further that the main reason for the decline of education in Africa is due to inadequate funding, particularly for research and information resources.

Assie-Lumumba (1993:36), a research fellow, laments the state of university libraries in Sub-Saharan Africa as follows:

“Even though they are (and perhaps precisely because they are) a public good, the libraries of African universities have very much the appearance of poor cousins. Library budgets everywhere are subjected to cutting without fear of immediate reactions. One consequence of budget cuts is the prevalence of delays or interruptions in subscriptions to periodicals and newspapers and suspension of the acquisition process. The impact on academic work of the resulting

impoverishment in library holdings is direct and negative.”

Consequently, many libraries can no longer support research activities (Rosenberg 1997:33). Balarabe (1995:33) explains the extent to which austerity affected the development of university libraries particularly in Nigeria: “...one effect was the reduction in overseas journal subscriptions from 2,000 to 300 titles. The University College Hospital, Ibadan ceased acquiring periodicals (and textbooks) in 1985, and the National Universities Commission reported that some universities had no journal issued after 1982.” In 1999, Nairobi University Medical School library long regarded as a centre of academic excellence in East Africa received just 20 journal titles compared to 300 titles a decade earlier. In Brazzaville, Congo, the university had only 40 medical books and a dozen journals, all dated before 1993 (Human Development Report 1999: 59). Gibbs (1995:128) in his survey of 13 African university libraries argues that not one university library has a viable serial collection. Besides, out of 3,300 journals indexed in the Science Citation Index, fewer than 20 are published in Africa. It is not surprising therefore that African countries suffer many of the world’s most virulent and infectious diseases yet often have the least access to information for combating them (Human Development Report 1999:58).

Capacity building in university research through improved availability and access to information resource materials is a priority to revitalize universities in Sub-Saharan Africa if they are to keep pace with rapid global changes in science and technology. The Association of African Universities (AAU) and the World Bank jointly affirm that university libraries need to collaborate and link with each other as well as with countries that are technologically more advanced. This is necessary if they are to play their role efficiently

in encouraging and promoting the research capabilities of their institutions for capacity development (World Bank 1997:23).

Despite the advantages of online access to information, many institutions cannot afford sufficient computers to link to global or regional information networks (Ojedokun 2000:17). By 1998 the University of Namibia could only provide 15 computers for its 2000 students. In general, fewer than one million people in Sub-Saharan had access to the Internet in 1998, and of this number, 80% were in South Africa (Human Development Report 2000:201). Of the other 20%, the ratio of people who had access to the Internet to those who did not was 1 to 5000 (Edejer: 2000).

2.4 Consequences of Information Poverty

There are many consequences of this information poverty. The countries lag behind in physical and technological development. Science and technology by their very nature require huge investments into library resources and in particular, access to the world's stock of knowledge that will enhance research activities. A lack of these basic services has resulted in the decline of academic output and research activities (Bekele 2001:3). On average, the continent spends below 0.5% of the total global investment on research development (Mutume 2003:4).

As a consequence of meagre funding, the quality of teaching and learning has dropped below international standards and research activities are underfunded and often of questionable merit. The once famous institutions such as the University of Ibadan in Nigeria, and Makerere University in Uganda are today only

shadows of their past glory. The graduates from these universities are not only few but they are equipped with mediocre skills that cannot enhance technological transfer (World Bank 1997:2-3). Sub-Saharan Africa produces “fewer scientists and engineers per million of population than any other region in the world” (UNESCO 1995:103).

This unavailability of skilled manpower means that only very few scientific and technical industries can operate in these countries, creating job scarcity and unemployment. It is worth noting that Sub-Saharan Africa accounts for only 13% of the world’s scientists and engineers and only 4 to 5% of global spending on research and development (Vespoor 2001:56). Unesco (1999a) estimates that Africa has only 20,000 scientists and engineers, or 0.36% of the world’s total. In Nigeria, only 15 scientists and engineers per million people engage in research and development compared with 149 in India and 3,700 in the United States (Unesco 1998c). Academics are therefore unable to pursue research and to keep up in their disciplines. This situation has isolated the elite scholars and scientists from world scholarship. Useem (1991) describes their psychological condition as ‘intellectual malaise’.

The inept technological performance of African scholars as well as the inadequate information availability to foster research activities have created a huge technological and scientific gap between the countries of Sub-Saharan Africa and those of Europe and North America (Kagoda-Batuwa 1998:4). While countries in the northern hemisphere are evolving a new and advanced economy based on knowledge, and while information is fast becoming an essential raw material for research in science and technology, most economies of Sub-Saharan Africa are still rudimentary. Most of them lack the capability to generate new

scientific and technological ideas and therefore cannot provide the high-level skilled workers that are needed in the knowledge economy (Swartz 2000:38). The consequences are poor internal efficiency, limited scientific output and graduate unemployment (Okuni 2000:23). The problem is how to bridge the information gap that exists between the developed countries and Sub-Saharan Africa. The answer to bridging this gap is to provide access to the global stock of up-to-date knowledge (World Bank 2000:71).

The technological gap and the frustrations associated with it are also evident in the widespread outflow of Africa's brightest students and researchers to developed countries. Owing to poor educational facilities and poor management of information resources, many of the brightest students avoid their universities and enrol at universities in industrial countries where they can obtain quality education. Many will not return home because of the absence of research resources and materials to nurture their intellectual aspirations. The few highly skilled who remain eventually migrate to regions where they can fully utilize their potential (Downes 2001:18). According to the UN Economic Commission for Africa (UNECA), about twenty thousand Africans leave the continent annually for industrial countries (Mutume 2003:3).

If highly skilled individuals are to be retained, appropriate actions have to be taken. The Task Force on Educational reforms established by the World Bank (2001:94) recommends two intertwined solutions to solve the problem of information deprivation, namely:

- ! Increasing access to resources and improving efficiency with which resources are used. To achieve this, the Task Force emphasises that educational infrastructure, and in particular, computer and Internet access, libraries and information services must be improved; and

- ! Resuscitating and restructuring resource-sharing practices to effectively supplement the scarce information resources of libraries. This is expected to enhance the continent's scientific and technological advancement.

2.5 Constraints of Resource Sharing among University Libraries in Sub-Saharan Africa.

Many factors hinder university library cooperation. One constraint is the issue of telecommunication infrastructure, which is the backbone to developing and managing effective access to information resources, especially in the digital age (Alemna 1998:4). Unfortunately, adequate and effective telecommunication infrastructure is lacking in most African countries and this is a major obstacle to successful cooperative ventures (Shibanda 2000:38). Moreover, Africa's telecommunications networks have been found to be inefficient and less reliable than networks in other regions of the world. There are only 14 telecommunication lines per thousand people in contrast to Norway's 474 (UNDP Human Development Report 2000:201). Consequently, there is little Internet access. For example, Kenya has only 2.63 Internet connectivity per 10,000 people against Zimbabwe's 3.83. Uganda, Ghana and Nigeria do not on average have more than one Internet connectivity per 10,000 people (ITU 2003). It is said that New York City has more Internet hosts than what is available in the entire African continent (Edejer:

2000).

The few telecommunication lines available are concentrated in the capital cities, thus leaving the rural area, where most people live, without telecommunication activities and isolated from the intellectual community (Shibanda 2000:38). This is particularly true of all the libraries included in this study since they are all located far away from the capital cities (see map on p.xv). This situation makes intra- regional cooperation difficult. Inter-regional cooperation is also made more difficult owing to lack of inter-country unity in telecommunication infrastructural system (Rosenberg 1997:33). This variation does not promote inter-country information sharing. The challenge for these libraries is how they can enhance effective resource sharing with an ineffective telecommunication infrastructure.

The Internet is a facilitator of resource sharing. However, most Internet databases are located far away from the African region and the resulting high telephone tariffs and the high subscription fees are threats to accessing resources through the Internet (Gurundian 2000:81). Poor communication and transportation systems have contributed to the inadequate document delivery system. Online document delivery systems and speed mail are relatively new or rare in many African countries as a result of poor telecommunication infrastructures. Thus, interlibrary loan still happens through the “snail mail”. Most resources are either lost in transit or never arrive on schedule (Nzioki 1990:97). Where a library is able to claim for a lost item, it can take several months or more before the item is received. Ojedokun (2000) submits that poor communications infrastructure and unreliable despatch are causing long delays. In countries like Kenya and Tanzania, it is said to be quicker to go in person to a library to consult materials, even when this

library might be a day's journey away.

Rosenberg (1997:33) asserts that the absence of union lists of books and periodicals of university libraries both on country and inter-country basis militate against the establishment of intra-regional resource sharing schemes. This situation arose because of the unavailability of coordinated university library systems on the continent. Nzioki (1990:86), In his study of the university libraries in Kenya, Nzioki notes that Kenya university libraries have inadequate and outdated information. Not only do the universities suffer from a paucity of channels for information gathering, storage and dissemination which further reduce the country's ability to utilize the little information available, but he concludes that the scarcity of resources will prevail for a long time. The available resources will not be maximally utilized unless the libraries and information systems are properly coordinated and made readily available to users (Ndavi 1990:176; Nzioki 1990:86).

Abdullahi (1998), at the IFLA Conference in Amsterdam, argued that lack of a coordinated information infrastructure and lack of coordination among librarians is a major hindrance to effective resource sharing. Where there is no coordination, interlending schemes operate haphazardly, as shown in Inoti and Matanji's (1990:160-161) study of inter-lending activities among 19 libraries in Kenya. Otike (1987:81) observes that poor coordination leads to the unnecessary duplication of resources. Furthermore, duplication of resources is aggravated by the desire of each library to be as independent and self-sufficient as possible. Otike (1987:81) observes that: "The result of these uncoordinated acquisition policies, coupled with dwindling budgets and the rising cost of literature, is that individual libraries end up with hopelessly inadequate collections and the nation has large gaps in its coverage of the world's

literature.”

The experience of the Committee of University Libraries in Nigeria in managing two major cooperation schemes further illustrates the importance of proper coordination. Under the first scheme, each library was assigned the responsibility of collecting specified African government publications. The second scheme involved the collection of Nigerian official publications. The Nigerian region was divided up, and participating libraries were assigned the responsibility of collecting government publications emanating from a particular sub-region. Unfortunately, the two cooperation schemes failed as a result of a lack of centralized coordination (Avafia 1985:16; Boadi 1981:95).

For a brief period, university libraries in three eastern African countries compiled the **Union List of Scientific and Technical Periodicals in East African Libraries**, as well as the **East African Medical Bibliography**. These schemes suffered from inadequate mechanisms for control and monitoring, and failed completely. Boadi (1981:96-97) is convinced that poor organization of resource sharing schemes contributes more to the failure of resource sharing than the poor financial situation of developing countries.

Attitude is another factor that retards library development and resource sharing. Many university authorities lack respect, and possess very little knowledge of the value of libraries. For this reason, very little money is voted for library budgets (Houbeck 2002). For example, when Egerton University in Kenya became a new university in 1987, the librarian proposed 12 million and 4 million Kenya Shillings as budgets for books and journals respectively. In the end, the library got 820,000 Kenyan Shillings for both (Nzioki 1990:94). Cases of deliberate deprivation of funds due to ignorance and a lack of value for

information centres is an everyday occurrence in most universities. Librarians carry a share of the blame. They have not taken the lead in promoting the value of information resources. It is their duty to enlighten and convince their governing bodies of the need to provide adequate resources for effective library information services (Inoti and Matanji 1990:161).

Economic constraints prevent effective information sharing. Ubogu (2003) states that most libraries in the developing countries do not have adequate funds to purchase the resources that they need due to an increase in the amount of published information and the devaluation of their currencies. In fact, poverty is playing a contradictory role in information development: It is a factor that necessitates, and at the same time hinders resource sharing practices (Shibanda 2000:39). Many university libraries have attempted informal cooperation arrangement but the libraries are too poor and thus have very little to share (Avafia 1985:16; Ilomo 1985:146). Where cooperation exists, it is on a low scale and the operation is hindered by the unavailability of location tools, lack of funds to support photocopying and postage, lack of formal interlibrary loan arrangements, and unavailability of resources requested (Rosenberg 1993:33). Otiye (1987:80) asserts:

“Concerning library co-operation, there is no formal arrangement in Kenya. The only programme that currently exists is the informal arrangement best known as ‘the ad hoc system’. It is worth noting that resource sharing is confined almost exclusively to interlibrary lending and photocopying. Schemes such as co-operative acquisitions, centralized storage and standardised cataloguing have never been conceived.”

Many libraries lack basic and functional information reproduction facilities such as photocopying machines

and duplicating facilities. These conditions frustrate librarians' efforts and discourage them from getting into cooperative schemes. The challenge is how to sensitize librarians into sharing the little that is available in their libraries.

Most librarians perceive inter-library loan as very expensive (Kiondo 2002:24). Rosenberg (1997:33) and Jackson (1998:46) claim that the high cost of interlibrary loan schemes, particularly the cost of postage and document delivery, is a major reason why inter-library lending is not developed in Africa. The challenge then is what can be done to reduce costs. Jalloh (1999b) argues that a cost-effective managerial strategy can help to minimise the cost of document delivery. If the cost is much more than the library can bear, the tendency is to minimise inter-library requests and the cycle of information poverty continues.

A shortage of personnel and skilled technical instructors in most universities in Sub-Saharan Africa have led to poor technological output in the universities. Students at universities lack adequate technical skills that are needed for searching, processing, and exchanging information and are therefore unable to engage in online electronic searching (Lwehabura 1999; Ojedokun 2000:17).

Rosenberg's (1993:33) own words succinctly summarizes the constraints militating against effective resource sharing among private and public universities in Sub-Saharan Africa:

“Within African countries, the low levels of interlibrary loans are due to a number of reasons; the lack of union lists of books and periodicals which makes location difficult; the lack of money to

pay for photocopies and postage; the lack of any interlibrary loan mechanisms or agreements; and another problem is that the needed material is often not available in-country, this is especially true in countries where one university library holds most of the countries bibliographical resources...Within Africa, interlibrary loan is even rarer. Again lack of location tools, high costs of telecommunications and postage and poor communications infrastructure all play a part.”

2.6 Ways of Improving Resource Sharing among University Libraries in Sub-Saharan Africa.

Electronic information resources are more readily accessible than the print resources. They have the potential of improving and promoting information-related activities and provide more useful, up-to-date and relevant information than most university libraries (Ojedokun 2000:14). It is much easier to access, transmit and disseminate such resources through the Internet, World Wide Web and CD-ROMs.

University libraries in Sub-Saharan Africa could benefit from this global information access if the continent’s telecommunication infrastructures, networks and postal systems are improved and distributed evenly across the nations (Ojedokun 2000:15). This will enable universities in rural areas to gain access to worldwide academic resources. To build and/or upgrade telecommunications networks and related communications technologies there is a need to develop cooperation at all levels of the telecommunication industry with the technologically developed countries. The cooperation must aim at developing skilled human resources in the area of ICTs. Such training should equip people to design, build, operate and maintain ICTs (Ojedokun 2000:18). Special and improved postal services such as the shuttle or courier service as in Europe and North America can ease the delays caused by document delivery.

If resource sharing schemes are to succeed among university libraries in Sub-Saharan Africa and beyond, there is a need for a firm policy on information which will enable libraries to generate and transmit information through a network of functional systems and infrastructure (IFLA 2001). Poor coordination of university library information systems and services has resulted in the lack of data on libraries and what they have available for sharing. Many libraries have no data on the intellectual heritage available in their countries making research very difficult (Sturges & Neil 1996). Without a coordinated system it is difficult to provide updated union listings tools and organize for optimal sharing. Lack of a coordinated information systems prevents many libraries in developing countries from participating in resource sharing (Riggs 2001).

Coordination, whether at individual or interest group levels requires good planning (IFLA 2001).

Mwiyeriwa (1993:631) argues that to achieve good planning and implementation, a prime mover such as a national commission that will liaise with the government to secure funding and effect legislation is necessary. Such a commission must work out a realistic plan of action and must involve library professionals who must be committed to the plan. Such a committee needs to meet regularly for sound strategic planning. It is hoped that proper coordination resulting in the formulation and implementation of a national information policy will curb the desire of libraries wanting to run their own affairs independently- a situation that has led to undesirable wasting of funds through duplication of resources.

The major objective of resource sharing is to provide greater access to a wider range of resources at reduced cost. Unfortunately, resource sharing has proved very expensive to the extent that the already

impoverished libraries are unable to finance it (Rosenberg 1997:33). Sometimes the cost of document delivery compares favourably with the cost of subscriptions and/or purchase, especially in Kenya where the cost of postal service is very high and where it costs an average of U.S.\$4.00 to send a one-page document by fax. For this reason, librarians in the region should examine ways of reducing the cost of the operation. In particular, the cost of photocopying, mailing and faxing should be drastically reduced (Jalloh 1999b).

The issue of cost is an important factor. Unfortunately, none of the literature reviewed on African university libraries gave any substantive solution to the high cost of resource sharing transactions. Jackson (1998:46) suggests that costs can be reduced if libraries adopt the use of computer imaging systems, such as Ariel and DocView, to scan and transmit documents through the Internet to the requesting library. This solution is applicable in places where there is unhindered access to the Internet but not in the majority of university libraries in Sub-Saharan Africa. Many of them have no access to the Internet. Where it exists, its performance is hindered by several factors some of which have already been discussed in this review.

Librarians and library patrons need to develop goals and objectives that they wish to achieve in order to design workable, realistic and successful resource sharing schemes. In order to do this, each librarian needs to re-examine and re-evaluate the entire library service, its procedures and policies. At the planning stage of cooperation, each member's goal would be reflected in the group's goals, which are then translated into shared common goals (Hayes 2003). Odini (1991:96) advises that, at the planning stage, in addition to considering the needs of each library, various forms and models of cooperation must be

examined in order to determine which model best suits a particular situation. He stresses multi-country cooperation for maximum economic and human development for Sub-Saharan Africa.

Advances in ICTs have created a new information environment as witnessed in the growth of networks, telecommunications, satellite transmission, and electronic mail. All of these have changed the pattern of resource sharing from print to online access. Library patrons therefore need to develop effective and adequate research skills to enable them clearly define what they want, and to locate materials by navigating the Internet and other disciplinary databases (Lynch 1997:454). Ojedokun (2000:18) suggests that the educational systems should be restructured to include the teaching and acquisition of information technology skills that will enable students to develop effective and efficient online information search strategies. Some aspects of information literacy programmes are taught in many universities.

After studying carefully the origin, growth and success of the Research Triangle University Libraries, the oldest and the most successful large-scale cooperative collection development program in North America, Dominguez and Swindler (1993:485) note the following as factors that could enhance cooperative collection building schemes:

- ! The cooperative should aim at achieving the institutions' goal;
- ! The cooperating libraries must be convinced that the cooperation is in the best interest of their institution;
- ! The organizational structures of the cooperation must provide a favourable environment for the operating of joint collection building efforts;

- ! End-users must have bibliographic access to the holdings of each of the cooperating libraries; and
- ! Funding must be provided to maintain and support resource-sharing schemes.

2.7 Conclusion

The literature reviewed in this section confirms the fact that a new world order that places greater emphasis on knowledge as the raw material for sustainable growth is in existence. Knowledge has become the main essential ingredient in the educational and economic advancement of any nation. The review further reveals that universities in Sub-Saharan Africa, which are supposed to be the tools for the educational and economic advancement of their nations do not have adequate information resources to enable them to perform their role as agents of development effectively. As a result, their countries lag behind in human development. University libraries therefore face the challenge of rethinking and planning alternative ways through which their clients can enjoy the benefits of global information networks.

This literature review indirectly addressed two of the questions raised in Chapter one of this study, which are:

- ! Is there a crucial need for SDA university libraries in Sub-Saharan Africa to participate in resource sharing?; and
- ! What are the resource sharing problems encountered by SDA libraries?

The review reveals that Sub-Saharan African university libraries in general (SDA libraries included) not only lack adequate resources but that they also lack sufficient funds and an information infrastructure to

meet the information needs of their clients. It also reveals that research activities that are vital for the development of African nations are lacking in Sub-Saharan African universities, and that the means of accessing information pertinent to the advancement of research activities are grossly inadequate.

Even though the review did not directly address the problems faced by SDA university libraries in Sub-Saharan Africa, the problems of resource sharing reviewed in general are also typical of SDA university libraries. The constraints of funds, lack of technological know-how, low regard for library services, economic recession, inflation and so forth are some of the problems faced by SDA university libraries.

The other questions raised in Chapter one however still remain to be answered, namely:

- ! How is resource sharing presently managed in SDA university libraries in Sub-Saharan Africa?;
- ! What resource sharing activities are there in and among SDA university libraries?;
- ! What are the resource sharing problems encountered by SDA libraries?;
- ! What are the prospects for improving resource sharing services in SDA libraries in Sub-Saharan Africa?;
- ! What kinds of resource sharing activities are feasible in each library?; and
- ! How can a network of SDA universities in Africa be established and sustained?

These questions will be answered empirically using a qualitative multi-method field study approach. This includes an analysis of documents relevant to resource sharing, observations, interviewing and the application of questionnaires to the study population. These are elaborated in Chapter three.

CHAPTER 3

METHODOLOGY AND RESEARCH DESIGN

3.1 Introduction

Research is a systematic study and investigation designed to promote the advancement of knowledge in a given subject or topic. This activity that includes research development, testing and evaluation is designed to expand the frontiers of human knowledge and bring about effectiveness in running human affairs. The researcher attempts to provide answers to questions by uncovering facts and formulating generalizations based on the interpretation of the facts.

This chapter elaborates fully the methodology and research design for the study. It includes an overview of qualitative methods and the rationale for selecting a qualitative approach. The chapter then presents the research design, sampling techniques, methods of data collection and data analysis. It discusses measures taken to achieve reliability and validity of both the data collection instruments and the data.

Social organizations are characterized by constant and continuing changes. It is therefore important for all social institutions such as the library to constantly evaluate their services to determine how well they are conforming with changing patterns of social behaviour, especially as it relates to changing educational

patterns and information seeking behaviour of patrons. Such evaluation in librarianship may be effectively done through the application of social science research methodology. When research is conducted to determine the state of the art, to challenge accepted beliefs, determine current practices in a field of study or in the provision of social services in relation to a changing environment, the findings become instruments which policy makers can employ directly in the planning and decision making processes to bring about improved social services (Patton 2002:283). In the case of the university library, such research findings will be useful in planning a new course that will improve information services to the academic community. The ultimate aim of the social science research process is then to provide information that will assist in making decisions that can enhance the performance of social institutions. When decision-making is not based on empirical evidence, the tendency is to base it on human emotion which of course has no scientific basis. In order to improve social organizations and base decision-making on concrete evidence, social science research has to be applied. This is precisely what this study project into resource sharing activities of Seventh-day Adventist (SDA) institutions of higher learning aims to do. The findings can then be applied to generate data useful for improving resource sharing among SDA libraries (Taylor & Bogdan 1998:137).

The purpose of this study is to investigate resource-sharing practices among Seventh-day Adventist institutions of higher learning in Sub-Saharan Africa. Since the availability of relevant educational resources is paramount to the success of any educational enterprise, the study investigates the level of resource sharing activities among Seventh-day Adventist institutions. Such an investigation will help to determine the extent to which the goals and objectives of the educational mission of the Seventh-day

Adventist Church in Sub-Saharan Africa are accomplished. It also examines:

- ! The degree of resource sharing practices between each of these libraries with their immediate academic neighbours;
- ! The extent of patrons' awareness of the importance of resource sharing in their information seeking; and
- ! The obstacles to effective resource sharing practices, and recommends ways in which resource sharing could be effectively and efficiently practised in order to achieve the goals and objectives of the universities that the libraries serve.

The research methodology incorporates a sociological approach toward the research design. This approach is preferred to the historical approach because of its tendency to allow a comprehensive and holistic approach to the study of contemporary social phenomena. The sociological approach proceeds from the premise that all documents reveal something about the individual's personal definition of a situation and are therefore invaluable in arriving at an explanation of his/her behaviour. The sociological approach will therefore analyse all statements, reports, and artifacts that testify to the issue being studied. It believes that all truth is not apprehended by studying only past records, and that there are other ways of explaining a phenomenon. The sociological approach conducts interviews and observations and uses them to develop and test propositions that will explain and predict human behaviour, or reveal institutional practices and perceptions (Kornblum 1994:41-45). The historical approach, however, works from the premise that the truth about a problem or phenomenon can only be revealed by examining past documents, written records and

artifacts (Ary *et. al.* 2002:2). Because the ultimate concern is apprehending the truth, the historical approach attempts more to establish credibility and discard statements that do not tell the truth. This is a limitation in the historical approach that could flaw the present study. Such discarded documents are invaluable to the social researcher because they help to reveal the totality of the social situation. Although the historical approach has its limitations especially for this study, the immediate usefulness of history in investigating contemporary problems is significant. A historical study enables an institution to deliberate on its past activities and employ its findings to chart a course for the future. In other words, a social agency such as the library can be improved if the library community employs its past experiences to address the information problems of the present. The sociological approach is however employed more prominently in this study.

Data is collected through obstructive and unobstructive techniques (Patton 2002:191). The unobstructive technique involves carrying out the study in a less formal environment that promotes freedom of expression by the participants. Such an atmosphere reduces distortion of gathered data thereby enhancing validity and reliability of data. The unobstructive technique is applied to record review such as resource-sharing policy documents, and others. These give historical insight into the institutions' resource sharing activities. Data is also collected through obstructive techniques such as, questionnaires and interviews.

3.2 General Orientation

Like other organizations, the university library has always conducted research to resolve problems, and in this case it is applied again to a specific matter, namely, resource-sharing. It has become necessary to re-

examine resource sharing practices for certain reasons: Cost of services and resources are increasing while budgets for library operations are dwindling. The library faces the challenge of reconciling both. In the new knowledge environment, where information resources play a significant role in advancing knowledge and the economy, libraries have to engage in scientific research, planning and decision-making activities in order to improve access to information resources. With increased publication and changes in the information needs and information seeking behaviour of library users, an understanding of users information needs and information seeking behaviour could help librarians to provide more effective information services to their clients (Mellon 1990: 142).

3.3 Qualitative Research Paradigm.

The choice of a research method in performing a study is very crucial to the success of the study. Orora (1996:23) advises that it is important for researchers to select a research paradigm that is applicable to their discipline. Furthermore, he asserts that the choice of a research paradigm is determined by the phenomenon being studied and the objectives of the study. These will determine the research approach, materials to be gathered and the method of analysis. Best & Kahn (1993:83) confirms that concept by saying that a variety of methods that are most effective under particular circumstances and suitable to the study should be employed.. Patton (2002:10) corroborates the views that the choice of research paradigm is determined by the phenomenon being studied and the objectives of the study.

The academic library, like its parent institution, is a social organization where teachers, students and researchers are tied together in a complex social activity of information seeking for only secondarily and

functional purposes. Such human experiences and behaviours are best understood from the point of view of the participants and cannot be fully captured when textual data are quantified. Effective research method in librarianship entail the active involvement of the researcher in the lives of members of the library setting in order to fully and truly understand events and information seeking behaviour of library clients, information accessibility and the value they ascribe to it. Based on the above recognition, the qualitative paradigm is best suited to this study.

Qualitative methods are developed in the social sciences to enable researchers to study social and cultural phenomena. Such methods include, for example, action research, case study research and ethnography. The motivation for doing qualitative research comes from the observation that if there is one thing that distinguishes humans from the natural world, it is their ability to socialise through speech communication. Qualitative research methods are therefore designed to help researchers understand people and the social and cultural contexts within which they live. It accepts the fact that events are field-based and are therefore best studied in their natural setting. McMillan & Schumacher (1993:15) contend that the qualitative research methodology's strongest point lies in its emphasis on constructive validity, that is, it seeks to understand phenomenon from the participant's perspective (Denzin & Lincoln 2003:70). It brings the researcher into direct interaction with the people and makes them feel comfortable and free to respond to any inquiry (Bernard 1995:136). The activity becomes responsive and holistically evaluative when the researcher collaborates the effects of the setting, insiders' meaning of the phenomenon, and the effects that the observed phenomena have on each other, and then make generalizations from them in the form of

universal laws and principles (Orora 1996:9).

Such generalizations are not validly made through quantitative reasoning instruments because the social and institutional contexts of such phenomena are largely lost, and cannot be adequately captured when textual data are quantified (Kaplan and Maxwell 1994:45-48). In addition, this field-based research design allows the researcher to get “close in” to the data and the insiders’ meaning of the phenomena (Orora 1996:9). Since this study involves direct contact between the researcher and the objects of study, personalized and intimate understanding of the phenomena is the optimal ways to achieve objectivity and validity (Orora 1996:9).

The qualitative method is applied when a researcher uses his/her own judgment through the context and meaning rather than quantitative reasoning instruments (Ulin et al. 2002:139). Because qualitative research describes the research environment by applying emergent techniques to design the research rather than through pre-selected hypotheses, the methodology will not generate findings beyond the unit of study so that hypotheses can emerge from the data naturally. This provides an emergent plan for an interactive process for obtaining data from which an analysis will be developed. In other words, there is no attempt to fit data into pre-conceived moulds. Instead, flexibility allowed in the qualitative approach provides a more sensitive and fuller grasp of the phenomena under investigation.

3.4 Research Design

Since the research is about the study of the library as a social institution, it adopts the case study method and combines it with the survey technique. This is possible due to the flexibility of qualitative approaches. The case study method as a typical example of the qualitative method, carefully and thoroughly investigates the life and/or behaviour of an individual or an institution within its real-life context with the view of identifying particular problems and finding solutions to the problems (Yin 1994:13). In order to achieve this purpose, the case study method tries to identify the phenomenon being investigated by reviewing the past as well as the present social ecology of the issue through interviews and the review of documents. Its strongest point is that a phenomenon can be best identified and tackled by reviewing both its past and present records. In this way, the case study method complements and strengthens the sociological approach and the qualitative methodology employed for this research. The techniques for collecting empirical data are chiefly the interview, questionnaires, and document analysis. Because the principal source of data collection is the interview, most of the data are primary sources. The pre-defined universe for this research includes five Seventh-day Adventist universities in Sub-Saharan Africa. However, this is not a population study. Instead, a representative sample of the population is selected. This enables the researcher to acquire an in-depth understanding of resource sharing, and for such qualitative study it is not the size of the sample but the depth of analysis that matters.

3.5 Sampling Technique

A study of resource sharing management among Seventh-day Adventist university libraries in Sub-Saharan Africa is chosen because of the need to evaluate the effectiveness and efficiency of the Seventh-day Adventist Church's educational contribution to promote and enhance capacity building for the

continent, and for improving both social and spiritual work of this Church on the continent.

As mentioned earlier, the universe population would involve all universities run by the Seventh-day Adventist Church in Sub-Saharan Africa. However, it is too costly to study all of them in order to discover and generalize those principles that have universal application. Through sampling, the researcher could still draw valid conclusions on the basis of careful observation of variables within a representative sample of the population (Best and Kahn 1993:13). Purposive sampling is applied in this research to select the sample frame. This is preferred because certain population units are considered typical of the study (Patton 2002: 46). Besides, it permits the researcher to control the infiltration of certain extraneous variables that might increase the variability of the sample, thereby reducing the validity of the study.

In order to control the potential effect of extraneous variables, the researcher adopts the matching process in selecting the sample size. This is a careful selection of institutions according to the matching variables. These variables are:

- ! Location of the University;
- ! Year of establishment;
- ! Number of students;
- ! Number of academic programs at the undergraduate and postgraduate levels; and
- ! Size of the library collection.

3.5.1 Location of the University

Since the study examines the resource sharing practices of Adventist universities in Sub-Saharan Africa, it is important to select a sample frame from each region of Africa where Adventist universities are located, namely: eastern, western and southern Africa. Such a selection would be truly representative of the study population in terms of geographical coverage.

3.5.2 Year of establishment

The age of an institution and its library to some extent determines the level of development of its library. Older institutions tend to have more stock and better-developed services. One of the factors that plagues resource sharing is that most African universities are new and thus have very little to share (Avafia 1985:16). To study libraries that are new and just developing may not give a true picture of resource-sharing management. Therefore this study selects the five oldest Adventist universities on the continent.

3.5.3 Number of students

The enrolment in a university determines, to a great extent, the size of the library and also the demand for information resources. The larger the enrolment the greater the need for varied information resources, and the greater the need for students to do more independent work (Avafia 1985: 22). Because there is a greater demand to access academic resources by large universities, the largest universities within the study population were selected.

3.5.4 Number of academic programs at the undergraduate and postgraduate levels.

Universities that offer a large variety of academic programmes will logically have a greater need to access

a variety of information resources and will therefore have a richer experience with the issues pertaining to resource sharing. The greater the variety of academic programs the more complex the information needs of the patrons. Moreover, resource-sharing problems are clearly elicited in places where the needs are greater.

3.5.5 Size of the library collection

As mentioned in section 3.5.2 many universities have very few collections and so have very little to share. This is the case with the libraries under investigation (see Table 7). Although the library collections are small compared to larger, well-established government-sponsored university libraries, the libraries under investigation have the largest collections. If the resources are brought together under a consortium, library users will have access to more than they would have in their own libraries.

In view of the criteria enumerated above, the libraries of the following universities are selected as the sample:

- ! University of Eastern Africa Baraton in Kenya (hereafter UEAB);
- ! Bugema University in Uganda (hereafter BU);
- ! Solusi University in Zimbabwe (hereafter Sol);
- ! Babcock University in Nigeria (hereafter BA); and
- ! Valley View University in Ghana (hereafter VVU).

These universities form the core tertiary institutions managed by the Seventh-day Adventist Church in Sub-Saharan Africa. They are considered the most developed in terms of library holdings, and services.

They are located in regions of Africa where there is a strong Seventh-day Adventist presence. Other SDA institutions do not have much to offer in terms of services. Rather, they depend heavily on the universities close to them geographically.

Each of the five universities is located in the interior of their respective countries but not far away from a city. Babcock, which received its charter in 1997, is strategically located at an equi-distance point between Lagos and Ibadan, Nigeria. The distance from Babcock to the two cities is about 50km. It is also within a 50 km radius of 5 university libraries in Nigeria. Bugema, chartered in 1998, is located 32 km from Kampala in Uganda, while Solusi chartered in 1997 and is 50km away from Bulawayo, Zimbabwe's second largest city. UEAB chartered in 1991, and is located in a typical rural setting that is 350 km away from Nairobi in Kenya, and 45 km away from Eldoret. Valley View chartered in 1998, and is 35 km away from Accra, Ghana (see map on p.xv).

The selection of data sources in each university is by purposive sampling in which the researcher selects information-rich individuals who provide the relevant data required. In this regard, persons who occupy the following offices, because of their direct relationship to the management and financing of the library, are suitable as informants, namely:

- ! The Library Director, or library staff in charge of resource sharing services;
- ! The Deputy Vice-Chancellor for Academics;
- ! The Deputy Vice-Chancellor for Finance; and
- ! The Deans of each school.

Data is collected in two phases. **Phase one**: The Librarian /or the Library staff in charge of resource sharing is asked to complete questionnaires that supplied the researcher with basic information about the library and the university. Data gathered from this preliminary exercise, in part, determine the style and content of the structured interview that followed. Data is gathered through questionnaires from the student body and the teaching staff. In determining the sample size for each university, the researcher selects, according to Cohen and Manion's (2000:104) suggestion, a minimum of 30% of the sample population to elicit valid and reliable data. Many other methodologists including Ary et. al. (2002:181) also agree that a carefully selected minimum of 30% of the study population should be sufficiently representative of the study and should yield a high percentage confidence level. This will improve accuracy and reliability. Accordingly, this study samples 30% of the undergraduate population at each institution. Because the post-graduate population in each institution is small, a 30% sample would not be truly representative. Therefore, the study samples 50% of the post-graduate population. This minimises sampling error and adds credibility to the findings. Students in their senior years of study at the university tend to understand better the importance of access to information resources. Therefore undergraduate students in their senior years and post-graduate students will understand the project better, and produce data relevant to the project. For this reason, in sampling the 30% of the undergraduate students, 90% come from students in their third and fourth years, while the remaining 10% come from students in their second year. At least 30% of the teaching staff in each institution is selected. The selection covers all major academic disciplines. Those selected are individuals who are regular users of the library, highly involved in research and with at least four years tenure at the institution.

Phase two : conducting of interviews. The Librarian, Deans of each School, the Business Manager and the deputy Vice-Chancellor of each university are interviewed. Interview schedules are prepared and each interviewee is asked relevant questions that relate to the research topic. The responses are recorded on cassette tapes and notes are taken. The researcher tries to conduct the interview in an informal atmosphere to enable respondents to freely express themselves. Each interview schedule is not more than thirty minutes. **Phase three**: The researcher analyses relevant library documents, such as the library annual or quarterly reports, library objectives and policies, reports of resource sharing activities, and statistics of how much sharing has been done over a given period. Other relevant policy documents such as the university Charter, handbooks, and statements of accounts are also analysed.

3.6 Obtaining access

The researcher sends letters of introduction to the heads of the universities and seeks permission to conduct research. Once permission is granted, the researcher spends a minimum of three days collecting data at each university.

3.7 Methods of Data Collection

The major data collection methods for this research are the face-to-face interview, questionnaires, document analysis and observation. This multi-method approach it is believed, would increase the credibility and trustworthiness of the results. This procedure is valued and reliable and it is also standard procedure employed in qualitative research. In fact, qualitative research is basically the triangulation of

methods. Denzin & Lincoln (2003:66) identify four types of triangulation, namely:

Data triangulation: This is a process whereby data is collected from different sources;

Investigator triangulation: Different researchers evaluate the same problem from different angle;

Theory triangulation: A simple set of data is interpreted and analysed from multiple perspectives; and

Methodological triangulation: The application of simple methodology to study a simple problem.

Data triangulation appears to be the best for this research and as such, it is the chosen design.

3.8 The Interview

The interview is an obstructive method of data collection. It is designed to gather valid and reliable information through the responses of the interviewee to a planned sequence of questions. Interviews are used to gather information about a person's experience, knowledge, feelings and perspectives about a particular situation or about the research topic. Those who are interviewed are usually people who are information-rich or have first-hand information about the situation/topic being studied. Through the interview, information is elicited from the mind of the respondent, and researchers then convert such information into data (Patton 2002:341).

This approach makes it possible to measure what a person knows, likes, dislikes, suggests about the topic and its improvement. Interviews range from quite informal and completely open-ended to very formal closed/fixed responses. Many researchers prefer the open-ended question types because it gives the respondents freedom to answer questions in the best possible ways they can elicit their responses. The freedom to respond to questions without having to select from pre-determined responses that are

usually regarded as the researchers pre-conceived notion, encourages objectivity and validity (Best and Kahn 1993:199). Speaking in support of the open-ended style, Patton (2002:348) declares that open-ended interviewing offer the persons being interviewed the opportunity to respond in their own words and to express their own personal perspectives.”

Many researchers value the interview as a highly dependable and flexible data-gathering device. Because of its flexibility, an investigator during the course of interviewing can probe into leads that appear fruitful, rephrase questions that are not clearly understood by the respondents and ask for clarity on answers given to questions. The body language communicated by the respondents in the interview process are clues from which the researcher can draw inferences about the situation under discussion (Taylor & Bogdan 1998:115).

Best and Kahn (1993:200-201) categorize the interview into four types:

- ! The informal conversation interview;
- ! The interview guide approach;
- ! The standardized open-ended interview; and
- ! The closed, fixed response interview.

The informal conversation interview asks questions as they emerge from a context without pre-determining what to ask. This method increases the relevance of the questions asked but sometimes lacks details and comprehensiveness because questions that do not emerge from the context, even if they are relevant, are not asked. The interview guide approach on the other hand uses pre-determined questions,

but the researcher, in the course of the interview, determines the sequencing and the wording of the questions. Though the data gathered from this method is systematic and comprehensive, the variations in wording and sequencing of questions can drastically challenge the validity and objectivity of the data especially when interviews are conducted in different places. The standard open-ended interview method uses predetermined questions that are applied to all respondents irrespective of location. This ensures high comparability of response and reduces considerably interviewer biases. The data is easily organized and analysed but the system lacks flexibility since questions cannot be altered to suit respondent's understanding. The formality of the occasion constrains the respondent from free expression of ideas. In the closed-fixed response interview, the response categories and the questions are pre-determined. Even though this type of interview simplifies data analysis, it reduces validity because the response categories do not allow the respondents to comprehensively express themselves.

Freebody (2003:133) classifies the interview as structured or fixed response, semi-structured and open-ended. The structured or fixed response interview is similar in its characteristics to Best and Kahn's standardised, open-ended interview and closed, fixed response interview. The semi-structured, like Best and Kahn's informal conversational interview and the interview guide approach begins with a pre-determined set of questions that allows the respondent greater freedom to discuss aspects of the topic that is relevant or of concern to him/her. The open-ended or fixed response like the semi-structured are predetermined. Respondents are required to answer the questions, which are worded in open-ended format.

Patton (2002:342) and Ulin et. al. (2002:64) share three similar classifications of the interview. Both of them classify the interview into the:

- ! Informal Conversational Interview;
- ! Interview Guide Approach; and
- ! Standardized open-ended Interview.

Ulin et. al. (2002:64) include one more category in their classification, namely:

- ! The closed-Fixed Response Interview.

In the Informal Conversational Interview, the investigator asks related questions as they emerge from the context. In the Interview Guide Approach, major questions and procedures are predetermined. This serves as the checklist to ensure all relevant topics are covered. The investigator determines the sequence and the wording of the questions. He/she is also free to probe beyond the preconceived questions especially if they lead to further light on the issue that is being investigated. The standardized Open-ended Interview requires strict adherence to a pre-determined, specific wording, sequencing and questioning procedure. The questions are open-ended. The Fixed Response Interview is very similar to the Standardized Open-ended system. The only difference is that in the former, responses are fixed and respondents simply select the most appropriate from among fixed responses.

In view of the strengths and weaknesses of the various methods of interviewing, the researcher applies a combination of methods to gather data, namely:

- ! Patton and Ulin's Interview Guide Approach, but with the open-ended characteristics of Best

and Kahn; and

- ! The Standardised open-ended interview method.

Since the system allows questions to be previously formulated, the researcher designs questions that lead to a comprehensive discussion of the subject. The attraction of this method is the fact that the researcher could probe beyond the pre-determined questions when respondents give useful insights that are worth pursuing further. The open-ended nature of the questions permits respondents to freely express themselves without conforming to the researcher's biases. McMillan and Schumacher (1993:427) affirm that elite interviews are best for collecting data on studies that desire in-depth understanding of the operations of an organization. Such an interview is relevant to this research since it examines resource-sharing practices among university libraries. The researcher conducts interviews with individuals who are directly related to the management and financing of the library. These individuals include:

- ! The Library Director, or library staff in charge of resource sharing services;
- ! The Deputy Vice-Chancellor for academics;
- ! The Deputy Vice-Chancellor for finance; and
- ! The Deans of Schools, and in some cases, heads of departments.

The researcher believes that the conversational nature of this method not only elicits more complete and valid answers from the respondents but that the discussion can lead to significant insights into the problem of resource sharing (Patton 2002:342).

Data from the interview is collected through tape recording and note taking. Respondents' para-linguistic expressions are noted. The venue, time and date of the interview are noted. This assists in verifying usefulness, reliability and validity of data collected. These sources are with the author for verification. A list of questions used in the interview is found in Appendix 1.

3.9 Questionnaire

The questionnaire as a data collection technique allows a wide coverage of pertinent data to be collected especially when data collection is spread across a wider geographical section, as it is the case here.

When it does not call for a signature or other means of identification, the question may elicit more candid and more objective replies and valid responses. The questionnaire is more adequate in situations where factual information is needed. In this case, the researcher would need documented information about resource sharing practices and plans for each of the institutions being studied. The major problem is the low-rate returns, which decreases the size of the sample (Ary *et. al.* 2002:384) and also introduces a bias into the sample because non-respondents can hardly be considered representative of the total population. Since data is collected from several sources, the weaknesses of the questionnaire will be compensated for by the strengths of other sources of data collection (Bradley 1993:440). In this study, questionnaires are distributed to respondents by mail prior to the researcher's visit to the field. Information gathered from the questionnaire gives the researcher background information and insight into resource sharing management and practices of each university. Such information guides the formulation of interview questions. Since the questionnaire elicits basic facts about the library in which field research is conducted, the chief information source through questionnaires is the Library Director at each university.

Questionnaire data on library usage and resource availability from the point of view of patrons is collected

from the following:

- ! The teaching staff;
- ! Post-graduate students; and
- ! Undergraduate students in their second, third and fourth years.

The teaching staff selected has served in the University for at least four years. The tenure guaranteed that the informant is familiar with the library and would therefore give valid information (see Appendix 2 and 3 for samples of questionnaires).

3.10 Document Analysis

Documents are important sources of data. They are supportive materials that provide insight into the organization's goals, objectives, and management. They reveal the internal problems and aspirations of the organization. Their analysis is therefore a highly valued method of data collection among many researchers. Documents, when analysed, provide deeper insight into the nature of the issue under discussion (Wilcott 1992:191). Different authors refer to this process by different names, though the concept and the processes are the same. Some authors call it 'review of documents' (Morse 1994:45) or 'content analysis' (Fidel 1993:233). Best and Kahn (1993:191) call it a 'non-interactive method' while Tuckman (1999:397) calls it 'written account'. Documents that can be analysed include records, reports, printed forms, letters, autobiographies, diaries, bulletins and many more (Best and Kahn 1993:191). In this investigation relevant documents are studied and analysed for their content. These include:

- ! Library policy statements;
- ! Charters of the institutions;

- ! Financial documents;
- ! Library handbooks;
- ! Minutes of the library committees;
- ! Library development plans;
- ! Inter-library loan records; and
- ! Other relevant statistical data.

3.11 Analysis of Data.

This is concerned primarily with textual analysis of verbal and written data (See Chapter 4 for details). It is an imperative stage in the research process as data become meaningful only when it is analysed and interpreted (Mouly 1993:141). Patton (2002:432) aptly describes the purpose and function of analysis of data thus, “the challenge of qualitative analysis is in making sense of massive amounts of data, reduce the volume of information, identify significant patterns and construct a framework for communicating the essence of what the data reveal.” In the qualitative research, data analysis involves classifying the data based on the research purpose, guided by hypotheses suggested by the data (Ulin *et. al.* 2002:136). This is a cumbersome process of unveiling the human experiences indicated in the data sources (Wilson & Hutchinson 1991:217).

Although there are various modes of analysis, the hermeneutical mode is adopted in this study. This method is most suitable because of its unique ability to gain an understanding of a social phenomenon within the context of human environment and behaviour. Taylor (1976:153) declares that, “interpretation

in the sense relevant to hermeneutics is an attempt to make clear, to make sense of an object of study.” It is a system based on the understanding of the text as a whole and the interpretation of its parts is based on the whole. Gadamer (1976:117) describes it as “a circular relationship. The anticipation of meaning in which the whole is envisaged becomes explicitly clear in that the parts that are determined by the whole themselves also determine this whole.” Thus the object of the interpretative effort is one of attempting to make sense of the organisation as a text analogue. The aim of the hermeneutic analysis becomes one of trying to make sense of the whole, and the relationship between people, organisation, and information sources. To achieve this process, the researcher will adopt the suggestions given by Best and Kahn (1993:203). They identify three stages of data analysis, namely:

- ! Organizing the data;
- ! Describing the data; and
- ! Interpreting the data.

Data gathered is transcribed, and /or coded and analyzed. After the data from the interviews is transcribed, it is organized by grouping answers together across the respondents. Data from questionnaires is grouped by number across the different respondents while data from document analysis is grouped according to subjects.

Once the data is appropriately organized, the researcher moves to the second stage of data description. Every relevant aspect of the research is described: the setting, respondents, view points of participants, and others. Lastly, the researcher proceeds to the most critical stage of data analysis, that is the

interpretation of data (see Chapter 5). According to Patton (2002:375), data interpretation involves explaining the findings, answering 'why' questions, attaching significance to particular results, and putting patterns into an analytic framework. Documents analysed can be verified with the author.

3.12 Reliability and Validity.

The quality of any research depends on the adequacy of the research design and the quality of the measurement procedures. A measuring instrument is said to be reliable if it gives consistent results each time it is applied to the same persons or phenomenon (Carmines & Zeller 1991:20). Reliability tries to measure the behaviour of a given measuring instrument under different conditions, that is, the stability of the measurement. For data to be useful, the data-collection techniques and the rules for using the data must produce information that is reliable and valid. Likewise, the data generated is considered valid if the measuring instruments give the correct position of the situation and measure what the researcher intended them to measure (Patton 2002:14). Even though it is easier to measure the reliability of a measuring instrument, the establishment of its validity is generally more valuable.

Hoyle *et. al.* (2002:83) argues that for meaningful research to take place, it is important to determine the reliability of the measuring instrument before it is used in a study, unless of course the reliability and validity have been previously demonstrated. When research instruments are plagued with errors, they are not likely to achieve reliable and valid results. Hoyle *et. al.* (2002:83) further advise that the instrument should be pre-tested to avoid ambiguous terms, unclear instructions, incomplete or unwanted answers. These authors clearly indicate the importance of critically examining and ascertaining the reliability and

validity of the measuring tools. If pre-testing shows that the tools and their procedures are not satisfactory, adjustments can be made before they are applied to the actual research.

3.13 Pretesting Measuring Procedures

There are many techniques for assessing reliability of the measuring tools, although many of them have been developed in the context of the questionnaire and interview techniques. Several authors (Ary *et. al.* 2002:255; Hoyle *et. al.* 2002:319) have identified two basic techniques. **Test-retest procedure**: In an attempt to assess reliability or stability, the respondent may be interviewed several times in order to measure the degree of agreement between the test and re-test times or the reliability coefficient. The higher the relationship between the two sets of data the higher the reliability. The result of this test may be faulty because the re-test may be affected by the memory of the previous test and the events that might have happened between the two tests. To avoid this error, it is suggested by Ary *et. al.* (2002:255) that the re-test be applied at a later time long enough to reduce the effects of the original test and yet not too long as to change the phenomenon being measured to any significant degree.

The second popular approach to test reliability is the application of equivalent questions called 'the split half reliability' (Ary *et. al.* 2002:256). This method measures the extent to which different instruments applied to the same individuals at the same time, yield consistent result, or the extent to which different investigators using the same instrument to measure the same individuals at the same time yield comparative or consistent result (Tuckman 1999:199). This system is suitable for measuring a research design that measures one variable. When several variables are involved, as it is with this study, other

testing measures are advocated.

To determine the reliability of the measurement procedures, the researcher applied the test and re-test method. The UEAB was used for pretesting. Twenty students were selected for pretesting. Since this method has the pitfalls of being influenced by practice and memory, especially when the tests are conducted within the same time frame, the researcher administered the test twice but with four months interval so that extraneous variables of time and practice do not have any significant influence on the performance of the respondents. The result of the first test especially on the students' questionnaire showed that some questions were not very clear. These were amended to achieve better clarity before the actual data collection.

In order to ascertain the validity of this research, the researcher tests the measurement procedures for:

- ! External validity; and
- ! Internal validity

For research to be meaningful and considered valid, the data generated from the sample must be representative of the larger population from which it is drawn (Ulin *et. al.* 2002:58). It is then that true generalisations can be made from the sample to the study population. The sampling techniques applied in the research design are the major determinant of the external validity of the measurement procedures. In determining the sample, therefore, the researcher defines the content population of the items from which the representative sample is drawn and used it as a guide in selecting a truly representative sample (Cohen

& Manion 1992:101).

The internal or content validity tests precisely asks for a representative collection of items on the test that accurately measure the variables that the researcher sets out to measure. If a good number of the questions directly measure what they should be measuring, then it is considered that the measuring procedures possess validity. To test for content validity, the researcher critically examines each of the test items for their relevance in the research. The researcher then seeks “the expert opinion” (Hoyle *et. al.* 2002:87) by requesting an experienced librarian in the area of resource sharing to evaluate the content of the test design. His suggestions for improvement are implemented.

When the reliability and the validity of the measuring procedures are ascertained, the researcher adopts the suggestions of Swisher & McClure (1984:95) to complement the measures which are adopted above.

They suggest that reliability and validity can be further enhanced by:

- ! Making certain that the answers to questions or the measures of a variable are coded and interpreted consistently upon data entry and analysis;
- ! Collecting data at a typical or appropriate time and not when something abnormal is happening;
and
- ! Making certain that the data collection is administered under a clear set of guidelines and instructions so that the procedures are the same for all instances.

Ulin, *et. al.* (2002:158) affirms that obtaining a credible response from the research participants is very important in achieving credibility. If the questionnaire is used as a source of data collection, they suggest that the questions be open-ended rather than suggestive. This will permit the respondents to freely

express their ideas. During the interview process, the researcher should watch out for contradictory statements and encourage the respondents to speak in details rather than make generalization.

In this study, the researcher achieved reliability and validity through the following steps:

- ! The application of multi-method of data collection (triangulation). Different data collection methods were employed such that the merits of each one compensated for the weaknesses of the other (Fidel 1993:232);
- ! First hand informers and information-rich individuals who had the potential to provide adequate and valid information were interviewed;
- ! To ensure absolute anonymity and freedom of expression, respondents to questionnaires were not required to identify themselves on the instruments;
- ! Since a study of this nature could cause apprehension and sensitivity concerning confidentiality respondents were assured that the information they gave would be treated with confidentiality; and
- ! The low return tendencies in the application of the questionnaire negatively impacts validity. To avoid this the researcher distributed questionnaires to respondents well ahead of field visitation to each institution. Those who had not filled the questionnaires were encouraged to do so and the researcher collected them while conducting interviews and document analysis. A high rate of return, the percentage of which is given in Chapter 4, was achieved by personally collecting the questionnaire responses.

At the interview, notes were taken accurately without interfering while the respondents spoke. The content of the notes were shared and crosschecked with the respondents for clarification and accuracy.

3.14 Conclusion

In this chapter, the researcher presented the methodology and the research design for this study. It described in detail the research procedure and the various techniques by which data was collected. Such techniques included in-depth interview, questionnaires, document analysis and observation. It also described the methods used to analyse data and the various measures taken to achieve reliability and validity.

CHAPTER 4

PRESENTATION OF DATA

4.1 Introduction

This chapter presents the data on the management, problems, and prospects of resource sharing services in selected SDA universities in Sub-Saharan Africa. The data collection instruments used to obtain data for this study, as explained in Chapter 3, were:

- ! Questionnaires;
- ! Interviews; and
- ! Analyses of relevant documentation.

There were 2242 respondents to the questionnaires distributed by the researcher to students and teaching staff at 5 universities, namely:

- ! Babcock University in Nigeria (**BA**);
- ! Bugema University in Uganda (**BU**);
- ! Solusi University in Zimbabwe (**Sol**);
- ! University of Eastern Africa Baraton in Kenya (**UEAB**); and
- ! Valley View University in Ghana (**VVU**).

Questionnaire distributions and returns are reported in Tables 2 and 3. The researcher's personal visit to

each university facilitated maximum return of distributed questionnaires. On average, 95% of the questionnaires were returned at Babcock, 78 % at Bugema, 83 % at Solusi, 87.5% at the University of Eastern Africa Baraton, and 87 % at Valley View.

Table 2 Students Questionnaire Distribution

Libraries	Enrolment	Questionnaires Distributed	Questionnaires Returned	% of Returned Questionnaires.
BA	3500	1020	1012	99%
BU	720	250	202	81%
Sol	1200	360	309	86%
UEAB	1200	400	349	87%
VVU	700	250	248	99%

Key

- BA** Babcock University
- BU** Bugema University
- Sol** Solusi University
- UEAB** University of Eastern Africa Baraton

Table 3 Faculty Questionnaire Distribution

Libraries	No. of Staff	Questionnaires Distributed	Questionnaires Returned	% of Returned Questionnaires.
BA	150	55	50	91%
BU	45	20	15	75%
Sol	40	25	20	80%
UEAB	60	25	22	88%
VVU	30	20	15	75%

Key

- BA** Babcock University
- BU** Bugema University
- Sol** Solusi University
- UEAB** University of Eastern Africa Baraton
- VVU** Valley View University.

A total of 36 interviews were conducted. As indicated in Chapter 3, the Deputy Vice-Chancellor, the Business Manager, the Librarian, and the Deans of schools at all the universities were interviewed. The only exceptions were at Bugema and Valley View where there were no schools but departments. In this case, all the heads of departments were interviewed. The following are the numbers of interviewees per university:

! Babcock-7;

! Bugema-8;

! Solusi-6;

! UEAB-7; and

! Valley View-8.

Altogether, 5 Deputy Vice-Chancellors for academic affairs, 5 Deputy Vice-Chancellors for finance, 5 Librarians, 16 Deans and 5 Heads of Departments were interviewed.

Upon arrival at each institution, the researcher made appointments with the individuals that hold the offices mentioned above, and an interview schedule was prepared. Each interview lasted about 30 minutes.

A large number of relevant and general documents were analysed. These include:

! **The University Charter,**

! **Enrolment Statistics;**

- ! **Budgetary Allocation;**
- ! **Librarian Job Description;**
- ! **Library Objectives and Policies;** and
- ! **Library Development plans** and non-policy documents such as **the minutes of the Library Committee.**

Minutes were reviewed for each library. Direct on-site observations were also made and recorded during the visits.

In the collection of data, the researcher visited each university in order to observe adequately the day-to-day activities of each library and conduct in-depth and personal interviews by interacting with members of the academic community. The visits not only helped to corroborate the questionnaire responses but also helped to obtain valid data through a comprehensive process of cross checking. Table 4 shows the schedule of visits for the five universities.

Table 4 Library Visitation

University	Period of Research
BA	18/09/02-24/09/02
BU	31/10/02-6/11/02
UEAB	16/11/02-18/12/02
Sol	20/11/02-27/11/02
VVU	11/09/02-16/09/02

In order to achieve a high level of accuracy and reliability, the researcher carefully selected at least the recommended 30% of the study population that comprised students and teaching staff from each

university (Cohen and Manion 1992:104). In the long run, the percentage of returned questionnaires and the number of interviewees added up to more than 30% return for each university. In accordance with the methodology discussed in Chapter 3, data collection was restricted to students in their second, third, and final year, and post-graduates students at universities that offered post-graduate programmes. It was felt that first year students would not have had sufficient orientation and mastery of their new environment and may therefore not be able to provide valid data.

Ninety percent (90%) of the questionnaires was administered to undergraduate students in their second, third, and fourth years at Babcock and UEAB, while 10% of questionnaires was sent to the post-graduate students because of their small number. At Bugema, Solusi, and Valley View, all the questionnaires were distributed to the undergraduate students in their second, third and fourth years, because at the time of collecting data there were no postgraduate programmes at the three universities.

4.1.1 Problems Encountered

Each university was visited at the beginning of its academic year. However, unforeseeable problems at Babcock University, Nigeria, impacted significantly on the data collection exercise. The researcher visited Babcock during the second week of the first quarter when classes were supposed to have begun, but registration had just commenced owing to the breakdown of its computer networks. Because there were not many activities going on, most of the students had left for home. Those left on campus were mainly first-year students who were trying to familiarize themselves with their new environment. The 2nd, 3rd, and 4th year students who made up the sample class were thus not readily available. As a result, the

researcher could not obtain the required sample size and had to leave the questionnaires with the Dean of Students. The completed questionnaires were then mailed to the researcher. These were received in January 2003.

The responses that emerged from the multi-method data collection approach were analysed to discover trends and patterns. These were examined and grouped into categories that enabled the researcher to determine:

- ! **The management styles of resource sharing services;**
- ! **Problems encountered; and**
- ! **The prospects for effective resource sharing.**

4.1.2 Categories of Analysis

The ranges of responses are presented under the following categories using descriptive statistics:

- ! General State of SDA Libraries;
- ! Current Resource Sharing Practices;
- ! Internet and Telecommunication Services; and
- ! The Prospects for the Establishment of an Adventist Universities Resource Sharing Consortium.

4.2 General State of SDA Libraries.

The purpose for reviewing data on the state of the libraries is to be able to determine the existing position of available information resources to support the curriculum offered at each university. In this regard, the

data that deal with the library collection, its size, quality and quantity are analysed in relation to student enrolment and course offerings.

4.2.1 Location.

A description of the location of each library is available in section 3.5.

4.2.2 Academic Programmes

The resource-sharing needs of a university are closely tied to the number and the variety of academic courses offered by the university. Prior to the granting of charter in the early 1990s, each university offered only two majors, namely: Religion and Theology. With the granting of charter, each university launched several new programmes that range from technology to the natural sciences, business management/sciences and the humanities. Many of the courses offered are at the undergraduate level. The exception is Solusi and UEAB, which have launched three post-graduate programmes each in the past five years. The ranges of courses are illustrated in Table 5.

Table 5 Academic Programmes.

Fields of Study	No. of Programmes				
	BA	BU	Sol	UEAB	VVU
Business	08	05	06	05	01
Education	04	05	01	03	none
Natural Scs.	12	None	04	08	01
Social Scs.	12	09	07	07	02
Technology	None	None	None	02	none
Total	36	19	18	25	04

Post-graduate programmes: Solusi and UEAB are the only universities that offer post-graduate programmes. Solusi offers part-time post-graduate programmes in Business Administration and Pastoral Ministry, while UEAB offers full-time post-graduate programmes in Public Health, Educational Administration and Curriculum Studies.

4.2.3. General Management Structure

Questionnaire responses revealed that each library has 2 full-time professional librarians with some support staff that include student assistants. Professional library duties are shared between the two professional librarians at each institution. A common pattern of work organization exists, namely: The Library Director is responsible for library management and resource development, while the Deputy Librarian is in charge of cataloguing. Students and other support staff are hired to manage the Serials Department and Readers' services. In this arrangement, three service sections are typically distinct, namely: Library Management; Technical Services and Circulation. The only exception to this is UEAB, which also has a section for Periodicals management. Many aspects of library services are not well developed, most notably resource-sharing. There are no organised resource-sharing services at any of the institutions. Formal reference service is almost non-existent at any of the libraries, yet there is an urgent need for reference librarians who can adequately and professionally handle end-user inquiries. When the librarians are asked to give reasons for the inadequate service, the response was that qualified librarians are hard to find. Another says there has been no attempt to increase or improve the services since he has been hired. Another responds that the university administration does not see any reason to increase the work force.

4.2.4 Library Budget and Expenditure

Data showed that the library at Babcock receives 10% of the operating budget according to the Nigerian University Commission (NUC) guidelines. UEAB and Solusi libraries receives 5-6% of the budget in accordance with ASDAL standards (see Appendix 4) which requires that at least 6% of a university's operating budget be made available for library acquisition, and more where an institution has areas that need augmenting. Bugema and Valley View are unable to provide the minimum of 6% of their operating budgets for library acquisitions. For the 2001/2002 academic year, the Bugema library received 2.5 % of the university's operating budget, while Valley View library received only 1.5%.

In general, the little funds available for library development could not purchase much, owing to an economic recession and currency devaluation in all countries. For example, the Solusi library book budget for the academic year 2000/2001 could pay only for the shipment of donated books from the USA. At VVU, the sum of GHC4.8million (Ghana currency) allocated for library purchases for the academic year 2000/2001 translates to only U.S.\$6000.00. The meagre numbers of purchased resources illustrated in the subsequent tables reveal the low buying power of the budgets.

4.2.5 Book Holdings

Each library has relatively small collections of information resources, and student-book ratio shows a steady decline as enrolment rises. In 2002, the holdings per university in relation to the enrolment were as follows:

Table 6 Book Acquisition and User Enrolment.

Libraries	1997/98		1998/99		1999/00		2000/01		2001/02	
	E	R								
BA	441	71	447	72	853	37	1192	27	2500	13
BU	NR	NR	NR	NR	NR	NR	522	06	544	07
Sol	672	65	694	63	693	64	842	53	948	47
UEAB	852	49	926	47	1028	43	1168	57	1172	42
VVU	231	35	2221	40	404	28	697	22	747	21

Key

- E** Library User Enrolment
- R** Ratio of Book Purchase per User
- NR** No Record Available
- BA** Babcock University
- BU** Bugema University
- Sol** Solusi University
- UEAB** University of Eastern Africa Baraton
- VVU** Valley View University.

On average, there are 14 books to each library user at BA; 8 books per library user at BU; 47 per library user at Sol; 42 per library user at UEAB, and 21 per library user at VVU. This is illustrated in Table 7.

Table 7 Book Holdings

LIBRARY	ENROLMENT	NO. OF VOLUMES	Ratio per User
BA	2,500	34,120	14
BU	544	4,235	8
Sol	948	45,000	47
UEAB	1172	49,610	42
VVU	747	16,000	21

Key

- BA** Babcock University
- BU** Bugema University
- Sol** Solusi University
- UEAB** University of Eastern Africa Baraton
- VVU** Valley View University.

Despite the decline, it would appear from Table 7 that library book acquisition is fairly satisfactory, but the bulk of the acquisitions are donations (see Table 8). Personal observations reveal that they are mostly multiple copies. At BU, there are as many as 20 copies for some titles. On average, donations make up 74.2% of book acquisition for the period between 1997 and 2002 for all the universities. The principal donors are:

- ! Brothers to Brothers International; and
- ! The International Book Bank.

Table 8 Book Acquisition for the period 1997 to 2002

Lib	97/98		98/99		99/00		2000/01		2001/02		Total			
	P	D	P	D	P	D	P	D	P	D	P	D	% P	% D
BA	53	410	54	48	60	319	8	88	92	896	267	1761	13%	87%
BU	NR	NR	NR	NR	NR	NR	450	2000	NR	nr	nr	nr	nr	nr
Sol	93	700	318	816	227	2273	333	1839	302	1273	1274	6901	17%	83%
UEAB	494	1389	741	589	626	592	42	353	141	423	2044	3346	43%	57%
VVU	121	196	162	705	635	721	141	350	157	341	1216	2313	35%	65%

Key

- P** Purchased
- D** Donation
- % D** Percentage of Donations
- NR** No Record Available

- BA** Babcock University
- BU** Bugema University
- Sol** Solusi University
- UEAB** University of Eastern Africa Baraton
- VVU** Valley View University.
- LIB** Libraries

The most useful figures for determining the resource level of a library are those that relate student numbers to library acquisition by purchase. The ratio of library purchases to the enrolment is illustrated in Table 9.

Table 9 New Books Purchased per Library User from 1997-2002

Library	Purchased	Items per Student
BA	267	0.008
BU	NR	NR
Sol	1274	0.02
UEAB	2044	0.04
VVU	1216	2.6

Key

- BA** Babcock University
- BU** Bugema University
- Sol** Solusi University
- UEAB** University of Eastern Africa Baraton
- VVU** Valley View University.

4.2.6 Journal Subscriptions

Each library shows a gradual rise in periodicals subscription. The journal title acquisition per student presents an uneven picture over the 5-year period that this study covers. This situation can be attributed to the irregularities in the renewal and cancellation of journals. Babcock had a current subscription to 584 journal titles in 2002 while Bugema subscribed to 50 titles which had not been renewed since 1999. It was noted that their serial collections were basically popular magazines. Solusi maintained its subscription to 170 journal titles of which 90 were current.

At UEAB, 354 titles were renewed for the academic year 2001/02. Previously only 50 titles, which constituted local subscriptions and were therefore cheap to purchase, were renewed for the academic year 1999-2000. The university was however able to renew all 354 subscriptions in the years that followed. At VVU, 72 titles were found on the shelves, of which only 15 were current. The details are illustrated in Tables 10 and 11 below:

Table 10 Current Serials Subscriptions.

Libraries	1997/98	1998/99	1999/00	2000/01	2001/02
BA	NR	NR	545	554	584
BU	NR	NR	NR	50	50
Sol	48	79	136	67	90
UEAB	343	262	50	50	354
VVU	41	45	50	56	15

Key

BA Babcock University
BU Bugema University
Sol Solusi University

UEAB University of Eastern Africa Baraton
VVU Valley View University.
NR No records available

Table 11 Serial Titles Acquired Per Library User.

Libraries	1997/98	1998/99	1999/00	2000/01	2001/02
BA	NR	NR	0.64	0.46	0.23
BU	NR	NR	NR	0.09	0.09
Sol	0.07	0.11	0.19	0.07	0.17
UEAB	0.4	0.28	0.04	0.04	0.21
VVU	0.19	0.2	0.12	0.08	0.09

Key

BA Babcock University
BU Bugema University
Sol Solusi University
UEAB University of Eastern Africa Baraton
VVU Valley View University.
NR No records available.

4.2.7 Adequacy of Resources

Questions 1C and 2.3 (see appendices 2 & 3) for the students and teaching staff respectively ask users to determine the adequacy of their resources. The responses of the 2242 respondents are as follows: 344 (15.34%) say resources are adequate; 1810 (80.73 %) say resources are inadequate, and 88 (3.93%) offer no responses to the question. The majority of respondents claim that their resources are inadequate.

Table 12 shows a detailed analysis of the responses.

Table 12 Adequacy of Library resources

Libraries	No. Polled	Adequate		Inadequate		No Response	
		No.	%	No.	%	No.	%
BA	1062	164	15.44	883	83.15	15	1.41
BU	217	57	26.27	160	73.73	0	00
Sol	329	4	1.22	313	95.14	12	3.65
UEAB	371	106	28.57	247	66.58	18	5.68
VVU	263	13	4.94	207	78.71	43	16.35
Total	2242	344	15.34%	1810	80.73%	88	3.93%

Key

- BA** Babcock University
- BU** Bugema University
- Sol** Solusi University
- UEAB** University of Eastern Africa Baraton

In summarizing the general state of the libraries and resource holdings, it is appropriate to point out the following:

- ! All 5 SDA universities evolved from seminary institutions to universities over the past 10 years. Therefore, they all face the task of developing new academic programmes. Their libraries face the challenge of developing a collection of resources that would meet not only the needs of new academic programmes but also the information needs of new students whose information needs are far more varied and complex than the needs of seminarians;
- ! Each library has two professional librarians who are responsible for multiple tasks and services; and
- ! Poor economic conditions, and in particular currency devaluation, drastically reduce the purchasing power of the libraries. The result is a marked inadequacy of information resources to support learning and to improve research. Most of the libraries depend heavily on donations to provide considerable resources to support the academic programmes (see Table 8).

4.3 Resource Sharing Practices.

The resource sharing services provided in each library are basic reference and inter-library loan activities.

These activities are performed in circumstances where very few, if any, formal inter-lending relationships

exist. Two categories of resource sharing practices are identified:

- ! Libraries with some form of inter-library relationships with other university libraries in their own regions, namely; UEAB and VVU; and
- ! Libraries without any inter-library relationships, namely: Babcock, Bugema and Solusi.

The two categories reveal a similar pattern of inter-library loan practices. The general operational pattern is that the librarian at each library gives letters of recommendation to any library user who wants inter-library loan service. The user then presents the letter to the lending library. In almost all cases the request to use the other library is granted but borrowing privileges are denied. In Zimbabwe and Ghana, a provision exists that enables any university student to borrow resources from other libraries in the respective country upon the payment to the lending library of an annual membership fee of ZWD3000.00 (U.S. \$3.00) in Zimbabwe and GHC5000 (U.S. \$0.62) in Ghana. Data shows that no student at either Solusi (Zimbabwe) or VVU (Ghana) has ever taken advantage of this service. Respondents claim that the fees charged are simply exorbitant and that they therefore could not afford it.

There is however a slight variation in the resource sharing pattern at those institutions with reciprocal borrowing relationships, namely: UEAB and VVU. At UEAB on the one hand, the teaching staff could use their letters of recommendation to borrow resources from the libraries that have an interlibrary relationship with UEAB. At VVU on the other hand, the teaching staff could not use their letters to borrow resources. Any resource requested on inter-library loan has to be borrowed in person by the VVU librarian. Owing to inadequate transportation and the inconvenience of carrying books from one library to the other, the librarian could not provide inter-library loan services to all categories of library

users. She is only able to provide the service to the teaching staff. Students who want inter-library loan service have to be contented with reference privileges only. In general, there are few inter-library loan requests. On the whole, inter-library loan transactions are minimal. In 2002, library users from the five libraries who requested inter-library loan service made up 4.96% of the respondents while 85.84% had never requested any resource via inter-library loan. 9.19% did not respond to the question (see Table 13).

Table 13 Inter-library Borrowing Practices

Libraries	NP	R	% R	NB	% NB	NOR	% NOR
BA	1047	31	3.09	972	96.6	44	4.34
BU	217	19	11.5	146	88	52	25.7
Sol	329	20	6.19	303	93	6	1.9
UEAB	341	16	5.57	271	94	54	15.4
VVU	263	23	10.5	194	66	46	18.5
TOTAL	2197	109	4.96	1886	85.84	202	9.19

Key

- NP** Number polled.
- R** Those who have requested ILL service.
- % R** Percentage of those who have requested ILL service.
- NB** Those who have never requested ILL service.
- %NB** Percentage of those who have never requested ILL service.
- NOR** No response.
- %NOR** Percentage of those who did not respond to the question..
- BA** Babcock University.
- BU** Bugema University.
- Sol** Solusi University
- UEAB** University of Eastern Africa Baraton
- VVU** Valley View University.

It is also observed that inter-library loan service is a one-way service. Information gathered from questionnaires and interview responses reveal that three of the five libraries have borrowed a few

resources from other libraries but none of the same in the period covered has ever loaned any resource to other libraries. There are, however, a few instances where librarians from other libraries consult the resources of the libraries under investigation. VVU records one instance while UEAB records approximately 12 instances. Table 14 shows a detailed analysis of the volume of inter-library loan activities at each library.

4.3.1 Reasons for Low Inter-library Transactions

The researcher wants to discover both from library users and librarians what the possible reasons are for the low volume of inter-library loan transactions. Many reasons are expressed; Respondents claim that they have no idea that resource-sharing services exist at their libraries. On average, 25% of the teaching staff at the five universities are not aware that their libraries provide resource sharing services. When asked to give reasons for the low volume of inter-library loan, fifteen (27%) of the teaching staff at Babcock, 4 (25%) from Bugema, 6 (30%) from Solusi, 6 (27%) from UEAB and 2 (15%) from Valley View indicate that they are not informed about the service. Even though this question is not posed to the students, a high number of students indicate that their main reason for not seeking interlibrary loan is because they have never heard of the service. In this regard, 122 (12%) respondents from Babcock, 31 (15.3%) from Bugema, 6 (1.9%) from Solusi and 111 (31.8%) from UEAB indicate that they have no idea that their libraries offer any resource-sharing services.

The Librarian at BA claimed that there is no appropriate data on information sources upon which to build the service. At Solusi and Valley View, respondents indicate that there is a lack of harmonized university or national information systems. This prevents them from having a knowledge of the resources that are

available for borrowing in other libraries. In addition, none of the universities have any union lists, current indexes, abstracts, directories or locally produced indexes that would enable end-users to know what is available at other libraries. Bugema and Valley View do not have indexes that could assist users to conduct research. Solusi library is a member of the South African Inter-lending System but it has no means of identifying the resources available in the libraries in the consortium. It needs an online connection to the South African Bibliographic Information Network (SABINET) but efficient and widespread Internet service is lacking at Solusi. The Consortium of Uganda University Libraries (CUUL) could not function owing to the unavailability of union lists and union catalogues.

In addition, apparatus that enhance document delivery are not readily available. Not one library has a facsimile machine, although each university has one that is located either in the Vice-Chancellor's office or the Business Manager's office. Functioning photocopying machines are available at Valley View but there are none at Babcock, Solusi and UEAB. For each location, postal services are poor. Babcock, UEAB, and Bugema have postal addresses located in the nearest big cities to facilitate faster receipt of mail, yet mail receipt is slow owing to the distance, poor road conditions and inadequate transportation.

The librarians At UEAB and VVU add that the borrowing regulations from the lending libraries frustrate them. They have to limit their requests to local libraries and turn to borrowing from universities outside the African continent. They claim that it is easier to contact libraries outside the continent for inter-library loan than to borrow resources from libraries in their respective regions. Hence more documents are borrowed from abroad than from the African continent. This is illustrated in Table 14.

Table 14 Resources Borrowed from other libraries.

Libraries	Number of Resources borrowed	
	Within the country	Outside the country.
BA	None	None
BU	7	None
Sol	None	None
UEAB	18	10
VVU	450	502

Key

- BA** Babcock University
- BU** Bugema University
- Sol** Solusi University
- UEAB** University of Eastern Africa Baraton
- VVU** Valley View University.

BU and VVU librarians complain that state university libraries are not particularly responsive to inter-library loan requests. The Bugema librarian complains that “big libraries” in Kampala are unwilling to lend their resources to smaller libraries. In some parts of Uganda, a feeling prevails that private universities are for wealthy individuals and that therefore, they are sufficiently endowed to cater for the information needs of their library users. The Valley View librarian asserts that many librarians at nearby public university libraries are not interested in getting into inter-library cooperation because it is too demanding. Their priority is status recognition and academic elevation and they would not use their time for resource

sharing, which is considered highly demanding and time-consuming. They therefore spend considerable professional time on academic research and publishing.

Library users also comment that the attitude of their librarians is a major hindrance to resource sharing. Many feel that their librarians adopt a 'go-it-alone' attitude that isolates them from librarians at other universities. A respondent at Babcock commented:

“Our librarians tend to shut themselves up from their professional colleagues. They need to be more up and doing and interact more with their colleagues in other libraries. They don't want to go the extra mile in seeking resources for their users and often complain of the inconveniences associated with inter-library loans.”

(Questionnaire response with the researcher)

At Valley View, some teaching staff respondents indicate that their librarians are satisfied with the condition of information provision in their libraries and that they seldom show enthusiasm in helping their clients to access information that cannot be provided in their own library.

Data revealed that end-users are less motivated to use the library, especially in requesting information resources unavailable at their own university libraries. Both faculty and students at the five universities use library resources sparingly. The teaching staff at Babcock, Bugema, and UEAB indicate that heavy

teaching loads left them with little time to explore resources within and outside the library. Research activities at each institution are also minimal, and funds allocated to research are not used optimally. Data showed that UEAB and Solusi spend only about 10% of the universities' research allocation. Bugema and VVU have no research allocation at all. Interview responses from the teaching staff confirm this revelation.

The exorbitant fees charged by the lending libraries in Ghana and Zimbabwe hamper the growth of resource sharing in general. Users at UEAB, Bugema and Babcock claim that they are not charged any fees when they use other libraries. But library users in Solusi and Valley View have to pay membership fees if they wish to obtain resources via inter-library loan from any library in their respective countries. Student respondents claim that fees charged are exorbitant. Consequently, no student at either institution has ever benefitted from the provision. Considering the serious economic recession faced by Ghana and Zimbabwe, and the fact that students struggle to pay school fees, additional expenses for library services would be financially unbearable. Yet academic libraries located in countries where there are serious economic downturns need to commercialize some of their services in order to sustain their libraries. The general economic conditions place resource sharing in jeopardy.

4.3.2 Additional Means of Gaining Access to Information Resources

With inadequate resources and a low level of inter-library loan traffic, the researcher wants to know how library users satisfy their information needs. The responses reveal that students have strong needs to access resources to complement what their libraries offer. It shows further that they access information

resources through five other means, namely:

- ! Other libraries;
- ! The Internet;
- ! Colleagues' holdings of information resources;
- ! Faculty Holdings of information resources; and
- ! Personal purchases.

Users at BU, Sol, and VVU rate the use of **other libraries** as their most preferred means of accessing information outside their libraries. Users from BA & UEAB rank **the Internet** as their most preferred means. On average, the responses reveal that the most preferred means of further access to information resources is via **Other libraries**, with 37.8% of the responses. **The Internet**, with 28% of the responses closely follows this. The least preferred means is via **Faculty holdings**. Table 15 illustrates these preferences in descending order of preference.

Table 15 Personal, Library Unmediated Means of Obtaining Needed Resources Not Available in the Library

Means of obtaining Needed Resources	BA		BU		Sol		UEAB		VVU		TOTAL	
	N	%	N	%	N	%	N	%	N	%	N	%
Other libraries	339	33	83	41	160	52	103	30	81	33	766	37
Internet	395	39	36	18	79	26	112	36	52	21	674	28
Colleagues	165	16	22	11	44	14	32	09	48	19	311	14

Means of obtaining Needed Purchase Resources	BA		BU		Sol		UEAB		VVU		TOTAL	
	70	07	22	11	24	08	13	04	05	02	134	6.4
Faculty Holdings.	22	02	31	15	00	00	3	09	00	00	85	5.2

Key

N No of Response

% Percentage of Responses.

In concluding this section, it is important to note the following:

- ! The resource sharing services offer at each library is basic reference and inter-library loan activities;
- ! The low level of inter-library loan activities is due largely to the lack of adequate organizational structures to formalize collaborative relationships, geographic and technological constraints as well as the reluctance of librarians to participate in resource sharing; and
- ! Library clients express a strong desire to gain access to resources outside their libraries. They employ several methods to obtain access.

4.4. Internet and Telecommunication Services.

Each university has one direct telephone line distributed to each department through internal communication devices. At Sol and UEAB, the telephone connection is characterized by frequent equipment failure and overloaded metre grids. At Babcock, the telephone system is linked to an old

exchange system 50 km away from campus, and often provides poor service. As a result of this, only three universities, namely, UEAB, Sol, and VVU provide Internet services, albeit poor and unreliable. At UEAB, Internet facilities are provided at the library via three computers. Students and teaching staff have to book to use the facility. Time allocation is restricted to 30 minutes per week per individual. This is necessary because of the few computers and the need to have more clients benefit from the service. The Internet room is often congested with anxious students waiting to get an opportunity to surf the Internet. At Solusi, Internet services are offered at the Computer Laboratory for a fee of ZWD3000.00 (U.S. \$3.00) per student per quarter. Only twenty students (10% of the enrolment) registered for the service because the fee is considered prohibitive. The Computer Laboratory has 15 computers for this purpose. At VVU, Internet facilities are provided in the Librarian's office, the university administrators' offices, and the Computer Laboratory, which has 10 computers. The Librarian's office has one computer with Internet facilities for use only by the teaching staff. When respondents are asked to list the strength and weaknesses they experience in their use of Internet facilities in their respective campuses, not one response mentions any strength. Instead, a list of identifiable constraints are listed, namely:

- ! Non-availability of the service in the library;
- ! Frequent breakdown of the service;
- ! Very brief time allocation; and
- ! Very few computers.

The sum of each constraint is calculated to obtain the rank average. At Solusi, 146 (47.2%) respondents rank **non-availability of the service in the library** as their greatest constraint. This is followed by

frequent breakdown of the service with a total of 130 (42%) responses. Third is that the **service is too expensive** with 125 (40.25%) responses. At UEAB, **very little time allocation** ranks highest with 263 (73.3%) responses. This is followed by **very few computers** with 177 (50.7%) At VVU, many respondents failed to respond to the question regarding the Internet service. In this respect, 127 (51.2%) skipped the question. Of those who responded, 83 (33.5%) claim that **non-availability of the service in the library** is the greatest constraint. Twenty-two (8.8%) claimed that **service was restricted to the teaching staff and administration**. Ten (4%) simply described the service as **weak, poor and unreliable**. The constraints are illustrated in Table 16.

Table 16 Constraints of Internet services.

Constraints	Sol		UEAB		VVU	
	N	%	N	%	N	%
Very few computers with Internet facilities	NA	NA	177	50.7	NA	NA
Very slow Internet connectivity	NA	NA	276	79	NA	NA
Very Little time allocated to Internet access	NA	NA	263	75.3	NA	NA
Internet room too congested	NA	NA	150	42.9	NA	NA
Frequent breakdown of network and equipment	130	42	150	42.9	NA	NA
Internet service too expensive	125	40.4	NA	NA	NA	NA
Internet facilities available only to a few	146	47.2	127	36.3	83	33.5

Key

- NA Not applicable
- N Number of respondents
- Sol Solusi University
- UEAB University of Eastern Africa Baraton
- VVU Valley View University.

Owing to the unreliable Internet services at their universities, students have to find alternative means of accessing the Internet. Data reveal that 39% of student respondents from Babcock, 18% from Bugema, 26% from Solusi, 36% from UEAB and 21% from Valley View often travel to the cities near their respective universities to access the Internet. The UEAB librarian claims that when journal articles requested on interlibrary loan from libraries outside Africa are sent via the library's e-mail, such documents are often retrieved from Eldoret in Kenya, the nearest big city to UEAB, because it is almost impossible to retrieve them from UEAB owing to the slow and unreliable Internet connection. This problem is compounded by the fact that library users lack adequate skills to search for information on the Internet. Data revealed that less than half of the respondents at the five universities have adequate information literacy skills to surf the Internet. On average, only 15% of teaching staff respondents, and 38% of students' respondents are skilled Internet users. Thirty percent of the teaching staff and 22.6% of the students failed to respond to the question. Table 17 illustrates the level of Internet searching skill of library users at the five libraries.

Table 17 Internet Research Skills of Library Users.

Libraries	Teaching Staff				Students			
	Skilled		Unskilled		Skilled		Unskilled	
	No.	%	No.	%	No.	%	No.	%
BA	05	10	17	34	506	50	506	50
BU	02	13.3	04	26.6	69	34	56	28

Libraries	Teaching Staff				Students			
	Sol	06	30	07	35	74	24	64.8
UEAB	05	23	20	77	153	44	126	36
VVU	00	00	15	100	99	40	164	66

Key

- BA** Babcock University
- BU** Bugema University
- Sol** Solusi University
- UEAB** University of Eastern Africa Baraton
- VVU** Valley View University.

The effect of poor telecommunication infrastructure is not only felt in online access to information but also for communication among librarians. The teaching staff respondents at Babcock, UEAB and Valley View note that poor communication infrastructure is a major factor constraining librarians from establishing collegiate relationships with other librarians.

To summarize this section, it is important to point out the following:

- ! Three out of the five university libraries offer Internet services;
- ! The services are hampered by poor technology and inadequate computers; and
- ! Many library users lack adequate skills to use the Internet effectively.

4.5 The Prospect for an Adventist Universities Resource Sharing Consortium.

Question 5.2 of the teaching staff questionnaire and interview questions (see appendices 1 and 3) posed to the administration of each university seek to discover if the teaching staff and the university administration see any usefulness in their respective libraries cooperating with other university libraries to share resources. Responses from the university management, and the teaching staff at each institution show very strong support for resource sharing in general. Question 5.5 of the teaching staff questionnaire asks specifically if the teaching staff would support collaborative ventures between their respective libraries and other Adventist university libraries in Africa. All faculty respondents at Bugema, Solusi, UEAB, and Valley View support the establishment of collaboration with other Adventist universities in Africa. At Babcock however, the teaching staff are not as enthusiastic. Fifteen (30%) of the teaching staff feel that special gains could accrue from such a relationships. The remaining 35 (70%) are not particularly enthusiastic about establishing cooperative relationship with Adventist universities. They simply want a workable relationship with any university irrespective of its affiliations. These respondents are particularly skeptical that inadequate communication system may hinder effective communication with other Adventist universities. Those who support the consortium idea identify the following as the advantages of resource sharing:

- ! The expansion of knowledge;
- ! Sharing will complement home library holdings;
- ! Enhancement of research;
- ! Access to a variety of information sources;
- ! Development of inter-university collegiate relationships;

- ! Availability of global networks of information to users; and
- ! Access to more resources on the integration of faith and learning.

The majority of the respondents support the idea of establishing a consortium of SDA university libraries in Africa.

4.6 Conclusion

In sum, the data presented and analysed here will be interpreted in the next chapter to elaborate noted problems and possibilities. The data begins to reveal very clearly a lack of commitment by librarians, the absence of a resource sharing culture, an **ad hoc** organizational structure, and the lack of shared bibliographical and physical access to other libraries' holdings as major factors that impede resource sharing. Telecommunication infrastructure can be improved if funds are provided for the installation of alternative systems that are viable and more effective. The issue of attitude and the lack of incentives for resource sharing are professional issues that can be overcome if librarians are determined to make the system work. Spies (2001:173) emphasises that committed and energised human resources are important in the implementation and facilitation of resource sharing systems.

CHAPTER 5

INTERPRETATION OF DATA

5.1 Introduction

This chapter provides an interpretation of the data analysed in Chapter 4 by providing reasons for the nature and patterns of the collected data, and pointing to potential solutions. In some instances, background and other relevant contextual information are taken into account in the interpretation. Data will be interpreted under three sections:

- ! State of the SDA Libraries;
- ! Management of Resource Sharing; and
- ! An Adventist Universities Resource Sharing Consortium.

5.2 The State of the SDA Libraries

5.2.1 Holdings.

In terms of adequacy of information resources, the analysis of data on donated and purchased resources illustrated in Tables 6 & 7 indicate that the libraries did not have sufficient resources to support the new academic programmes. ASDAL requires that at least 10% of the university's operating budget be provided for the library to purchase resources to support a new major. It requires highly up-to-date and relevant resources at a ratio of at least three resources per course per user. Table 8 revealed that donations made up 73% of book acquisitions for all the libraries while purchases made up only 27%. Given these statistics, and given the fact that the bulk of donations are not always relevant to the programmes offered, not one library met ASDAL standards. According to Table 9, VVU is the only university that provided up to two resources per user. All others had less than one. Babcock, the fastest growing institution is the most severely affected, with 13% purchases and 87% donations. There were very few instances when purchased resources exceeded donated items. One exception, for example, was the case in Babcock during the 1998/1999 academic year. It purchased 54 resources and received 48 as donations. The figures in Table 9 which represents the average for book purchases and university enrolments for the period between 1997 and 2002 indicated that apart from VVU, no other library was able to purchase at least one resource per library user. This situation is far from satisfactory. The figures showed that each library depended very much on donations instead of purchases.

It was observed that many of the donated resources are not only multiple copies but also obsolete and

irrelevant. For example, at the time of collecting data in 2002, Bugema had just received about 1000 volumes of donated multiple copies of books, some as many as 12 copies per title. Most of the donations were unsolicited and irrelevant to the curriculum. This is particularly true of Solusi and VVU. Donations especially to a small developing library are usually received with enthusiasm. They can help to build the collection only if the resources are relevant to the needs of the library. When they are not, as is the case with Solusi and VVU, they help the library to grow in size without actually developing its relevance. They tend to waste funds and professional time because the library, in most cases, bears the cost of shipping, sorting and technical processing of the resources. When and where they come as duplicates as was the case with Bugema, the library collection loses its dynamism and begins to look more like a bookshop than a library. The library is then faced with the problem of weeding and disposing of such collections in the future. The problem is compounded at universities such as UEAB, where discarding excess and obsolete materials is guided by long bureaucratic procedures.

Table 6 reveals a gradual decrease and an imbalance in enrolment and the rate of growth of library resources. By 2002, only Solusi had 47 resources per student. Babcock, the fastest growing institution had only 13 books per student while Bugema had only 7. These statistics may give the impression that UEAB and Solusi, (the two universities that recorded the highest holdings per student) are not too badly off. It is however to be remembered that the resources of UEAB and Solusi consisted of 57% and 83% donations respectively. Calculations revealed that between 1997 and 2002, Babcock library books increased by 7% while enrolment increased by 82%. At Solusi library, resources increased by 1.9% while enrolment increased by 29%. At UEAB library, resources increased by 14.25% while enrolment

increased by 27.3%. At VVU, resources increased by 48.89% while enrolment increased by 69.07%.

On average, library resources increased by 18.01% while enrolment increased by 51.8%. Therefore while enrolment escalated, library resources grew at a lower rate. This situation is not peculiar to private universities. State-owned universities also suffer from an inadequate supply of information resources. For example, in Kenya, state-owned university enrolments rose from 12,986 in 1980 to 67,371 in 1985 (World Bank 2000:109). But public expenditure on education, for the same period, rose from only 12.4% to 13.7% (2000:121). Total expenditure per student declined from 808% of GNP per capital to 540 % of GNP per capital for the same period) .

One possible explanation for the inadequate supply of information resources is the devaluation of currencies, which decreased the purchasing power of the budget. This is coupled with the fact that the universities were enrolling more than they could cater for. University administrators and librarians did not take cognizance of the effects of the constant increases in enrolments on library resources.

In terms of periodical subscriptions, only 2 libraries, namely, Babcock and UEAB showed a viable periodical collection. Bugema had no current subscriptions, and the few periodical titles found on the shelves were basically popular magazines. Yet the periodical list submitted by the librarian showed a list of 150 titles. The list and the situation of the periodical shelves did not correlate with each other. It could mean that periodical titles had been cancelled in the past and that the list had not been updated. Solusi was able to renew 28% of its periodicals in 2002. In the past, renewal had been sporadic. VVU

renewed 21% of its periodical titles but the bulk of the renewals were titles in religion and theology. Generally, it was observed that there were several irregularities in the renewal and cancellation of periodical titles. This was expected at Solusi, given the poor economic conditions of Zimbabwe. The collections were very unreliable in terms of continuity.

The holdings generally indicate that the libraries were unable to support the curriculum of their respective institutions with relevant and current resources. These findings confirmed the research conducted by Rosenberg (1997:14) on the state of African university libraries when she concluded that African university libraries are not only under-resourced, but that they enrol more students than they can adequately provide information resources for.

Student enrolments at universities have increased gradually owing to an increase in population growth and increased access to primary and secondary education. In fact, since the 1990s Africa has witnessed a growth in tertiary education enrolment that exceeds many other parts of the world. An increase in university enrolment is an achievement for the education sector but the lack of corresponding increase in the amount spent on providing information resources has led to the decline in the quality of education. Universities without sufficient resources cannot provide their students with effective access to current knowledge and information. This situation may lead to a decline in the quality of training, falling student scores and a decrease in staff and research output. Graduates of such universities may not be equipped sufficiently to meet employers' expectations and may not be able to contribute effectively to the development of their regions.

5.2.2 Financial Conditions and Strategies of Funds Disbursement

One major cause of insufficient resources is the fact that the universities are relatively new. They all came into being in the early 1990s. Like many new universities in Africa, those in this study are eager to launch new programmes without the corresponding information resources to support them. They are confronted with the challenge of meeting the needs of a growing university, particularly the need to build infrastructure and develop relevant, rich and varied resources to support new academic programmes. The universities in this study are all private universities. They do not receive grants from funding organizations. They depend heavily on fees and appropriations from the funding body. These sources cannot adequately meet their needs for information resources. Accurate and up-to-date figures of expenditure for the years covered by this study could not be found for four of the libraries. The researcher relied heavily on the percentage appropriated to each library and the number of resources purchased on an annual basis. The figures (Table 8), which could readily translate into the amount spent are pitifully low. The expenditure of funds depended on how promptly students paid their fees. As a result, each university budget including that of its library was centralised and disbursed according to the financial capability of each university. Often, universities with a small enrolment and that are self-supporting (e.g. BU and VVU) were unable to provide the minimum of 6% of their operating budgets for library acquisitions. In the 2001/2002 academic year, the Bugema library received 2.5 % of the university's operating budget, while Valley View library received only 1.5%.

The Business Office at BU and Sol, however, did not base their reason for low library budgets on the size of their university. Rather it was said that funds were disbursed according to the request of each

department, including the library. The librarians at these two institutions however refuted this by emphasizing that requests for more funds were never granted. This may hold true for Solusi but not necessarily for Bugema. Bugema purchased its information resources mainly from Kampala. The publishing output in Uganda and the stock available in the few bookstores in Uganda would not warrant any big expenditure on information resources. At VVU, the inability of students to settle their debt hampered the allocation of funds for library development. This explains the paucity of materials and the slow rate of book acquisition, and why budget figures did not often translate into expenditure. This funding strategy meant that universities with a higher enrolment such as BA and UEAB should receive more funds for library development. Table 9 however does not reflect this. VVU had the highest ratio of books per users while BA had the lowest ratio. The explanation could be that the libraries did not necessarily receive funding based on the cash flow, or that the administration did not give much thought to the development of the library. The funding they received may not reflect the inflation rate of their respective countries. Ghana, Kenya, Nigeria, Uganda and Zimbabwe are experiencing unusually high inflation rates, which have handicapped the growth of their libraries. For example, at the time of collecting data (2002) for this study, the foreign exchange rate for the United States dollar (\$) for each of the countries visited were as follows:

- ! Nigerian Naira (₦) was 135;
- ! Ugandan Shilling (UKsh) was 1840;
- ! Zimbabwe dollar (ZWD) was 1500;
- ! Ghanaian Cedis (GHC) was 8000; and
- ! Kenyan Shillings (Ksh) was 78.

With such a high and unpredictable exchange rate, the library budget cannot stretch sufficiently to meet users' needs. An interviewee described the ZWD thus: "it is not there." In Solusi, the 2002 book budget had such a low purchasing power that it was only sufficient to ship donated books from the U.S.A. As reviewed in Chapter 2, poverty, dwindling library budgets and inflation continue to contribute to an inadequate supply of information resources to academic libraries (Kiondo 2002).

Interview sources indicated that library-generated income such as library fees and income from overdue charges are paid into the general university account rather than made available for library development. The library like any other part of the university segment is a commercial enterprise. Deprivation of its income means a reduction in the number and standard of its services.

5.2.3. Internet and Telecommunication Services.

The data analyzed in section 4.4 revealed that the quality of Internet and telecommunication services in Solusi, UEAB and Valley View was very poor. Bugema and Babcock had no Internet facilities. Further follow-up on the installation and launching of Very Small Aperture Terminal (VSAT) in Babcock revealed that the VSAT has not functioned because the model purchased for the university was not the right one. The choice of a wrong VSAT model and the lack of adequate IT infrastructure could be due to the absence of IT expertise. UEAB, Solusi and VVU also lacked adequate expertise and hardware for Internet services. This result was unexpected at Solusi because of its proximity to countries, which have the best IT development in Africa, namely: Botswana and South Africa. It could mean that the university administration did not prioritize IT or lacked the funds to do so. Therefore Solusi could not benefit from

its proximity to countries with developed IT systems.

An effective telecommunication system is essential for the success of any resource sharing arrangement.

The method by which information resources are acquired has been revolutionised by ICTs. The Internet and the World Wide Web in particular are promoting high-speed access to information resources.

Document delivery of information is faster and more efficient than in the past. Library users can access and retrieve information resources from the Internet without the assistance of their librarians. In situations where libraries have no formal relationship with other libraries, as it is the case with the libraries identified in this research project, the Internet offers a partial solution to securing resources. In addition, the World Wide Web provides more useful, current and relevant information than most university libraries (Sloane 1997:28). It can be used for training in information literacy, as well as for developing content through digitization and the acquisition of electronic sources (Evans 1999:1). This is an asset to libraries with a scarcity of resources, like those investigated in this study.

The ability to benefit from online information resources depends very much on library users' computer and information literacy skills. Odini (1991:94) asserted that the lack of IT infrastructure and skills to access online information sources is a major reason why African universities lag behind in resource sharing. Data revealed that less than half of the respondents in the five universities have adequate skills to surf the Internet. Only 15% of teaching staff respondents, and 38% of students' respondents are skilled Internet users (see Table 17). If the teaching staff are not skilled, it is very unlikely that the students will be adequately skilled to use the Internet. A close examination of the information literacy skills curriculum of

each university showed that online searching skills did not receive enough emphasis. Moreover, the skills are taught by teachers who themselves did not have adequate skills to find information. Where library users are not adequately skilled to construct good search strategies and locate relevant information on the Internet, they cannot benefit from the enormous information resources available from global information networks (Kaniki 1993:569). When IT infrastructure is inadequate, it is difficult to teach library users online information searching skills.

Whereas earlier studies attributed inadequate development of IT and acquisition of IT skills to lack of expertise and inadequate provision of telecommunication infrastructure on the African university campus, none considered the general social development trends of African cities. This study discovered that urbanisation determines, to a large extent, the level of development and the provision of adequate telecommunication infrastructure and services. The choice of location of the universities investigated in this study is in conformity with the SDA education policy that educational institutions be located in the interior of their countries in order to avoid the distractions of city life. Though this policy was promulgated with the best intention, the geographical location of the universities away from the capital or commercial cities of their respective countries hampered their ability to take advantage of fast document delivery systems offered by the Internet and the World Wide Web. This is due to the fact that in most African countries, the highest concentration and the best quality telecommunication infrastructures, computers, television sets, transportation and mailing services, and other socio-economic amenities are often located in cities, particularly in the capital cities.

The provision and quality of such services deteriorate as one moves further away from the capital cities. Consequently, institutions that are located far away from big commercial cities suffer as a result of their isolation. This is precisely what these university libraries are experiencing. Each of the five universities is located in the interior of their respective countries. Babcock is strategically located at an equi-distance point between Lagos and Ibadan, Nigeria. It is about 50km radius of Lagos and Ibadan. Bugema is located 32 km from Kampala, while Solusi is 50km away from Bulawayo, Zimbabwe's second largest city. UEAB is located in a typical rural setting, 350 km away from Nairobi, and 45 km away from Eldoret. Valley View is 35 km away from Accra (see map on p.xv). Each library struggled with erratic and unreliable telephone systems and generally undeveloped communication systems. It was not uncommon in UEAB for the telephone system to be out of order for days owing to poor infrastructure and overloaded metre grids. As a result, Internet and other telecommunication services, where available, were very poor and unreliable. Students had to travel to cities around them in order to gain some reasonable quality access to the Internet. As revealed by the data, 39% of student respondents from Babcock, 18% from Bugema, 26% from Solusi, 36% from UEAB and 21% from Valley View often travelled to the cities near their respective universities to access the Internet in preference to the slow unreliable Internet service provided by their universities. The UEAB librarian asserted that when journal articles requested on interlibrary loan from libraries outside Africa were sent via the library's e-mail, such documents were often retrieved from Eldoret (the nearest city to UEAB). The slow and unreliable Internet connectivity at UEAB made retrieval of documents very difficult if not almost impossible.

Bugema had only one direct telephone line that was connected to the Vice-Chancellor's office. Solusi

received its telecommunication connectivity from an old telecommunication system located in a rural centre while Valley View, which is just outside the city of Accra, Ghana, has a poor telecommunication infrastructure. This old and unreliable telecommunication infrastructure not only impeded effective online sharing of resources, it also hampered effective communication between the libraries and their counterparts in other institutions. It is amazing though that VVU could suffer from poor telecommunication infrastructure despite its close proximity to Accra. Inadequate funding, poor planning and lack of sensitivity to the importance of good communication systems could be responsible for communication inadequacy.

Data revealed that poor telecommunications systems had other causes and not necessarily the university's location. This confirms results from earlier studies. When asked to account for the poor Internet services, a teaching staff interviewee attributed this to the employment of pseudo- technicians who were not adequately skilled to develop and manage information technology on the campus. This was corroborated by thorough observation. Not one university had a department for Information Technology management. It appeared that IT development on each campus had not been given a high priority. There were pockets of computer networks in UEAB. There were no full time IT directors except computer science lecturers and students who were called from time to time to manage the computers and the few networks at the respective campuses. This is particularly true of BA and UEAB whose main IT personnel were math majors who at one time or the other had learnt some information technology but had no formal training in that area. At Solusi, there was no IT management at all because the university had no network. The few computers found in some departments were used mainly for word processing. The same situation applies

to BU and VVU. As revealed by Ojedokun (2000:17), the lack of qualified IT personnel to establish and maintain IT operations has led to poor technological output in African universities.

5.3 Management of Resource Sharing.

University libraries have for some time recognized that sharing resources with other libraries is one of the practical solutions to their inability to develop a comprehensive collection. Data presented in Section 4.3 revealed that no library had an organized department for resource sharing. One reason could be the inadequate professional staffing. As indicated in Section 4.2.3, each library had only two professional librarians. Adequate staffing is very important to the survival of resource sharing.

Interlibrary lending is the main form of resource sharing practiced, and only two libraries out of five are involved in some form of inter-library loan relationship. Table 14 indicates a very low use of ILL within and outside the libraries in their respective countries. The fact that UEAB and VVU borrowed more resources from abroad than they borrowed from the libraries within their region means that the collaborative structures they operated at the regional level were not very productive. This is evident from the fact that there was not much difference in the patterns of ILL operation between the two libraries with inter-library loan relationships and the three without. The absence of a practical workable cooperative venture as it was the case with UEAB, VVU and their reciprocal libraries made inter-library loan service unproductive. It is noteworthy that the libraries outside the continent that supplied resources to the two libraries were all SDA university libraries. When asked to give reasons for the preference to borrow resources from SDA libraries in Europe and North America, the librarian at VVU responded that libraries

outside Africa were quick to contact and in most cases the material requested was available, and document delivery was fast.

Since they share the same affiliation and denominational objectives with the lending libraries, all bureaucratic procedures for ILL transactions were waived. They therefore readily obtained the resources they needed even without a formal ILL relationship. The UEAB librarian asserted that it was easier to send an e-mail to Andrews University library in Berrien Springs, Michigan, U.S.A. and obtain a response within 48 hours than to spend endless hours trying to contact, for example, Moi University which is only 80 km away. Usually, organizations engage in cooperative ventures when they anticipate some mutual benefit from the relationship. When the benefits are not readily forthcoming or when they are burdensome to obtain, as was the case with UEAB, VVU and their reciprocal libraries, cooperative ventures collapse. There was no real cooperation. Each library designed its inter-library policies in isolation and not in consultation with their reciprocal libraries. Each dictated its terms and the borrowing libraries complied owing to their necessities.

Inter-library loan practices were not reciprocal. BU, UEAB and VVU borrowed resources from other libraries but no library ever borrowed resources from any of them. The possible interpretation for this is that the culture of resource sharing is not well established in many libraries. It could also mean that UEAB and VVU were net borrowers and had not much to offer their reciprocal libraries. This is understandable since the bulk of their borrowing came from libraries abroad, which have more resources and well-organized resource sharing consortia that could provide for their ILL needs. The low figures of resources

borrowed within the country for a period of five years is so small that it would be accurate to infer that the libraries had no resource sharing programmes. This conclusion is supported by the fact that the other libraries- BA, Solusi- had no lending records at all. Some interview responses at Solusi contradicted observations of the actual library situation. Of eight heads of teaching departments interviewed, four claimed that their library provided an effective ILL service, and that they were satisfied. The librarian, however, claimed that no ILL service existed. The records of the library and observation supported the librarian's view. In the researcher's view, the interviewees were trying to protect their library rather than provide accurate data.

VVU is the only institution with a considerable (in the context of the five libraries) borrowing record from libraries within its region. It recorded an average of 37 documents per month. According to the librarian, all the resources borrowed were books. At no time did any teaching staff member request journal articles. This is understandable since the library had no periodical indexes that would have assisted the library users to identify journal articles that they would have needed.

Even though inter-library loan transactions were very few, data revealed in Section 4.3.2 that library users were anxious to gain access to resources outside their libraries. Table 15 confirms this desire. That the desire to gain access to **other libraries** ranked highest indicates that the respective libraries could not meet the needs of their users, and therefore library patrons have a strong need to access the resources of other libraries. The teaching staff collection in Bugema, according to observation, was stronger than the university library collection. It is surprising, however, that library users in Bugema preferred to access

other libraries rather than their teaching staff collection. Moreover, traveling to Kampala is hampered by poor transportation and poor road conditions. It was often very difficult to determine how long it would take to get to Kampala (which is only 32 km away) by public transport, with stops at almost every junction to pick up passengers.

5.3.1 Resource Sharing Constraints.

The framework for resource sharing is based on the availability of resources available for sharing, and the arrangements for sharing them. This calls for some form of coordination of the sources of information supply that can be put to use. This is the basis upon which any resource sharing service is established. The countries in question here had no formally coordinated information systems either at the national or regional levels. When the librarian at Babcock was asked to give reasons for the near absence of resource sharing services in Nigeria, the response was that there was no appropriate baseline data on information sources upon which to build the service. At Solusi and Valley View, respondents indicated that there was no coordinated university or national information systems that could provide important information on the types of libraries available, their resources and the modalities of access to their collections. Resource sharing cannot flourish in an environment where end-users do not know the resources owned by cooperating libraries and how to access them. It is intriguing to find that none of the libraries had any union lists, current indexes, abstracts, directories or locally produced indexes that would enable end-users to know what is available in other libraries. Bugema and Valley View did not have indexes that can assist users to do research. Solusi library is a member of the South African Interlending System but the library had no means of identifying the resources available in the libraries in the

consortium. It needed an online connection to SABINET but efficient and widespread Internet service was lacking at Solusi.

The Consortium of Uganda University Libraries (CUUL) could not function owing to the unavailability of union lists and union catalogues. Resource sharing thrives better in an environment where users have a knowledge of what resources are available and where they can be found. This poor bibliographic access to African university libraries is a chronic problem identified earlier by Odingo (1991:94). UEAB and Moi University tried to build a union catalogue for the first two years of their collaboration but the attempt failed owing to a lack of cooperation by both libraries. What this revealed is that resource sharing cannot succeed where librarians are unwilling to get into co-operative ventures and commit themselves to providing the machinery that will build and sustain the programme. Resource sharing can be improved among libraries in a region. With the availability of computers in each library it should not be difficult to compile and harmonize union lists and make them available for access.

A logical relation to bibliographic access is that of physical accessibility to information resources. It is the second most important factor in effective resource sharing. Underscoring the importance of physical access, Kaniki (1993:567) asserted that, "Having knowledge about the existence and location of information is often not enough to solve many information needs if a person cannot physically have the resource." As revealed by this investigation, the means of discovering what is available for sharing and the mode of delivery is by visiting the lending library. This is a cumbersome arrangement as the librarian had to go to the lending libraries to borrow resources. Resources had to be borrowed personally from the

libraries with which UEAB had inter-library relationships. The VVU librarian had to use public transport to Balme library in Accra, Ghana to borrow resources for the teaching faculty who made requests. When asked if the borrowing service could be extended to students, she responded:

“How many books can I carry in a public transport?

Even if I have a car of my own it is not practical to

borrow books on a regular basis for a large number of

library users. The number will have to be restricted.”

Distance in this case becomes an important factor in the delivery of resources. The farther apart the lending libraries are, the more difficult it is to negotiate and implement resource-sharing programmes. This study confirms the findings of Alott (1980:78-79), who more than two decades ago in her study of inter-lending transactions among libraries in Kenya, discovered that the bulk of inter-lending occurred around Nairobi because libraries were concentrated around Nairobi. Librarians readily picked up requested resources from the lending libraries. Outside Nairobi, however, the situation was different. Because the libraries were far apart, inter-lending activities were scarce and few.

This study demonstrates that proximity of libraries is still a major factor to expedite resource sharing, even in an age when modern technology guarantees virtual delivery of information resources. Many university libraries are still unwilling to lend their resources to libraries that cannot readily arrange to have their personnel collect the resources. In other words, there has not been much improvement in resource sharing in the past twenty years. It appears also that the rapidly developing telecommunications and computing technologies that have eased document delivery and facilitated electronic access to information resources

are yet to be exploited by many African university libraries to facilitate inter-lending activities.

As pointed out in Chapter 4, the ILL relationship between UEAB, VVU and their reciprocal partners was ineffective. This is particularly true of VVU with a high number of resources borrowed from other libraries while it never loaned resources to any library (See Section 4.3). This one-way system has turned VVU into a net borrower. The document delivery policies of the libraries that had inter-lending relationships with VVU confirmed that net lenders still exert a position of influence and authority over net borrowers. The policies that the lending libraries operated were cumbersome and discouraging to VVU. This confirms a fundamental principle of resource dependence theory (Dunbar 1992:2) that the relative power of each library in a lending network is determined by the proportion of critical material it is able and willing to lend. In such a situation, inter-lending relationship ceases to be inter-dependent. Rather, the net lenders dictate their terms to the beneficiaries. Where a lending library is in the position of control and influence, and institutionalizes its power within the lending system, inter-lending services do not prosper. It is no longer a relationship of equals but that of a benefactor and a beneficiary.

What librarians are looking for in a cooperative scheme is a simple and efficient mechanism of operation that will promote prompt identification and delivery of resources with the least cost in funds and human resources. As revealed by the data, the librarians at UEAB and VVU preferred to borrow resources from overseas libraries than to request from the libraries around them because this saves time and human resources. The librarian at VVU asserted that it sometimes took her a full day to travel to Balme library to collect resources. This compares favourably to the short time she would need to spend to make requests

to foreign libraries through an e-mail service that was often very prompt. This further proves that libraries prefer ILL collaboration that will yield prompt and convenient delivery of information resources with minimal costs.

Inter-library loan service does not prosper where the service is closely linked to income generation. The exorbitant fees charged by the lending libraries in Ghana and Zimbabwe hampered the growth of resource-sharing in general. Student respondents in Solusi and Valley View claimed that fees charged were exorbitant. They also had to bear their transportation costs to the lending library. Owing to this, they could not exploit and benefit from the ILL provision in their respective countries. Considering the serious economic recessions faced by Ghana and Zimbabwe, and the fact that students struggled to pay school fees, additional expenses for library services may be unbearable. The economic conditions indeed hampered the growth of resource sharing.

Interesting data was generated from the perspective of end-users. Even though the low-volume of resource sharing is attributed to poor physical infrastructure, poor management and insufficient funding, users' attitudes and motivation play a significant role. In this regard, this study reveals that where library resources are not optimally utilized and where research activities are minimal, resource sharing programmes tend to degenerate. This data revealed that library users had little motivation for information seeking. Data revealed that both the teaching staff and students in the five universities used library resources sparingly. Research activities at each institution were also minimal, and funds allocated to research were not exhausted even though some of the universities offer research incentives. For example,

at UEAB, each member of the teaching staff is allocated 25% of the basic salary wage as a book and equipment grant. Any member of the teaching staff who publishes articles is paid an honorarium of \$50.00 or its equivalent for each article published.

Despite these incentives, data showed that UEAB and Solusi spent only about 10% of their respective university's research allocation. Bugema and VVU had no research allocation. The reason is that these two universities are very new and are therefore spending the bulk of their university's funds for capital development. With minimal research activities performed by the teaching staff, students had little motivation to conduct research themselves. Interview responses from the teaching staff corroborated this revelation. The teaching staff at BA, BU and UEAB indicated that heavy teaching loads left them little time to explore resources within and outside the library. Observation and further interviews revealed that the universities have not developed a culture of research. Teaching is still the main activity of the staff. Moreover, the remuneration system did not encourage research as lecturers are not remunerated on the basis of research activities. (The five universities applied similar remuneration policies). Generally, resource sharing services in academic libraries are in response to end-users' pressure for greater access to varied and current resources to support their learning activities, and in particular, to enhance research. Where end-users' academic motivation is low, resource-sharing activities are likely to operate at minimal levels.

The data also demonstrated that the attitude of librarians is a major factor in the poor organization of resource sharing services. Usually librarians respond to economic constraints by investing time and effort

to improve and maintain resource sharing arrangements and inter-lending systems. The librarians in this study have not done much to encourage resource sharing. The only library that has put some time into resource sharing is VVU. Others did not demonstrate any proof of vigorous involvement to alleviate the poor resource conditions of their libraries. One proof of this is the fact that resource sharing values and needs have never been brought to the attention of the respective university administrations. Yet it is the university administration that can effect inter-institutional relationship from the top. One university administrator, upon learning about resource sharing from the researcher, commented, “This is a new idea. If our librarian writes a convincing proposal about it, we will support it”. At another university, many teaching staff had never heard of the concept until the time of collecting data for this study. The fact that no allocation was made for resource sharing in the budgetary proposal of the respective libraries is indicative of the low priority it received from the librarians. Contrary to earlier research, therefore, this study revealed that a lack of funds is not necessarily a constraint to resource sharing. Rather it is also the result of a lack of commitment to the programme.

5.3.2 Prospects for Effective Resource Sharing.

In one sense, the location of the five libraries is an impediment to resource sharing. In another sense, the location of some of them could boost and promote effective resource-sharing. The location of Babcock, Solusi and Valley View offers such prospects. First, Babcock and Valley View are in close proximity to several university libraries: Babcock is located in a 50 km radius of 5 university libraries in Nigeria, while Valley View is 18 km from the University of Ghana, Legon, which has the largest university library collection in Ghana. This close proximity can foster inter-library relationships. Second, the location of

Babcock and Solusi close to commercial cities, and their mailing addresses in cities can enhance faster delivery of inter-library requests. UEAB is not so fortunate. However, the cheap but efficient 24-hour fast mail delivery service provided by the Securicor Security Service Kenya Limited is an asset for fast inter-library transactions. The ability of the Securicor service to penetrate any place irrespective of road conditions is indeed an added advantage.

An effective telecommunication system is essential for the success of any resource sharing arrangement. Babcock University has started a campus area network for Internet connectivity, and UEAB is in the process of installing a wireless radio link for Internet connectivity. Such connectivity will by-pass the poor telephone system that has hindered effective Internet access for several years. An efficient widespread Internet connectivity will facilitate online resource sharing and digital exchange of data.

As analysed in section 4.4.2, the value attached to information resources, the urge and the need to use them are to a large extent determined by the information users' ability to find, evaluate and utilise information. The researcher tried to find out if there were courses taught in any of the universities that equipped students with the skills to locate, evaluate and use information effectively. It was found that each of the universities taught courses that lead to the acquisition of research strategy skills. Such courses were offered as general requirements for every student. The titles of the courses are:

- ! "Use of the Library": Babcock;
- ! "English Composition 11": Bugema;

- ! “Introduction to Research Paper Writing”: Solusi;
- ! “Introduction to Writing Skills”: UEAB; and
- ! “English Composition II”: Valley View.

These courses will equip students with basic information literacy skills that will enable them to search, identify relevant information from both print and non-print databases, analyse and apply such knowledge meaningfully. As revealed in section 5.3.2, there is a need to improve the online research content of the courses particularly for VVU and Bugema. Librarians should also be given the responsibility to teach the sections that relate to research.

5.3.3 Types of Resource Sharing Activities Practicable in each Library

Questionnaire responses corroborated by observation revealed that some forms of resource-sharing activities could be implemented almost immediately at each university library. Activities such as, **exchange of bibliographic data (EB)**, particularly the exchange of locally produced indexes, **inter-library loan (ILL)**, and **sharing of personnel (SP)**, are the main services practicable at each library. Duplicate copies of resources could be readily exchanged if a framework for cooperation exists. Since each university has a computer, they should be able to produce local indexes to some of their periodicals, and accession lists that they should be able to send in a digital format to the other universities. A smooth and effective inter-library loan system could be implemented and maintained if each library engages in cooperative agreements with other libraries through simple inter-library loan procedures. The library that may find inter-library lending difficult is Bugema, owing to its isolation and discrimination by the state-

supported university libraries. Owing to the strict code of conduct expected of personnel serving in the institutions involved in this investigation, personnel sharing with state-supported university library staff may not be possible. However, such a plan could easily be facilitated when organized with institutions of the same denominational affiliation. Each library could benefit professionally if it engages in sharing personnel with well-developed SDA university libraries in the West. **Cooperative Acquisition (CA)** and **Cooperative Cataloguing (CC)** are possibilities at Babcock and Valley View owing to their nearness to several state university libraries. This can be effected through improved communication and transportation systems. Table 18 illustrates the type of resource-sharing activities that are feasible in each library.

Table 18 Resource Sharing Activities Feasible in Each Library.

Universities	CA	CC	EB	ILL	SP
BA	✓	✓	✓	✓	✓
BU	×	×	✓	×	✓
Sol	×	×	✓	✓	✓
UEAB	×	×	✓	✓	✓
VVU	✓	✓	✓	✓	✓

Key

- CA** Cooperative Acquisition
- CC** Cooperative Cataloguing
- EB** Exchange of Bibliographic Data
- ILL** Inter-library Loan
- SP** Sharing of Personnel.
- X** No likely cooperative activity
- ✓** Possible cooperative activity.

5.4 Conclusion

This Chapter has attempted to interpret the data on the management, problems and prospects of resources sharing in selected SDA university libraries in Sub-Saharan Africa. The following is a summary of the

interpretation:

- ! Very limited resource sharing services are offered. This is due to geographic, technological and attitudinal constraints. In addition, limited budgets prevented the libraries from offering any meaningful resource sharing services;

- ! There are no strong inter-library cooperative agreements between any of the libraries and with others inside and outside of their regions. This is due to poor communication systems and the inability to develop and operate innovative, and convenient inter-library cooperation policies that would provide effective organizational and operating infrastructure;

- ! Resource sharing services are not promoted owing to inadequate staffing and the over-use of the existing ones. This hampered the development of library services in general and resource sharing services in particular;

- ! The Universities do not have adequate resources to support learning and research activities. They are self-supporting private institutions whose main source of income comes from students' fees. They do not receive subsidies from funding agencies. Moreover, many of them are new and are therefore concentrating the expenditure of their funds on developing their university's infrastructure;

- ! Absence of bibliographic identification tools and poor telecommunication systems are major hindrances in accessing information outside the libraries. All the libraries are located in regions of

Africa that lack both regional and national bibliographic control systems, thereby restricting library users ability to access bibliographic data for needed resources; and

- ! The user community and the university administration support strong functional inter- library cooperation between their libraries and other libraries. They were able to understand the importance and the values of inter-library cooperation for resource sharing.

CHAPTER 6

AN ADVENTIST UNIVERSITIES RESOURCE SHARING CONSORTIUM.

6.1 Introduction

On the whole, the majority of respondents from the five universities favoured the establishment of a Consortium of Adventist University Libraries in Africa (CAULA). Only Babcock showed a low teaching staff response to this concept. This could be attributed to the frustrations the teaching staff there faced in their attempts to gain access to resources outside their university library. They appeared to have lost faith in any attempt at establishing inter-lending relationships with other libraries.

Respondents at Valley View felt that liaison with other Adventist universities in Africa would be easier owing to their common faith, religious perspectives, and approaches to education. Trust, which is presently lacking in respect of state-supported universities libraries, could be readily established instead among Adventist libraries owing to their religious affiliation. Respondents expressed that such a relationship could:

- ! Facilitate research collaboration;

- ! Encourage closer academic exchange of ideas and information flow;
- ! Allow liaisons with SDA universities abroad;
- ! Promote the uniqueness of SDA educational objectives;
- ! Provide opportunities for the universities to solve common information-related problems; and
- ! Promote the integration of faith and learning.

Respondents advised that the following steps should be taken in the organization of the consortium:

- ! Create an awareness forum at each university;
- ! Establish the committee of Adventist University Libraries in Africa;
- ! Organize a forum to determine the managerial modalities of the consortium with representatives from each university; and
- ! Select a Board of Governors to direct the activities of the consortium.

6.2 A proposal for the establishment of a Consortium of Adventist University

Libraries in Africa (CAULA)

6.2.1 Motivation

The study revealed that each university library and its users are in favour of the establishment of the consortium of Adventist university libraries in Africa. With regard to the organization of the consortium, respondents from the five universities concurred on the need to establish an Awareness Forum in each university as a first step. This forum will sensitize the university administration, teaching staff and students to the needs and values of establishing a cooperative endeavour among SDA university libraries for the

purpose of sharing information and other forms of resources. The forum will organise lectures and seminars for the teaching staff, administrators and librarians on the needs and values of library cooperation. The group will also produce leaflets and fliers on the needs and values of library cooperation. Such will be circulated to librarians and administrators. The forum will also carry out a comprehensive feasibility study that will examine the needs of each library in relation to resource sharing and ways in which a consortium of Adventist libraries can help to meet the needs. This feasibility study will attempt to find information about the following in each library in order to discover their most critical needs in terms of resource sharing:

- ! The size of the collection in relation to the enrolment;
- ! The IT capabilities of Each Library;
- ! Library Budget; and
- ! Number of Professional Staff.

As a second step, the establishment of a Committee of Adventist University Libraries in Africa should follow the forum. This Committee will identify and elaborate the kind of cooperative ventures that could assist each library in improving its library services, propose suitable structures and the staff and cost implications. In determining the overall structure of the consortium, two main suggestions were made, namely: respondents from BA & BU proposed the establishment of a Committee of SDA University Libraries and emphasized that the Committee should organize a working group to determine the managerial modalities of the consortium. The working group could consist of the following representatives from each university:

- ! **The Library Director;**
- ! **Information Technology Personnel;** and
- ! **The Deputy Vice-Chancellor,** responsible for the library.

Solusi, UEAB and VVU, however, suggested a **Board of Directors** that will comprise representatives from the Education Department of each of the three divisions of SDA in Africa, namely:

- ! East Central Division (ECD);
- ! Southern Africa Indian Ocean Division (SID); and
- ! West Central African Division (WAD).

should lead the consortium.

Some respondents from the three institutions that suggested the latter clarified that since the universities obtain their funds from the Divisions, their involvement was crucial. Their awareness may lead to the disbursement of funds and generate greater interest in library development.

Based on the solid evidence from data that supports the need to establish a consortium of SDA libraries in Africa, the researcher recommends the following broad outlines for the establishment of a consortium. These outlines include aspects of the suggestions that were made by both groups mentioned above.

6.2.2 Preamble

There are a range of principles and partnership strategies that are based upon emerging models of cooperation and the prevailing environmental factors affecting each library. Library cooperatives have no consistent or fixed standards. Some are highly structured while others are loose federations. What is

important is that the cooperation should grow out of the environment itself and that the model implemented should be consistent with the information technology development level of the libraries and countries involved. Effective resource sharing is a gradual process and the rate of its growth will be determined by each library's internal development and capabilities. In this regard, the researcher has thoroughly examined the context of the SDA libraries, their nature and needs before proposing the model below. As the model is implemented, it will need to be reviewed periodically to determine its effectiveness, and to assess the gradual implementation of cutting edge technologies. The overall objective, however, is to encourage and nurture an ethos of sharing among the libraries.

Adherence to these principles and strategies will foster a more balanced approach to resource sharing and improved access to the collections of the libraries that constitute the cooperative. An essential factor for its success will be the availability of committed staff with strong personal dedication, and commitment to a clearly defined agenda.

6.3 Aims of the Consortium

- ! To increase the purchasing power of the CAULA by providing access to a more comprehensive collection at reduced cost;
- ! To expand resource availability and improve access to print materials, digital data, and human resources across Adventist institutional libraries in Sub-Saharan Africa through cooperative structures;
- ! To assist member libraries to develop a cooperative culture that emphasises common interests,

visions and needs, and to shift their focus from an ownership-oriented to an access-oriented information service;

- ! To progress from relatively informal cooperative structures to a highly-organized, centrally-staffed organization, sharing automated systems and engaging in all kinds of collaborative ventures;
- ! To bring Adventist denominational publications under effective bibliographic control and provide optimal access to them;
- ! To develop and /or offer other professional services through human resource-sharing; and
- ! To develop a Web-site for the Consortium of Adventist University Libraries in Africa (CAULA) where activities and services can be readily accessed.

6.4 Areas of Cooperation

Areas of cooperation may include the following:

- ! An expanded inter-library loan service;
- ! The creation of a union catalogue and a union list of serials;
- ! Reference and delivery service;
- ! Human resource-sharing;
- ! The exchange of publications and surplus copies of documents; and
- ! Joint acquisition, where possible.

6.5 Requirements for Participating Libraries

An effective and workable resource-sharing network requires some important infrastructural elements that

each member library must have, namely:

- ! A collection of publications to share, with up-to-date and accurate bibliographic information about the holdings of each library. This will enable the compilation and maintenance of union lists that will serve as the bibliographic accessing tools for the holdings in the network;
- ! Appropriate telecommunication systems that will enable timely bibliographic access and delivery of requested information. In this regard, computers with CD-ROM drives for accessing union catalogues and union list of serials will be essential as well as e-mail services to enable quick communication and document delivery. Availability of document delivery software such as DocView should be installed on computers to make document delivery easier. Direct and effective telephone lines for communication is of paramount importance;
- ! Resource-sharing policies to regulate resource-sharing transactions. This should include procedures for borrowing and lending, conditions of supply, which materials may or may not be loaned, period of loan, procedure for returning loaned materials, responsibility for loss or damage;
- ! Funding to support the programme. Member libraries should jointly fund the cooperative, including paying whatever costs are incurred on behalf of library patrons;
- ! A dedicated professional full-time employee in each library, whose job will be to initiate, organize, coordinate and maintain resource-sharing programmes;
- ! A standard Machine Readable Catalogue (MARC) format, the Anglo American Cataloguing Rule-11 (AACR-11) cataloguing code, and a standard thesaurus such as Library of Congress Subject Headings (LCSH). This makes exchange of bibliographic data easier; and
- ! Librarians with a strong feeling of cooperation, and the conviction that they can derive real benefits

from collective membership that cannot be achieved individually.

6.6 Organizational Model for CAULA

6.6.1. Board of Directors

The consortium shall be governed by a Board of Directors, which shall consist of the Deputy Vice-Chancellor of each university in the cooperative and the Executive Director of the programme (See 6.6.2) shall serve as its secretary (See 6.6.2). The reason for involving top university management in resource sharing as indicated in section 5.4 is to get them to share the vision and conviction of the importance of information services and to secure the necessary managerial and financial support that the programme will require. The Board will establish inter-institutional relationships at the highest level to pave the way for inter-library links. Its role is also to promote resource sharing among the university libraries by offering resource-sharing grants, and supporting inter-library loan, automation, and retro-conversion projects. This Board will also adopt and implement the recommendations made to it by the Executive Director of the programme. The Board of Directors will meet once in every two years to review the progress of the programme. The two-year meeting interval will allow the programme to run for a sufficient period of time to enable a realistic assessment to be made so that reliable and valid reports can be presented to the Board.

6.6.2 Executive Director

An Executive Director will be directly responsible to the Board and shall be appointed from among the librarians in the cooperative, and who shall be the director of the library where the programme is based.

That institution shall be the managerial headquarters of the programme. The Executive Director shall coordinate the plans of the Local Coordinators, who shall be the library directors of the member libraries in the consortium. Together they will form the Coordinating Committee. This Committee will implement and evaluate the programme from time to time, and make recommendations through the Executive Director for aspects of the programme that require top administration support and action. Each library shall appoint a Resource Sharing Manager (RSM) who will initiate, organize, coordinate, run and maintain the resource-sharing department, as well as maintain CAULA in their respective libraries. The RSM will be answerable to the Local Coordinator who is the library director of that particular institution. The person appointed in each library should have leadership skills, technical and professional competence in resource sharing. The Resource sharing Managers in all the libraries in the consortium shall form the Implementation Committee. The Implementation Committee is the most practical committee in the organizational structure. The committee may meet once in two years to review the progress of its activities to determine new trends and to find solutions to emerging problems. The committee will make recommendations for change and innovations to the Coordinating Committee, which then presents them to the Board of Directors for implementation. A steering committee shall, however, promote the concept among proposed members of the consortium.

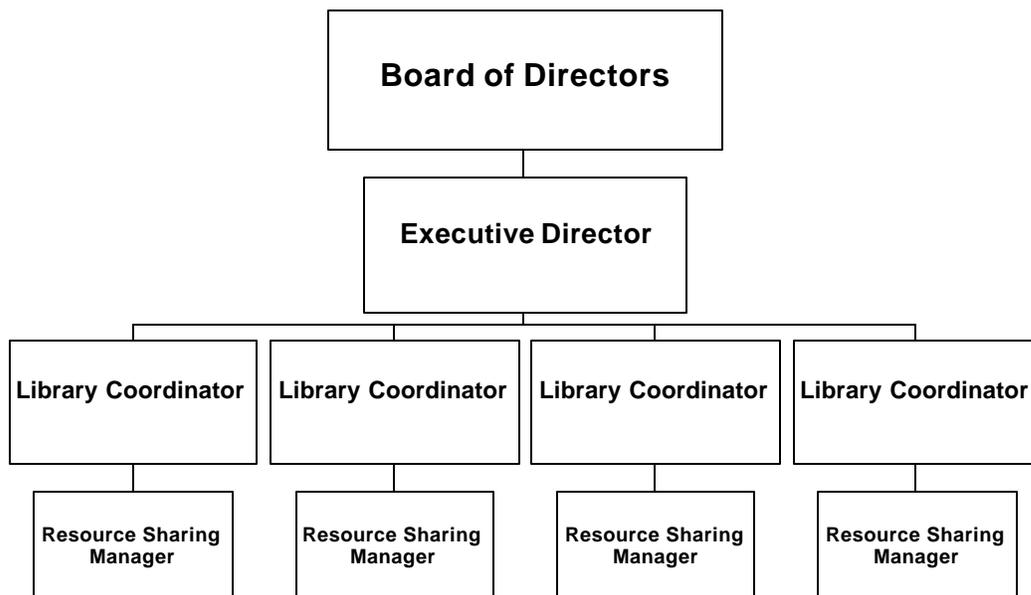
6.7 Steering Committee for CAULA

It is important that all libraries that belong in the group be fully involved in CAULA. To achieve this, a task force will be expected to mobilise all eligible members to participate fully in the activities of CAULA. This body will:

- ! Promote the cooperative concept among eligible libraries;
- ! Mobilise libraries to be members of the consortium;
- ! Promote the essence of and the values of cooperation among eligible members;
- ! Ensure the implementation of the standards agreed upon by the stakeholders;
- ! Examine further ways whereby CAULA can share resources and work towards achieving a global information network among SDA university libraries in Africa; and
- ! Ensure the attainment of the objectives of CAULA.

The Steering Committee will lay the ground work upon which the managerial structure will operate and its membership shall consist of :

- ! A representative from each library; and



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Department of Education of the three Divisions that make up Africa, namely: The East-Central Division; The Southern-Indian Ocean Division and the Western-Central Division.

The management structure of the proposed consortium is illustrated below:

6.8 Mode of Operation

- ! An affordable membership fee will be charged which will cover operating costs, such as the cost of communication, mailing of lists of resources for donations, union lists and document requests. The membership fee will also cover the cost of an honorarium paid to lending libraries who will negotiate this fee and subsequent increases;

- ! The cooperative will have a Central Coordinating Unit (CCU), which will be decided by members

of the cooperation. It should be one of the institutions of the cooperative and the library director of that institution should be the Executive Director. The CCU should have good and effective communication systems, access to the Internet, preferably a computerized operating system to ease operation. It should be well staffed with a library director who is highly experienced in resource sharing;

! Members of the consortium will be required to send bibliographic data of their new accessions periodically to the Central Coordinating Unit (CCU). This unit will collate and use the information to build an up-to-date union catalog of the consortium. The CCU will also consolidate locally produced indexes into a union list of serials. Both lists will constitute the “Adventist Joint Catalogue Scheme” (AJCS). This will then form the backbone for CAULA. The CCU will coordinate all resource sharing activities through the AJCS. The list should be updated every three months and circulated among member libraries in CD-ROM format. In this way, members of the consortium will have a knowledge of what is available for borrowing, and will be able to channel their ILL requests to the appropriate library that holds the items they need. The will also publish a newsletter that will update member libraries about the activities of the cooperation;

! Member libraries will formulate ILL policies and regulations so that each library’s peculiar needs and situations can be considered in the formulation of the policies. ILL requests are then placed directly to the lending library but information about the request will be sent to the CCU for managerial purposes. The delivery systems employed should be fast, cost effective and

sustainable;

! Full bibliographic listings of resources for donations as well as publication exchange will be sent to the Central Coordinating Unit (CCU), which then compiles the list and circulates it among members. It then sends the final list of recipients and items requested to the owing library which then distributes the items; and

! Although consortia place a lot of emphasis on sharing of information resources, it needs to make plans for the sharing of human resources as well, particularly the sharing of outside expertise for improving the skills of library personnel. In these times when information technology is being applied to improve library services, it is important for librarians in Sub-Saharan Africa to upgrade their technology skills and apply such skills for improving the services in their libraries. This is important in a continent that lacks technical expertise. This can be achieved through staff exchange programmes with libraries in developed countries. Such an arrangement will enable librarians to acquire the appropriate technical skills they need to improve library services in their own libraries. It will also add meaning and value to resource sharing programs. To achieve this purpose, the consortium will liaise with Adventist institutional libraries abroad and work out modalities for staff exchange programmes. Each library in the consortium will evaluate its personnel and service needs and place its requests to the CCU accordingly. The CCU will then identify qualified librarians for exchange or qualified libraries where a staff can be sent to train informally for the acquisition of certain skills. Qualified and highly skilled individuals who meet the needs of the requesting library

will be sent on personnel exchange programmes. Likewise individuals identified by their libraries for skills upgrading will be sent to the libraries where they can receive training. The programme should run for at least one year to allow sufficient time for the transfer of skills. In this way skills and technology can be transferred through resource sharing to SDA libraries in Sub-Saharan Africa.

6.9 Conclusion

This chapter presented a proposal for the establishment of a consortium of Adventist university libraries in Sub-Saharan Africa. It discussed the organization of the consortium and proposed a model management structure. The proposal however is a provisional guideline that may be adapted where necessary. The course of the consortium will determine the necessary changes that need to be made in order to promote its progress.

CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

Chapter One of this study discussed the need and the rationale for investigating the management, problems and prospects of resource sharing in SDA university libraries in Sub-Saharan Africa. This was necessitated by changes taking place in information services and the value of access to information in university

education. User information needs, patterns of information seeking and the benefits of information resources have all been affected by an emerging knowledge society. Information is increasingly regarded as the raw material for development, and universities are urged to use information to produce research that will enhance societal development. These changes vindicated the importance of libraries but at the same time challenged the way libraries provide information services. There are many ways for libraries to adapt to these changes, chief among which is making collaborative efforts to satisfy the needs of the end-users. The SDA university libraries in Sub-Saharan Africa face the special challenge of providing adequate access to information resources in a competitive education environment.

7.2 Findings

This section presents the findings of this study based on the results of data analysis and interpretation presented in Chapters Four and Five. Findings are presented in response to the principal question posed by this study: **What prevents SDA universities in Sub-Saharan Africa from developing cooperative linkages to share information resources across their libraries?** The full response to this question emerges from the answers to the sub-questions that follow:

Question 1: Is there a crucial need for SDA university libraries in Sub-Saharan Africa to participate in resource sharing?

All five SDA university libraries find themselves in transition from seminary library status to that of full university library status. The granting of a charter in the 1990s to each institution to operate as a private university allowed them to upgrade their seminary to a university by offering diversified degree

programmes in science, technology and the arts. This new status opened up admission to all who wanted a university education, and this drastically increased the student enrolments. The libraries now face the challenge of providing sufficient information resources to cater for the demands of new academic programmes, and also to meet the information needs of a growing and highly heterogeneous university community. The major obstacle in meeting these challenges is insufficient funding. Though comprehensive data on budgeting is not available for all the libraries, the low figure of purchased resources is also an indication of poor funding. Owing to inadequate funding the libraries find it difficult to meet the information demands of the academic programmes and the increasing enrolments. This is particularly true of Babcock University, which manifests the lowest figure in the acquisition of new books over a period of five years (see Table 9).

Library users demonstrate a need for more information by their eagerness to use the resources of other libraries. This is evident from users' indication of the means by which they gain access to resources outside their respective libraries (see Table 15). In each library, the end-users' attempts to source information resources from other libraries are by their own initiatives. This study has shown convincingly that SDA university libraries do indeed have a crucial need for resource sharing.

Question 2. How is resource-sharing managed presently in SDA university libraries in Sub-Saharan Africa?

The study found that none of the libraries has a managerial structure for resource sharing services. Not one has a department and organized resource sharing services with dedicated staff attached to it, or a well-

defined resource sharing structure. One can adduce from the data that resource sharing has no systematic planning and that it is not a major part of library service. Instead, it is performed haphazardly as requests arose. Data revealed also that the lack of adequate staff, and the fact that the value of resource sharing and the services are not promoted among the university administration and the library users are the main reasons for a **laissez faire** system. Since resource-sharing is end-user driven, the lack of awareness of the service by the users means that they would rarely, if at all, request the service. Apart from UEAB, not one library has the basic resource sharing apparatus such as, for example, resource sharing operation policies. Resource sharing is therefore either managed poorly or not at all.

Question 3: What kind of cooperation exists between the SDA libraries and other university libraries?

Some forms of ILL cooperation exist between a few of the SDA libraries and libraries in their respective regions. But there is no formal relationship among SDA university libraries themselves in Sub-Saharan Africa. The effort made by the VVU library to establish collaboration with other libraries is however commendable. Of the five libraries, only VVU makes substantial progress towards collaboration with tertiary institutions in its region, although the collaboration is not particularly effective. The cooperation that exists between UEAB and Moi, and UEAB and the Catholic University are relatively functional but ineffective. The weakness is due to the absence of administrative and managerial overheads to operate them on a more effective and long-term basis. Cooperation between SDA libraries themselves is non-existent, and in the case of cooperation between SDA libraries and nearby libraries, it is ineffective.

Question 4. What resource-sharing activities are there in and among SDA university libraries?

The resource sharing services offered in each library are basically reference and minimal inter-library loan

activities. Table 14 showed that BA and Sol did not borrow any resource in the past five years, and VVU had the highest rate of borrowing with 502 documents. The inter-library loan transactions are performed in circumstances where very few, if any, formal inter-lending relationships existed. The libraries engage in an unilateral inter-library loan system since data showed that no other library ever borrowed resources from any of the libraries. The interlibrary relationships that exists between UEAB, VVU and the libraries with which they have inter-library relationship is informal and ineffective because end-users could not readily borrow resources on an interlibrary loan basis. This is why there is no significant difference between the inter-library practices of those libraries with inter-library connections (UEAB and VVU) and those without (BA, BU, Sol).

Owing to the stringent and rigid inter-library policies of the lending libraries, librarians at UEAB and Valley View would rather borrow resources from libraries outside the African continent. They claim that it is easier to contact libraries outside the continent for inter-library loan than to borrow resources from libraries in their respective regions. All the resources borrowed by the two libraries from universities in the United States and Europe is received on schedule. The easier and more convenient inter-library transactions with libraries outside the continent are possible reasons why it is easier for libraries in Ghana and other African states to readily obtain resources from libraries abroad than to do so from libraries in their own regions. In general, there are very few interlibrary loan requests. In 2002, library users who requested interlibrary loan services made up 4.96% of the respondents while 85.84% had never requested any resource via Interlibrary loan. This is indicated in Table 13. In sum, very little resource sharing is taking place.

Question 5: What are the resource sharing problems encountered by SDA libraries ?

- ! The first major problem is the lack of adequate staffing in each library. This is indicated in section 4.2.3. This inadequacy explains the absence of many professional services and, in particular, the absence of an organized resource-sharing service in any of the libraries;

- ! It is, however, worth mentioning that each library is directed by a qualified librarian who assisted also by a qualified librarian. The two trained librarians are rendering high-level professional services in spite of the need for additional staff. But there is a limit to what two professionals can do in a university library;

- ! The librarians at Babcock, Bugema and Solusi have adopted a 'stand- alone' stance in relation to resource sharing. The tendency to remain aloof from their colleagues in other libraries discourages the establishment of functional resource sharing programmes. Additional copies of books are not shared nor exchanged with any library. Yet Babcock, Bugema and Solusi have additional copies, which they could exchange for different resources from other libraries, thereby increasing the variety of their own resources. The only library with considerable interest in resource sharing is VVU;

- ! Resource sharing programmes and their values are not promoted in any of the libraries (see section 4.3.1). Both the teaching staff and students' responses expressed a lack of awareness of the service. This ignorance may be attributed to the fact that the librarians have much to do and

could not provide the library services the users deserve;

! Membership fees levied on end-users seeking inter-library borrowing hinder the growth of resource sharing initiatives. Data gathered from Solusi and VVU support this finding (see section 4.3.1). Resource sharing fees levied in Zimbabwe (U.S.\$3.00) and Ghana (U.S.\$10.00) is considered too exorbitant in view of the poor economy. The students are therefore not financially able to participate in resource-sharing. Internet service which costs ZWD2,000 (Zimbabwean currency) per user per academic quarter is avoided by students at Solusi because it is considered prohibitively expensive. Only 20 (1.6 %) of 1200 enrolled students could afford to pay the fee; and

! Library technical amenities are not adequate, and this inhibits the libraries' service capacity. Apart from UEAB with its total of 11 computers to cater for a population of 1200 users, there are no other libraries with more than one computer each. There are however 20 and 10 computers for Internet access in the Computer Laboratories at Solusi and VVU respectively. BU and UEAB have addressed the problem of inadequate Internet service by providing a Very Small Aperture Terminal (VSAT) for Internet connectivity. Generally, basic communication and reprographic amenities such as facsimile machines, photocopiers and communication facilities are inadequate and not available in some of the libraries. In recognition of the fact that the availability of photocopying facilities is important, VVU allows a private photocopying vendor to operate the

service in their libraries.

Question 6: What are the prospects for improving resource sharing services in SDA university libraries in Sub-Saharan Africa?

Interview responses from the university management, and the teaching staff at each institution showed very strong support for resource sharing in general, and with other Adventist institutions in particular.

Based on the responses from interviews, the prospects for resource sharing are excellent. The university management at Bugema, Solusi, and Valley View are ready to allocate funds for resource sharing if librarians present convincing proposals. Likewise, librarians have also expressed the desire to re-dedicate themselves to promote and support resource-sharing services. Each library express a willingness to join other SDA libraries to form a consortium. The teaching staff likewise support this idea unanimously and even propose ways in which such a consortium can be organised.

University libraries in Kenya and Uganda are proposing the establishment of cooperative initiatives to research for development purposes through resource sharing among libraries and other information centres. Hopes are high that they will build a common database of their library collections in future. This will enable librarians to discover what is available in other libraries. In addition, the close proximity of Babcock and Valley View to many universities in their regions offers good prospects for cooperative activities with those libraries.

The Leland Initiative, a U.S. government effort to enhance the capabilities of universities in Africa to acquire and make available global information resources in support of education and research, has provided and installed communication technology equipment at the UEAB and many tertiary institutions in Kenya. This is expected to facilitate wider use of Internet technology for teaching and sharing information resources among tertiary educational institutions. Hopefully, this telecommunication infrastructure will facilitate online linkages and enhance resource sharing activities particularly among Universities in Kenya.

Question 7. What kind of resource-sharing activities are feasible in each library?

Questionnaire responses corroborated by observation and illustrated in Table 18 revealed that resource-sharing activities such as, exchange of bibliographic data (EB), particularly the exchange of locally produced indexes, inter-library loan (ILL), and sharing of personnel (SP), are the main services that are feasible in each library.

Question 8. How can a regional consortium of SDA university libraries in Africa be established and sustained?

A consortium of SDA university libraries in Africa can be established and sustained by creating an awareness of its need among each library that should be involved. Such an awareness will also sensitize the university administration to its needs and values, as well as to the need to establish inter-university collaboration at the highest administrative level. An awareness forum committee should then set up a

committee with representatives from each stakeholder to plan and organize the operation of the network (see Chapter Six for details of a proposal).

7.3 Recommendations.

Based on the findings of this study, the following are recommendations for improved resource sharing:

- ! The study revealed that SDA university libraries in Sub-Saharan Africa need resource sharing services. It is recommended that each library and its institutional leadership explore systematic, formal and effective modalities that will facilitate productive resource sharing with academic institutions in their respective regions. The five universities studied share similar historical and economic circumstances that provide sufficient impetus for cooperation with surrounding libraries in general, and with SDA university libraries in particular;
- ! None of the libraries has a managerial structure for resource sharing. It is recommended that each library plans to organize and maintain a resource-sharing department. A qualified staff member who will organize and manage the resource sharing department should be employed. The staff will design a functional, practical managerial structure for resource sharing. He/she should work out strategic alliances with other libraries, and formulate policies and procedures that will encourage and facilitate, with minimum hindrance, the optimal use of the pool of information resources brought together by the collaboration. Policies implemented and models adopted should be sufficiently flexible to deal with difficulties that users experience in requesting resources;

! SDA university librarians need to make concerted efforts to establish and foster collegiate relationships with their colleagues in other institutions. The findings of this study revealed that some librarians had very little professional interaction with their colleagues. Library cooperation is participatory and it is people that make it work. A collegiate relationship will not only help to formalize collaboration but will also facilitate the creation of the necessary organizational structures that will allow resource-sharing programmes to function effectively. In consolidating the cooperation, it is recommended that members of the consortium organize regular meetings of resource sharing staff from the institutions involved. Such meetings will encourage honest and open communication and make resource-sharing more effective;

! The main resource sharing service between SDA libraries and others is an informal arrangement for inter-library lending. It is recommended that librarians explore and practice other forms of resource sharing that are permanent, well-structured, and beneficial to their users;

! The findings of this study revealed that resource-sharing services are not promoted among library patrons. Each library should devise a means for marketing the importance and value of the service among end-users in order to encourage their continued patronage. This study proved that the insufficient funds allocated to resource sharing in each library was due to a lack of understanding of the importance of resource sharing by the university administration;

- ! The study revealed that necessary duplicating and reprographic systems are lacking in each library. It is recommended that these be provided for each library. Each library should be equipped with its own direct telephone connection, and have autonomy in the usage of the telephone. A Very Small Aperture Terminal (VSAT) or other affordable satellite-based communication systems, sufficient computers and a campus area network should be provided to facilitate unhindered access to the Internet;

- ! The prospects for resource sharing are very good at SDA university libraries. Babcock and Valley View should take advantage of their proximity to many universities in their regions to engage in collaborative activities. The various cooperative initiatives in different regions should be encouraged to move from a planning to an action stage. Librarians should also provide convincing proposals for resource sharing to the administration, which is ready to support a convincing and meaningful proposal;

- ! The study revealed that some forms of resource sharing are feasible in each library, particularly inter-library lending and exchange of bibliographic data. Owing to the close proximity of Babcock, and VVU to other universities in their respective surroundings, it is recommended that these libraries engage in an inter-institutional relationship for cooperative cataloguing, and cooperative acquisition. As pointed out in section 4.5, personnel sharing (SP) is restricted by the institutions' strict code of conduct, but they can share personnel with institutions of the same denominational and educational values in Europe and North America through a staff exchange programme. Such a programme will foster technology transfer, which may improve library services and develop

librarians' expertise; and

- ! This study discovered that low resource sharing is due to library users' inadequate computer skills and the lack of a research culture among students and the teaching staff. It is recommended that each university intensifies its information literacy programmes in order to equip library users with the necessary skills to access information effectively through the Internet and other electronic information systems. The teaching staff at each university should promote the culture of research. This will challenge them as well as their students to seek more information for scholarly academic performance.

7.4 Suggestions for Future Research.

- ! Further research should be conducted into the causes of reluctance by librarians to participate in resource sharing practices. After all, Africans are known to have a culture of sharing and one would expect that this value would be incorporated into the practice of librarianship in Sub-Saharan Africa;
- ! Further study is required to explore the economics of cooperation for libraries in Africa. Many library articles argue that resource sharing is not done for cost saving. While this may be true, it should not apply to the African scenario because one of the main objectives of engaging in resource sharing is to cut down costs by accessing the resources of other libraries. In this way the library can retain its budget for the purchase of resources that are not readily available for lending.

If the cost of lending is equivalent or greater than the cost of purchase, then the programme is not beneficial to the libraries. In this case, many librarians will not embrace the programme as it does not meet their objective. A study on this issue will assist in determining suitable cost effective resource-sharing models for the continent;

! There has not been much research available on the information seeking behaviour of the end-users in resource-sharing transactions. Research needs to be conducted to examine the kinds of information that users had at the time of placing interlibrary loan requests, their sources of information and methods of information seeking that produced the requests, and the degree of relevance of the document requested by the end-user. Such a study will help to determine end-users' information assessment and searching skills. It may also identify areas that need improvement in the institutions' information literacy programmes; and

! Finally, a few library networks are already operating in Africa, particularly in southern Africa. No study is available yet that measures the effectiveness of these networks. There is a need to investigate the problems and successes of these networks. The results of such a study will help to improve other African library networks.

7.5 Conclusion

This study revealed that SDA university libraries are in great need of resource sharing, because they now offer a greater variety of academic programmes than they did when they only supported studies in religion

and theology. Moreover, they are new and emerging libraries and they will need access to other libraries' resources in order to support the new academic programmes offered by their respective universities. This study showed, however, that very little resource sharing activities are occurring between each library and other libraries in their respective regions and among SDA university libraries themselves in Sub-Saharan Africa. The negative attitude of librarians and the lack of awareness of the need and value of a resource sharing programme by the university administration and library patrons are the major reasons for the low level of resource sharing. The study demonstrated that library patrons have information needs that their own libraries cannot meet, and that they therefore support the establishment of effective resource sharing collaboration with other libraries, particularly with other SDA university libraries in Sub-Saharan Africa. In this regard, the study recommended that each library enters into formal cooperative agreements and the establishment of a Consortium of Adventist University Libraries in Africa (CAULA) for effective resource sharing was proposed and elaborated. The consortium is based on mutual and reciprocal benefits, which will lead to greater efficiency, cost effectiveness and the availability of resources. For the consortium to be a success, the study further recommended the active participation of the university administration in its establishment and maintenance. This will provide the basis for necessary support and sustainability. The proposed CAULA will reduce the expenses of unnecessary duplication of donated materials, facilitate interaction, cooperation and coordination and guarantee a high quality ILL service to staff and students of SDA universities. Finally, it will exercise bibliographic control over SDA publications, and help librarians to develop and nurture a culture of cooperation.

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