Thesis Introduction Sample

CHAPTER 1

INTRODUCTION

1.1 Background of the study

With diminishing finances, it is rarely possible for a library or information center to have enough resources to fulfill the needs of its clients. What is being delivered is only a portion of what their clients actually need (Ramos & Mohd Ali, 2005). Collaboration is widely recognized as the best way for libraries to cope with the ever increasing challenges: volume of information resources; nature and quality of information; user needs and expectations; information and communication technology competencies and infrastructure; inflated cost of information resources; and staffing needs. However, although these challenges have continued to prevail, libraries working under collaborative initiatives like the Consortium of Academic and Research Libraries in Illinois (CARLI) have registered tremendous success.

This thesis reports the findings of a thorough study to establish the factors that have led to the success of CARLI and how such success factors can be applied in libraries of developing countries like Uganda. Emphasis is placed on the establishment of CARLI leadership, the sharing of responsibility and decision making processes as well as sources of funding for the consortium. Also central to the research study is exploration of the role and responsibility of participating member libraries and their contributions to and expectations from the consortium.

I contend that lack of funding to facilitate consortium activities is not the central factor in the failed progress of the planned consortium activities in Uganda, rather it is the lack of committed leadership and cooperation among participating libraries that is responsible for the lack of progress. In any kind of organization or cooperation like a library consortium, funding has never been enough due to ever changing technologies and continuous demands from library patrons. However, good leadership and cooperation among membership plays a bigger role in achieving a common goal. Having and working towards a common goal, under dedicated, dynamic and faithful leadership with an active and energetic membership plays a great role in the success of a consortium.

To assist in the possible improvement of consortium operations in Uganda, I need to understand the leadership, responsibility, staffing, collection, policies and procedures, funding and structure of academic libraries in the participating membership of CARLI in comparison with those of Uganda. My research has incorporated interviews with CARLI staff and a questionnaire survey to all the participating CARLI membership.

1.2 Problem statement

There is now ample research on the benefits of library collaboration mainly in developed countries (Kaul 2001, Riley 2006, Wright 2006, Bennett 2007, Foulonneau et al. 2007, Williams 2008, Feather, Bracken & Diaz 2008, Butler 1998, Domatob, 1998). In Africa, a lot of research has been devoted toward the need for collaboration (Musoke 2008, Paulos 2008, Kinengyere 2007, Ibeun & Obasuyi 2007, Amaeshi (Ed.) 2003, Kaul 2001, Rosenberg 2001, Ade Ajayi, Goma & Johnson 1996) and a few registered successes (Musoke 2008, Paulos 2008, Rosenberg 2001, Kinengyere 2007, Ibeun & Obasuyi 2007, Amaeshi (Ed.) 2003, Kaul 2001). However, no research has been reported on how to apply identified success factors from developed countries in order to bring a change in developing countries. Developed countries have registered tremendous success stories compared to less developed countries; failure in developing countries has been attributed to poor funding without looking at other factors like committed leadership and cooperative membership.

The National Council for Higher Education (NCHE) (2007) indicates that there are six public and twenty-four private universities giving a total of thirty registered universities in Uganda. Of these, only twenty-one universities and two research institutions are actively and currently participating in the Consortium of Uganda University Libraries, (CUUL) (2008). It is clear, however, that most of these universities do not have adequate resources to support certain, if not all, areas of their academic and research programmes. Since 2005, access to computer facilities, books and other learning materials has improved; still many are far from reaching ratios comparable to world standards; and, unfortunately, the student to book ratio dropped from twenty-three books per student to nineteen in 2006 (NCHE, 2007). The NCHE 2006 (2007) study further shows that there has been a 9.4% increase in the total number of students that enroll in the universities from 124,313 in 2005 to 137,190 in 2006 without an increase in

the number of information materials in most of these universities. Although there is evidence of no increase in the number of information resources to be used by students in these universities, NCHE instead attributes the low level of research across the higher education spectrum to inadequate funding; more so, the student to book ratio stated above is far below the set standards and NCHE does not suggest for these universities to participate in resource sharing as a way of bridging the student to book ratio.

The NCHE (2007) acknowledges the usefulness of the library, stating that "the library… is the heartbeat of an academic institution". However, its 2006 study indicates that universities have continued to reduce the amount of money spent on books (0.1% in private and in 2.5% in public universities) and that library space is being converted to student instruction classrooms. This is an indication of low spending on library books; much as these universities are still working harder to acquire information materials, space to store them is also becoming another challenge.

One of the important things I have learned all through the time I have worked at Makerere University Library's outreach programme in partnership with CUUL as Deputy Country Coordinator for E-resources, on top of other significant institutional challenges among African universities, a committed leadership and membership was noticed as still lacking among CUUL membership. While there are already tangible successes registered by CUUL, still much has not been achieved, like spearheading resource sharing as one of its objectives since inception.

This study begins to address issues that are surrounding the inefficiency involved in partnership, networking and collaboration among university libraries in Uganda. This includes how universities with far better information resources like Makerere University can share with newly established universities lacking sufficient library resources. More particularly, the study directly addresses consortium issues like leadership, communication and membership contribution as key factors in this kind of collaboration.

1.3 Objectives of the study

- Study the consortium history among academic and research libraries in the state of Illinois

- Identify the factors that influence libraries to join and continue to participate in a consortium
- Determine how consortium values affect participating libraries
- Determine the effectiveness and extent of resource sharing among CARLI member libraries
- Identify factors that lead to the success of a consortium other than money
- Suggest practical ways for resource sharing in developing countries like Uganda

1.4 Limitations of the study

Any comparison of differing societies, or search for causal relationships must be conducted within dimensional identities (Amaeshi (Ed), 2003); meaning, a perceived need to understand the economic, political, educational and sociological factors that affect information sharing among universities in both developed and developing countries. While the majority of the developments are standard practice in academic libraries in the developed world, many of these issues are relatively new to us in developing countries, and we have had to contextualize them by finding practical but local ways of addressing some of them (Musoke, 2008).

In this study therefore, I do fully understand the dimensional identities that exist among CARLI and CUUL; I try to contextualize identified success factors by finding practical but local ways of applying these factors that have led to CARLI advancement putting into context the economic, political, educational and sociological environments of operation between the two consortia.

CHAPTER 2
LITERATURE REVIEW

2.1 Introduction

In my literature review, I have found a good representative literature discussing the need for collaboration among Uganda's universities and research institutions and a few outlines of the benefits so far registered in these universities. However, little is written in detail about resource sharing as a way to bridge the shortage of information resources among these universities. I am grateful to some authors (Musoke 2008, Paulos 2008, NCHE 2007, Rosenberg 2001, Kaul 2001) who identified some of the factors that have hindered collaboration in Africa, although their discussions outline funding as a major factor in this progress as opposed to good leadership, effective communication and responsive membership. By studying the relevant literature, it will help me understand more fully how other factors play a big role in the development of consortium in developing countries.

2.1.1 State of higher education in Uganda

To date, the existing physical resources of higher education institutions are quite inadequate. Past political instability, lack of financial resources and the general lack of a culture that values maintenance have combined to cause gross negligence in the maintenance of physical infrastructure including laboratories, seminar rooms, libraries, research facilities and staff offices (Musisi, 2003). Higher education received about 10 percent of a total Ministry budget of UGX 619.93 billion in the 2004/05 budget year (Ministry of Education and Sports, 2005), a rate that has remained more or less constant since the mid 1990s. The implementation of cost sharing in institutions of higher learning has increased revenue generation to supplement transfers from the government. In addition to cost sharing, funds are generated internally through private sponsorship of students, consultancies, sales of services and contributions from donors, (Musisi, 2003). However these sources have not been able to accommodate the ever increasing budget needs. Due to such poor funding, much has been left undone.

2.1.2 Structure of academic libraries in Uganda

According to the Universities and Other Tertiary Institutions Act of 2001, with reference to Makerere University library structure (Makerere University Library, 2007),

the overall administration of libraries is vested in the office of the University Librarian who reports to the Vice-Chancellor through the Deputy Vice-Chancellor in Charge of Academic Affairs (DVC-AA). The University Librarian is a member of Makerere University Top Management and Senate. Within the library, the University Librarian and deputies form the Library's Management team, which works with heads of sections and branch libraries to implement University Library policies and programmes, and enforce library rules and regulations. The policy making body of the University Library is the Academic Programmes and Library Committee, which is a senate committee chaired by the DVC-AA. It is composed of members of Senate representing the sciences, arts and humanities, library, students and other relevant stakeholders.

2.1.3 History of consortium in Uganda

To strengthen the network of librarians, researchers and academics in developing countries and Uganda in particular, the International Network for the Availability of Scientific Publications (INASP) encouraged librarians to form national consortia. During a workshop on the topic of library cooperation for effective provision of information in Uganda and beyond, CUUL was established in 2001. Areas of cooperation include resource mobilization and sharing, and training and marketing of member libraries (Kinengyere, 2007). One of the challenges being addressed by CUUL is the sustainability of e-journal subscriptions at the end of donor funding. In November 2005, CUUL decided on the mechanism of cost-sharing the e-resources, starting in 2006. Out of the 43 registered Programme for the Enhancement of Research Information institutions-(PERI)-Uganda, only 11 (25%) responded to the e-resources sustainability initiative in time for the 2007 subscriptions and this trend has not changed to date (Kinengyere, 2007). The networking and collaboration of CUUL has not yielded good results as outlined in its objectives and this has been blamed on the lack of funds without looking at other factors like the commitment of its membership, and trust from its leadership. Both CUUL and CARLI which began in July 1, 2005, do have a lot in common in their formation. Like UIUC for CARLI, Makerere University Library is the coordinating institution for CUUL under the PERI programme. The current establishment of CUUL as per its constitution (2001) is composed of a five member elected executive committee (Chairperson, Vice Chairperson, Treasurer, Secretary,

Publicity) who conduct CUUL activities in addition to their institutional responsibilities; and a committee of representatives from actively participating institutions called 'Functional committees' who help to coordinate CUUL activities in their respective institutions. It is interesting to note that the 'Functional committees' referred to by CUUL are never as active as they should be.

2.1.4 The need for collaboration

A perceived need for collaboration among the African university libraries was stated as early as 1990 (Ifidon, 1990); and was outlined in the Carnegie meeting of 2004, which identified the ability to participate in a global economy that is increasingly centered on access to knowledge as a critical key in solving the problems of the African nations. One of the goals of the conference was to develop partnerships between libraries and donors, and establish a platform on which future consortia and agendas could be built. During the meeting, many problems faced by African university libraries were discussed, such as poor networks, little cooperation between institutions that create their own databases of local materials, and very few digitization programs to increase African content on the Web and respond to the thousands of different cultures and languages across the continent.

The benefits of collaboration, consortia, networks and peer support have been emphasized in information science literature for a long time. Most of the success stories reported by African University Librarians revolve around collaboration and networking within institutions to lobby policy makers, within the country to form consortia and share the subscription of e-resources, build capacity and get professional support. The actual and potential of networking, cooperation and digitization is to modify the functions of acquiring, storing and disseminating information and knowledge, hence the need to be supported (Musoke, 2008). Because of limited resources there is, therefore, need to build on the achievements, share experiences and best practices through collaboration and networks.

2.1.5 Resource sharing

The concept of resource sharing has been used in the developed countries as a means to alleviate the resource inadequacies of individual libraries. In Africa, it has been seized upon as a way of sustaining information services. Rosenberg (2001, p. 14-

15) in her paper "The sustainability of libraries and resource centers in Africa" quoted a Kenyan librarian who concluded that "there is no doubt that resource sharing programmes have a significant role to play in developing countries, given the problem of scarce resources" and "if libraries are to continue to meet the demands of other users, increased cooperation and resource sharing are vital". Rosenberg (1993) continues to note that on the ground there is little in the way of resource sharing. In some ways the situation has deteriorated, as systems that used to work (like the East African Literature Service) have collapsed. The survey (Rosenberg, 2001) of University libraries in Africa found that interlibrary lending (the main, if not the only, form of resource sharing practiced), was minimal, especially in-country and within Africa. Such evidence suggests that there is a lot that needs to be done in order to bring a change about the idea of resource sharing among universities and research institutions. Even though these universities have little to share, even a little sharing may help future sharing of acquisitions in the most demanding subject areas.

2.1.6 Research and research paradigms

In her paper "Strategies for addressing the university library users' changing needs and practices in Sub-Saharan Africa", Musoke (2008) states that there is drastic change in the methods of conducting research and research paradigms. For example, the demand for a multidisciplinary approach to research has meant that a research project in the Medical School, which would ordinarily require medical literature now also requires some social science and ICT components. Such approaches put further demands on the already meager information resources in our libraries, hence the need for sharing. The diversity of research methods is an indicator of the complexity of research and the challenges of meeting the information needs of human beings conducting research. Such challenges call for immediate revival of resource sharing among these universities in order to meet the changing needs. The presence and advancements in information technology can also help in this process.

2.1.7 Policy formation and leadership

The Association of African Universities (AAU) emphasizes that the way ahead for the development of research and postgraduate capacity in African universities is through selective concentration of resources within the university system, and the

achievement of collaborative links among African universities, and between African universities and research institutions (AAU, 2009). In order to achieve that goal, AAU suggested that providing effective leadership to facilitate meaningful regional inter-university cooperation among African universities may help to ease the resource constraints and to build a viable educational enterprise in Africa capable of meeting the challenges ahead (Ade Ajayi, Goma & Johnson, 1996)

2.1.8 Consortium membership

Among the most serious problems of Uganda's libraries is the low level of and response rate towards collaboration and consortium in a number of library and information science activities. According to Paulos (2008), the most successful libraries in southern Africa, like in Botswana and South Africa, have been able to form strong alliances. Developing complex and strong links and partnerships facilitates the utilization of information resources.

An example of a successful regional network is the Association for Health Information and Libraries in Africa (AHILA). In addition to its international connections, AHILA has two internal concerns—sharing scarce resources through interlibrary cooperation and developing systems for improved bibliographic control of the health literature produced in Africa (Kinegyere, 2008). Such strategies if applied at the national level will not only strengthen regional networks, but also work as satellite communication networks for international organizations to overcome the problems of lack of physical infrastructure and as a basis for enhancing access to information among university libraries with fewer resources.

2.1.9 Library funding

The importance of government support towards consortia is elucidated in the plan of the United Nations (UN) World Summit on the Information Society. This body acknowledges the significance of addressing fundamental issues of development in universal access, infrastructure, information and communication technologies, literacy, skills and training, E-learning, and E-Agriculture (Ibeun & Obasuyi, 2007). If Uganda is a signatory, it should join other countries in the attempt to support libraries and archives. Lack of funding has been a bigger issue among university libraries and has been attributed to lack of understanding of the role of libraries in an institution of higher

learning by university and political leaders as it emerged from the Carnegie conference (2004) and mentioned by many other writers (Musoke 2008, Ade Ajayi, Goma & Johnson 1996, Paulos 2008, Rosenberg 2001). However, not all African countries are dependent on external funding. Libraries in Botswana and South Africa are examples where funding is internally generated and the quality of library resources is very high, (Paulos, 2008). As a source of funding for libraries in Africa, including Uganda, Paulos (2008) in his paper "Library resources, knowledge production, and Africa in the 21st century" suggested the need for funding from African governments; the importance of proactive approaches on the part of academic librarians in Africa - including the importance of identifying unique materials in the collections and seeking collaboration to digitize them; and the importance of outreach, in particular, seeking the support of Africans in the diaspora.

2.1.10 Increasing number of library users

The growing number of university students, the increase in study programmes coupled with paradigm shifts in curriculum and research, the increase in research and the rapid ICT developments have all changed the routines of traditional academic librarianship (Musoke, 2008).The demand for information resources has increased, with diminishing budgets, resulting in a poor service to library users. This is further evidenced in the NCHE report of 2007 as outlined above.

2.2 Consortium of Academic and Research Libraries in Illinois (CARLI)

CARLI is an unincorporated association, with a total of 153 member institutions all over the State of Illinois (CARLI, July 2009).

2.2.1 History

July 1, 2005 saw the merging of three Illinois academic library consortia to a consolidated consortium called CARLI; the merged consortia include: Illinois Cooperative Collection Management Program (ICCMP), formed in 1986 and provided statewide collection studies and grants; Illinois Digital Academic Library (IDAL), formed in 1999 and provided centralized electronic resource licensing; and Illinois Library Computer Systems Organization (ILCSO) formed in 1980, provided the shared integrated library system Illinet Online which became I-Share in the consolidation. The merging of these three consortia was aimed at improving the efficiency and cost

effectiveness of services, increasing the effectiveness of consortial and member library staff efforts, and creating opportunities to pursue new programs and services that the three constituent consortia would not have been able to provide on their own. CARLI has continued to add new products, services and programs including: The I-Share integrated library system, E-resources licensing, digital collections and statewide collections awards and programs.

2.2.2 Strategic plan, values, and goals

CARLI remains fully committed to fulfilling its established mission:

The Consortium leads Illinois academic libraries to create and sustain a rich, supportive, and diverse knowledge environment that furthers teaching, learning, and research through the sharing of collections, expertise and programs

and attaches great importance to cooperation among academic and research libraries of all types, sizes and missions; respect for the diverse missions and populations served by member institutions; recognition of each member institution's autonomy; sharing the full range of academic library resources effectively and economically; free and open access to all intellectual resources; excellence in providing services and programs; innovation in identifying and implementing collaborative solutions to shared challenges; responsiveness to member needs; cost-effectiveness in the delivery of programs, services, and products; careful stewardship of all CARLI resources; protecting the privacy and security of library records; supporting intellectual freedom; and advocacy for academic and research libraries at the local, state, regional and national levels. Furthermore, the consortium reaffirms its commitment to resource sharing, through the continued maintenance and development of its integrated library management system, and the provision of meaningful electronic resources, through brokering, subsidization and cost-sharing agreements as outlined in its four broad strategic priorities: Collaboration and Leadership, Innovation, Resource Sharing, and E-Resources (CARLI, 2007).

2.2.3 Membership

2.2.3.1 How to become a CARLI member

All higher education institutions in Illinois that are recognized by the Illinois Board of Higher Education, and are members of the Illinois Library and Information Network (ILLINET) are eligible for membership in CARLI; and will agree to abide by the terms and conditions of the CARLI Membership Agreement and any other subsidiary agreements governing participation in a specific CARLI service. However individual member libraries retain autonomy over their own operations. CARLI membership includes three categories each with a different entitlement and responsibility, and different annual membership fees. As of the fall of 2009 there were 107 Governing, 30 Associate and 16 Basic members.

2.2.3.2 Membership categories and obligations

Governing membership is entitled to participate in all CARLI products, services, and programs at the fullest level of central support; participate in all CARLI committees, task forces, and user groups; receive priority status on waiting lists to join I-Share and other premium services like enrollment in training sessions. Associate membership is eligible for most services and programs, and participates in CARLI governance as a group represented by a single voting member on the CARLI Board of Directors. Basic membership qualifies for selected services and programs, and does not participate in CARLI governance or voting. CARLI member institutions may upgrade to a higher or move to a lesser membership level by following the CARLI Bylaws. Eligible institutions that have not joined CARLI may participate in CARLI email discussion lists, and may attend CARLI training events and workshops at a fee sometimes higher than that of the three membership categories.

2.2.3.3 Membership benefits

CARLI serves over 98% of Illinois higher education students, faculty and staff at 153 member institutions of which 76 institutions benefit from I-Share; E-resources brokering with over 1,000 discounted subscriptions to electronic journals and other resources; a 24-hour delivery by Illinois Library Delivery Service (ILDS) to 141 CARLI libraries and all the state's regional library systems; the Book Digitization Initiative for Illinois academic and research libraries; in-house development of VuFind an open

source front end to I-Share catalog; and participation in the University of Rochester's Extensible Catalog project.

2.2.3.4 Funding sources

CARLI's sources of funding include annual subscription membership fees where Governing membership contribution ranges from a minimum of $1000 to a maximum of $10,000 and is calculated by student Full Time Equivalent (FTE) enrollment and institution type, Associate members pay $500, and Basic membership is $100. Other funding includes contributions towards e-resources brokering, development of library systems like I-share catalogue and VuFind, support for digitization projects and the Open Content Alliance, through conducting workshops where each membership contributes different fees to participate in any activity, and grants from the state and federal governments. The CARLI financial year runs from July 1 – June 30.

2.2.4 Governance

CARLI operates under the direction of the CARLI Bylaws 2008 (CARLI, 2008, 2006).The University of Illinois serves as CARLI's fiscal and contractual agent under a Memorandum of Understanding between the Board of Trustees of the University of Illinois and CARLI Board of Directors. CARLI operates as a unit of the University Office for Planning and Administration, University of Illinois at Urbana-Champaign.

2.2.4.1 Board of Directors and committees

CARLI Board of Directors oversees the affairs of CARLI except those reserved for the entire membership; sets strategic direction of the consortium; oversees all CARLI committees; reviews and approves the detail and the total organizational budget each year; advises and gives recommendations on the hiring and evaluation of the Assistant Vice-President for Planning & Administration/ CARLI Executive Director; and provides advice and input to the University of Illinois in matters relating to the Consortium. The Board meets regularly throughout the year. In addition to the Board of Directors, there are several committees, working groups, user groups, and task groups established to support the Board in carrying out operational and programmatic activities of the consortium; assist the Board in the development, implementation, operation, and evaluation of programs and services; provide the Board with advice and recommendations related to policy, management, fiscal, and on other matters that

require the Board's attention. Each committee or group has CARLI liaison fulltime staff who works as a focal point for a designated committee; committees meet quarterly with CARLI Board of Directors or as required. The committees and groups are required to present reports at the end of each task assigned to them; the reports are published and made public online on the CARLI web page.

2.2.4.2 Board committee organization

Board committees are of two categories, standing (permanent) committees referenced in the CARLI Bylaws and temporary "ad hoc" groups established to carry out a specific task and then discharged. All committees report to the Board on a schedule established by the Board. Each Board committee has a CARLI staff liaison. Ad hoc groups have sunset dates at which point the group will be discharged.

2.2.4.2.1 Standing (permanent) committees

There are five permanent committees established by the CARLI Bylaws.

Executive committee: The officers of the CARLI Board of Directors shall constitute the Executive Committee. The Committee is advisory both to the Chair and to the Board of Directors on scheduling agenda topics and preparing information for the Board of Directors' review and action. The Executive Committee is authorized to act on behalf of the Board of Directors on any urgent matter requiring Board approval, unless a regular or special meeting of the Board of Directors is scheduled to take place within 48 hours. The CARLI Board elects its own Vice-Chair/Chair-Elect each year to join the current Chair, Past Chair, and CARLI Executive Director in forming the Executive Committee and will meet as needed to update the Board on their plans and actions. CARLI Executive Director is the Staff or Board liaison.

The finance committee provides the Board with recommendations related to annual budget requests, the annual budget, the annual financial performance report, and any other financial matters that require the Board's attention. It's composed of four Board members, one each from public institutions, private institutions, community colleges, and one at large. The Past CARLI Chair is the chair of the committee. The Finance committee reports to the CARLI Board of Directors, on a quarterly basis. CARLI Staff or Board liaisons are the CARLI Executive Director, and CARLI Director for Business and Financial Services.

The personnel committee provides the Board with recommendations and input into the recruitment, compensation and evaluation of performance of the Assistant Vice-President and Executive Director. The Board, in turn, provides its recommendations to the University of Illinois. The Committee may also provide the Board with recommendations and input into any other personnel matters that require its attention. The Personnel Committee is composed of four Board members, one each from public institutions, private institutions, community colleges, and one at large. The Vice-Chair/Chair Elect is the Chair of the Committee. The group reports to the CARLI Board of Directors and University of Illinois Associate Vice President for Planning and Budgeting on an annual basis. The CARLI Board liaison is the University of Illinois Associate Vice President for Planning and Budgeting.

Products and Services Vetting Committee (PSVC) is charged with reviewing suggestions for new and enhanced products and services for CARLI, with considering recommendations received from individuals and groups, with screening the ideas to identify which should have staff analysis, with prioritizing the ideas, and reporting final recommendations to the Board. The PSVC is made up of three CARLI Board members and three non-board members. Appointments to PSVC are made by the CARLI Executive Committee. The committee chair reports to the Board at each of its meetings. The CARLI Executive Director serves as the staff liaison to the PSVC. A product or service suggestion form is posted online for the members to suggest resources and the suggested resources are posted online for other members to look at. This avoids duplication of suggestions.

CARLI Program Planning Committee (CPPC) is charged with screening applications for CARLI-supported educational programs and conferences for funding, and serves as the planning committee for the annual CARLI membership meeting. The CPPC is made up of three Board members and two non-board members. Appointments are done by the CARLI Executive Committee. The committee chair reports to the Board at each of their meetings, and the CARLI Executive Director serves as the staff liaison to the Committee. A report listing all applications for program support will be given to the Board annually with an indication of status and priority.

2.2.4.2.2 Temporary "ad hoc" groups

These are temporary groups like working groups, user groups, and "ad hoc" task forces which help CARLI in carrying out operational and programmatic activities of the consortium. However, they are established to carry out a specific task and then be discharged. All groups report direct to the CARLI Board of Directors through a CARLI staff liaison.

Working Groups (WG) focus on a broad area of service and are assumed to be ongoing. They include Collections WG, the E-Resources WG, the Preservation WG, and the Public Services WG. The rules for member appointment and terms, expected reporting frequency, coordination, and CARLI staff or Board liaison are the same for all WG as below.

- **Member appointment and terms**: WG members are appointed for a term of 1-3 years from a pool of volunteers and/or nominees in order that a rotation system can be established. Approximately a third of the committee membership is appointed each year. After the first year appointees will serve 3-year terms beginning on July 1. Each spring volunteers are solicited for the expiring terms. The CARLI Executive Committee has the final responsibility for appointing WG members. In the case of mid-term vacancies, the WG recommends candidates, and the CARLI Executive Committee appoints new committee members to fill the remaining portion of the term.

- **Expected reporting frequency:** Whenever necessary or on request the WG chair reports on committee plans and activities at the CARLI Board meetings and thereafter will report back to the group's committee. The WG Chair will submit a written annual report of the committee's activities to the CARLI Board for the fiscal year.

- **Coordination:** The chairs of each of these groups meet, at least twice a year, to share what their groups are discussing or will have discussed, in order to reduce duplicative efforts and identify opportunities for collaboration.

- **Staff or Board liaisons:** Each of the WG has one CARLI Office staff representative that serves as the liaison.

- **Tasks required on completion of work:** Recommendations for new or enhanced CARLI products, services and programs for each WG are sent to the PSVC or the CPPC. Each of the WG chairs forwards other documents dealing with staffing, policy, and budget issues to the CARLI Board for review and approval.

Types of WG

Collections WG (CWG) provides advice to the CARLI Board on collection development and management within CARLI, management of the collection partnership grants, and advises the CARLI Board about policies and structures for future collection development and collection management projects.

Electronic Resources WG (ERWG) advises the CARLI Board and staff about possible new purchases and renewals of electronic resources; analyzes the budget allocation and makes recommendations to the PSVC; identifies cost effective opportunities through negotiations of brokered resources; develops policies and principles for the negotiation and acquisition of electronic information; and determines appropriate methods for evaluating resources and gathering member feedback. For example an E-resources vendor proposal form is provided online, and the status of selected e-resources is posted on the web.

Preservation WG (PWG) advises the CARLI Board and staff on the consortial aspects of preservation; works with the CARLI Executive Director to develop funding alternatives to establish a preservation program; and gives advice to other CARLI groups on other programs and services to include preservation elements in training, purchase agreements, and collection analysis.

Public Services WG (PSWG) advises the CARLI Board and staff on the consortial aspects of public service issues; identifies issues of critical concern and makes recommendations on how these issues may be addressed through continuing education, best practices, shared tools, etc.

User Groups (UG)

UGs focus on a product operated by the consortium in a shared environment that requires collaborative decision-making; each group has a CARLI staff liaison; and they are assumed to be ongoing. UGs member appointments and terms, reporting

frequency, coordination and CARLI staff liaison terms are similar to WGs. The UGs include digital collections, and I-Share UGs.

Types of User Groups (UG)

Digital Collections UG (DCUG) serves to coordinate the consortial aspects of CARLI's CONTENTdm system, developing best practices and seeking opportunities for consortial collaboration in support of better access to digital collections and better service to users. DCUGs may appoint necessary functional subgroups to assist the CARLI Office in planning education/training workshops, facilitating topical discussions, preparing recommendations concerning specifications, implementation, and ongoing support, and other topics of current need.

I-Share UG (IUG) serves to coordinate the consortium aspects of the I-Share system, developing best practices, and seeking and promoting opportunities for consortial collaboration in support of greater efficiency and better service to member libraries and users. The IUG function teams include:

- **System-related functions** broadly include acquisitions of all formats of materials; cataloging, authority control and metadata creation; maintaining adherence to pertinent standards; creating a sustainable, accessible, easy-to-use and high-performance online public access catalog; enhancing system capacity for search and retrieval of data; delivery of content; and resource sharing.

- **Specific activities of IUG** broadly include preparing recommendations concerning specification, selection, implementation, and ongoing instruction and support for tools and services related to the respective functional areas; facilitating topical discussions by means of face-to-face forums and electronic communications; and assisting the CARLI Office in planning educational and training workshops for the membership.

- **Evaluation and innovations IUGs** participate in the evaluation of broader initiatives and service innovations beyond the consortium and make recommendations for their implementation to benefit I-Share participant libraries and CARLI as a whole.

- **Training** IUGs develop continuing education events like forums and workshops for participating libraries and incorporate elements of pertinent CARLI initiatives

and additional public program recommendations received from the I-Share Teams and I-Share participant libraries.

- **Assessment** IUGs suggest mechanisms to assess consortium operations, and to identify good models, appropriate metrics, and best practices in the consortial efforts.

Task Forces

The Task Force focuses on conducting a clearly defined investigation that furthers the mission or operation of the consortium, and has specific deadlines for reporting to the Board and has established sunset dates. No formal liaisons from Board or staff are required, but they may be appointed, as needed. At the time of writing this thesis, CARLI task forces included Strengthening CARLI Structure & Governance Task Force, Collections Enhancement Awards Program Evaluation Task Force, Resource Sharing Code Revision Task Force, and SFX Forum Planning Task Force.

Interest Groups

Interest Groups function primarily as listservs/ communication channels with CARLI staff monitoring discussions which focus on areas of common interest, like a product or service, subject specialty, or other common interest related to CARLI's mission; Interest Groups too have no formal Board or staff liaisons.

2.2.5 CARLI appointments

2.2.5.1 The Board of Directors

Members of the CARLI Board of Directors are elected to three-year terms by the membership. The Board includes twelve voting members elected by the Governing Member institutions, with three members each representing the public university, community college, and private institution sectors, respectively, and three members elected at large. A thirteenth voting member of the Board is elected by the Associate Members of CARLI, to serve as their representative. There are three ex-officio non-voting members: the CARLI Executive Director, and representatives appointed by the Illinois Board of Higher Education and the Illinois State Library. A nominating committee appointed by the Board of Directors solicits nominations for the four positions each year.

2.2.5.2 The Committees

Appointments to serve on the committees take into account expertise, diversity, commitment to serve, and balance in the composition of the group. Appointments to committees that report to the CARLI Board are made by the Executive Committee. Members of groups that report to other committees or groups, e.g., teams that report to a User Group are appointed by the parent body with approval of the Executive Committee. All committee members are volunteers who are either invited by e-mail through CARLI liaison staff, through the web application form or personal volunteering. Appointment to a CARLI committee is for a three-year term of service. Committee members are eligible for one, three-year reappointment upon the recommendation of the committee chair and the staff liaison, and at the discretion of the Executive Committee.

2.2.6 Policies, guidelines and procedures

CARLI business is conducted with the guidance of CARLI Bylaws (CARLI, 2008, 2006), and other policies and procedures including memoranda of understanding between the CARLI Board and the Board of Trustees of the host institution (CARLI, 2005), the Illinet Interlibrary Loan Code (Illinet, 2000), (CARLI, 2005), I-Share Library Resource Sharing Code (CARLI, 2006), Digital Collections Collection Development Policy (CARLI, 2007), Guidelines for CARLI Committee Chairs and Members (CARLI, 2008), CARLI Digital Collections Agreement, E-resources Agreements, Prerequisites For Publishing A Collection In CARLI Digital Collections, and Required Metadata Fields For Collections In CARLI Digital Collections.

2.2.7 Staffing

According to the CARLI organizational chart, CARLI operations are managed by the CARLI Executive Director and Assistant Vice President for Planning and Budgeting with the support of the Director of Administration and Planning, an Administrative Assistant and six CARLI service units. In total there are 28 staff (Dec. 2009).

2.2.7.1 CARLI Service Units

There are six CARLI service units each with a head called a director of that unit and other officers that support the unit. These include

- Business & Finance Services: Chief Financial Officer, Secretary, Administrative Assistant, Delivery Program Administrator/Accountant, and Account Technician I

- Communications: Assistant Director, CARLI Communications, Webmaster

- Collection Services: Director, and CARLI Collections Services

- E-Resources: Director, CARLI Electronic Resources, and Program Coordinator

- Systems Services: Associate Director CARLI System Services, two Senior Research Programmer, two Application Support Specialist, Research Programmer, Database Specialist, and Application Support Specialist, and

- User Services: Director CARLI User Services, seven Library Systems Coordinators, and Associate Director CARLI Date Services.

2.2.7.2 Staff and Membership Communication

CARLI maintains effective methods of communicating to its members through CARLI Blog, Wiki, twitter, online Newsletter, Webpage, e-mail, telephone, and minutes and reports of CARLI Board of Directors, committees, user groups and task forces, and staff. All these services are available online for CARLI members to choose from. CARLI also maintains both a staff directory and telephone directory available online.

2.2.8 Services and products

2.2.8.1 I-Share

I-Share is an integrated library system that now serves as the online catalog for 76 CARLI member libraries. I-Share runs on the "Voyager" software from The ExLibris Group and provides participating libraries with an online catalog of their own collection as well as a merged, union catalog of the holdings of all I-Share libraries. I-Share also supports library collection management functions including circulation, cataloging, acquisitions, serials control, course reserves, and reporting.

One of the key features of I-Share is its support for resource sharing among participating libraries. I-Share member libraries agree to share their resources with other I-Share libraries. Items not available at the local library can be located and borrowed from other I-Share libraries. Requested items are sent from the lending library to the borrower's library. Additionally, I-Share's reciprocal borrowing policy allows people who

are registered borrowers at an I-Share library to visit any other I-Share library and borrow items onsite.

I-Share employs the Voyager components "Universal Catalog" and "Universal Borrowing" to provide library users the ability to locate and request materials from any I-Share library, and to provide librarians with a shared source of cataloging data.

2.2.8.2 VuFind

VuFind is an open source system; a library resource portal designed and developed for libraries by libraries. The goal of VuFind is to enable library users to search and browse through all of the library's resources. The VuFind features include all OPAC features: Catalog Records, Locally Cached Journals, Digital Library Items, Institutional Repository, Institutional Bibliography, Other Library Collections and Resources.

2.2.8.3 CONTENTdm

CONTENTdm is a software package used by CARLI to store and provide access to digital versions of primary source materials. CONTENTdm provides a means of making a wide variety of media types including images, journals, books, audio and video files, maps, and newspapers accessible for search and display on a typical personal computer with an Internet connection and a web browser. CARLI offers different options for use of CONTENTdm for its membership. If you simply want to view materials purchased by the CARLI consortium or view collections created by other CARLI libraries, you can search the CARLI Digital Collections on the CARLI CONTENTdm server; CARLI Governing Member libraries that want to contribute content but have CARLI host their content on a CARLI-managed server, can opt to add collections to the CARLI Digital Collections; CARLI Associate or Governing Member libraries that want to manage their own digital library server can opt to purchase the software under the pricing terms of the agreement between CARLI and OCLC and install CONTENTdm on their own server. CARLI maintains the server and software, stores the content, and backs up the data. CARLI staffs conduct basic training sessions that introduce CONTENTdm to participating libraries.

2.2.8.4 Illinois Library Delivery Service (ILDS)

The ILDS is a courier service that transports library materials between participating Illinois academic and research libraries to support interlibrary resource sharing in the state of Illinois. ILDS serves CARLI Governing and Associate members. ILDS is managed by CARLI, in cooperation with the Illinois State Library. ILDS libraries receive communications about ILDS from CARLI and any service questions are sent to CARLI through an e-mail: support@carli.illinois.edu. Trucking of ILDS materials is done by a commercial delivery service firm. Funding from the Illinois State Library covers the cost of providing one delivery location to each CARLI Governing and Associate member and to the regional library systems' headquarters, and a portion of the cost of the ILDS reusable delivery bags. Libraries will need to pay for office supplies (their computer, printer, paper, and zip ties for bags) needed to support their use of ILDS. Every ILDS location receives delivery and pickup service Monday through Friday, except for announced holidays. The ILDS vehicle visits participating libraries every day; libraries do not call for pickup. ILDS delivery locations can inform the ILDS program coordinator about planned closure dates when delivery service is not required. Emergency closures may also be reported to the ILDS program coordinator as the situation permits. The overall turnaround time for an interlibrary loan transaction is typically longer than 24 hours as it takes libraries time to retrieve and process the material, and for the material to reach the patron. ILDS is intended for sending library-owned materials between libraries to fulfill interlibrary resource sharing requests including books and journals, photocopies in envelopes, recordings, maps, and audio-visual materials. It is also possible to redirect surplus ILDS bags or to receive additional ILDS bags through the ILDS system. ILDS is not used to send correspondence including library notices like overdue notices, office supplies, furniture, computer equipment, perishables, correspondence between library staff, or inter-campus mail between branches of an institution.

2.2.8.5 Electronic Resources program

The foundation for the CARLI Electronic Resources program is provided through the CARLI Electronic Resources Licensing Principles which guide CARLI's efforts in negotiating with publishers and vendors for a wide variety of electronic content on

behalf of the membership. CARLI E-Resources program goals include reducing e-resource costs for members, increasing the breadth and coverage of collections, and purchasing materials of lasting value for members. All CARLI members are eligible to participate in the database brokering program but may incur additional service fees depending upon their membership level. Governing and Associate members come with full participation with no service fees or restrictions; Basic members contribute a service fee of $50 per database selected; and Non-members are ineligible to participate in the database brokering program.

2.2.8.6 Collection management

CARLI initiates library cooperative collection development programs to meet the diverse information needs of faculty, students, and other library users in Illinois in order to make the best use of its resources. These include CARLI Book Digitization Initiative started for optimal access to and preservation of unique materials in Illinois. Last Copy Pilot Project allows any CARLI library that seeks to withdraw a "last copy" to donate it to a library that will retain the title for resource sharing in Illinois. The Collections Enhancement Awards Program and the CARLI/OCA Book Digitization Initiative expand collections and access to information resources throughout the state of Illinois. These provide guidance and funding for cooperative collection development; and preservation where CARLI develops resources and training for CARLI member libraries to provide guidance on both curatorial and preservation matters for collections.

2.2.8.7 SFX

SFX is a link resolver that sits between a "source," where a user begins the search process, and a "target," where the user goes next. CARLI provides support for the software acquisition, installation, and training of library staff who train their users later. The "source" might be an abstracting and indexing database, an A-Z list of journal titles, an OPAC, or a footnote in an electronic full text article. If the source system can build a standards-compliant OpenURL containing metadata (typically bibliographic citation information) about the "object" the user is interested in, then a link resolver like SFX can generate a list (or menu) of relevant targets. Targets might be the electronic full text of the cited article (perhaps available from a provider other than the source where the user found the citation), or a document delivery request form, or a web-based

service that will automatically reformat a bibliographic citation according to a specified style manual, suitable for pasting into the user's bibliography.

2.2.8.8 WebFeat

WebFeat is a federated search engine that can search any or all of a library's databases simultaneously with a single interface. WebFeat can search any database, including licensed databases, free databases, catalogs, Z39.50, Telnet, or proprietary databases.

2.2.8.9 Program Awards

There are three program awards within CARLI. These include

1. Access & Analysis Awards which enhance bibliographic access to current collections or analyze current collection strengths and weaknesses

2. The Collections Enhancement Awards Program and the CARLI/OCA Book Digitization Initiative which works to expand collections and access to information resources throughout the state of Illinois, providing guidance and funding for cooperative collection development; and

3. Collaborative Digitization / Collection Partnerships for collaborative digitization projects.

CHAPTER 3
METHODOLOGY

3.1 Introduction

This chapter discusses the methods that have been used in the collection and analysis of data to answer the primary and secondary research questions of the study. It explains the research design, sampling techniques and data collection methods used; and describes how data collected from the research has been analyzed. Both qualitative and quantitative research methods have been used in carrying out this research. However, the overall approach will be qualitative because qualitative methods focus on the experiences of people involved, and attempt to understand the reasons behind certain behavior description (Taole, 2008). The evaluation has been carried out using three systems of data collection techniques, literature review, interviews and questionnaires. The literature review and interviews are used to collect qualitative data while questionnaires are used to collect both qualitative and quantitative data; thus the two will complement each other.

3.2 Literature search

An extensive literature review and analysis on library collaborations in Africa and Uganda, as well as a detailed summary of the literature concerning CARLI, has been presented in chapter 2. The principal sources of this information include: the official web pages of universities and organizations under analysis; published literature in textbooks and journals both electronic and print; and reports and minutes of the involved organizations. However, some of the review of library collaborations in Africa and Uganda is derived from my own experience as an outreach librarian at Makerere University Library.

3.3 Research design

According to Yin (1994: 19) as stated in Taole 2008, a research design is a plan that guides the investigator in the process of collecting, analyzing and interpreting observations. It is a logical model of proof that allows the researcher to draw inferences concerning causal relations among the variables under investigation (Taole, 2008). The research design covers sampling techniques as well as the data collection methods that are used in this research. The areas of interest include scope, rationale, and history of

CARLI; types of information resources shared among CARLI; policies and procedures in place; organizational structure of CARLI; leadership, role and responsibility of CARLI; membership types and scale of institutions; structure of both public and private academic, community and research institutions; expectation of CARLI and its membership in the consortium; source of funding to CARLI; relationship of CARLI to government and UIUC as a coordinating institution; challenges faced by CARLI in carrying out its activities; and membership and CARLI staff perception of funding compared to other factors as a source of CARLI's success. The list was modified to include emerging issues from the survey feedback which were investigated further during the interview process.

3.4 Target groups

3.4.1 Introduction

The main focus of this study was CARLI staff and Directors of CARLI member institutions that carry out the day-to-day CARLI activities. The chosen criteria used in selecting the broader category of respondents was aimed at critically identifying such factors that have kept CARLI vibrant, trusted by its membership and achieving all its successes, and what has been the contribution of its membership to CARLI. The following measures were used in choosing the respondents for the survey and interview.

1. The library/ institutional type and enrollment
2. CARLI membership category
3. Directors of the libraries
4. CARLI staff

3.4.2 Library/ institutional type

There are five library types which were considered in this research, including public university libraries, private university libraries, community college libraries, private college libraries, and research libraries.

According to Illinois Board of Higher Education (IBHE) (Sept. 2009), there are 9 public universities on 12 campuses, 48 community colleges, 97 independent not-for-profit colleges and universities, and 35 independent for-profit institutions. This gives a total of 189 institutions of higher learning in the State of Illinois. Generally the enrollment

in public universities, a few independent private universities, and community colleges is far greater than the enrollment in independent private colleges.

Public institutions are expected to participate in CARLI more than private institutions; and the size of each institution determines the type of service from which it will benefit. For example public university libraries offer a wide range of subjects and have big enrollment and therefore they subscribe to more CARLI services compared to a small private college.

3.4.3 CARLI membership categories

CARLI has 153 members in three membership categories: 107 are governing, 30 are associate, and 16 are basic in the fall of 2009. CARLI member libraries serve over 98% of Illinois higher education students, faculty and staff. The research targeted all 3 membership categories because there are different policies and procedures, and benefits that each member category is entitled to.

3.4.4 Library directors

Directors of CARLI member libraries were chosen as respondents to the survey because according to the CARLI Service Evaluation Survey Final Report (May, 2007), directors or other administrators are more likely to be aware of CARLI services than those in other library positions. The survey was e-mailed directly to the directors who filled it out and returned it back to the researcher.

3.4.5 CARLI staff

CARLI has six service units with 28 fulltime staff. The Executive director and the three directors of the six service units were interviewed to provide in-depth details of the functions and activities carried out in a consortium. The service units chosen for interviews were: business and finance, electronic resources, and user services.

I am grateful to my respondents for they were able to provide the required data for this research.

3.5 Sampling techniques

Given the diversity in membership categories, historical consortium membership background, institutional subject specialization and interests of the participating libraries, and the geographical distance between the institutions, each has unique expectations and benefits from CARLI. Tapping into such diversity helped the

researcher to take care of all the divergent views of the member libraries. The researcher interviewed four CARLI executive members, and received questionnaire feedback from 67 (44%) of the 153 directors of member libraries including 60 (56%) of 107 Governing, 4 (13%) of 30 Associate, and 3 (18%) of 16 Basic members.

3.6 Data collection methods

I used a multi-strategy approach called 'triangulation' to collect data because it allows the use of more than one method or source to collect data in a study of a social phenomenon so that findings may be cross-checked (Taole, 2008). The methods which have been applied in this study are literature review, questionnaires and interviews.

3.6.1 Document analysis

The research process started with and was guided by an extensive literature review and analysis on library collaboration in Africa and Uganda in particular, CARLI, CUUL and other stakeholders in this study. The process of collecting and analyzing the literature started in April 2009. I thoroughly analyzed the documents generated by the organizations in question which included websites, reports and minutes of meetings, newsletters, and brochures.

The CARLI website, newsletter, previous studies and reports provided a basis for understanding the history of CARLI, its establishment and the overall performance of the consortium. The availability of vital information about CARLI on their website facilitated the smooth progress of this research. The available CARLI literature was used in the development of the questionnaire that was used to collect the data for this study.

3.6.2 Questionnaires

Using the available documentation on CARLI, CARLI staff, and guidance from my thesis advisor, in September 2009, eleven questions were developed on which the respondents were asked to provide feedback. Out of the 11 questions 9 were multi-choice, and 2 were open-ended. The multi-choice questions allowed a wide coverage of topics, and saved time for the respondents since each questionnaire was estimated to take less than 10 minutes of their time; while the open-ended questions helped to gather more divergent views that were missed in the 9 multi-choice questions. To increase ease of answering the multi-choice questions, the questionnaire was designed

in a form format. To avoid missing data, respondents losing interest, and low response rate, the questions were short, clear and unambiguous. A brief explanation of the aims and objectives of the research, including the researcher's biography, was provided and preceded the questions.

In November, 2009, after the approval of the research instruments by the Institutional Review Board (IRB) of the University of Illinois at Urbana-Champaign, the questionnaire was pre-tested to clarify any anomalies that may cause misrepresentation among the respondents. Pre-testing was done with CARLI staff and friends. This helped to identify questions that would make respondents uncomfortable, questions that might be misunderstood, and to determine the flow of the questions. On January 20th, 2010 the questionnaire as well as the survey consent form was sent out to the CARLI member library directors by e-mail. Subsequent reminders were sent on February 9th and 16th respectively. The questionnaire is attached as Appendix B.

3.6.3 Interview

To provide more insight and understanding of how CARLI works, on 25th February, 2010 at the CARLI office in Champaign, a formal interview was conducted between the researcher and CARLI staff. A formal interview guide was designed with guidance from my thesis advisor, which was presented and accepted by the IRB office on November 25, 2009. (See Appendices C and D) Although the interview followed a formal guide, the respondents were given the opportunity to express their views independently and were probed further through questions that arose from the discussion. For their protection and privacy, an interview consent form was signed that outlined the usage of the data collected. The interviews were audio recorded and notes were taken to enable further analysis and interpretation without losing details.

3.7 Issues relating to data quality

As mentioned by Taole (2008), reliability and validity are two main criteria for determining data quality where validity presumes reliability, that is, if a measure is not reliable, it cannot be valid.

3.7.1 Reliability

In order to maintain reliability in the study, the researcher administered the same type of questionnaire to all the subjects, that is, all CARLI members who participated in this research were given the same type of questions with the same type of wording thus carrying the same meaning to all. The assumption here is that all the respondents will have the same interpretation of the questions; however, the researcher made sure that all the questions were constructed in the English language so as to be easily read and understood by all subjects.

3.7.2 Validity

As mentioned by Taole (2008) and Gray (2004), an instrument is valid if it measures what it was intended to measure and covers all research issues both in terms of content and detail. The research instruments have been designed to obtain both validity and reliability, using the following steps:

- The researcher made an extensive analysis of the literature and research that has been published by and on both CARLI, African and Ugandan libraries in relation to consortia, and CUUL in order to get more details of how much emphasis was required to address the issues in this research

- The use of both interviews and questionnaires along with the already existing CARLI reports and research by and about consortia in both developed and developing countries provided greater confidence in the findings by combining the strength of different data collection methods and sources.

- The research instruments were pre-tested using a sample of respondents to ensure that they cover the research questions in terms of content and details (Taole, 2008)

- The questionnaire and interview were concise and clear to increase the response rate, and to avoid ambiguity and waste of respondents' time.

- Awareness about the research and its goals were made to the respondents through the following: consecutive planning meetings with CARLI staff; a brief presentation to library directors of CARLI membership during their member meeting on October 30th, 2009; and CARLI newsletter. In addition the consent form contained a brief note on the aims of the research, and rights and privacy of the respondents. This positively

influenced both the relevance and usefulness of the information collected. (See Appendix A)

- Neither personal nor institutional data was collected concerning the respondents and their respective institutions and this encouraged freedom of expression and allowed sharing both positive and negative experiences in their work with CARLI.

- A selected sample of CARLI staff was interviewed to gain more information, which may not have been obtained from the questionnaire and literature alone. Interviewees helped probe further and gave more specific answers and were asked to elaborate on issues not otherwise discussed.

3.8 Data analysis and interpretation

Data analysis involves a process of thorough examination and interpretation; a process of resolving data into its constituent components, to reveal its characteristic elements and structure. By analyzing and interpreting data, I made sense of the information collected. This study collected both qualitative and quantitative data, and therefore, data was analyzed according to its type.

My data collection and analysis was done sequentially with preliminary data analyzed from reports and committee minutes which helped in informing future data collection. The interview and questionnaire transcripts were central in my data analysis. Data analysis required reading and re-reading; and listening and re-listening to highlight and label important, descriptive and informative issues that emerged for sorting and categorization. In the data I looked at issues that have led to the success of CARLI, issues that relate to Uganda's setting and how challenges have been handled. The ultimate goal was to identify factors that have led to the success of CARLI and how such factors can be applied to Uganda's setting.

3.9 Protection of the subjects

In keeping with the university regulations, I submitted and received approval from UIUC, IRB office to carry out this research as included in Appendix E.