

**A COMPARISON OF RESEARCH AND PUBLICATION PATTERNS AND
OUTPUT AMONG ACADEMIC LIBRARIANS IN EASTERN AND SOUTHERN
AFRICA BETWEEN 1990 TO 2006**

BY

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**Submitted to the Department of Library and Information Science
For the Award of
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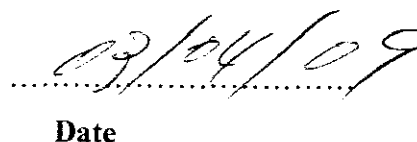
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Grace C. Sitienei

DECLARATION

I wish to declare that this thesis, “ A Comparison of Research and Publication Patterns and Output among Academic Librarians in Eastern and Southern Africa between 1990 to 2006”, is my original work and has not been presented for a degree in any other university and that all sources used in this work have been acknowledged by citations.



Grace C. Sitienei


Supervisor
Date

DEDICATION

I dedicate this work to my son Ira Kiprop, my father and mum, George and Elizabeth Sitienei, and my brother Benard Kitur for their support and patience while I was away from them.

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LIST OF ABBREVIATION AND ACRONYMS

CD-ROM	Compact Disc Read Only Memory
C&RL	College & Research Librarianship
CSIR	Council for Scientific and Industrial Research
HRSC	Human Science Research Council
JAL	Journal of Academic Librarianship
LIS	Library and Information Science
LISTA	Library and Information Science Technology Abstract
MRC	Medical Research Council
OPAC	Online Public Access Catalogue
OUT	Open University of Tanzania
RP	Relative performance
SCI	Science Citation Index
SSCI	Social Sciences Citation Index
SDI	Selective Dissemination of Information
SABINET	Southern Africa Bibliographic Network
UNESCO	United Nation Educational Scientific and Cultural Organization
USSR	Union of Socialist Soviet Republics
WORLDCAT	World Catalogue Database

ABSTRACT

Different categories of people who may be scholars, lectures, students, retirees, housewives, politicians, administrators etc. use the library to access the information they require to pass exams, make decisions or read for leisure. Academic libraries are most important to all scholars and students who pass through a university. For these libraries to continue striving and provide effective services, research is required to improve on areas that are not viable to users. The professional academic librarian is mandated to provide guidance on how these services can be improved in order to make the library useful to all. This cannot be possible if the academic librarians only concentrate on shelving, acquisition, classification, cataloguing, charging and discharging and processing of information materials. The role of academic librarians has continued and will continue to change as time goes on. Many academic librarians provide research assistance to their users and other vital services to facilitate the completion of their client's research. However, it is significant to note that academic librarians must engage in research and publish, in order to improve services and attract more users to the library. Payne and Payne (2004: 9) highlights that there are two main reasons why people carry out research. One among others is because there is an intellectual challenge and the urge to fill a gap in our knowledge, or believe that current accepted theories should be tested. A second reason is that we want to change the world.

Academic librarians need to be provided with incentives such as funding, promotions, and time out in order to entice them to carry out research. This study was carried out with an idea that academic librarians should carry out research and publish, for development and for the improvement of library services. Academic librarians holding a bachelors degree and above, who were working in public universities in Eastern and Southern Africa were targeted for the study. The purpose of this research was to compare the research and publication patterns of academic librarians working in Eastern and Southern Africa from 1990 to 2006. Six objectives were formulated in order to achieve this purpose.

The research was purely carried out online, 866 academic librarians names were retrieved from a total of 47 Public university libraries WebPages, via the universities websites. These names were used as access points to retrieve data from the two online databases (i.e. LISTA and WORLDCAT).

Bibliometrics was used as research method, Microsoft Excel software was also employed for the purpose of data analysis and presentation of the collected data. Findings indicated that Southern Africa was the most prolific region with 194 (74.00%) of the publications emanating from there. South Africa was the most productive country in Southern Africa with 111(42.21%) publications. Tanzania was the most productive country in Eastern Africa with 31 (11.41%). Muswazi and Pienaar were the most prolific academic librarians with 11(3.97%) publications each. Most productive academic library was from Southern Africa, which was Botswana with 31 (11.41%) publications. Majority of the academic librarians from both regions contributed to one publication. The study was concluded with the following observation being made: Overall South Africa emerged the most prolific country in both regions; majority of the countries from both regions were not consistent in their publication production; there was a continuous rises and drops in research publication from 1990 to 2006; and academic librarians preferred publishing articles than any other publications, many academic librarians did not engage in research and academic librarians, from the two regions prefer publishing individually. The study further recommended several studies that needed to be carried out in Africa and other parts of the world in order to fill and clarify gaps that emanated from the study.

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction and conceptual framework

The term ‘research’ has been defined in many ways by a number of authors, and of these the simplest is perhaps Neuman’s (2006:2) assertion that it is a way of going about finding answers to questions. Leedy in Aina (2002:1) goes further to state that research *“is the manner in which we attempt to solve problems in a systematic effort to push the frontiers of human ignorance or confirm the validity of the solutions to problems others have presumably solved.”*

Research therefore has significant personal, sociological and economic benefits in fields such as medicine, agriculture, business, the military, law, commerce and academics. Goddard and Melville (2001:1) believe that without research, we would be nude, homeless and penniless, because everything we know now had to be discovered by someone at some point in time. In terms of personal growth or development, Houghton in Career Focus (2006, par.1) cited research as a key player in helping individuals achieve the career of their dreams, while the editor of The Sowetan (2008) more generally wrote an article entitled and explaining why *Research is the key to success*. In addition, Aceto (2005, what are the benefits of research to a university? section, par.1) states that the career benefits of research are countless, ranging from an increased ability to attract highly qualified and motivated members of staff (both nationally and internationally), to having a greater advantage over competitors in gaining and maintaining research funds, better chances of ‘rubbing shoulders’ with the very best, and creating a more stimulating working environment for all involved. Research is carried out all over the world and in all sectors of society. Goddard and Melville (2001:3) reveal that in South Africa, the southern – most country in Africa, research is carried out in all sectors of the economy (cultural scientific, medical etc.) in institutions such as museums, universities, technikons, industry research laboratories, and councils such as CSIR, HSRC, MRC and various state departments. Because of the significance attached to

research and publication in all sectors of the various institutions, academic librarians in public universities should also be expected to carry out research. It may be surprising to most to hear of librarians engaging in research, because people generally believe that librarians confine themselves to shelving, checking books in and out, and classifying and cataloguing books in the library. But Verzosa (2007) believes that it is very important for librarians to engage in research as this adds value to librarianship. She laments that research in librarianship particularly within the Philippines is disappointing and though it is evident that there is an abundance of well educated, well trained professionals, there is an unfortunate shortage of research-oriented librarians. The same may or may not apply to academic librarians in Africa. Research and research publications compliment each other, meaning that academic librarians should not only engage in research, but also publish the outcome of their research in order for others to gain access.

The DEST HERDC Specification for the collection of 2006 data (DEST HERDC, 2008, para.1.3.10) defines research publications as books, book chapters, journal articles and/or conference publications that meet the definition of research and are characterized by: substantial scholarly activity, as evidenced by the discussion of the relevant literature - an awareness of the history and antecedents of the work described a format(in terms of presentation) that allows a reader to trace the sources of the work, through citations and footnotes; originality, portrayed by not being a compilation of existing works; content that increases the stock of knowledge; a form that enables the dissemination of knowledge; and attempts to improve the quality of publications.

The Royal society of New Zealand (RSNZ, n.d.para.1) website adds that research publications must i) maintain scientific self respect; ii) complete the scientific process; ii) be a clear measure of productivity; iv) promote the sense of a scientific community, and; iv) preserve knowledge.

1.2 Definition, roles, objectives and purpose of academic libraries

Prytherch (2000:3) defines academic libraries as libraries in an educational establishment at any level, i.e. universities, colleges, research associations, etc. The term is less associated with school libraries. The objectives of academic libraries are to serve the needs of the academic community (staff and students); provide study areas for users; provide a lending service appropriate to different types of users; and provide an active information service (and this may extend beyond the institution to local industry and commerce). Peters (1999:27) observes that academic libraries document and cater for advancement in educational and research disciplines that are of great interest to an institution by providing a freely available and readily accessible service. This facilitates promotion and tenure, research funding and professional opportunities, which are closely linked to an individual's publication record. Academic libraries are also repositories of ideas that provide a durable true base upon, which subsequent generations of scholars can build and in so doing, create knowledge or technology that opens new possibilities of discovery. They further guarantee the survival of knowledge beyond one generation by providing a shared collection that is difficult to destroy. This knowledge survival ensures that a culture is grounded and spares a society the cost and effort of recreating techniques and reinventing technology. Peters (1999:27) concludes that academic libraries contribute towards a culture by providing a locus for research, new ideas, lecture series and a host of exhibits and exhibitions.

1.3 Problem statement

Onyancha (2007; 95) reveals that there is general belief in Africa that not much is presently known about the nature of research and publication patterns by academic librarians. The purpose of this study is to establish and compare the research and publication patterns of academic librarians within two regions in Africa. An academic librarian supports members of an academic community, such as students, researchers and teaching staff by managing, organizing, evaluating and disseminating the information they need. Publishing or creating information has not been part of academic librarians' resume. Stover (1996, par.2) believes that it is vital for academic librarians to be involved

in publishing in order to support the scholarly communication process. Gregory and Medford (2006, par.1) maintain that academic librarians would also benefit a great deal from publishing because it allows them to maintain their faculty status, obtain promotions, and gives them the opportunity to add to the body of knowledge that goes into creating our literature. Bahr and Zemon (2000: 411), and Hart (1996: 455) have observed that academic librarians in the West publish a lot, and in some institutions, publication is actually a requirement for promotion. In order for academic librarians to carry out research, financial support, designated time to do research and rewards for completing research in time should be provided as incentives that entice librarians to continue with research, and compel others to begin.

1.4 Aim of the study

The overall aim of this study was to compare the publication patterns and output of academic librarians working in Eastern and Southern African public universities¹ between 1990 and 2006.

1.5 Research Objectives

The main objectives of the study were as follows:

- To examine what academic librarians publish;
- To establish why academic librarians publish;
- To study the publication trends of academic librarians;
- To establish in which journals academic librarians publish;
- To determine the nature of collaboration; and
- To compare the number of publications produced.

Public universities are Institutions of higher education that are funded by public means through a national overnment

1.6 Research Questions

The following research questions were posed;

- What do academic librarians publish?
- Why should academic librarians publish?
- What is the publishing trend of academic librarians?
- Which journal do academic librarians publish?
- Do academic librarians collaborate?
- How much do academic librarians publish?

1.7 Significance of the study

It was hoped that the following organizations and individuals might find this study useful to them: i) policy makers and research funding institutions, such as the University of Zululand, and library associations in Eastern and Southern Africa, who would see the need to provide funding, skills and equipment to librarians wishing to publish ii) journal publishers, who would benefit by publishing this study iii) the researcher to attain a masters degree; iv) librarians, as it would help them identify other researchers within the African region with whom they could collaborate in research; and v) employers, who could use this study to identify the best librarian candidates for recruitment in the field of research (both in terms of the qualities that they possess, and in identifying existing top researchers).

1.8 Scope of the study

The study focused on public academic libraries found in the Eastern and Southern regions of Africa. In Eastern Africa, it covered Ethiopia, Kenya, Tanzania, Somalia, Sudan and Uganda. Countries covered in Southern Africa were: Botswana, Malawi, Lesotho, Namibia, South Africa, The Kingdom of Swaziland, Zambia and Zimbabwe. The researcher selected these two regions because she hails from Eastern Africa and is also a

student in Southern Africa. The researcher was curious as to the publication strength and output of the regions. Rwanda, Burundi, Eritrea and Djibouti (Eastern Africa) and Angola, Mozambique (in Southern Africa) were excluded from the study because names of their academic librarians were not available.

The choice of these two databases was also largely based on their availability. The researcher found that individual subscription to a database was not financially viable. Fortunately, the University of Zululand - where this study was carried out - subscribes and provides the databases free to its students at the library. The databases are available through the Library of the University of Zululand's OPAC and the university's library websites on the Internet.

1.9 Literature review

Neuman (2006:111) states that a literature review is based on the assumption that knowledge accumulates, and that we learn from and build on what others have done. Scientific research is a collaborative effort involving many researchers who share their results with others and pursue knowledge as a community. For the purposes of this study, literature was thoroughly reviewed from sources such as books, journals, conference papers, research publications, the Internet and other sources (see chapter two for detailed information).

1.10 Research method

The study opted for bibliometrics as a research method. Karolinska Institutet Bibliometrics Project Group (2006, para.1) defines it as the application of mathematical and statistical methods to publication, and that it is often used to evaluate scientific research through quantitative studies on research publications. Wyllys (2003, Bibliometrics and cybermetrics Section, para.2) describes it as one of a few research methods used in Library and Information Science.

Diodato (1994: ix) notes that informetrics is sometimes used synonymously with bibliometrics. However, the latter examines patterns that show up not only in publications, but also in many aspects of life. Informetrics can generally be viewed as that which includes bibliometrics and all of scientometrics. On the other hand, scientometrics applies bibliometric techniques to science. ‘Science’ refers to physical and natural science and mathematics, but doesn’t include social science. Scientometrics goes beyond usual bibliometric techniques. For example, it may examine development and even go so far as to include political sciences. It can compare science research policies from country to country and/or the amount of scientists in each country. Cybermetrics and webometrics are two terms that have recently emerged in the field of Library and Information Science. The two terms are related to bibliometrics, scientometrics and informetrics. However, cybermetrics seeks to investigate the quantitative aspects of the Internet, while webometrics investigates and answers information-related questions concerning the Web, such as how big the Web is, what the “average page” is like, how richly connected the Web is, etc (refer to chapter two the section on conceptual framework for more information) .

1.11 Organization of the report

The report was organized as follows:

Chapter one provides the background framework of this study. The chapter introduces the study’s conceptual framework; summarizes the definition, roles, objectives and purpose of academic libraries; defines the problem statement, aim, objectives, research questions and the scope and limitations of the study; briefly introduces the literature review research method and work plan used in the study; and provides a definition of terms used in the study and summary of the chapter.

Chapter two reviews literature related to this study. Under a theoretical framework bibliometrics is defined and discussed. Other issues discussed are librametry, informetrics, scientometrics and webometrics; collaboration of authors: the role of

academic librarians; and related studies on publication patterns and output of academic librarians. A summary of the chapter was also provided.

Chapter three: discusses the research methodology used in this study. In this chapter the following issues are addressed: an introduction to the chapter; bibliometrics as a research method; targeted population; study area; sampling; sample frame and sample size; data collection instruments; data collection procedure; data analysis; pilot study; problems encountered: and a summary of the chapter.

Chapter four consists of the data presentation and analysis. The chapter is arranged as follows: an introduction to the chapter: distribution of publication output according to geographical region, country, academic librarians and journals, trend publication output by region from 1990 to 2006; distribution of publication output by subject; distribution of publications by type of document; and the nature of collaboration among academic librarians.

Chapter five discusses the findings of this study, beginning with an introduction to the chapter followed by why academic librarians should publish; most productive countries, academic libraries and academic librarians; application of Lotka's and Bradford's law of scattering; most popular journal/s; research trends in Eastern and Southern Africa; most researched subject; most published type of document; nature of collaboration among academic librarians; and a summary.

Chapter six consists of the recommendations and conclusions of the study.

The bibliography and appendixes (A and B) are provided at the end of this study

.12 Workplan

The International Research Centre (2008, what is a work plan section) define a work plan s a schedule, chart or graph that summarises the different components of a research

project and how they will be implemented in a coherent way within a specific time – span. For this research a workplan had to be prepared and it served as a guide on how to gather the necessary data and compile this thesis. The work plan is provided in the appendix at the end of this report.

1.13 Definition of terms

This study provides the definitions as they exist in *Harrods's librarians' glossary and reference book* by Prytherch, A. (See bibliography for reference).

- 1.13.1 Academic librarians** In this study they are considered professionals who are holders of first degree and above and are working in a university library.
- 1.13.2 Academic libraries** Libraries that are within public universities.
- 1.13.3 Article** A contribution written by one or more persons for publication in a periodical
- 1.13.4 Bibliometrics** It is the discipline of measuring the performance of a researcher, a collection of articles, a journal, a research discipline or an institution. This process involves the 'application of statistical analyses to study patterns of authorship, publication, and literature use.' In this project the word bibliometrics and informetrics are used interchangeably.
- 1.13.5 Electronic journal** A journal whereby the full end product is available on optical disc or over a network or in which all aspects

of preparation, referencing, assembly and distribution are carried out electronically

1.13.6 Electronic publishing The publication and dissemination of information via electronic means, especially using the CD-ROM or networking. Other options include the use of electronic databases, videotext, e-mail and electronic newsletters.

1.14 Summary

This chapter briefly touched on research and the characteristics of a research publication, and denoted the roles, objectives and purpose of academic libraries; problem statement; aim of the study; and the objectives and research questions of the study. Under the scope, the chapter revealed the subject and geographical coverage; limitations that the researcher encountered; databases used to collect data and why they were selected; the period the study covered; and a brief introduction to the literature review and research method used in this study. This was followed by a work plan, definition of terms, and summary of the whole chapter.

The next chapter will provide a literature review on bibliometrics and other related issue.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Bless and Higson-Smith (2000:20) opine that the purpose of a literature review is one or a combination of the following:

- To sharpen and deepen the theoretical framework of the research in question.
- To update the researcher on the latest developments in related areas of research.
- To identify gaps in knowledge, as well as weaknesses in studies already carried out, by establishing what has been done, what hasn't been done, and what needs to be improved.
- To discover connections, contradictions or other relationships between different research results by comparing various investigations.
- To identify variables that should be considered in a given study, as well as those that prove irrelevant. This finding is often achieved by comparing different investigations.
- To examine the definitions used in previous works as well as the characteristics of the population under investigation, with the aim of adopting them in a study. In so doing homogeneity, which enables easier comparison, is obtained in different studies.

However, Bless and Higson-Smith (2000:20) caution that although a literature review is essential, it also carries certain dangers. One may, for example, be influenced by the results of previous research, or may accept without criticism their chosen characteristics and explanations such that one fails to discover new possibilities and observe without bias.

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2.2 Conceptual framework

Healthy Women – Healthy Communities websites (2003, par.1) reveals that there are many different ways to explain a conceptual framework. This site adds that it is a set of logical ideas organized in a way that makes them easy to communicate to others. The BusinessDictionary.com website (2008) defines it as a theoretical structure of assumptions, principles and rules that holds together the ideas comprising a wide concept. This study employed the conceptual framework of bibliometrics/ or informetrics.

2.3 Bibliometrics

As a word, bibliometrics appears to have its roots in “biblio” and “metric” (Sengupta, 1992:76). The term “biblio” is derived from the combined Latin and Greek word “biblion”, which is similar to the word Bybl (os), meaning book. Paper was derived from the word Byblos, a city of Phoenicia noted for its export trade in paper. The word “metrics”, on the other hand, indicates the science of meter, i.e. measurement, and is derived either from the Latin or Greek word “metricus” or “metrikos”, each respectively meaning measurement.

Ikpaahindi (1985: 163) reveals that bibliometrics is a generic term that describes a series of techniques that seek to quantify the process of written communication techniques. The author states that bibliometrics has been used to resolve three issues: i) to identify the most productive authors identifying concepts in science; ii) to identify the fusion and fission of scientific knowledge; and iii) to supplement, not substitute, subjective judgements.

According to Egghe and Rousseau in Hjørland (2007, par.2), bibliometrics emanated from the west from statistical studies of bibliographies. Hjørland (2007, par.1) defines bibliometrics as “book measurements”. The term, according to the author, is used for all kinds of documents (journal articles being the most common). However, measurement

does not lie in the physical properties of these documents, but in the statistical patterns of variables such as authorship, sources, subject, geographical origin and references (citation).

Wallace (1989: 11) believes that bibliometrics [as a discipline] first came into being in the late nineteenth century, arguing that there are works in that century that function as original bibliometric studies. Both Hjørland (2007, par.4) and Ikpaahindi (1985: 163) agree with Wallace that studies done by Cole and Eales in 1917 were truly bibliometrics in nature. The two scholars conducted a statistical analysis of literature of comparative anatomy from 1550 and 1860, and in their report, illustrated the decline of interest and the distribution of literature in and between the subject matter in countries, within periods and according to divisions within the animal world. A further benchmark in the history of bibliometrics was E. Wyndham Hulme's published book of 1923, which was based on the study of *the International Catalogue of Scientific Literature*, where for the first time the term 'statistical bibliography' was introduced (Wallace, 1989:1) Hulme did not agree with Cole and Eales' use of the term 'statistical analysis of literature', and settled for the term 'statistical bibliography' in 1922. The scholar examined a number of bibliometric characteristics of the publications listed in the catalogue and the number of journals produced by each country represented in the list.

Before 1969, bibliometrics was therefore either known as 'statistical bibliography' or had no title at all (Sengupta, 1992:75). This implies that studies done during the first half of the twentieth century were individual efforts by scholars in different fields who did not know of each others work (Wallace, 1989:11). But this all changed when the term 'bibliometrics' was finally coined by Pritchard in 1969. The author argue that although Pritchard coined the term, and despite it being quickly accepted, the content of the term continued to disturb him. Pritchard hadn't agreed with Hulme's use of the term 'statistical bibliography' because he thought the term was clumsy and could be confused with statistics or bibliography. Pritchard then suggested the term bibliometrics, stressing that the term was more straightforward. He was optimistic that bibliometrics "*would be used explicitly in all studies which sought to quantify the process of written communication,*

and would quickly gain acceptance in the field of information science." Pritchard's optimism bore fruit, because according to Sengupta (1992: 78), the development of bibliometrics as a subject has since grown tremendously as a distinctive research area. As for Pritchard, he may have finally been satisfied in 1972, when he defined bibliometrics as the *"metrology of the information transfer process... its purpose is analysis and control of the process"* (Sengupta, 1992: 77). Ikpaahindi (1985: 163) and Hjørland (2007: par.3) state that this definition refers to the application of mathematical and statistical methods to books and other media of communication.

In 1978 Nicholas and Richie stressed that the scope of bibliometrics was *"...to provide information about the structure of knowledge, and how it would be communicated"* (Sengupta, 1992: 77). The two scholars divided bibliometrics into two groups, i.e. descriptive bibliography, which describes the characteristics or features of literature, and behavioral bibliography, which examines the relationships formed between components of literature (e.g. citation studies). Sengupta reveals that in contrast a scholar by the name of Rolland Stevens considered bibliometrics to be a quantitative science and divided it into two basic categories, i.e. descriptive bibliography, which is used to examine authors' productivity; and evaluative bibliography, which is used to count the use in literature of a specific topic, subject or discipline. The author argues that a measurement is *"the common theme throughout the definition and purpose of bibliometrics"* and that *"the thing we are measuring when carrying out a bibliometric study are the process variables in the information transfer process"*. Following this, more specific definitions of bibliometrics were formulated, such as The British Standard Institution's assertion that it is the *"quantitative analysis of the bibliographic feature of a body of literature"* and Dorothy Hertzell's definition of bibliometrics as *"the science of recorded discourse which uses specific methodologies, mathematics and science, in its research in a controlled study of communication. It is the body of literature, a bibliography quantitatively or numerically or statistically analyzed"*.

Herubel (1999: 380) sums up the definition of bibliometrics as *"as a quantitative analysis of publications for the purpose of ascertaining specific kind of phenomenon"*.

Rousseau (1990) summarized the early historical development of bibliometrics in a chronological manner and referred to it as the *Timeline of bibliometrics*. This timeline is provided in Table 1.

Table 1: Timeline of bibliometrics by Rousseau

YEAR	OUTSTANDING EVENTS
1913	Auerbach finds hyperbolic relation between the rank and size of German cities (what is currently called Zipf's law)
1916	Hyperbolic nature of word use (Zipf's law) - J.B. Estoup
1917	"The history of comparative anatomy" - publication counts and graphical representation - F.J.Cole and Nellie Eales
1922	The term "Statistical bibliography" - Wyndham Hulme
1922	Dresden's work on the publications of the Chicago section (mathematics)
1926	Lotka's law "Frequency distribution of scientific productivity"
1927	Citation analysis : Gross and Gross
1928	Hyperbolic nature of word use: Condon
1929	Zipf's Ph.D.Thesis
1932	Selected studies of the principle of relative frequency (Chinese) - Zipf
1934	Sources of information on specific subjects: Bradford's law
1934	Paul Otlet uses the term bibliometrie in his <i>Traite de Documentation</i>
1935	"The psychobiology of language; first clear formulation of Zipf's law" by Zipf
1936	Journal-to-journal cross-citation network: Husley Carson and Marcella Lubotsky
1948	Characteristics of the literature of chemistry and physics; use of "key journals" - Herman Fussler
1948	A mathematical theory of communication : Claude Shannon
1948	Term librametrics proposed by Ranganathan

1949	Zipf - Human behavior and the principle of least effort
1954	Mandelbrot: Structure formelle des texts et communication
1955	“ Citation indexes for science” - Garfield
1956	Bibliographic coupling idea - Fano
1960	Index of realized research potential - Raisig
1961-1965	Bibliographic coupling - Kessler
1963	Science Citation Index
1963	Little science, big science: Price
1963	Journal impact factor: Garfield & Sher
1964	Goffman: contagion / epidemic idea
1965	“ Networks of scientific papers” : Price
1966	Naukometria = scientometrics : Nalimov
1966-1968	Co- mentioning = co-citation idea: Rosengren
1967	Leimkuhler function
1968	Matthew effect: Merton
1969	“ Statistical Bibliography: an interim bibliography” - Alan Pritchard
1969	The term “ bibliometrics” : Alan Pritchard
1969	Equivalence of bibliometric laws(strongly suggested):Faiththorna
1972	Ortega hypothesis: Coles
1973	Social Science Citation Index
1973	Co- citations: Henry Small + Irina Marshakova
1975	Categories of citations: Moravcsik & Murugesan
1975	First international Research Forum in Information Science (IRFIS): London – B.C. Brookes
1976	Success–breeds–success: Price
1977	Mandelbrot: “The fractal geometry of nature”
1978	Journal of scientometrics founded
1978	Arts & Humanities Citation Index
1979	Term “ informetric”: Nacke
1983	Co- word analysis: Callon and Courtial

1983	Evaluation of big science: Martin & Irvine
1983	Van Raan, Moed and their team perform evaluation of university research group
1984	Eugene Garfield receives the first Derek J. de Solla Price medal (list of all awardees)
1985	Pao fitting procedure
1985	Citer motivations : Terrence Brooks
1986	Nicholl's fitting procedure
1987	First International Conference (ISSI)
1988	First regional large-scale citation index (China)
1999	Dictionary of bibliometrics
2001	The Mires of research evaluation
2002	Research performance in the humanities

Source

- Rousseau, R. 1990. *Timeline of Bibliometrics*, from http://users.pandora.be/ronald.rousseau/html/timeline_of_bibliometrics.html
- Herubel, P.J.V.M. 1999. *Historical bibliometrics: it's purpose and significance to the history of discipline*, from http://www.gslis.utexas.edu/~andc/fulltext/Landc_34_4_Herubel.pdf

Sengupta (1992: 82) states that bibliometric techniques can be applied to the following areas:

- Identifying research trends and the growth of knowledge in different scientific disciplines;
- Estimating the comprehensiveness of secondary periodicals;
- Identifying the users of different subjects;
- Identifying authorship and its trends in documents on various subjects;
- Measuring the usefulness of ad hoc and retrospective SDI services;
- Forecasting past, present and future publishing trends;
- Developing experimental models correlating or bypassing the existing ones;
- Identifying core periodicals in different disciplines;

- Formulating an accurate need-based acquisition policy within limited budgetary provision;
- Adapting an accurate weeding and stacking policy;
- Initiating effective multilevel network systems;
- Regulating the inflow of information and communication;
- Studying obsolescence and the dispersion of scientific literature;
- Predicting the productivity of publishers, individual authors, organizations, countries or an entire discipline;
- Designing automatic language processing for auto-indexing, auto-abstracting and auto-classification; and
- Developing norms for standardization.

Bibliometrics seeks to address the following issues:

- In which country the literature on a particular subject or discipline was published and their amount of contributions.
- Where the author who contributed to certain subject literature works is based and the amount of contribution to those nations
- What language is used in most publications
- How words are used in most publications and the patterns describing their use
- What type of information sources are very important (books, theses, articles etc.) to certain subjects
- The research methodologies (historical, case study, experimental, survey, etc) are used in a certain subject's research information sources
- The distribution of the authors' contribution to literature and reasons why some authors publish more than others
- The distribution of articles on a particular subject in the journals in which they are published (Wallace, 1989: 1).

Harboe – Ree (2005: 1) opine that bibliometrics' increasing importance stems from the fact that research quality frameworks more often use a form of bibliometrics to measure quality, and national and international university ranking tables use it to

place academics and institutions. For both of these two reasons, universities are increasingly relying on bibliometric results to comprehend the research performance of in organizations. According to the author, bibliometrics has a lot to do with us today because it is fundamental to library science - we subscribe to the main citation indexes, or will sometimes be asked to subscribe or provide advice related to them: many people are being asked to contribute to their institution's RQF preparation: and many of us are involved with open access initiatives that are meant to have an impact on citation.

2.4 Librametry, informetrics and scientometrics

Sengupta (1992:88), Rao and Neelameghan (1992: 243) state that the term librametry was suggested by different scholars in a series of conferences held in several different places. Ranganathan first brought it up in Leamington spa in 1948. He suggested that it was necessary for librarians to develop "*librametry and psychometry, because many issues in library work involved large numbers*". However, the concept of librametry did not develop until the 1970's. Ranganathan once again discussed it in 1969 in a paper presented to the Seminar of the documentation Research and Training Centre (DRTC), where he illustrated it as an example of statistics applicable to library work service. Some of the areas in which librametric techniques can be applied were listed by Ranagathan as follows:

- When determining the optimal strength of library staff in different sections and their judicious distribution;
- In the deployment of library staff to dispose of reference queries during different library hours;
- When systematizing the circulation of library documents;
- When developing and organizing local, state, regional and national library systems;
- In determining the optimal size of a service library;
- When testing the accuracy of catalogue entries by sampling techniques;
- When ensuring the accurate selection of library documents; and

- When analyzing readers' queries.

Neelameghan outlined the scope of librametry in his paper presented to the same seminar. He noted that both bibliometrics and librametry examined the statistical distribution of processes that related to the utilization of documents, library staff, and users - the aim being to create theories on the original and management aspects of libraries.

Rao presented his paper during the 15th India IASLIC Conference on Bibliometrics held at Bangalore University in December in 1985 where he defined librametrics as *“information processes and information handling in libraries and information centers by quantitatively analyzing the characteristics and behavior of documents, library staff and library users.”*

Sengupta (1992: 83) opines that the term ‘informetrics’ was introduced by Professor Otto Nacke in 1979 during a second International conference on bibliometrics and scientometrics held in London, Ontario. In 1989, a scholar named B.C. Brookes suggested the term ‘informetrics’ as the most appropriate term to cover bibliometrics, scientometrics and other quantitative studies related to information science. This was followed in 1991 by a third International conference on Informetrics, held in Bangalore where ‘informetrics’ was used as a generic term to mean the *“use and development of a variety of measures to study and analyze several properties of information in general and documents in particular”*. It was finally agreed on that informetrics covers bibliometrics and scientometrics.

Sengupta (1992: 84) reveals that Egghe and Rousseau stated that informetrics *“deals with the measurements, hence also the mathematical and modeling of all aspects of information and the storage and retrieval of information”*. It is a matathematical meta-information - the theory of information on information - scientifically developed with the aid of tools borrowed from mathematics, physics and computer science. Sengupta (1992:84) adds that Morales views it as a kind of scientific activity related to information thus making it an integral part of information science. All its metric aspects are designed

to improve the efficiency, flexibility and information products of information establishments while handling, storing and transferring information. Informetrics can be applied to following areas:

- Quantitative growth of literature;
- Obsolescence and scattering of information;
- Efficiency in information products and services in science and technology and production;
- The role of different kinds of documents as a means to scientifically communicate;
- Information pertinence and relevance;
- Ranking of periodicals and serials according to various parameters;
- The role of informal channels in scientific communication;
- Overlapping of subject content between periodicals and serials; and
- Citation habits of scientists and the growing role of citation analysis.

Scientometrics can be treated as an analogue concept to bibliometrics. It originated from the USSR and was practiced in East European countries. Scientometrics encapsulates research from various walks of life - historians, philosophers, economists, scientists, etc - from different branches of physics and the natural sciences i.e. science managers and policy makers, and administrators of government and non-governmental organizations, among many others. Dobrov and Karennoi were the first to coin the term. They defined it as *“the measurement of informatics processes”*, while Mikhilov defined it *“ as that scientific discipline that studies the structure and properties of scientific information and the laws of processes of scientific discipline devoted to all quantitative aspects of science and scientific research”*.

2.5 Webometrics

According to Rousseau (2008, Webometrics: a definition section) Björneborn and Ingwersen define webometrics as “the study of the quantitative aspects of the

construction and use of information resources, structures and technologies on the Web drawing on *bibliometric* and *informetric* approaches."

2.6 Collaboration of authors

Authors can decide to either publish a publication individually or co-author with a colleague. When authors collaborate a relationship tends to develop. Glanzel (2003:73) notes that a recent study showed that among scientists a lot of collaboration existed within a department, research group or institution. The author lists Beaver's eighteen reasons why people tend to collaborate:

- Access to skills and expertise
- Access to equipment, resources or 'stuff' one doesn't have
- Improved access to funds
- To gain respect, admiration and recognition for professional advancement
- Efficiency, i.e. more hands and minds make it easier to learn the tacit knowledge that goes with the techniques
- To allow more rapid progress
- To be able to tackle "bigger" problems (more vital, precise, and difficult problems)
- To increase productivity
- To get to know people by creating networks i.e. like an "invisible college"
- To retool and learn new skills or techniques that enable one to break into a new field or subfield and solve problems
- To satisfy intellectual interest and the desire to learn more
- To share the excitement of being on the same page with others
- To find weakness or mistakes more efficiently
- To keep one focused, because others are counting on one to do so
- To reduce aloofness and recharge one's energy and excitement
- To educate oneself and others

- To advance knowledge and learning
- To have fun and pleasure in collaboration

2.7 The role of academic librarians

Peters (1999:27) identifies the role of academic librarians as:

- An individual responsible for managing and leveraging the institutional resources that are devoted to educational and research support.
- He/she ensures that information will be available to students and the faculty on an equal basis, regardless of an individual's or departments' wealth by reducing unnecessary duplication and by facilitating inter-library-loans to enable access to other libraries on a no-or-low cost basis.
- Contributing to the timeliness and quality of scholarship by making it possible to locate and use information, wherever it may be.

According to Veaner (1990:63), an academic librarian makes a unique and vital contribution to higher education by:

- Bearing responsibility for developing college and university library collections and for instructing students (both formally in the classroom and informally in the library).
- Advising faculties and scholars on the use of library collections.
- Providing a variety of information services to the college or university community, ranging from answers to specific questions to the compilation of extensive bibliographies.
- Providing library and information services to the community at large
- Through his/her research into the information process and through bibliographies and other studies, he/she adds to the sum total of knowledge in the field of library practice and information science. Through membership and participation in

library and scholarly organizations, he/she works to improve the practice of academic librarianship, bibliography and information work.

- Performing a teaching and research role by advising and assisting faculties in their scholarly pursuits.
- Involving themselves in research functions - many conduct research in their own professional interest while discharging while off- duty.

Veaner (1990:64) observes that in 1988 the Canadian Library Association (CLA) Canadian Association of College and University Libraries (CACUL) stated the role of academic librarians as:

- Contributors to the pursuit, dissemination and structuring of knowledge and understanding.
- Combining specialized knowledge in terms of the theoretical base of library and information science, management skills, and competence in subject disciplines in order to provide services that are vital for the educational function of their institutions.
- Dealing with wide and varied clientele, whose needs, age range and literacy skills vary considerably.
- Contributors to the instructions and research functions of their institution through the exercise of their professional knowledge/or their competence in subject disciplines.
- Functioning as facilitators, instructors and communicators in making and combining library services with teaching and/or research programs and priorities.
- Developers and evaluators of resource collections; the provision of subject specialized reference services; the acquisition, bibliographic control, storage and preservation of library collections; the development and implementation of a variety of library systems; and the provision of instruction in the exploitation of in-house resources, etc.
- Play the role of administrators, scholars, teachers, bibliographic experts or a combination of all the above.

- Upholding intellectual freedom by pursuing independent education and self-development activities, undertaking research in library science or other disciplines, and participating in college, university and professional associations.
- Professionals who have selected intellectual pursuit as their career. He/she is a creative partner to the faculty, researchers and students.
- Contributors to a university's intellectual framework by extending their information and organizational skills to all levels of the academic community.
- Creating, building, maintaining, managing and improving the existing information infrastructure in order to make it possible to conduct effective teaching, learning and research.
- Contributors to the achievements of their own goals and objectives within the constraints of the university or college mission and within the context of the library program as determined by campus administration and head librarians.

Veaner (1990:66) summarizes the role of academic librarians as encompassing the widest range of professional goals, duties and responsibilities, such as faculty colleague in the educational process, manager, planner, system designer, leader and supervisor, mediator, contractor, negotiator, resource allocator, writer, speaker, fundraiser, researcher, teacher, research colleague of the client, subject expert, database searcher, collection builder, budget analyst, proposal writer, statistician, consultant, telecommunications expert and entrepreneur.

The author concludes by stating that without academic librarians, the quality of teaching, research and public service in our universities would deteriorate, and this would make it impossible for programs in many disciplines to be performed.

2.8 Why academic librarians should publish

Poynter (1979:14) describes publishing as the act of preparing and issuing material for public distribution or sale, or “or placing before the public”. Publications, according to the author do not need to sell and if in a book, it need not look beautiful. The most important thing is that they (the publications) are issued. Sales will depend upon the content and not the packaging.

Marjorie (2000, para.5) states that publication “is competitive” and offers a professional advantage. The more one publishes, the more one is invited to speak and hear and thus get ideas for further publishing. The cultural norm of an academic institution is based on how much one has been published in peer reviewed journals. However, academics also publish to leave their ideas behind for generations that follow, and/or to dispute the existing ideas of their colleagues.

Writing or research is both a challenge and a satisfaction. Poynter (1979: 10) underscores the value of publishing to all authors and this applies to librarians as well. According to the author, publishing can bring about prestige, recognition, wealth, and acceleration in one’s career.

An academic librarian can start with a series of non-paying magazine articles that increase the librarian’s visibility. The librarian can then compile this series of articles into a book. Once librarians have established credibility, they can operate seminars in their fields of expertise, command high speaking fees and issue highly-priced business consultations. Publishing can also lead to careers in teaching and consultancy work, and advising large corporations. Academic librarians who publish will find that they are in great demand - people will want their information, or simply want them around to provide assistance, and corporations will fly them in for consultations because this is cheaper than sending all their employees to experts.

Poynter (1979:11) refers to the published material as a “dream product”, which generally means that coupled with publicity, the packaging and marketing of information is a

profitable product. According to the author, publicity not only sells, but also opens doors and produces more invitations that lead to opportunities that prove the academic librarian's expert status. This results in greater financial remuneration for the academic librarian. The author further maintains that people also seek experts whose opinions, advice and ideas are quoted in the media. Poynter (1979:11) opines that:

“Many people work hard at a job for 40 years and have nothing to show for it but memories and pay tubs. Some take their knowledge and write books, the result is a tangible product for all to see. A book or an article lasts forever, like a painting or a sculpture, but there are many copies of the book, not just one. Whereas a sculpture can only be admired by a limited number of persons at any one time in the place where it is displayed, books or articles come in multiple copies for all the world to use and admire simultaneously”.

Curran (1990:9) agrees that money, fame, furthering one's career and the thrill of holding a bound volume with one's the academic librarian's name on the cover, or appearing on a web journal are some of the benefits of publishing. However, the author further believes that an academic librarian should wish to put words down on paper, have a strong urge to communicate ideas to other people, have something to write about, and have an audience that he/she wishes to address. Thyer (1994:3) argues that all publications are very vital to society and are viewed as archival data. Apart from individual subscription, many institutions (and their libraries) will retain these journals on their shelves for decades, where access to the journals by future researchers is virtually guaranteed.

Publishing also helps promote the academic librarians' department. Administrative superiors are often quickly informed about findings that show particular programs or departments to be highly rated. Such findings can be used as leverage in 'academic poker' that justifies qualification for further resources such as new faculty lines, graduate funding, computer equipment, etc. If a department achieves a high status, other outstanding and talented librarians are also more likely to be attracted to the institution's library.

Scholarly productivity is a vital element because it determines whether or not a candidate can move up in the academic hierarchy. In the past, promotion was earned primarily through one's excellence in teaching, and/or in university or community service. Academic librarians should realize that this has changed; more vigorous standards of scholarship have exerted their grip, to the point that recent doctoral graduates are advised to have several articles published in order to be competitive in the academic market. A publishing record is therefore generally (literally and figuratively) more quantifiable than excellence in teaching or in service. Thyer, Poynter and Curran agree that publishing has the following advantages:

- Advancement in one's field
- The promotion of one's academic department or school
- An author will always gain financially from publishing
- Invitations to address professional meetings
- Intrinsic rewards, such as the joys of writing professionally and the pride felt when seeing one's work appear in the best journals, or responding to requests for reprints and engaging in subsequent stimulating and exciting correspondences with one's colleagues.

Thyer (1994:6) concludes by quoting Benjamin Franklin, who said:

"nothing gives an author so much pleasure as to find his works respectfully quoted by other learned authors".

Web publishing is increasingly becoming popular in the publishing world and Stover (1996, abstract section, par.1) believes that the WWW has great potential as a publishing medium, both for original electronic publications and mirrored (already in print) publications. According to the author, it is important for librarians to get involved in web publishing because of the following:

- Academic librarians need to support the scholarly communication process, and web publishing is a powerful symbol of their enfranchised role. Since

dissemination is a function that is traditionally associated with librarians, web publishing fits well into this tradition.

- Academic librarians possess a certain measure of expertise when it comes to organizing and providing access to information. These skills can be shared with the community through the WWW.
- Web publishing provides academic librarians with a higher profile on campus, which is an important asset these days because of the changing nature of higher education and the changing role of academic librarians.
- The web provides unique access to scholarly information
- Web publishing would give the academic librarian's institution a positive reputation both nationally and internationally.
- Web publishing allows the academic librarian to bypass the profit-based system of print publishing that has tormented academic librarians for years, since it eliminates one of the main intermediaries (the print publisher) between author and reader (Stover, 1996, the value of the librarians as publishers on the web section).

The role of the librarian continues to change, and with the high prioritization of publishing in today's academic climate, librarians in Africa and other parts of the world should take notice.

2.9 Related studies on publication patterns and output of academic librarians

Scanning through the Library and Information Science Technology Abstract (LISTA) and Library and Information Science Abstract (LISA) databases revealed that in Africa, a study of this kind had yet to be carried out. The closest found was a study by Uzun (2002), who analyzed 21 core journals in the field of Library and Information Science from developing countries and economic European countries to establish the nature of research in the two geographical areas. Onyancha (2007) also carried out nearly a similar study, in which Library and Information Science records produced by researchers in Africa between 1986 and 2006 were analyzed. Ocholla and Ocholla (2007) also examined the publication count and analyzed peer refereed articles indexed in South

Africa in Library and Information Science between 1993 and 2006. However, similar studies have been conducted in the United States of America and Malaysia. For instance, a study by Hart (1996) examined the aggregated publishing record of the librarians at Penn State University, an institution that requires publication as a condition for continued tenure. Hart used the survey questionnaire method to collect data. Noteworthy observations that emerged from the study were as follows:

- Penn State's librarians were quite productive in terms of the number of publications they contributed to literature, and were strongly committed to research.
- An increasing demand for publication had served to influence both the quality and quantity of librarians' publications in recent years.
- Of the librarians who answered the questionnaires, 95% agreed, 73% strongly agreed, and 22% moderately agreed that publishing expectations had increased over the past fifty to twenty years.
- The most common form of publication was journal articles - there were 203 refereed journal articles and 128 non-refereed journal articles, and these combined to make up 62% of the total publications.
- On average, each Penn Librarian had produced slightly more than 9 publications, including articles, book chapters, conference proceedings and books.
- 80% reported that they were working on a project that they expected would lead to publication (Hart, 1996).

Onyancha's (2007) study on "*LIS research in Africa: how much is it worth? A citation analysis of the literature, 1986 – 2006*". The researcher used two sources of data namely ISI Web of Knowledge (i.e. SCI and SSCI) and EBSCO (i.e. LISTA) to extract data.

- The leading country was South Africa which produced a total of 439 records followed by Nigeria (259), Botswana and Ghana were ranked number three with 59 records each. Kenya (37) was fifth, followed by Egypt (36), Swaziland (29) and Ethiopia (25).
- Of the 53 African countries only 26 authored at least one LIS record each between 1986 – 2006.

- South Africa's contribution accounted for a merely 0.46% of the total national output and 2.76% of the world's total Library and Information Science output, Nigeria (1.22%, 1.63%) Botswana (3.33%, 0.37%), Ghana (1.87%, 0.37%) and Kenya (0.31%, 0.23%)
- The highest national contribution was recorded by Swaziland (4.32%) as regard to LISTA.
- Each country's contribution fell below 0.1%, South Africa recorded the highest contribution of (0.0658%), followed by Nigeria (0.0238%), Botswana (0.0112%), Ghana (0.0083%), and Kenya (0.0050%).
- South Africa received the highest citations, followed by Nigeria (232), Egypt (92), Botswana (48), and Kenya (45), Ghana (38), Ethiopia (37), Swaziland (33), Tanzania (32) and Zambia (15). Algeria, Angola, Sierra Leone and Tunisia received no citation.
- In terms of ranked relative performance of each African country Algeria emerged in first position (146/188, $rp^2 = 0.78$).
- Lawan SM(43) emerged the most cited record in Africa
- Out of the top 34 cited records 23(67.6%) emanated from South Africa, South Africa yielded 6(17.6%) followed by Egypt and Kenya which produced 2(5.9%) each and Tanzania (1, 2.9%).
- There were a total of 70.16% uncited records in South Africa of the total LIS records produced by LIS researchers in the country. South Africa, Nigeria, Botswana, Ghana, Kenya, Swaziland, Zambia, Uganda, Namibia, Benin and Algeria recorded more uncited than cited records.

Ocholla and Ocholla (2007) carried out a study on "*Research in library and Information Science in South Africa: an analysis of journal research output from 1993 – 2006*". The data analyzed in this study was extracted from LISA (Library and Information Science Abstract database and ISI Web of Science (i.e SSCI) and Arts and Humanities Citation Index File (A&HSI) databases. The results found were as follows;

² rp stands for relative performance

- A total of 157 journals generated 1216 articles, of the 157 87(54.4%) and 70(44.6%) were indexed by LISA.
- *The South African Journal of of Libraries and Information Science* and the *South African Journal of Information Management* and *Mousaion* were the three most leading journals.
- The top 4 most productive authors did not reside in South Africa
- All top 10 authors indexed in LISA, except one, resided in South Africa
- The highest citation ration originated from Behrens
- Dorminant research areas were management (43), Information retrieval (119), Information Science(107), ICTs(97), Education and Training (89) and Information Dissemination (72)
- A total number of 145 South African authored articles were published either by single authors or co- authored of these individual authored were(31%), two authors appeared (53.8%) times, three authors (11.8%) and four authors (2.8%)
- 55% of the articles were internally authored and 45% externally authored.

Bahr and Zemon (2000) conducted a study on “*Collaborative authorship in the journal literature perspective for academic librarians who wish to publish*”, which aimed to establish the extent to which college librarians publish articles. The research aimed to identify collaborative articles by university librarians, collaborative patterns and the status of each collaborative partner. They found that university librarians were the greatest contributors to the field’s premier research journals and their most significant collaborators. The authors found that of the 399 articles in C & RL from 1986 to 1996, 159 (40%) were written collaboratively, 133 were written by university librarians, and 84% of the collaborative articles were by university librarians. The two authors observed that the most common form of collaboration was cross-gender collaboration among both college and university librarians. They noted that when the issue of who collaborates with whom was raised, the most common partner of a university librarian was another university librarian. Of the 185 authors contributing towards the 133 collaborative articles in C & RL, 124 (67%) were university librarians, 19 (10%) were faculty librarians, 18 (10%) belonged to the library science faculty, and 24 (13%) were designated as others.

The pattern persists in JAL of the 99 authors responsible for 78 collaborative articles, 73 (74%) were university librarians, 9 (9%) were faculty librarians, 8 (8%) belonged to the library science faculty, and 9 (9%) were others. The collaborative articles librarians wrote for JAL and C & RL had a total of 40 authors – 18 college librarians and 22 collaborative partners. Of the 22 partners, 8 were university librarians, 5 were college librarians, 6 were faculty, 1 was library science faculty, and 2 were other.

Weller *et al.* (1999) carried out a more general study on the publication pattern of United States academic librarians from 1993 to 1997 by examining the contribution of academic librarians in the U.S to Library and Information Science peer reviewed literature. The following was noted:

- 1,579 (43.6%) were authored by at least one academic librarian. In total, there were 5,477 instances of authorship, and 2,032 of these constituted academic librarian's names.
- The most productive library belonged to Pennsylvania State University which had 35 authors who had authored 46 articles
- Harvard University was the least productive, with 16 authors who had authored 14 articles.
- 43.6% of all published peer-reviewed articles were written by at least one academic librarian.
- More than 1/3 (36.5%) of co-authored and multiple authored articles show collaboration, either within or between institutions. Single authorship is the norm, although co-authorship is very vital. Collaborative endeavors amongst librarians and non-librarians occur within and across institutions. In all, literature in Library and Information Science has many types of authors (Weller *et al.*, 1999).

In terms of research methodology, a study entitled "*Motivating librarians to conduct research*" by Verzosa (2008) used the survey method to establish why librarians do not carry out research and what professionals could do to improve the situation. Verzosa noted that:

- 15% of the librarians who gave reasons for not reading research-based articles said that they did not have enough expertise in research methods.
- 50% indicated that their master's degree program adequately prepared them to read and comprehend research-based publications.
- Only 4 out of 10 were given time to conduct research. Of these 4, only 2 said that they would conduct research.
- Only 50% of the research conducted was published
- In terms of support, about 50% were given time off, 25% got internal funding and 15% received external funding.
- Only 50% occasionally did, while 25% seldom and 15% frequently applied their research to their practice.

The results of Yazit and Zainab (2007) employed the bibliometric technique and collected data from seven online databases and seven well established OPAC'S for their study entitled "*publication productivity of Malaysian authors and institutions in Library and Information Science.*" The results of Yazit and Zainab's study indicated that:

- Malaysian Library and Information Science authors preferred to publish in journals (511, 48.9%) and conference papers (474, 45.4%).
- Publication distribution declined over the 41 year period but the moving average depicted a steady incremental trend
- A total of 506 authors contributed to 1, 045 publications and 309 were one-time authors.
- Active authors in Library Information Science were affiliated to 131 institutions.
- Productive institutions were the National Library of Malaysia, University of Malaysia Library, and the academics at the Masters of Library and Information Science programme, University of Malaya.
- Publication productivity was related to institutional active involvement in Library and Information Science journal publishing.
- Popular subjects in research were collection development, development and management, information centers and services, and ICT applications in Library and Information Science.

As mentioned earlier, Uzun (2002) conducted a study entitled “*Library and Information Science research in developing countries and Eastern European countries: a brief bibliometric experience*,” using bibliometric methods to analyze data and survey an item-by-item selected set of 21 core journals in Library and Information Science for the period spanning 1980 – 1999. These journals were indexed in the Social Science Citation Index (SSCI). The author established that:

- 826 (7.9%) out of a total of 10400 articles published in 21 journals were from Developing Countries or the Economic European Union.
- The number of articles with authors from China, Saudi Arabia, Turkey, Botswana, Ghana, Kuwait and Taiwan significantly increased, while those of India, Nigeria, Pakistan, Brazil and Poland decreased.
- Among the countries featuring decreasing trends in the numbers of articles, Library and Information Science research received high recognition in Nigeria and Pakistan. In terms of increasing trends in articles, low priority areas were China, Turkey and Taiwan.
- A co-word analysis based on the keywords and thematic noun-phrases in the titles and abstracts of a sampled 102 articles published between 1996 and 1999 (the author did not discuss the period between 1980 and 1996) showed that bibliometrics was the most frequent topic in Library and Information Science in major Developing Countries and European Economic Countries.
- Information retrieval, information needs and information use were among the topics that received relatively high interest from researchers working in Developing Countries in Asia and Africa (Uzun, 2002).

The above studies reveal that the research productivity of librarians in the field was of paramount importance. From these studies, it was encouraging to note that professionals in the field are carrying out and are committed to research. There was an indication that similar studies of this nature had been carried out before. Important to however were the similarities and differences of these studies in relation to this particular study. These issues were as follows;

The first study by Hart (1996) was similar to this study, for instance, it examines the scholarly output of academic librarians in the field of LIS and the type of publication published. However, differences noted were the fact that this study was not a bibliometric study, type of document published by these academic librarians were not analyzed, the research did not also address the subject content of the publications and the study was confined to Penn University in the United States of America.

Onyancha's (2007) study was also based on the research output in LIS, LISTA online database was one of the databases used to extract data, Countries examined in this study featured, these were Botswana, Ethiopia, Kenya, South Africa, Somalia, Sudan, Swaziland, Tanzania, Uganda, Lesotho, Zambia and Zimbabwe. Finally this study was a bibliometric/informetric study.

Differences noted were as follows: all categories of LIS researchers were included in the study; Many (53) African countries were included in the study; The type of document and subject content of the document were not studied; nature of collaboration of these researchers was not discussed; the journals where these records appeared did not form part of the study; other issues not discussed were; the period studied was between 1986 to 2006, which meant that it was wider (21 years) and publication published earlier than 1990 were also considered. This study also concentrated on citation analysis of LIS records.

Ocholla and Ocholla (2007) study was also similar in that it examined research output in LIS; the nature of collaboration; this study was also a bibliometric study; subject content of articles in the articles were analysed; the most productive issue was also dealt with; journals that published most records were discussed and collaboration also featured in the research.

It was noted that this study was only confined to LIS researches recorded in journals; it did not address the type of document published, the study was limited to the period from 1993 to 2006; and entirely different online databases were used to extract data.

Weller *et al* (1999) study addressed the following similar issues; the study examined the research output of LIS; publication pattern of United States of America academic librarians in universities; and the nature of collaboration of academic librarians.

This study, however examined only articles published in LIS; the study was not a bibliometric study and it was confined to the period from 1993 to 1997.

Bahr and Zemon (2000) study had very few similarities and differences to this study, in relation to similarities; it was observed that these researchers also examined collaboration of academic librarians in LIS research production. The targeted population was academic librarians.

The study was however, confined to the period from 1986 to 1996 and only United States of America academic librarians were targeted for the study. This study was not a bibliometric study.

Yazit and Zainab (2007) study had the following similarities: just like the above studies, it sought to examine the research output in LIS field; it was a bibliometric study, and issues such as subject coverage and sources of the published work were examined; online catalogues were used to extract data. The study however, was confined to the period from 1965 to 2005, this meant much wider period was studied (41 years) and 2006 was not included; over six online databases were used (i.e. Library Literature, Library and Information Science Abstract Network (LISAnet), Springerlink, Educational resource centre (ERIC) etc.); and only targeted Malaysian authors published in Malaysian as well as abroad.

Uzun (2002), similarly examines the output of research in LIS field; just like in this study only Botswana featured among the countries studied; and this was also a bibliometric study.

The study was different in that only core journals in the field were examined; it was confined to the period from 1980 to 1999, which meant that the study dealt with publication published earlier than 1990 and did not also examine those published after

1999; co- authorship was apparently also the interest of this researcher; countries examined were from Africa, Asia; and subject content of the articles were examined.

Finally, Verzosa (2008) just like all the other researchers mentioned above examined the publication output in the field of LIS; Important to note though, is the fact that publications were not analysed but individual outputs of librarians was examined; and the study was confined to librarian in the Philipines.

2.10 Summary

The term ‘bibliometrics’ was found to have first been coined by a scholar named Pritchard. A number of scholars have provided different but related definitions as to what the term ‘bibliometrics’ means. Herubel (1999: 380) summed up bibliometrics “*as a quantitative analysis of publications for the purpose of ascertaining specific kinds of phenomenon*”. Other terms related to bibliometrics are informetrics, scientometrics, librametry and webometrics. Rousseau (1990) summarized the early development of bibliometrics in a chronological manner, popularly known as the *Timeline of bibliometrics*. The chapter also noted that many reasons prompt authors to collaborate and that academic librarians play a significant role in their day-to-day work in libraries. As with other scholars in different notable professions, librarians stood to gain enormously if they engaged in publishing. Previous studies indicate that librarians publish in countries such as the United States of America, Malaysia, and in a number of European and developing countries. It was found that studies to this effect have not been done in Eastern Africa and Southern Africa. The subsequent chapters therefore sought to determine the publication patterns and output of these two regions as revealed by the findings.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research methods used in this study. The discussion includes the target population, sample size and sample frame, instruments used, data collection procedure, and data analysis.

3.2 Research Methodology

Mcmillan and Schumacher (2006:9) define research methodology (or research methods), as the way in which one collects and analyses data. Data may be collected using different measurement techniques, extensive interviews, observations and/or through the review of a set of documents. The two authors note that research methodology is systematic and purposeful, meaning that the procedures are not haphazard and are planned to yield data on a particular problem. The term 'methodology' according to the two authors, refers to a design wherein the researcher selects a form of data collection and then analyses the product in order to investigate a specific research problem. This study employs the bibliometric approach, content analysis and quantitative methods to analyse and obtain data on the research and publication patterns and output of academic librarians employed in public university libraries in Eastern and Southern Africa.

3.3 Bibliometrics as a Research Method

Goddard and Melville (2001:16) define a research method as a way of specifying how one can go about finding solutions to problems and what steps should be taken in order to do so. This study employs bibliometrics as its research method. Twining (2001:70) states that bibliometrics is a method that utilizes quantitative analysis and statistics to

investigate, among other aspects of information, patterns of the information-knowledge transfer process. It is based on the enumeration of scientific data in the form of articles, publications, patents and citations. Bibliometrics' uses range from determining the level and nature of collaboration between scientists and disciplines, to examining cognitive (i.e. human, mechanical, and neural network) development. Ungern-Sternberg (1995, par.1) posit that bibliometrics consists of several specific research methodologies, i.e. citation counts and analyses, bibliometric coupling, co-word analysis, and webometrics. Bibliometrics was discussed in detail in the previous chapter.

The study also employed content analysis in its data collection. Content analysis is defined by Krippendorff in Wilkinson and Birmingham (2003:68) as a research technique that makes replicable and valid inferences from data to a study's content. The documents studied were online journals, printed journals, books and journal articles (e.g. *Libri* articles). Search engines were used to access electronic documents for chapters one and two of this study. Other documents sourced for content analysis were obtained from two online databases (i.e. LISTA and WORLDCAT). Websites belonging to university academic libraries were accessed for academic librarians' names.

3.4 Target population

Neuman (2006:225) defines the population of a study as a larger pool of cases or elements, e.g. people, businesses, commercials, animals, etc. Goddard and Melville (2001:34) define a population as any group that is the subject of research interest. However, Welmar, Kruger and Mitchell (2005:57) describe a target population as the population on which the researcher would like to generalize his/her results. Hence, this research targeted all academic librarians that were holding a bachelors degree and above and who, at the time of the study, were employed in Eastern and Southern African public university libraries. Where the degree was not indicated, staffs holding job titles such as librarian and above (i.e assistant librarian, Sub- librarian, chief librarian, subject librarian, head of department etc.) were included in the study. The total target population is illustrated in the table below.

Table 2: Target population of the study

EASTERN AFRICA	LIBRARY	TP³	SOUTHERN AFRICA	LIBRARY	TP
Ethiopia	Alemaya University of Agriculture	2	Botswana	University of Botswana	49
Uganda	Makerere University	20	Lesotho	University of Lesotho	17
Kenya	Egerton University	2	Malawi	University of Malawi	5
	Kenyatta University	7		University of Mzuzu	9
	Moi University	17	Namibia	University of Namibia	15
	University of Nairobi	24	South Africa	Cape Peninsula University of Technology	15
Somalia	Somalia National University	0		Central University of Technology	7
Sudan	University of Khartoum	3		Durban University of Technology	56
Tanzania	Mzumbe University	3		Mangosuthu Technikon	23
	Sokoine National Agricultural	14		Nelson Mandela Metropolitan University	36
	Open University of Tanzania	8		North – West University	19
	University of Dar es salaam	11		Tshwane University of Technology	29
				University of Cape Town	56
				University of Johannesburg	18
				University of Free State	15
				University of Fort Hare	19
				University of Kwa Zulu Natal	50
				University of Limpopo	13
				University of Pretoria	114
				University of Rhodes	5
				University of South Africa	11
				University of Stellenbosch	16

³ TP stands for Total population

				University of Western Cape	21
				University of Witswatersrand	34
				University of Venda	7
				University of Zululand	12
				Vaal University of Technology	13
				Walter Sisulu University of Technology	1
			Swaziland	University of Swaziland	12
			Zambia	University of Zambia	14
				Copperbelt University	11
			Zimbabwe	Midlands State University	22
				University of Zimbabwe	9
				Zimbabwe Open University	2
TOTAL		111			755

The target population consisted of 111 librarians from the East African region and 755 librarians from Southern Africa, amounting to a total of 866 academic librarians.

3.5 Study area

Two regions on the continent constituted the study area, i.e. with six countries from Eastern Africa (Ethiopia, Kenya, Tanzania, Somalia, Sudan, and Uganda) and eight countries from Southern Africa (Botswana, Lesotho, Malawi, Namibia, South Africa, The Kingdom of Swaziland, Zambia and Zimbabwe). As indicated earlier countries such as Angola, Madagascar and Mozambique were excluded because of the reason mentioned in section 1.8. The locations of these countries are illustrated in the figure below.

FIGURE 1: MAP OF AFRICA SHOWING THE COUNTRIES THAT CONSTITUTED THE STUDY AREA



Source [http:// www.rebirth.co.za/images/map of Africa.jpg](http://www.rebirth.co.za/images/map_of_Africa.jpg)

3.6 Sampling

Bless and Higson-Smith (2000:84) state that sampling means leaving certainty in favor of probability. Payne and Payne (2004: 209) elaborate by stating that since it is not possible to study everything, sampling has to be applied in order to select a subset of people or social phenomena from the larger 'universe' to which they belong. This selection, the authors reveal, would either lead to representative cases for the entire study.

The advantages of sampling are as follows:

- Collecting data from a sample does not consume time
- It is less costly
- Sampling is the only logical way to collect data
- It is the only possible way to collect data when the population is large

However, the authors caution that there are limitations that arise from sampling, such as biases in the sampled list of the target population.

In this study, non-probability sampling was used in order to achieve adequate representation. Under non-probability sampling, the purposive sampling technique was selected. Walliman (2001:234) defines purposive sampling as a method wherein the researcher selects what he/she thinks is representative of a typical sample. This method was used to sample the categories of academic librarians that formed the target population of this study. The same method was used to sample public academic libraries, and the two regions (Eastern and Southern Africa) in Africa.

3.6.1 Sample frame and sample size

Welmar, Kruger and Mitchell. (2005: 57) posit that a sample frame is a list in which each unit of analysis is mentioned only once. The authors note that unless such a sampling frame is borne in mind it is impossible to judge the level of representativeness. Neuman (2006:201) states that a researcher samples a population by developing a specific list that closely approximates all the elements in the population. This list is the sample frame. The

sample size according to Delving (2006:56), will be drawn from the same frame. This involves making judgments about the number of participants needed to carry out the study. Gray (2004: 85) describes it as the range of figures between which the population parameter is expected. From the two regions, the following public university libraries constituted the sample frame.

TABLE 3: PUBLIC UNIVERSITY LIBRARIES

REGION			
EASTERN AFRICA	COUNTRY	NO.	NAME OF LIBRARY
	ETHIOPIA	1	Alemaya University of Agriculture Library
	KENYA	2	Egerton University Library
		3	Kenyatta University Library
		4	Masinde Muliro University of Science and Technology Library
		5	Moi University Library
		6	University of Nairobi Library
	SOMALIA	7	Somalia National University Library
	SUDAN	8	University of Khartoum Library
	TANZANIA	9	Mzumbe University Library
		10	Open University of Tanzania Library
		11	Sokoine National Agricultural University Library
		12	University of Dar es Salaam Library
	UGANDA	13	Makerere University Library
SOUTHERN AFRICA			
	BOTSWANA	14	University of Botswana Library
	LESOTHO	15	University of Lesotho Library
	MALAWI	16	University of Malawi Library
		17	University of Mzuzu Library
	NAMIBIA	18	University of Namibia Library
	SOUTH AFRICA	19	Cape Peninsula University of Technology Library
		20	Central University of Technology Library
		21	Durban University of Technology Library

		22	Mangosuthu Technikon Library
		23	Nelson Mandela Metropolitan University Library
		24	North – West University Library
		25	Tshwane University of Technology Library
		26	University of Cape Town Library
		27	University of Johannesburg Library
		28	University of Free State Library
		29	University of Fort Hare Library
		30	University of Kwa Zulu Natal Library
		31	University of Limpopo Library
		32	University of Pretoria Library
		33	University of Rhodes Library
		34	University of South Africa Library
		35	University of Stellenbosch Library
		36	University of Western Cape Library
		37	University of Witwatersrand Library
		38	University of Venda Library
		39	University of Zululand Library
		40	Vaal University of Technology Library
		41	Walter Sisulu University of Technology Library
	KINGDOM OF SWAZILAND	42	University of Swaziland Library
	ZAMBIA	43	Copperbelt University Library
		44	University of Zambia Library
	ZIMBABWE	45	Midlands State University Library
		46	University of Zimbabwe Library
		47	Zimbabwe Open University Library

The sample size constituted a total of 47 public university libraries, 13 were Eastern Africa's and 34 from Southern Africa. Only University that provided the names of academic librarians were included in the sample size (see 3.11 bullet 9).

3.7 Instruments of data collections

The following instruments were used to carry out the research;

(i) Databases

Sinclair (1997:109) defines a database as a collection of data items in a file used by programs that copy and alter items, but whose actions are not restricted by the way in which the item is stored. A database of any size would be kept on a hard, compact or floppy disc. The database would then be continually updated.

The following two databases were used to retrieve the data necessary for this study, i.e. the **WORLDCAT** and **LISTA** databases, and were selected according to the subject and type of the document indexed the time period the databases covered; the size of the database (how much it describes/indexes or contains) and their availability.

EBSCOHOST - this is a gateway (interface) to numerous online databases. The database selected from this host database was the Library and Information Science and Technology Abstract (**LISTA**) (2007, Google). **LISTA** provides full-text journal articles and an index of books, research reports and conference proceedings. Subjects covered include librarianship, classification, cataloguing, bibliometrics, online information retrieval, information management, search engines, printed and electronic information sources, the information industry, scholarly communication and electronic publishing. **LISTA** with full text coverage extends back to the mid 1960s.

FIRSTSEARCH - this database has a collection of over sixty databases covering all subjects. Each **FIRSTSEARCH** database can be searched separately, and some of **FIRSTSEARCH**'s databases are Dissertation Abstracts, Books-in-print, WorldCat, WilsonSelect, Article first and many more (2003, New Mexico State University). Data for this research was obtained from THE **WORLDCAT** database. **WORLDCAT** is a

world wide library catalogue hosted by the FIRSTSEARCH database. The database describes over 41 million books and other materials (videocassettes, CDs, etc) from libraries worldwide (2007, Mundt, Literary and Learning Commons World).

(ii) Internet

The Internet was consulted widely and proper references are provided in cases where it was used. Lojkine (2003:9) defines the Internet as a computer network that spans the globe. It consists of millions of computers that are physically connected via wires cables and satellite connections in order to allow information to pass from one computer to the next. Lojkine reveals that the Internet provides numerous services, one of which is the **World Wide Web (WWW)**, which consists of millions of magazine-styled pages packed with text, pictures, sounds, animations and video clips.

The Internet facilitated online access and interaction with databases and websites. Academic librarians' names and electronic journals were accessed through the Internet.

3.8 Data collection procedure

Blanche and Durrheim (2002:46) state that data is the basic component of research. In order to draw conclusions in a study it is essential for the researcher to have sound data to analyse and interpret. The data captured should also be valid. A number of methods are available for data collection, examples of which are questionnaires, interviews, observation and document reviews etc. This study used document reviews together with content analysis. The procedure used to collect the necessary data was as follows:

(i) Identification of Public University Libraries

In order to establish which academic libraries are hosted by public universities in Eastern and Southern Africa, the researcher consulted the *Europa Book of the year. 2007 - Volume 1 and 11*. These books are available from the University of Zululand

library. The books list all public universities found in countries within the two regions and indicate their status (i.e. whether the university is public or not). They also provide a list of the libraries found in these universities. Another source that proved to be useful was *Wikipedia, the free encyclopedi* which is freely available on the Internet.

(ii) Identification of academic librarians' names

The main purpose of this study was to establish whether academic librarians in public universities in Southern and Eastern Africa publish, or carry out research. In order to achieve this, it was necessary to obtain all the names of academic librarians who are holding a bachelors degree and/or above. The Internet again proved useful. The websites of each university provided the names of these librarians. The procedure used to retrieve the names of librarians was as follows:

- i) Use the Google search engine
- ii) Search for the "University of Zululand website" in South Africa for example
- iii) Go to the library webpage
- vi) Click on the library staff icon, the list of library staff appears

The names were subsequently listed in a table (See appendix B)

(iii) Creation of a master list

A master list with the following fields was then created:

- a. Author
- b. Title of document
- c. Year of publication
- d. Subject of document
- e. Type of document
- f. Journal
- g. Collaboration

- h. Affiliation
- i. Number of documents

(iv) Downloading of data

The following procedure was used to download data for this particular study

(v) Keywords used

The full name of each academic librarian was used as a keyword to search all three databases for any publication that may have been published by the said academic librarian (see appendix B). In process of downloading data, it was noted total number of publication of an individual academic librarians varied when the names were interchanged (i.e Inoti, V.I., or V.I. Inoti or Inoti, V.) during searching. This variation was sought out by employing various search strategies provided by the two databases. For instance LISTA database allowed the use of search operator “or” (i.e “Inoti, V.” or “Inoti, V.I.). Use of one single author’s names was also possible. WORLDCAT database similiarily allowed use of author’s two names in full all initials (i.e. Edda Lwoga or E.T.Lwoga)

The data retrieved was finally recorded in a spreadsheet and analyzed according to the research questions indicated in the master list.

3.9 Data analysis

Bless and Higson-Smith (2000:137) reveal that the process of data analysis takes different forms depending on the nature of the data itself. Before the quantitative analysis of data was undertaken, duplicate data was deleted from the master list (see appendix). Quantitative data is often analyzed using a range of descriptive and inferential statistical procedures. Data was analyzed and presented in percentage and frequency form, and

thereafter illustrated in charts (e.g. pie, line, bar graph etc) and tables using Microsoft Excel.

3.10 Pilot study

Aina (2002:40) states that the purpose of a pilot study is to act as ‘the dress rehearsal’ of the main study, and thus help clarify potential problems. Also known as a pre-test it generally provides a lead on the effectiveness of questionnaires, the code chosen for pre-coded questions, and the probable cost and duration of the main study in its various stages.

A pilot study was carried out prior to this study to compare the research and publication patterns and output of academic librarians in Eastern and Southern Africa from 1990 to 2005. It concentrated on three university libraries in Kenya i.e. Nairobi University, Moi University and the Masinde Muliro University of Science and Technology; and four public universities in South Africa., i.e. University of Kwa-Zulu Natal, University of Zululand, Durban University of Technology and Mangosuthu Technikon.

In the course of the pilot study some library webpages were found not to include the names of their staff, and others provided the names, but did not indicate the qualifications. The researcher also sometimes experienced problems with Internet access. Data was analyzed and presented in tabular and chart form. It was clear that academic librarians in the two countries engage in research. However, it was noted that Kenyan academic librarians publish more than their South African counterparts. Therefore, in addition to other recommendations, the study stipulated that South African academic librarians should significantly increase their output, and that despite being marginally better, Kenyan academic librarians should do the same.

3.11 Problems encountered

The following problems were encountered in the cause of the study:

- Although it would have been interesting to include other regions in Africa, the time frame, language barrier and limited resources (human, financial and other) meant that this was impossible.
- The study was to take a period of one year, which wasn't enough time to cover a wider period. The researcher therefore, felt that a clearly delineated period would provide ample and accurate data.
- Inability to individually subscribe to the databases required for this study meant that the researcher had to rely on the library which provided it free although it was inaccessible only when the library was open.
- Poor Internet access due to slow network connections caused by constant power cuts, the closure of the library during holidays and disconnection resulting from technical problems within the university's ICT department.
- The databases sometimes took too long to open, search and display data.
- University librarians occasionally do not update their webpages
- The researcher found limited information related to this study.
- Some university webpages did not include the names, qualifications, or designation of their library staff, e.g. Kenyatta University, Jomo Kenyatta University of Agriculture and Technology, Egerton University, and Maseno in Kenya. Sudan had twenty universities but only one provided a list of its librarians (Khartoum University). Only one (Makerere University Library) University library in Uganda provided a list of its library staff, while three (Kyambogo University Library, Gulu University Library and Mbarara University Library) did not.
- In South Africa, the Kwa Zulu Natal University library, Durban University of Technology Library and Free State Library provided list. However, the qualifications of the librarians were not provided. The Walter Sisulu University of Technology and Science Library, also in South Africa, did not provide the names of the librarians. In Zimbabwe, the Bindura University of Science Education Library and National University of Science and Technology Library also did not provide the names of the librarians.

- Some university websites such as the University of Limpopo in South Africa, Egerton University in Kenya and various websites in Sudan took a very long time to open and this proved frustrating to the researcher.
- The geographical distance between the various libraries made it impossible for the researcher to physically visit them. The researcher therefore used the e-mail service in order to obtain the required information. However, none of them responded to the e-mails.
- Somalia does have a public university, although it was not operational at the time of writing.
- Africa lacks an electronic bibliographic database for capturing and indexing all research documents. Only South Africa had an electronic bibliographic database known as SABINET, forcing the researcher to rely on International databases such as LISTA and WORLDCAT to collect data.
- There was a lack of consistency in the databases when recording the authors' names. For example, on university library webpage, an academic librarian may bear three names, while only two names appear on the research document.
- The WORLDCAT database does not indicate the affiliation of the authors, and because of this the researcher had to rely on LISTA (in cases where the same publication was indexed by both databases), which does, The WORLDCAT database did not provide the keywords for some of the research publications, forcing the researcher to provide them.
- The LISTA database does not update the affiliation of the author on some occasions for example when the author changes his/her employer.

Despite all these problems, the researcher ensured that the quality of this study was not compromised by ensuring that data was collected when the library was opened and preparation of the data done later. The researcher also relied on academic librarians names that were provided by public libraries listed in table 3. The researcher also realized that university websites and databases sometimes proved to slow opened faster during the day, opened faster during the night and weekends, therefore this time was utilized well to fasten collection of academic librarian's names.

3.12 Summary

This chapter presented a detailed account of the strategy and methodology according to which this study was conducted. The pilot study only sampled four academic libraries in South Africa and three in Kenya and the results could therefore not meet the objectives of this study. The following gaps existed in this study: Academic librarians holding diploma qualification did not form part of the study; and some countries and public universities were not included in the study because of the reason cited in section 3.11 bullet 9 & 10. In the cause of developing a research methodology the researcher realized that Africa lacked an online bibliographic database and in order to solve this problem two international database were selected for this study. The issue of varying academic librarian's was dealt with in this chapter.

The next three chapters attempt to achieve the research objectives by providing and analyzing data on the comparison of publication patterns and output of academic librarians in the two selected regions.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1 Introduction

This section answers the following objectives. However, objective bullet 2 is not covered in this section [see section 2.8].

- To examine what academic librarians publish[see 4.8 and 4.9];
- To establish why academic librarians publish;
- To study the publication trends of academic librarians[see 4.7];
- To determine where academic librarians publish[see 4.2 and 4.6];
- To determine the level at which they collaborate[see 4.10];
- To establish the quantity of publishing [see 4.4 and 4.5].

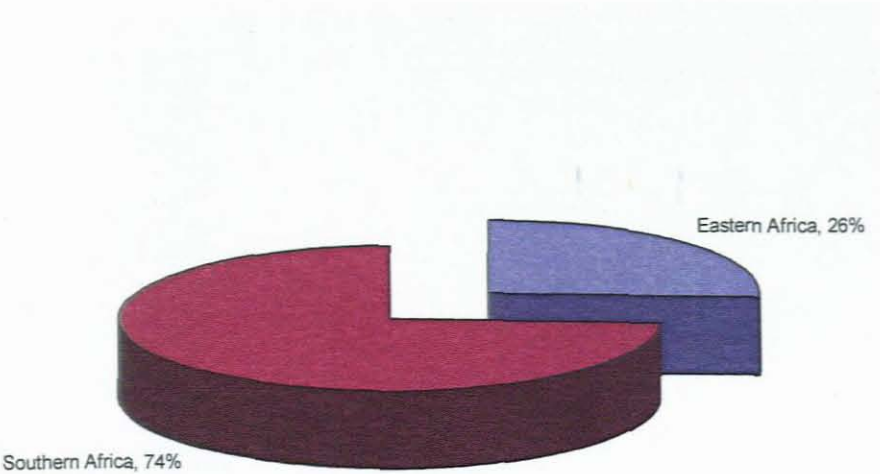
The names of academic librarians were retrieved from various university websites and used as keywords to access data from two online databases. This chapter covers data analysis and presentation.

4.2 Regional distribution of publications

Figure 2 below illustrates the distribution of publications according to geographical region. The chart indicates that East African academic librarians produced 69 (26.00%) publications, and Southern African librarians published 194 (74.00%).

[The value for N = 263]

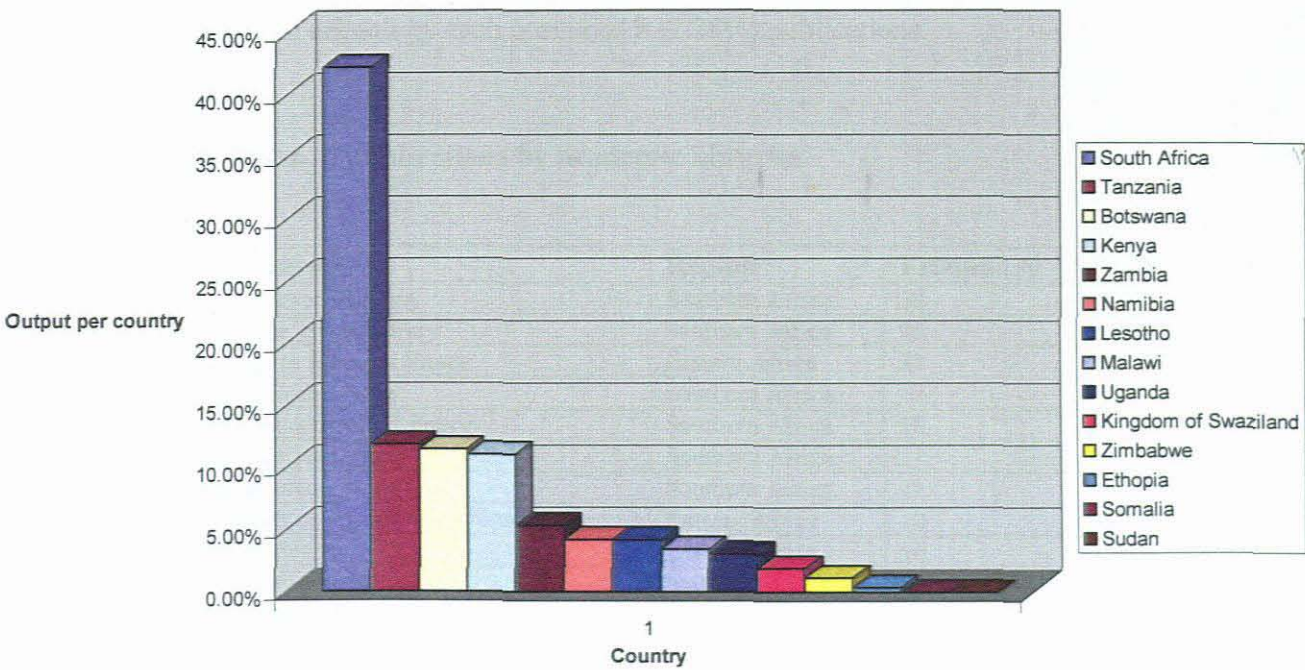
Figure 2: Distribution of publication by geographical region



4.3 Country wide distribution of publications

Figure 3 below indicates that South Africa produced 111 (42.21%) publications, Tanzania 31 (11.79%), Botswana 30 (11.41%), Kenya 29 (11.03%), Zambia 14 (5.32%), Namibia and Lesotho 11 (4.18%), Malawi 9 (3.42%), Uganda 8 (3.04%), Swaziland 5 (1.90%), Zimbabwe 3 (1.14%), Ethiopia 1 (0.38%), and Somalia and Sudan 0 (0.00%). [The value for N= 263].

Figure 3: Distribution of publications by country



4.4 Distribution of publication by academic libraries

The table below shows the distribution of publications by academic libraries in both regions. Academic libraries from the two regions produced a total of 263 publications. Most of the publications were from the University of Botswana Library, which produced 30 (11.41%). The University of Cape Town Library came second with 25 (9.51%) followed by the University of Dar es salaam with 21 (7.98%) and the University of Pretoria with 19 (7.22%) publications. Other libraries' contributions, in descending order, were from the University of Witwatersrand (18; 6.84%); the University of Namibia and University of Lesotho (11; 4.18%); the Sokoine University of Agriculture Library and Moi University Library (10; 3.80%), the University of Zambia (9; 3.42%) Makerere

University Library (8; 3.04%); and Egerton University Library (7; 2.66%). Libraries from the University of Nairobi, Masinde Muliro University of Science and Technology, University of Malawi, University of the Free State, University of Kwa Zulu Natal, and Tshwane University of Technology each produced 6 (2.28%) publications.

TABLE 4: Distribution of publications by academic libraries

Number = 263

No.	Academic libraries	Region	Frequency	%
1	University of Botswana Library	Southern Africa	30	11.41%
2	University of Cape Town Library	Southern Africa	25	9.51%
3	University of Dar es Salaam Library	Eastern Africa	21	7.98%
4	University of Pretoria Library	Southern Africa	19	7.22%
5	University of Witwatersrand Library	Southern Africa	18	6.84%
6	University of Namibia Library	Southern Africa	11	4.18%
7	University of Lesotho Library	Southern Africa	11	4.18%
8	Sokoine University of Agriculture Library	Eastern Africa	10	3.80%
9	Moi University Library	Eastern Africa	10	3.80%
10	University of Zambia Library	Southern Africa	9	3.42%
11	Makerere University Library	Eastern Africa	8	3.04%
12	Egerton University Library	Eastern Africa	7	2.66%
13	University of Nairobi Library	Eastern Africa	6	2.28%
14	Masinde Muliro University of Science and Technology Library	Eastern Africa	6	2.28%
15	University of Malawi Library	Southern Africa	6	2.28%
16	University of Free State Library	Southern Africa	6	2.28%
17	University of Kwa Zulu Natal Library	Southern Africa	6	2.28%
18	Tshwane University of Science and Technology	Southern Africa	6	2.28%
19	UNISA	Southern Africa	5	1.90%
20	University of Rhodes Library	Southern Africa	5	1.90%
21	University of Swaziland Library	Southern Africa	5	1.90%
22	Copperbelt University Library	Southern Africa	5	1.90%
23	University of Fort Hare Library	Southern Africa	5	1.90%
24	Durban University of Technology	Southern Africa	4	1.52%
25	University of Mzuzu Library	Southern Africa	3	1.14%
26	University of Limpopo Library	Southern Africa	3	1.14%
27	University of Stellenbosch Library	Southern Africa	3	1.14%
28	University of Zululand Library	Southern Africa	3	1.14%
29	University of Zimbabwe Library	Southern Africa	3	1.14%
30	CPUT Library	Southern Africa	2	0.76%
31	University of Johannesburg Library	Southern Africa	2	0.76%
32	Alemaya University of Agriculture Library	Eastern Africa	1	0.38%
33	University of North – West Library	Southern Africa	1	0.38%
34	Vaal University of Technology Library	Southern Africa	1	0.38%
35	Somalia National University Library	Eastern Africa	0	0.00%
36	Kenyatta University Library	Eastern Africa	0	0.00%
37	Mzumbe University Library	Eastern Africa	0	0.00%
38	Open University of Tanzania Library	Eastern Africa	0	0.00%
39	University of Khartoum Library	Eastern Africa	0	0.00%

40	University of Venda Library	Southern Africa	0	0.00%
41	Central University of Technology Free State	Southern Africa	0	0.00%
42	Mangosuthu Technikon Library	Southern Africa	0	0.00%
43	Nelson Mandela Metropolitan University Library		0	0.00%
44	Walter Sisulu University of Science and Technology Library	Southern Africa	0	0.00%
45	University of Western Cape Library	Southern Africa	0	0.00%
46	Midlands State University Library	Southern Africa	0	0.00%
47	Zimbabwe Open University Library	Southern Africa	0	0.00%
	TOTAL		263	100%

4.5 Distribution of publication by academic librarians

A total of 271 publications were produced cumulatively by the two regions. Of these, 69 publications were from Eastern Africa, and 194 were produced by academic librarians from Southern Africa. Table 5 illustrates that Muswazi from the University of Witwatersrand and Pienaar from the University of Pretoria both produced 11 (4.00%), followed by Ojedokun from the University of Botswana (9; 3.27%), and Darch from the University of Cape Town (8; 2.91%) Msuya and Nawe from the University of Dar es Salaam, Westhuizen from the University of Pretoria, Moshoeshe–Chadzingwa from the University of Lesotho, and Chifwepa from the University of Zambia each contributed 7 (2.55%) publications, while Nyamboga from Egerton University and Lumande from the University of Botswana produced 6 (2.18%) each. [It was not possible to analyse the data in terms of rank or academic qualifications because some library websites provided the job title and not the qualifications of the academic librarian. In all cases though, the job title were provided, however, these job titles were not uniform. See appendix B for more details]

Table 5: Distribution of publication by academic librarians

N= 275

Eastern Africa Region					Southern Africa Region				
WORLDCAT & LISTA DATABASE					WORLDCAT & LISTA DATABASE				
No.	Name	Library	Fq	%	No.	Name	Library	Fq	%
1	Msuya	University of Dar es salaam	7	2.55%	1	Muswazi	University of Witwatersrand	11	4.00%

2	Nawe	University of Dar es salaam	7	2.55%	2	Pienaar	University of Pretoria	11	4.00%
3	Dulle	Sokoine University of Agriculture	6	2.18%	3	Ojedokun	University of Botswana	9	3.27%
4	Arap Tirong	Moi University	6	2.18%	4	Darch	University of Cape Town	8	2.91%
5	Shibanda	Masinde Muliro University of Science and Technology	6	2.18%	5	Westhuizen	University of Pretoria	7	2.55%
6	Nyamboga	Egerton University	6	2.18%					
7	Musoke	Makerere University	3	1.09%	6	Moshoeshoe - Chadzingwa	University of Lesotho	7	2.55%
8	Inoti	Nairobi University	2	0.73%	7	Chifwepa	University of Zambia	7	2.55%
9	Were	Nairobi University	2	0.73%	8	Lumande	University of Botswana	6	2.18%
10	Liyai	Nairobi University	2	0.73%	9	Gwenda	University of Rhodes	5	1.82%
11	Khamadi	Moi University Library	2	0.73%	10	Swanepoel	Tshwane University of Technology	5	1.82%
12	Mulimila	Sokoine University of Agriculture	2	0.73%	11	Nfila	University of Botswana	4	1.45%
13	Manda	University of Dar es salaam	2	0.73%	12	Kgosiemang	University of Botswana	4	1.45%
14	Nkhoma Wamunza	University of Dar es salaam	2	0.73%	13	Ngwira	University of Malawi	4	1.45%
15	Lwehabura	Sokoine University of Agriculture	2	0.73%	14	Namponya	University of Free State	4	1.45%
16	Omona	Makerere University	2	0.73%	15	Fidzani	University of Botswana	3	1.09%
17	Mammo	Alemaya University of Agriculture	1	0.36%	16	Uta	University of Malawi	3	1.09%
18	Matanji	University of Nairobi	1	0.36%	17	Caroline	University of Cape Town	3	1.09%
19	Musisi - Edebe	Moi University	1	0.36%	18	Dubbeld	University of Kwa Zulu Natal	3	1.09%
20	Wanyama	Moi University	1	0.36%	19	Marais	UNISA	3	1.09%
21	Kiloi	Moi University	1	0.36%	20	Myers	University of Kwa Zulu Natal	3	1.09%
22	Bii	Moi University	1	0.36%	21	Anbu	University of	3	1.09%

							Swaziland		
23	Odini	Moi University	1	0.36%	22	Lungu	Copperbelt University	3	1.09%
24	Mwanzilo	Egerton University	1	0.36%	23	Oladokun	University of Swaziland	2	0.73%
25	Lwoga	Sokoine University of Agriculture	1	0.36%	24	Rao	Copperbelt University	2	0.73%
26	Kiondo	University of Dar es salaam	1	0.36%	25	Jain	University of Botswana	2	0.73%
27	Kabudi	University of Dar es salaam	1	0.36%	26	Taole	University of Botswana	2	0.73%
28	Matovelo	Sokoine University of Agriculture	1	0.36%	27	Hansmann	University of Botswana	2	0.73%
29	Busagala	Sokoine University of Agriculture	1	0.36%	28	Morgenstern	University of Lesotho	2	0.73%
30	Lutwama	Makerere University	1	0.36%	29	Namhila	University of Namibia	2	0.73%
31	Kakai	Makerere University	1	0.36%	30	Barrat	University of Namibia	2	0.73%
32	Kakembo	Makerere University	1	0.36%	31	Thomson	University of Namibia	2	0.73%
		TOTAL	75⁴	100%	32	Amoah	University of Cape Town	2	0.73%
					33	Arko- Cabbah	University of Cape Town	2	0.73%
					34	Tise	University of Stellenbosch	2	0.73%
					35	Nicholson	University of Witwatersrand	2	0.73%
					36	Mgobozi	University of Zululand	2	0.73%
					37	Chimfwembe	Copperbelt University	2	0.73%
					38	Makondo	University of Zambia	2	0.73%
					39	Chikonzo	University of Zimbabwe	2	0.73%
					40	Oosthuizen	University of Fort Hare	1	0.36%

⁴ Total number of contributions by all academic librarians including those who collaborated

					41	Raju	University of Kwa Zulu Natal	1	0.36%
					42	Buchanan	University of kwa Zulu Natal	1	0.36%
					43	Khun	University of Free State	1	0.36%
					44	Darries	CPUT	1	0.36%
					45	Rolf	CPUT	1	0.36%
					46	Herbert	Durban University of Technology	1	0.36%
					47	Muller	Durban University of Technology	1	0.36%
					48	Thomas	Durban University of Technology	1	0.36%
					49	Latsky	University of Johannesburg	1	0.36%
					50	Sander	University of Johannesburg	1	0.36%
					51	Shokane	University of Limpopo	1	0.36%
					52	Chuene	University of Limpopo	1	0.36%
					53	Bopape	University of Limpopo	1	0.36%
					54	Larney	University of North - West	1	0.36%
					55	Hammes	University of Pretoria	1	0.36%
					56	Van Eeden	UNISA	1	0.36%
					57	Retief	UNISA	1	0.36%
					58	Englebretcht	University of Stellenbosch	1	0.36%
					59	Sieberhagen	Tshwane University of Technology	1	0.36%
					60	Mahlangu	Vaal University of Technology	1	0.36%
					61	Ubogu	University of	1	0.36%

						Witwatersrand		
				62	Jiyane	University of Zululand	1	0.36%
				63	Morupisi	University of Botswana	1	0.36%
				64	Dintwe	University of Botswana	1	0.36%
				65	Esilaba	University of Botswana	1	0.36%
				66	Kakoma	University of Lesotho	1	0.36%
				67	Chiwaya	University of Malawi	1	0.36%
				68	Phiri	University of Malawi	1	0.36%
				69	Van Roi	University of Namibia	1	0.36%
				70	Sturges	University of Namibia	1	0.36%
				71	Katjihigwa	University of Namibia	1	0.36%
				72	Mchombu	University of Namibia	1	0.36%
				73	Visagie	University of Namibia	1	0.36%
				74	Ohene	University of Namibia	1	0.36%
				75	Awuku	University of Namibia	1	0.36%
				76	Khangala	University of Cape Town	1	0.36%
				77	Omar	University of Cape Town	1	0.36%
				78	Sales	University of Cape Town	1	0.36%
				79	Rapp	University of Cape Town	1	0.36%
				80	Barben	University of Cape Town	1	0.36%
				81	Lesley	University of Cape Town	1	0.36%

					82	Walter	University of Cape Town	1	0.36%
					83	Thomson	University of Cape Town	1	0.36%
					84	Visser	University of Cape Town	1	0.36%
					85	Yumba	University of Swaziland	1	0.36%
					86	Ngcobo	University of Swaziland	1	0.36%
					87	Banda	Copperbelt Universsity	1	0.36%
					88	Nkhoma	Copperbelt Universsity	1	0.36%
					89	Sibanda	University of Zimbabwe	1	0.36%
						TOTAL		200	100%

4.6 Distribution of publications by sources

Table 6 below shows the distribution of publications in journals⁵. 35 journals from Eastern Africa published a total of 69 publications, while 80 journals from Southern Africa published 194 publications. The *Southern African Journal of Library and Information Science* topped the list by publishing 23 (8.75%) of Southern Africa’s publications. *Library Review* came second with 12 (4.18%) of Eastern Africa’s publications. Southern Africa’s *Information Development* came third with 10 (4.18%) publications, followed by the *Africa Journal of Library and Information Science* (8; 3.04%), and *Information Management* (7; 2.66%) Eastern Africa’s *Quarterly Bulletin of International Association of Agricultural Information Specialist* and *Information Development* both published 6 (2.88%) publications. [Please note that not all publications originated from journals]

Table 6: Distribution of publications by source

N = 263

Eastern Africa region				Southern Africa region			
WORLDCAT and LISTA Database				WORLDCAT and LISTA Database			
No.	Journal	Fq	%	No.	Journal	Fq	%
1	Library Review	12	4.18%	1	South African Journal of Library and Information Science	23	8.75%
2	Quarterly Bulletin of International Association of Agricultural Information Specialist	6	2.28%	2	Information Development	10	3.80%
3	Information Development	6	2.28%	3	African Journal of Library and Information Science	8	3.04%
4	IFLA Journal	5	1.90%	4	Information Management	7	2.66%
5	Information Management	4	1.52%	5	The International Information and Library Review	7	2.66%
6	Library Management	3	1.14%	6	Vetenary Science Library (University of Pretoria)	6	2.28%
7	Health Libraries Review	3	1.14%	7	International Journal Of Legal Information	6	2.28%
8	New Library World	2	0.76%	8	IFLA Journal	6	2.28%
9	SRELS Journal of Information Management	2	0.76%	9	Library Management	6	2.28%
				10	Mousaion	6	2.28%
10	Journal of Information Science	2	0.76%	11	The Electronic Library	5	1.90%
11	Journal of Inter Library Loan and Document Delivery	1	0.38%	12	University of Cape Town	5	1.90%
12	Campus Wide Information System	1	0.38%	13	South African Centre for Cooperation in Agricultural Research and Training	4	1.52%
13	Oxford publishers	1	0.38%	14	University of Pretoria	4	1.52%
14	Eldoret SCANUL (ECS)	1	0.38%	15	Library Review	4	1.52%
15	Malaysian Journal of Library and Information Science	1	0.38%	16	Quarterly Bulletine of National Library of South Africa	3	1.14%
16	Electronic Library and Information System	1	0.38%	17	Libri	3	1.14%
17	DESIDOC	1	0.38%	18	Program: Electronic Library and Information Systems	3	1.14%

18	Kenyan Economic Association	1	0.38%	19	Library Hi Tech Journal	3	1.14%
19	Centre for Law Research International	1	0.38%	20	Journal of Academic Librarianship	3	1.14%
20	Library and Archival Security	1	0.38%	21	Cataloguing and Classification Quarterly Journal	3	1.14%
21	African Journal of Library and Information Science	1	0.38%	22	IATUL Annual Conference Proceedings	3	1.14%
22	Libri: International Journal of Library and Information Science	1	0.38%	23	National Library of Namibia	2	0.76%
23	Journal of Information Technology	1	0.38%	24	Information Studies Journal	2	0.76%
24	Berlin Koster	1	0.38%	25	University of Natal	2	0.76%
25	University of Dar es Salaam	1	0.38%	26	For Full Text	2	0.76%
26	University of North Carolina at Chapel Hill	1	0.38%	27	UNISA	2	0.76%
27	Tanzania Library Association	1	0.38%	28	National University of Lesotho	2	0.76%
28	Dar es Salaam SCESCAL Ten	1	0.38%	29	Boston Spa, British Library	2	0.76%
29	Information Technology for Development Journal	1	0.38%	30	Cape Librarian	2	0.76%
				31	National AIDS Coordinating Agency, University of Botswana	1	0.38%
30	Springer Verlag	1	0.38%	32	Campus Wide Information Systems	1	0.38%
31	South African Journal of Librarianship and Information Science	1	0.38%	33	Education for Information	1	0.38%
32	Journal of Librarianship and Information Science	1	0.38%	34	International Information Review	1	0.38%
33	World Libraries	1	0.38%	35	Institute of Southern African Studies (National University of Lesotho)	1	0.38%
34	The Department of Women, Kampala	1	0.38%	36	Lesotho Library Association	1	0.38%
35	Uganda Library Association	1	0.38%	37	Maseru	1	0.38%

	TOTAL	69	100%	38	Library and Information Update	1	0.38%
				39	Legal Information Management Journal	1	0.38%
				40	Collection Development	1	0.38%
				41	College Research Libraries	1	0.38%
				42	Chandos	1	0.38%
				43	South African Institute of International Affairs	1	0.38%
				44	Malherbe Library	1	0.38%
				45	National Museum Council	1	0.38%
				46	University of Johannesburg	1	0.38%
				47	Eric	1	0.38%
				48	Information Outlook	1	0.38%
				49	INSPEL	1	0.38%
				50	African Research Documentation	1	0.38%
				51	Sub – Saharan African Program	1	0.38%
				52	MALICO	1	0.38%
				53	FAO Fisheries	1	0.38%
				54	Malawi Library Association	1	0.38%
				55	International Journal of Information and Library Research	1	0.38%
				56	APLESA	1	0.38%
				57	Zomba Malawi	1	0.38%
				58	ASLIB Proceedings	1	0.38%
				59	Journal of Documentation	1	0.38%
				60	INSPEL	1	0.38%
				61	National Archives of Namibia	1	0.38%
				62	Social Science Division, Multi Disciplinary Research Centre	1	0.38%
				63	Clio Press	1	0.38%
				64	The Reference Librarian	1	0.38%
				65	Library Consortia	1	0.38%

					Management		
				66	University of Stellenbosch	1	0.38%
				67	Library and Information Workers Association	1	0.38%
				68	Science and Technology Libraries	1	0.38%
				69	Interlending and Document Supply	1	0.38%
				70	Rand Afrikaans University	1	0.38%
				71	University of Zululand	1	0.38%
				72	Electronic Journal of Academic and Special Librarianship	1	0.38%
				73	Journal of Society of Archivist	1	0.38%
				74	Digital Libraries	1	0.38%
				75	Kepro Bulletin	1	0.38%
				76	The Project	1	0.38%
				77	Malayasian Journal of Library and Information Science	1	0.38%
				78	University of Botswana	1	0.38%
				79	African Journal of Librarianship	1	0.38%
				80	Oxford	1	0.38%
					TOTAL	194	100%

[Source in this case means the journal and publisher that publication appears]

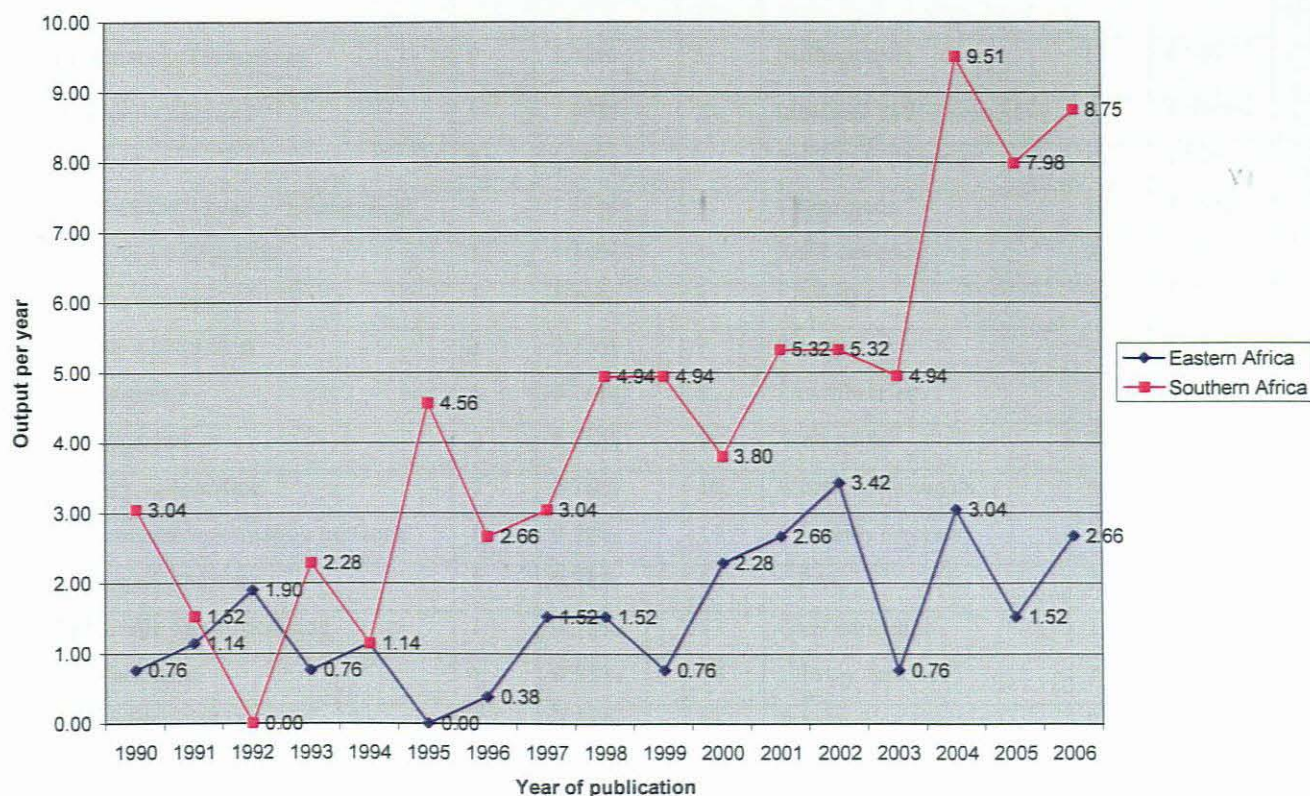
4.7 Trends of publication output by region from 1990 to 2006

Figure 4 illustrates the publication trends of the two regions. In 1990 Eastern Africa started off with 2 (0.76%) publications, which rose to 3 (1.14%) in 1991 and 5 (1.90%) in 1993. This fell back to 2 (0.76%) in 1994. In 1995, the number of publications increased to 3 (1.14%) then dropped abruptly the following year to 0 (0.00%). In 1997 the number rose to 4 (1.52%), where it remained constant until 1999, before dropping again to 2

(0.76%). In 2000, the number of publications rose to 6 (2.28%), a trend that was maintained in 2001. 2002 saw the number rise to 9 (3.42), then drop to 2 (0.76%) in 2003, rise the next year to 8 (3.04) then drop in 2005 to 4 (1.52%). The number rose again in 2006 to 7 (2.66%).

Southern Africa started with 8 (3.04%) publications in 1990, but this number dropped to 4 (1.52%) in 1991 and again the following year to 0 (0.00%). In 1993 the number of publications went up to 6 (2.28%), dropped the next year to 3 (1.14%) rose in 1995 to 12 (4.56%), dropped in 1996 to 7 (2.66%). The number rose again the following year to 8 (3.04%) and even more in 1998 to 13 (4.95%) where it remained in 1999. In 2000 production increased to 16 (3.80%) before dropping to 14 (5.32%) in 2001, where it remained until 2003. In 2003, the number of publications reduced to 13 (4.95%) rose even more to 25 (9.51%) in 2004, dropped the next year to 21 (7.98%), and went up in 2006 to 23 (8.75%).

Figure 4: Trend publication by region



4.8 Distribution of publication by subjects

Table 7 below shows the subjects that academic librarians researched in their publications. In Eastern Africa most academic librarians (9; 3.42%) focused on Information Technology, followed by Academic Libraries and Congresses (5; 1.90%), and Information Resource Management and Information Services (3; 1.14%). Southern African academic librarians published mostly on Bibliographies and Libraries and Automation which totaled (13; 4.94%), closely followed by Academic Libraries and Congresses (12; 4.56%), Book Reviews (9; 3.42%) and on a lesser scale, Libraries (4; 1.52%).

Table: 7 Distribution of publications by subject

N = 263

Eastern Africa region	Southern Africa region
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WORLDCAT and LISTA Database				WORLDCAT and LISTA Database			
No.	Subject	Fq ⁶	%	No.	Subject	Fq	%
1	Information Technology	9	3.42%	1	Bibliography	13	4.94%
2	Academic libraries	5	1.90%	2	Libraries and automation	13	4.94%%
3	Congresses	5	1.90%	3	Academic libraries	12	4.56%
4	Information resource management	3	1.14%	4	Congresses	12	4.56%
5	Information Services	3	1.14%	5	Book reviews	9	3.42%
6	Human resource library	2	0.76%	6	Libraries	4	1.52%
7	Health information	2	0.76%	7	Internet	3	1.14%
8	Cataloguing	2	0.76%	8	Law libraries	3	1.14%
9	Bibliography	2	0.76%	9	Web portal	3	1.14%
10	Library automation	2	0.76%	10	Electronic journals	3	1.14%
11	Agricultural information network	1	0.38%	11	Libraries mergers	3	1.14%
12	Document Delivery	1	0.38%	12	OPAC	2	0.76%
13	Electronic data processing	1	0.38%	13	User education	2	0.76%
14	HIV infection	1	0.38%	14	Library services	2	0.76%
15	Fish information	1	0.38%	15	Information literacy	2	0.76%
16	Library building	1	0.38%	16	Library consortia	2	0.76%
17	Marketing	1	0.38%	17	Library employee	2	0.76%
18	Library finance	1	0.38%	18	Curriculum	2	0.76%
19	Internet	1	0.38%	19	African published journal	2	0.76%
20	Agricultural literature	1	0.38%	20	Knowledge management	2	0.76%
21	Internet reference service	1	0.38%	21	Information accessibility	2	0.76%
22	Digital libraries	1	0.38%	22	Namibia–Imprint periodical	2	0.76%
23	Collection development	1	0.38%	23	Public libraries – South Africa	2	0.76%
24	Telecommunication law & legislation	1	0.38%	24	Strategic planning	2	0.76%
25	Electronic resource	1	0.38%	25	Cataloguing	2	0.76%
26	Information dissemination	1	0.38%	26	Library orientation	2	0.76%
27	Information profession	1	0.38%	27	Digital libraries	2	0.76%
				28	HIV/AIDS	2	0.76%

⁶ Fq stands for frequency

28	Library science	1	0.38%	29	Libraries for teaching	1	0.38%
29	Information specialist	1	0.38%	30	CD - MARC	1	0.38%
30	Agricultural libraries	1	0.38%	31	Information science and teaching	1	0.38%
31	Comparative librarianship	1	0.38%	32	Serial control system automation	1	0.38%
32	Library research	1	0.38%	33	Information retrieval	1	0.38%
33	Library orientation	1	0.38%	34	Library science	1	0.38%
34	Collection development	1	0.38%	35	Technologies and innovation	1	0.38%
35	Library management	1	0.38%	36	Electronic works	1	0.38%
36	Automated classification	1	0.38%	37	Information access	1	0.38%
37	Libraries and education graduates	1	0.38%	38	Libraries – special collection	1	0.38%
38	ICTS	1	0.38%	39	IT-Cataloguing	1	0.38%
39	Information seeking behavior	1	0.38%	40	Human rights	1	0.38%
40	Electronic Information service	1	0.38%	41	Information science	1	0.38%
41	Agricultural information	1	0.38%	42	obituary	1	0.38%
42	Rural development	1	0.38%	43	CD-ROM-Africa	1	0.38%
43	Reserve collection	1	0.38%	44	Fish information	1	0.38%
44	Agricultural information services	1	0.38%	45	Community library	1	0.38%
	TOTAL	69	100%	46	Library directory	1	0.38%
				47	Intranet and Internet	1	0.38%
				47	Indexing and abstracting	1	0.38%
				48	Information for rural	1	0.38%
				49	Library cooperation	1	0.38%
				50	Theses register	1	0.38%
				51	Archives	1	0.38%
				52	Visual learning	1	0.38%
				53	Library administration	1	0.38%
				54	Library collection	1	0.38%
				55	Legal information	1	0.38%
				56	Acquisition	1	0.38%
				57	Library partnership	1	0.38%
				58	Kipling Rudyard	1	0.38%
				59	E-Mail	1	0.38%

				60	Information storage and retrieval systems-agriculture	1	0.38%
				61	Agriculture	1	0.38%
				62	Descriptive cataloguing	1	0.38%
				63	CD-ROM	1	0.38%
				64	Government publications	1	0.38%
				65	Business information	1	0.38%
				66	Telematic libraries	1	0.38%
				67	Information service	1	0.38%
				68	Strategic management	1	0.38%
				69	University libraries	1	0.38%
				70	Animal information	1	0.38%
				71	Video copyright	1	0.38%
				72	NACO	1	0.38%
				73	Electronic resources	1	0.38%
				74	LIASA	1	0.38%
				75	Grey literature	1	0.38%
				76	AIDs	1	0.38%
				77	Union catalogue	1	0.38%
				78	Censorship	1	0.38%
				79	Swaziland National Bibliography	1	0.38%
				80	Library strategic planning	1	0.38%
				81	ETD	1	0.38%
				82	Copyright	1	0.38%
				83	Inter library loan	1	0.38%
				84	Evidenced based medicine	1	0.38%
				85	Libraries award	1	0.38%
				86	Association Institute	1	0.38%
				87	Freedom of information	1	0.38%
				88	Documentation	1	0.38%
				89	Translations(Rhetoric)	1	0.38%
				90	Legal literature	1	0.38%
				91	Intellectual property	1	0.38%

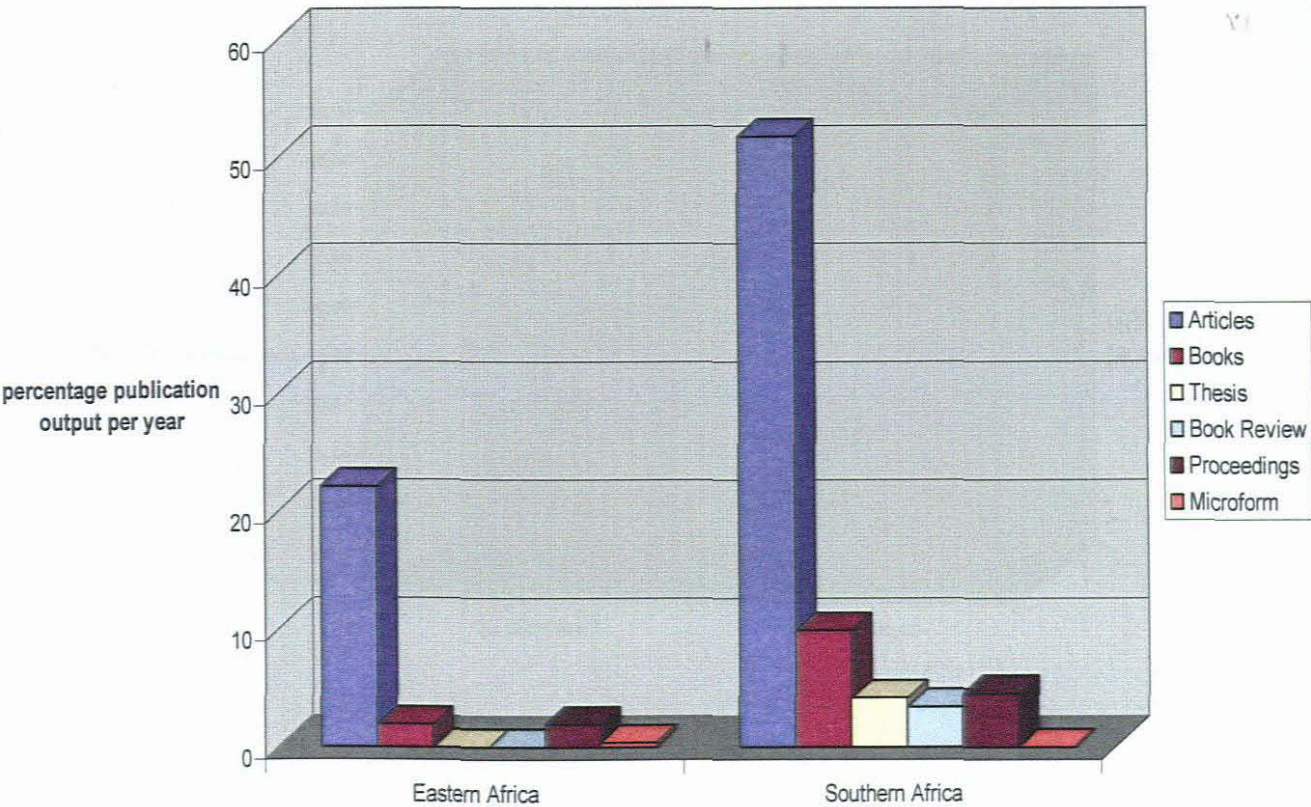
				92	Records management	1	0.38%
				93	Education technology	1	0.38%
				94	GAELIC region	1	0.38%
				95	Communication	1	0.38%
				96	National libraries	1	0.38%
				97	Libraries and education	1	0.38%
				98	Library science societies	1	0.38%
				99	Information specialist	1	0.38%
				100	Internet education	1	0.38%
				101	Education	1	0.38%
				102	Information science – rural women	1	0.38%
				103	Libraries-circulation	1	0.38%
				104	Data structure	1	0.38%
				105	Information technology	1	0.38%
				106	Academic librarian	1	0.38%
				107	Information structure	1	0.38%
				108	Information storage and retrieval	1	0.38%
				109	TOTAL	194	100%

4.9 Distribution of publication by type of documents

There were 69 publications in Eastern Africa. Of these, 58 (22.05%) were articles, 5 (1.90%) books, 5 (4.56%) conference proceedings, 1 (0.38%) microform and 0 (0.00%) theses or book reviews. Southern Africa had 194 publications, 136 (51.71%) of which were articles, 26 (9.89%) books, 11 (4.18%) theses, 9 (3.42%) book reviews, 12 (4.56%) conference proceedings and 0 (0.00%) microforms (see figure 5).

[The value of is N = 263]

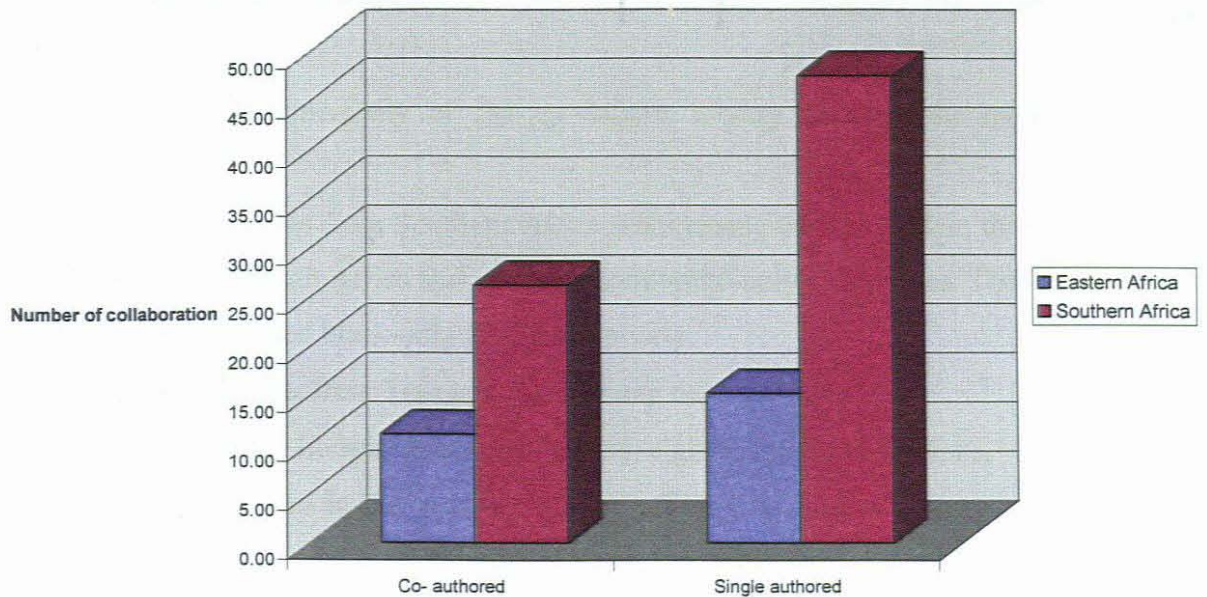
Figure 5: Distribution of publications by type of documents



4.10 Nature of collaboration among academic librarians

Figure 6 below illustrates the nature of collaboration of academic librarians in the two regions. There were a total of 263 publications. In Eastern Africa, 29 (11.03%) of the publications were co-authored and 40 (15.21%) were published individually, while in Southern Africa, 69 (26.24%) were co-authored and 125 (47.53%) were published individually.

Figure 6: Nature of collaboration among academic librarians



4.11 Summary

This chapter was about data analysis and presentation. Data was presented in pie charts, line and bar graphs, and tables. The salient issues emerging from this chapter were:

- Of the two regions Southern Africa emerged the most productive and surpassed Eastern Africa by 48.00%.
- Out of the fourteen countries, South Africa emerged the most productive.
- There was a slight difference (30.42%) in the production output of Tanzania, Botswana, Kenya and Zambia.

- There was a gap of 36.89% - 0.00% between South Africa and countries such as Zambia, Namibia, Lesotho, Malawi, Uganda, Swaziland, Zimbabwe, Ethiopia, Somalia and Sudan in terms of publications.
- Tanzania was the most productive country in Eastern Africa
- University of Botswana Library emerged the overall most productive library.
- In South Africa, the University of Cape Town Library emerged the most productive.
- In East Africa, the University of Dar es Salaam Library emerged the most productive.
- Eight academic libraries from Southern Africa were among the top twelve; three of them were from South Africa and were previous white-only universities. Those that had been designated black-only performed poorly.
- Two university libraries from Tanzania were among the top twelve.
- Only eleven university libraries produced between eight to thirty publications.
- Most academic libraries in the top twelve were offering courses in Library and Information Science, e.g. the University of Cape Town, University of Botswana University of Dar es salaam, University of Namibia, University of Pretoria and Moi University Libraries.
- Most academic librarians were once-time publishers.
- Most of Southern African academic librarians published in the *Southern Africa Journal of Library and Information Science* journal, while academic librarians in Eastern Africa published mostly in the *Library Review* journal.
- Both regions experienced a rise and fall in publication output from 1990 to 2006. However, in 1992 Southern Africa produced 0 (0.00%) publications which was in contrast to an incremental increase of 25 (9.51%) in 2004. Eastern Africa had 0 (0.00%) publications in 1995, against an increase of 9 (3.42%) in 2002.
- Most of the publications in Southern Africa focused on Bibliography and Library Automation, while in Eastern Africa the main subject area was Information Technology.

- Most of the publications in Southern Africa were articles, followed by books, conference proceedings and theses. In Eastern Africa, the publications were mainly articles and conference proceedings.
- Academic librarians in both regions preferred publishing individually.
- The most prolific librarians were both from South Africa.

The following omissions were noted in this chapter:

- Whereas the researcher would have liked to show the number of publication produced by academic librarians by rank or academic qualifications, this was not possible, because of the reason explained in the report [see 4.6].
- There were also academic librarians who published articles, books etc and this had to be discussed [see 4.9].

From these findings, there grew a need to establish why some academic librarians and libraries were performing better than others. The outcome of the study could then be used to improve the production output of countries that were performing poorly.

The next chapter discusses the findings of this study.

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.1 Introduction

According to Neuman (2006:498), the discussion of the findings is not “*a selective or partisan interpretation*” but “*a candid discussion of what is in the results section*”, so that a reader can “*examine the data and arrive at different interpretations*”. Neuman proposes that in the discussion of results the researchers should give a clear interpretation of his/her findings. He further adds that, the easiest way for beginners to organize the discussion is according to hypothesis. However, this study did not use hypothesis and for that reason, in line with what the author has proposed, that this chapter will discuss the findings in relation to the study’s research questions and objectives formulated as indicated in chapter one.

This chapter therefore, discussed what the findings reveal about what academic librarians publish; why academic librarians should publish; the publication trend among academic librarians: the geographical distribution of publications among academic librarians; the nature of collaboration among academic librarians; and the publication output of academic librarians.

5.2 Why academic librarians should publish

Peters, (1999:27) and Veaner (1990: 63) observe that academic librarians play a vital role in public university libraries by providing varied library services and assisting clients with their research through the provision of necessary information. The roles of the academic librarians have continued to change over the years, mainly from being a caretakers of books to that of being creators of intellectual knowledge. From Poynter.

Marjorie, Curran, Thyer, and Stover (refer o page 26) believes that academic librarians could reap the following benefits if they engaged in research:

- Research would give an academic librarian recognition both nationally and internationally;
- It would offer professional recognition to the academic librarian from colleagues and peers. For example, they may be called upon to speak at functions;
- The academic librarian would have reason to be proud, in that s/he has been published and that someone somewhere has cited his or her work;
- The academic librarian would add to the body of knowledge that goes into creating our professional literature;
- Publication leads to invitations to conferences and symposiums;
- Research publications could be used to rate academic librarians when the need for promotion arises;
- It could lead to further careers, for example in teaching or consultancy, for the academic librarian;
- Academic librarians would gain financially from publishing;
- Publishing could result in the promotion and recognition of one's department/institution based on publication output.
- It would provide continued tenure for the academic librarian;
- The academic librarian would become competitive in the publishing world;
- The academic librarian can keep score of his/her professional achievement through publishing;
- It would be of significant importance in the academic librarian's resume;
- The academic librarian would have left his/her ideas behind for others to consider; and
- He/she would be able to impart research skills onto others who wish to publish.

5.3 Most productive region and country

In the findings, Figures 2 and 3 show the most productive region and country in relation to academic librarians' productivity. The most prolific region was Southern Africa with 194 (76%) publications. Eastern Africa only recorded 69 (26%) publications. South Africa emerged as the most prolific country in this study with 111 (42.21%) publications. Tanzania came second (31; 11.79%), followed by Botswana (30; 11.41%), Kenya (29; 11.03%), Zambia (14; 5.32%), Namibia and Lesotho (11; 4.18%), Malawi (9; 3.42%), Uganda (8; 3.04%), Swaziland (5; 1.90%), Zimbabwe (3; 1.14%), Ethiopia (1; 0.38%), and Somalia and Sudan (0; 0.00%).

Arguably, Southern Africa's accomplished performance could be attributed to South Africa, which boosted the region. South Africa was probably more prolific because:

- It has a strong and sound research policy.
- Funds are always made available to academic librarians who wish to carry out research.
- The country is politically stable
- Many universities offer the course. Therefore the country could produce more research-oriented academic librarians than the rest of the countries in the study.

Performance in countries such as Zimbabwe, Sudan and Somalia was most likely affected by political instability. Proof of this lies in the fact that South Africa, Botswana and Tanzania have, in the study's time frame, been the most stable countries, and correspondingly enjoyed good performances. South Africa and Botswana could additionally attribute their good performances to strong economies, which are lacking in most of the countries in the two regions.

Another reason probably affecting the publication performance of countries such as Ethiopia, Kenya, Lesotho, Namibia, Malawi, Swaziland, Zimbabwe, Uganda, Somalia and Sudan is the issue of Diaspora, whereby many intellectuals are migrating to other

countries of the world because of the presence of push factors such as unemployment, poor remuneration, lack of academic freedom, and poor government policies. This affects many professions, including Library and Information Science. For instance, the Africa News update website (2005; par.1) highlighted that between 500,000 and 1.8 million Kenyans work overseas, making it the most brain-drained country in the region. This could mean that many academic librarians living abroad probably publish outside. In addition, there is also the possibility that the course (Library and information Science) is not given priority because it is not considered to be a science/ technology course. Funds are therefore channeled to other areas considered more of a priority such as medicine, agriculture, and the pure and applied sciences. Furthermore, many academic librarians probably do not get incentives and motivation, such as promotion, recognition, funding and sabbatical leave to carry out research. The fact that librarians bearing a masters or a PhD degree could be moving to other attractive professions such as teaching cannot be ruled out, this leaves the library fraternity without research-oriented professionals. On top of this, there could be the lack of a sound research policy, which results in the neglect of implementation of the findings suggested by professionals in this field. Important to note also is that for a long time universities in Africa were not offering Library and Information Science, these may have hampered the production of research-oriented librarians.

The fact that the databases may not have indexed all the publications cannot be ruled out, particularly because in the course of data collection from the LISTA and WORLDCAT databases, there was a great difference in the total number of publications retrieved.

5.4 Most productive academic libraries

Sengupta (1992:82) states that bibliometrics can be used to predict the productivity of publishers, individuals, authors, organizations, countries or entire disciplines. This study therefore sought to establish the most productive academic libraries in the two regions. The University of Botswana Library in Southern Africa came out on top with 30

(11.41%) publications. The next nine prolific academic libraries, in descending order, were from the University of Cape Town in Southern Africa with (25; 9.51%), the University of Dar es salaam in Eastern Africa (21; 7.98%); the University of Pretoria in Southern Africa (19; 7.22%); the University of Witwatersrand (18; 6.84%), the University of Namibia and the University of Lesotho in Southern Africa (11; 4.18% each); the Sokoine University of Agriculture and the Moi University in Eastern Africa (10; 3.80 %) the University of Zambia in Southern Africa (9; 3.42% publications each) [see table 4].

A closer look at the top universities reveals that they have existed for a long time, and are probably more stable than other universities in terms of government funding. Some of these institutions were also the first academic institutions of higher learning in their countries, e.g. the University of Botswana, University of Dar es salaam, and the University of Namibia. Another factor worth noting is that the three of the academic libraries from South Africa that featured in the top ten were from universities that had been designated as ‘white-only’ during the apartheid era. These are the University of Cape Town, University of Pretoria and the University of Witwatersrand. However, academic libraries from universities that were designated as ‘black-only’ performed poorly, such as the University of Zululand (3; 1.14%), the University of the North–West (1; 0.38), the University of the Western Cape (0; 0.00%), and the University of Venda (0; 0.00%). In all likelihood, former ‘white-only’ academic libraries performed well because of access to better resources and funding, which they continued to enjoy once apartheid was banished. In contrast, survival was probably the main focus in black-designated libraries which suffered from poor resources in the years proceeding and immediately following democratic independence.

Eastern Africa’s Sokoine University of Agriculture Library probably made the top ten because it is in an agricultural-based university, and therefore, enjoys the funding that goes with the importance placed on agriculture in the region. In a similar position is the Egerton University Library, which took twelfth position with 7 (2.66%) publications.

It is interesting to note that the top ten libraries i.e. libraries hailing from, the University of Botswana, the University of Cape Town, the University of Dar es salaam, The University of Pretoria, the University of Namibia, the University of Zambia, Moi University, Makerere University, Egerton University and Nairobi University; were in institutions that offer the Library and Information Science course. It is highly likely that the academic librarians from these universities were getting support in terms of skills and funding from the Library and Information Science department.

5.5 Most productive academic librarian

Ikpaahindi (1985: 163) observed that bibliometrics could be used to identify the most productive author/s. Data from Table 5 indicates that a total of 32 academic librarians contributed towards 69 publications in Eastern Africa. In Southern Africa 90 academic librarians contributed to 194 publications. Two academic librarians from Southern Africa emerged as the most prolific in the two regions, and these were Muswazi from the University of Witwatersrand Library, and Pienaar from the University of Pretoria Library, each with 11 (4.00%) publications. In Eastern Africa, academic librarians with a record of more than five publications were Msuya and Nawe, both from the University of Dar es salaam, with 7 (2.55%) publications each; and Dulle from the Sokoine University of Agriculture, Arap Tirong from Moi University and Nyamboga from Egerton University with 6 (2.18%) publications each.

Academic librarians from Southern Africa with a record of more than five publications, other than Muswazi and Pienaar, were Ojedokun from the University of Botswana Library (9; 3.27%); Darch from the University of Cape Town Library (8; 2.91%); Westhuizen from the University of Pretoria, Moshoeshe–Chadzingwa from the University of Lesotho and Chifwepa from the University of Zambia (7; 2.55% each); Lumande from the University of Botswana (6; 2.18%); and Gwenda from the University of Rhodes and Swanepoel from the Tshwane University of Technology (5; 1.82% each). Academic librarians from Southern Africa therefore occupied the first four overall positions. The top 7 most prolific academic librarians came from institutions that have

existed for a long time. However, it is possible that some academic libraries performed poorly because their most productive academic librarians moved to other libraries in search of greener pastures. For example e.g. Muswazi moved from the University of Swaziland to the University of Witwatersrand, and Shibanda moved from Moi University to the Masinde Muliro University of Science and Technology.

Only 23 Library Directors from the 47 academic libraries published and conducted research. These Directors were Nawe, Arap Tirong, Mwanzilo, Dulle, Musoke, Shibanda, Mammo, Rapp, Gwenda, Tise, Ubogu, Sander, Swanepoel, Namhila, Phiri, Uta, Larney, Chuene, Lungu, Buchanan, Moshoeshe–Chadzingwa, Chikonzo and Namponya (see appendix for data on their affiliations).

5.6 Most popular journal

The popularity of a journal in the two regions was measured by the number of times any academic librarian's publication had appeared in the journal. In Eastern Africa, academic librarians tended to publish in 35 journals. Most (12; 4.18%) of the librarians in this region preferred publishing in *Library Review*; followed by the *Quarterly Bulletin of International Association of Agricultural Information Specialist*, and the *Information and Development Journal*, both in second place with 6 (2.28%) publications. The *IFLA Journal* had 5 (1.90%) publications.

Southern Africa academic librarians published in 80 journals. Most (23; 8.75%) of the publications were in the *Southern Africa Journal of Library and Information Science* (8; 3.04%); and *Information Management* and *International Information and Library Review Journal*, both with 7 (2.66%) publications. Seven journals published a total of 6 (2.28%) publications each, namely *Veterinary Science Library*, *International Journal of Legal Information*, *IFLA Journal*, *Library Management*, *Mousaion*, *University of Cape Town* and *The Electronic Library Journal*. These results illustrate that academic librarians in Southern Africa preferred publishing in foreign journals. East African academic

librarians probably did so because they lack(ed) regional journals that focus on this discipline.

5.7 Research trend in Eastern and Southern Africa

According to Sengupta (1992: 82), bibliometrics can be used to analyze or identify the research trends and knowledge of scientific disciplines. The publication trends of the two regions under study show that from 1990 to 2006, the number of publications was inconsistently increasing and decreasing. Southern Africa's publication output was only steady once from 1998 to 1999, where the number of publications remained at 13 (4.94%). Eastern Africa had a steady publication trend from 1997 to 1998, where the publication output was 4 (1.52%). In 1992 and 1995, the publication output was 0.00% in Southern Africa and in Eastern Africa respectively. This unsteady trend could be attributed to a lack of funds during the specified periods.

Elections and referendums also seem to affect the output of publications in the two regions, perhaps because when an election or a referendum is held all funds are geared towards these events. However, this was not the case in some years where there was a drop in output. For instance, it is possible that East Africa's output dropped in 1993, because Kenya had an election in the previous year; in 1995 the output dropped once more, and this may have been due to Tanzania's election; and in 2005, Kenya and Uganda had a referendum and Tanzania had an election. Similarly in South Africa, publication output dropped in 1992, possibly because South Africa had a referendum during that year; in 1994, Botswana, South Africa, Malawi and Namibia held their elections; and in 1996 Zambia and Zimbabwe had their elections.

However, despite elections in South Africa, Malawi and Namibia in 2004 the output rose but, but then dropped the following year, probably due to the strain on funds caused by the previous year. The same scenario occurs in East Africa, whereby although Uganda held an election in 2006, the publication output rose. Kenya also held an election in 1997 with an increase in its publication output.

The independence of South Africa in 1994 appears to have had a positive impact on the country's publication output, because from then on it increased, clearly indicating that it had surpassed the East African's output. Stemming from the above, the researcher therefore predicts that the publication output will probably continue rising and falling depending on the political situation that prevails in the two regions.

5.8 Most researched subject

This section was meant to identify the subject areas that academic librarians covered most in their publications. The results are illustrated in Table 8 as shown in chapter four. In Eastern Africa, a total of 43 subjects were discussed in 69 publications. The most researched subject was Information Technology, which appeared in 9 (3.42%) publications, followed by the following two topics; Academic Libraries and Congresses which were discussed in 5 (1.90%) publications.

In Southern Africa, a total of 108 subjects were discussed in 194 publications. Bibliography and Library Automation were the most covered subjects, each with a total of 13 (4.94%) publications, followed also by two topics which were; Academic Libraries and Congresses, covered in 12 (4.56%) publications. Book Reviews were in third place with 9 (3.42%) publications.

Academic librarians from both regions were interested in Library Automation, possibly because the period from 1990 to 2006 saw more libraries moving away from manual to automated library systems. In both regions, academic librarians probably published articles on Academic Libraries because they were more familiar with the academic library environment. The results also perhaps illustrate that during this period more conferences were held in Southern Africa than in Eastern Africa.

5.9 Most published type of document

Publications may appear in the form of articles, abstracts, books, book reviews, proceedings, etc. In Eastern Africa, most of the 69 publications (58; 22.05%) were articles, followed by proceedings (5; 4.56%), books (5; 1.90%), microforms (1; 0.38%) and theses and book reviews (0; 0.00% each). A similar situation was depicted in Southern Africa, where most of the publications were articles (136; 51.71%), followed by books (26; 9.89%), theses (11; 4.18%), book reviews (9; 3.42%), proceedings (12; 4.56%) and microforms (0; 0.00%). There were a total of 194 publications in Southern Africa (see figure 5). These results indicate that academic librarians from both regions prefer articles to any other form of publication. This preference could be because articles are peer reviewed, are faster and cheaper to produce, and readership is always assured. On the other hand, the poor publication of books could be attributed to Kags' (2008: par.2) argument that Africa lacks a reading culture, and because of this and due to many authors shy away from publishing books. The number of proceedings confirmed that more conferences were being held in Southern Africa than in Eastern Africa, as mentioned earlier.

5.10 Nature of collaboration among academic librarians

Weller *et al* (1999) established in their study that 1/3 of the librarians in their study preferred to publish jointly. However, Yazit and Zainab (2007:44) found that most Malaysian Library and Information Science publications were single authored (see chapter two for more details). In Eastern Africa, most (40; 15.21%) of the publications were also single authored. The same results were found in Southern African publications, where again most (125; 47.53%) of the publications were done by individuals single (see figure 6). Academic librarians in both regions probably published individually because of poor library networks connecting libraries and a lack of funding for authors who wished to publish jointly.

5.11 Summary

This chapter attempted to discuss the findings of this study based on the data collected and analysed in chapter four. Various reasons were provided as to why a certain region performed poorly or well. The reasons provided however, were purely based on speculation. The researcher hoped that further researches and recommendations suggested in the next chapter would be conducted in future to help shed light on these important emerging and pressing issues.

The next chapter will provide recommendations and a conclusion to the study.

CHAPTER SIX

RECOMMENDATIONS AND CONCLUSION

6.1 Introduction

This chapter provides the summary of the findings and conclusion of the study. The chapter will also include suggested recommendations in all areas that require attention.

The aim of this study was to compare research and publication patterns of academic patterns in Eastern and Southern Africa from 1990 to 2006. In order to achieve this two online databases namely WORLDCAT and LISTA were used to retrieve data. Academic librarian's names were retrieved from public university websites. Bibliometrics was employed as a research method, and data was analyzed with the help of Microsoft Excel and displayed in the form of tables and graphs (i.e. line and bar graphs, and pie charts).

6.2 Conclusion

The objectives of the study were as follows:

- To examine of what academic librarians publish;
- To establish of why academic librarians publish;
- To determine the publishing trend of academic librarians;
- To determine where academic librarians publish;
- To determine the level of collaboration and
- To establish the quantity of publishing.

The researcher noted that overall the above objectives were achieved, because over half (47; 55.95%) out of 84 public universities libraries (see table 11 and 12 at the back of the report), that were to be included in the study from both regions provided names of their academic librarians online. It was noted that in the East Africa region not much was achieved, because only 14 (31.10%) out of a total of 45 public universities libraries (see table 11) provided the names of their academic librarians. However, the objectives were achieved because out of a total of 39 public academic libraries, 33 (84.60%) provided

names of their academic librarians (see table 12). The researcher was able to retrieve and analyze data for those libraries that provided the names (see back of this report) of their academic librarians from the online databases (LISTA and WORLDCAT).

6.3 Gaps and inconsistencies

The following gaps were observed during the study

- University librarians did not update their websites from time to time, did not provide all details of their employees necessary for this study i.e. some provided the designation of the librarians and not their degree qualifications or vice versa.
- Some universities as stated within the study, did not have a website at all on the Internet
- Some libraries did not provide a webpage for their libraries.
- The LISTA was not updated from time to time i.e. when an academic librarian changed employers it was not indicated and sometimes the full name(s) of the academic librarians was not indicated. WORLDCAT on the other hand, did not provide affiliation of the author.
- This study had not been carried out in many countries in Europe, Asia and Africa; therefore there was not much information on the study.
- The researcher noted that even though LISTA database was designated to capture all researches in Library and Information Science, it did not do so. This was observed when data was downloaded from WORLDCAT database; WORLDCAT database had indexed publications that were not provided by LISTA. WORLDCAT database had also portrayed the same. WORLDCAT did not always provide Keywords for publications.

6.4 Recommendations

This section will provide recommendations and suggestion to further research pertaining to this study.

6.4.1 Why should academic librarians publish?

Based on the literature available to the researcher (see chapter two and five), it was noted it was important for academic librarians to publish because of the following important reasons:

- National and international recognition the academic librarian would get;
- It would offer professional recognition to the academic librarian from colleagues and peers such as being called to functions;
- The academic librarian would add to the body of knowledge that goes into creating our professional literature;
- Research would be used to rate professional librarian when need for promotion arises and
- Academic librarian would gain financially from publishing.

6.4.2 What do academic librarians publish?

It was observed from the study that academic librarians needed to diversify the subject areas they researched on, because as noted (see table 8 and 5.8) most academic librarians from both regions concentrated on the following subject areas Information Technology, Libraries and Automation, Academic Libraries, Congresses. Academic librarians in Southern Africa concentrated more on bibliographies. Librarians needed to publish also on the following areas that were not researched on Information Ethics and Policy, Informetrics and Bibliometrics. Librarians from both needed to increase publications more in subject areas that appeared in below five publications e.g. were User Education, Research Methods, Indexing and abstracting and Information Services.

6.4.3 Do academic librarians publish?

It was noted that academic librarians from both region preferred publishing individually, however, the researcher wishes to recommend that they should jointly author because this would facilitate the sharing of ideas, skills, lead to improvement of the quality of research and also this would allow for better lobbying of fundings.

6.4.4 How much do academic librarians publish?

- There was urgent need for the following Public universities libraries to improve their productivity since they had no publications at all ; Somalia National University, Kenyatta University in Kenya, Mzumbe University of Tanzania, Open University of Tanzania, University of Khartoum, Midlands University of Zimbabwe and the following universities in South Africa; University of Venda, Mangusuthu Technikon, Central University of Free State , Nelson Mandela Metropolitan University, and University of Western Cape(see table 4 and 5.4).
- Other public university that had less than 5 publications need to do the same and academic librarian who were one – time or not – publishers (see table 6 and 5.5) needed to increase their publication as well.
- Though it was noted that Southern Africa performed fairly well in terms of production ,there was an urgent need for the following countries within this region to improve their research productivity; Zambia, Zimbabwe, Namibia, Swaziland, Ethiopia, Lesotho and Botswana. In Eastern Africa Tanzania performed not so well and in that line it needed to improve more and these countries needed to work hard to improve; Kenya, Uganda, Sudan, Ethiopia, and Somalia [see figures 1, 2 and 5.3].
- This study suggests the following solutions for countries and public universities that performed poorly: Academic librarians need to be motivated through the provision of research fund and sabbatical leave; they should be awarded in terms of promotions for publishing; and employers should allow or encourage conference attendance.

6.4.5 What is the publication trend of academic librarians?

All academic librarians from both regions should be encouraged to publish regularly. This should be strengthened by provision of incentives such as consistent funding, promotion and sabbatical leave. This would strengthen the publication trend and eliminate the rise and drops in publication trends (see figure 4 and 5.7).

6.4.6 Do academic librarians collaborate?

It was noted that academic librarians from both region preferred publishing individually, however, the researcher wishes to recommend that they should jointly author because this would facilitate the sharing of ideas, skills, lead to improvement of the quality of research and also this would allow for better lobbying of fundings (see figure 6 and 5.7).

6.5 Suggestions for further research

It was recommended that:

- Based on the literature retrieved, it was evident that such study had not been carried out before especially in Africa, therefore, a complete and detailed bibliometrics study should be conducted on the research and publication patterns of academic librarians in order to establish issues such as why many academic librarians do not publish, problems faced by academic librarians who publish and what can be done to make it possible for them to publish.
- Further research is also recommended on countries such as Angola, Burundi, Rwanda, Mozambique, and Universities in these two regions that did not provide the names of their academic librarians.
- A detailed research is required on Europe, Asia etc so that the results can be compared with Africa's.

- Finally, further research is required on other parts of Africa such as North, Central and Western in order to attain a complete and detailed picture on the nature of research and publication pattern of the whole continent.

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APPENDIX A

TABLE 8: DISTRIBUTION OF ACADEMIC LIBRARIES IN EASTERN AFRICAN PUBLIC UNIVERSITIES

EAST AFRICA	NAME OF LIBRARY	AFFILIATION	YEAR STARTED	NO.OF STAFF	AVAILABILITY ON WEB
BURUNDI	Bibliotheque de l'Universite	University of Burundi			Names not available on website
DJIBOUTI	Pole Universitaire De Djibouti Library	Pole Universitaire De Djibouti			Names not available on website
ETHIOPIA	Addis Ababa University Library	Addis Ababa University	1950		Names not available on website
	Alemaya University Library	Alemaya University		2	Available
	Debut University Library	Debut University			Names not available on website
KENYA	Margaret Thatcher Library	Moi University		17	Available
	Nairobi University Library	UON	1959	24	Available
	Masinde Muliro University of Science & Technology Library	MMUST		1	Available
	Egerton University Library	Egerton University		2	Available
	Maseno University Library	Maseno University			Names not available on website
	Jomo Kenyatta University of Agriculture & Technology Library	JKUAT			Names not available on website
	Kenyatta University Library	Kenyatta University		7	Available
RWANDA	Bibliotheque Universitaire	University of Rwanda			Names not available on website
SOMALIA	Somalia National University Library	Somalia National University			Names not available on website
SUDAN	AL – Neelain University Library	AL – Neelain University			Names not available on website
	Bahr AL Ghazal University Library	Bahr AL Ghazal University			Names not available on website
	AL – Zaiem AL – Azhari University Library	AL – Zaiem AL – Azhari University			Names not available on website
	Bakhet EL – Rudda University Library	Bakhet EL – Rudda University			Names not available on website
	University of Dongola Library	University of Dongola			Names not available on website
	EL – Dalang University Library	University of Dongola Library			Names not available on website
	EL- Gadarif University Library	EL- Gadarif University			Names not available on website
	El – Imam El – Mahdi University Library	El – Imam El – Mahdi University			Names not available on website
	University of Holy Quran & Islamic Science Library	University of Holy Quran & Islamic Science			Names not available on website
	Kassala University Library	Kassala University			Names not available on website
	University of Khartoum Library	University of Khartoum	1945	3	Available
	University of Kordofan Library	University of Kordofan			Names not available on website
	Nile Valley University Library	Nile Valley University			Names not available on website
	Nyala University Library	Nyala University			Names not available on website
	Omdurman Islamic University Library	Omdurman Islamic			Names not available on website

		University			
	Red Sea University Library	Red Sea University			Names not available on website
	Shendi University Library	Shendi University			Names not available on website
	Upper Nile University Library	Upper Nile University			Names not available on website
	Sudan University of Science & Technology Library	Sudan University of Science & Technology	1950		Names not available on website
	University of West Kordofan Library	University of West Kordofan			Names not available on website
	University of Zalengi Library	University of Zalengi			Names not available on website
TANZANIA	University of Dar Es Salaam Library	UDSU	1961	11	Available
	Sokoine National Agricultural Library(SNAL)	SUA		14	Available
	University of Bukoba Library	Bukoba University			Names not available on website
	Mzumbe University Library	Mzumbe University		3	Available
	Open University of Tanzania Library	Open University of Tanzania		8	Available
	Zanzibar University Library	University of Zanzibar			Names not available on website
UGANDA	Makerere University Library	Makerere University	1946	20	Available
	Kyambogo Library	Kyambogo University			Names not available on website
	Gulu University Library	Gulu University			Names not available on website
	Mbarara University of Science and Technology Library	MUST			Names not available on website
TOTAL					

TABLE 9: DISTRIBUTION OF ACADEMIC LIBRARIES IN SOUTHERN AFRICAN PUBLIC UNIVERSITIES

SOUTHERN AFRICA	NAME OF LIBRARY	AFFILIATION	YEAR STARTED	NO. OF STAFF	QUALIFICATIONS/DESIGNATION
ANGOLA	Agostinho Neto University Library	Agostinho Neto University			Names not available on website
BOTSWANA	University of Botswana Library	University of Botswana		49	Available
LESOTHO	University of Lesotho Library	University of Lesotho		17	Available
MALAWI	University of Malawi Library	University of Malawi	1965	5	Available
	University of Mzuzu Library	University of Mzuzu		9	Available
MAURITIUS	University of Technology Mauritius Library	University of Technology Mauritius			Names not available on website
MOZAMBIQUE	Universidade Eduardo Mondlane Library	Universidade Eduardo Mondlane			Names not available on website
	Universidade Pedagogica Library	Universidade Pedagogica			Names not available on website
NAMIBIA	University of Namibia Library	University of Namibia		15	Available
SOUTH AFRICA	University of Cape Town Library	University of Cape Town	1905	54	Available
	University of Fort Hare Library	University of Fort Hare	1916	19	Available
	University of Kwa Zulu Natal Library	University of Kwa Zulu Natal		51	Available
	Cape Peninsula University of Technology	Cape Peninsula University of Technology		15	Available

	Technology Library				
	Durban University of Technology Library	Durban University of Technology		56	Available
	University of Free State Library	University of Free State		15	Available
	University of Johannesburg Library	University of Johannesburg		18	Available
	University of Limpopo Library	University of Limpopo		13	Available
	Mangosuthu Technikon Library	Mangosuthu Technikon		23	Available
	Nelson Mandela Metropolitan University Library	NMMU	1901	36	Available
	North-West University Library	North-West University		19	Available
	University of Rhodes Library	University of Rhodes		5	Available
	University of Pretoria Library	University of Pretoria	1908	114	Available
	UNISA Library	UNISA	1947	11	Available
	University of Stellenbosch Library	University of Stellenbosch	1895	16	Available
	Tshwane University of Technology Library	Tshwane University of Technology		29	Available
	Vaal University of Technology Library	Vaal University of Technology		13	Available
	Central University of Technology Library	Central University of Technology		7	Available
	University of Venda for Science and Technology Library	University of Venda for Science and Technology		7	Available
	Walter Sisulu University of Technology and Science Library	WSUTS	1922	1	Available
	University of Western Cape Library	University of Western Cape		21	Available
	University of Witwatersrand Library	University of Witwatersrand		34	Available
	University of Zululand Library	University of Zululand		12	Available
KINGDOM OF SWAZILAND	University of Swaziland Library	University of Swaziland		12	Available
ZAMBIA	University of Zambia Library	University of Zambia		14	Available
	Copperbelt University Library	Copperbelt University		11	Available
ZIMBABWE	University of Zimbabwe Library	University of Zimbabwe	1956	22	Available
	Bindura University of Science Education Library	Bindura University of Science Education			Names not available on website
	Midlands State University Library	Midlands State University		9	Available
	National University of science and Technology Library	NUST			Names not available on website
	Zimbabwe Open University Library	Zimbabwe Open University		2	Available

Source: The Europa World of Learning, 2007, 57th ed. London: Routledge, 2006, Vol.1 and 11.

MASTERS STUDIES IN LIBRARY AND INFORMATION SCIENCE: SITIENEI G.C. (Student No. 20056989)

NO	Activities	TIME /DURATION																							
	YEAR	2007					2008												2009						
		A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M		
1	Proposal development and defense																								
2	Chapter one																								
3	Chapter two																								
4	Chapter three																								
5	Chapter four																								
6	Chapter five																								
7	Chapter six																								
8	Thesis collation and correction																								
9	Thesis out to external examiner																								
10	Back From examiner																								
11	Graduation																								

APPENDIX B

DATABASE COLLECTION SPREADSHEET FOR EASTERN AFRICA FROM WORLDCAT/ LISTA DATABASE

COUNTRY	AUTHOR	CO-AUTHOR	CO-AUTHOR AFFILIATION	NO	TITLE OF DOCUMENT	YP	SUBJECT	NOP	DOC TYPE	JOURNAL	LIBRARY
ETHIOPIA	Mammo, Y			1	The role of the Internet for the agricultural sector in Ethiopia: potentials, challenges and prospects.	2003	Agricultural Information Network	1	Article	Quarterly Bulletin of the International Association of Agriculture Information Specialist	Alemaya University of Agriculture
KENYA	Inoti, V.I	-	-	2	The trend of interlending activity in Kenya: an overview.	1992	Academic libraries		Article	Journal of ILL & Document Supply	University of Nairobi
	Inoti, V.I.	Matanji, P.		3	Interlending and document supply in Kenya.	1990	Document delivery	2	Article	Information Management	University of Nairobi
	Muriithi, F.	Were, J	Unknown	4	First IAAILD Africa conference-a new chapter is born.	2006	Conference proceedings		Proceedings	Quarterly Bulletin of the International Association of Agriculture Information Specialist	University of Nairobi
	Were, J.	Kay, R. & <i>et al</i>	IFLA Fellow	5	Tsunami.	2005	Electronic data processing	2	Articles	IFLA Journal	University of Nairobi
	Shibanda,	-	-	6	Media paradigm in	2003	HIV infection		Article	Quarterly Bulletin	Masinde

	G.G.				HIV/AIDS dimension among Kenyan smallholders knowledge adoption.					of the International Association of Agriculture Information Specialist	Muliro University of Science and Technology
	Shibanda, G.G.	Musisi-Edebe, J. E.	Moi university	7	Managing and developing the strategy for Africa's information in global computerization.	2000	Information technology		Article	Library Management	Masinde Muliro University of Science and Technology
	Shibanda, G.G.	-	-	8	Collection development as performance management	1994	Academic libraries		Article	Library Review	Masinde Muliro University of Science and Technology
	Shibanda, G.G.	-	-	9	Information for agriculture in Kenya.	1991	Rural development		Article	Information Development	Masinde Muliro University of Science and Technology
	Shibanda, G. G.	-	-	10	Optimizing fisheries information for decision making among Kenyan fish pond smallholders	1999	Fish information		Article	Library Review	Masinde Muliro University of Science

											and Technology
	Shibanda, G.G.	-	-	11	Multimedia computer utility framework for Moi University management information system	2002	Human resource library	6	Articles	Campus Wide Information System	Masinde Muliro University of Science and Technology
	Odini, S.O.	-	-	12	Managing a reserve collection: the case of Moi University library	1997	Reserve collection		Article	Library Review	Moi University
	Arap Tanui, T.	Ocholla, D.	University of Zululand	13	The construction and development of a library building: Moi university library/faculty.	1997	Library building		Article	Library Review	Moi University
	Khamadi, S.J.	-	-	14	Moi university library's bibliographic instruction programme	1996	Library orientation		Article	Library Review	Moi University
	Khamadi, S.J.D.	-	-	15	A proposal for change at Moi University Library: staff development, training and promotion	1994	Human resource - library	2	Article	New Library World	Moi University
	Bii, H.K.	Wanyama,P.		16	Automation and its impact on the job satisfaction among the staff of MTL, Moi University	2001	Information technology	1	Article	Library Management	Moi University
	Arap Tirong ,T.	Kiloi, A.S.		17	Why Marketing? The experience of Moi University	1993	Marketing		Article	Library Management	Moi University

					Library Kenya						
	Arap Tirong, T	Rosenberg Diana		18	Income generation : experiences from eight university libraries in Eastern, Central & Southern Africa	2001	Library – finance- Africa		Article	Oxford publishers	Moi university
	Arap Tirong, T.	Muriithi,F.		19	Proceedings of the standing conference for African National & Central & Southern Africa(SCANUL – ECS), Maseru, Lesotho 5 th – 8 th Dec 1996	1998	Congresses		Proceedings	Eldoret, SCANUL(ECS)	Moi University
	Arap Tirong, T.	-	-	20	Standardization of bibliographic data: the African perspective	1992	Cataloguing		Article	Library Review	Moi University
	Arap Tirong, T.	-	-	21	Library cataloguing: relevance to modern library users	1992	Cataloguing	6	Article	Library review	Moi University
	Nyamboga, C.M.	Kemparaju, T.D. & <i>et al</i>	Dept. of LIS Jnana Bharathi,India	22	Evaluation of university websites targeting English speaking users: a comparative analysis of selected sites in developed and developing countries	2006	Internet		Article	Malaysian Journal of LIS	Egerton University
	Mwanzilo, P.K.	-	-	23	Sharing information on the best practices in sustainable development in Kenya	2005	Agricultural literature	1	Article	Quarterly Bulletin of the International Association of Agriculture	Egerton University

										Information Specialist	
	Nyamboga, C.M.	-	-	24	Information skills and information literacy in Indian university libraries.	2004	Information resource management		Article	Electronic Library and Information Systems	Egerton University
	Nyamboga, C.M.	-	-	25	IT in university libraries in Karnataka	2002	IT		Article	Information Management	Egerton University
	Nyamboga, C.M.	Ongus, R. & <i>et al</i>	Egerton University	26	Experience in the use of the Internet at Egerton university Njoro-Kenya.	2004	Internet in reference service	6	Article	DESIDOC Bulletin of Information Technology	Egerton University
	Ongus, R.W.	Nyamboga, C.M.	Egerton University	27	Digitizing a research library: Egerton university – Kenya.	2004	Digital libraries		Article	SRELS Journal of Information Management	Egerton University
	Ongus, R.W.	Nyamboga, C.M.	Egerton University	28	Electronic document delivery for supporting agricultural research in Kenya: the experience of Egerton University library.	2002	Collection development		Article	SRELS Journal of Information Management	Egerton University
	Liyai, H.A	Odhiambo, L.O. & <i>et al</i>		29	Studies on cooperatives: co-operatives development in Kenya: a bibliography	1990	bibliography		Book	Kenyan Economic Association	University of Nairobi
	Kabatesi	Liyai, H.A.	UON	30	Press law: IT and freedom of the press	1994	Telecommunication-law & legislation	2	Book	Centre for law Research International	University of Nairobi
				0				0			Kenyatta

											University
Tanzania				0				0			Mzumbe University
				0				0			Open University of Tanzania
	Msuya,J.	-	-	31	Serials mutilation hazard at university of Dar es salaam library in Tanzania	1991	Collection management (libraries)	7	Article	Library and Archival Security	University of Dar Es Salaam
	Manda ,P.A.	-	-	32	Electronic resource usage in academic and research institutions in Tanzania	2005	Electronic resources		Article	Information Development	University of Dar Es Salaam
	Manda, P.A.	-	-	33	Information and agricultural development in Tanzania: a critique	2002	Information dissemination	2	Article	Information Development	University of Dar Es Salaam
	Kiondo, E.	-	-	34	Resource mobilization for library and information service development in Africa	2002	Information profession	1	Article	African Journal of LIS	University of Dar Es Salaam
	Msuya,J.	-	-	35	Computerizing the library catalogue with ADLIB at the University of Dar es salaam.	2001	Libraries - automation		Article	Information Management	University of Dar Es Salaam
	Msuya, J.	-	-	36	The information studies program of the University of Dar es salaam perception of stakeholders.	2005	Information services		Articles	Information Management	University of Dar Es Salaam
	Msuya, J	Matovelo D.S. & et al	Library professor university of Dar	37	Towards developing proactive information	2006	Information resource		Article	Quarterly Bulletins of the International	University of Dar Es

			es salaam		acquisition practices among <i>smallholders farmers for</i> empowerment and poverty reduction: situation analysis		management			Association of Agricultural information specialists	Salaam
	Msuya, J.	Farijala, M.	Unknown	38	The provision of library and information services to distance learners: the open University of Tanzania(OUT)	2002	Information services		Articles	Libri: International Journal of LIS	University of Dar Es Salaam
	Nawe, J. E.	-	-	39	Leadership challenges in high education libraries in East Africa	2001	Library science		Article	Library Review	University of Dar Es Salaam
	Nawe, J.E.	-	-	40	The future of library and information services in Tanzania	2001	Information specialists		Article	Library Review	University of Dar Es Salaam
	Nawe, J.E.	Wema, E. F.	National construction council	41	Prospects and traumas of computer-aided services in university libraries: a case of the University of Dar es salaam	2000	Academic libraries		Article	Information Management	University of Dar es salaam
	Nawe, J.E.	-	-	42	Using information and communication technologies in Tanzania responses of information professionals	2000	IT	7	Article	Information Management	University of Dar es salaam
	Nawe, J.E.	-	-	43	Information technology for the info-poor: experiences of the University of Dar –es – salaam library	1998	IT		Article	Information Development	University of Dar es salaam

	Nawe, J.E.	-	-	44	Work – relatd stress among the library and information workers	1998	Academic libraries		Article	Information Development	University of Dar es salaam
	Dulle,F.W.	-	-	45	The extension triad approach in disseminating agricultural information to extension workers...	2000	Agricultural information services		Article	Journal of Information Science	Sokoine National Agricultural University
	Mulimila,, R.T.	-	-	46	IT application in East Africa government – owned university libraries.	2000	Libraries automation	1	Article	Library Review	Sokoine National Agricultural University
	Dulle,F.W.	Lwehabura , M J .F. & <i>et al</i>	University of Dar es salaam	47	Researchers’ perspective on agricultural libraries as information sources in Tanzania	2001	Agricultural libraries		Articles	Library Review	Sokoine National Agricultural University
	Lwoga, E.T.	Wanyenda, C.	Unknown	48	Open access and open source: considerations for agricultural academic libraries in promoting collaboration and sharing of information and knowledge	2006	Information resource management	1	Article	Quarterly Bulletin of the International Association of Agriculture Information Specialist	Sokoine National Agricultural University
	Dulle,F.W.	Mulimila, R.T. & <i>et al</i>	SUA	49	Application of information technology for research in Tanzania: feedback from agricultural researchers	2002	IT		Article	Journal of Information Technology	Sokoine National Agricultural University
	Nawe, J.E.	-	-	50	Need and priority areas for continuing education for sub	1991	Comparative librarianship		Article	IFLA Journal	University of Dar es

					and professional information, library and archives personnel in Tanzania.						salaam
	Nkhoma-Wamunza, A.G.	-	-	51	Training and management of information services in the new millennium:16 th -19 th Oct, 2002 Bagamoyo, Tanzania, proceedings	2004	Congresses		Proceedings	University of Dar Es Salaam Library	University of Dar es salaam
	Nkhoma-Wamunza, A.G.	-	-	52	Information technology transfer policy and development in Tanzania: a case study	1997	IT- Tanzania	2	Microform	University of North Carolina at Chapel Hill	University of Dar es salaam
	Msuya,J.	-	-	53	Developing a library research agenda at the University of Dar es salaam	2002	Library research		Article	Information Management	University of Dar es salaam
	Msuya, J.	-	-	54	Rural library programme as a response to the challenge of relapsing into illiteracy: has Tanzania got the programme right : SCECSAL TEN, 27 July – 1 st August,1992	1992	congresses	4	Book	Tanzania Library Association	University of Dar es salaam
	Kiondo, E.	Kimbunga, T.M.	-	55	Information services in Tanzania academic libraries : problems and future	1992	Information services	1	Book	Dar es salaam SCECSAL – TEN	University of Dar es salaam
	Kabudi,A.M .M	-	-	56	The development and provision of scientific and technical information services	1997	Academic libraries	1	Book	Berlin, Koster	University of Dar es salaam

					in Tanzania, with reference to university libraries						
	Dulle, F.W.	-	-	57	Networking agricultural libraries in Tanzania: possible application of information technology	1999	IT		Article	Information Technology for Development	Sokoine National Agricultural University
	Dulle, F.W.	Lwehabura, M.J.F. & <i>et al</i>		58	Creating a core journal collection for agricultural research in Tanzania : citation analysis and user opinion techniques	2004	Agricultural information		Article	Library Review	Sokoine National Agricultural University
	Dulle, F.W.	Mulimila, R.T. & <i>et al</i>		59	Brief communication application of IT for research in Tanzania; feedback from agricultural researchers	2002	IT		Article	Journal of Information Science	Sokoine National Agricultural University
	Lwehabura, J.F.	Matovelo, D.S.		60	Effective library management : issues for managers and subordinates	2000	Library management	1	Article	New Library World	Sokoine National Agricultural University
	Murata, M.	Busagula, L.S. P & <i>et al</i>		61	The impact of OCR accuracy and feature transformation on automatic text classification	2006	Automated classification	1	Article	Springer – Verlag	Sokoine National Agricultural University
UGANDA	Lutwama, E.	Kigongo-Bukenya, I.M.N.	Makerere University	62	A tracer study of the East African School of LIS graduates 1995-1999 working in Uganda.	2004	Libraries and education graduates	1	Article	South African Journal of LIS	Makerere University

	Omona, W.	Ikoja – Odongo, R.	Makerere University	63	Application of information and communication technology (ICT) in health information access and dissemination in Uganda.	2006	ICT's		Article	Journal of Librarianship and Information Science	Makerere University
	Kakai, M.	Ikoja – Odongo, R. & <i>et al</i>	Makerere University	64	A study of the information seeking behavior of undergraduates students of Makerere University, Uganda	2004	Information Seeking behavior	1	Article	World Libraries	Makerere University
	Omona, W.			65	Providing online information services in Makerere university library	2006	Electronic Information service	2	Article	Information Development	Makerere University
	Musoke, M.G.N.			66	Research on women in Uganda: an annotated bibliography	1993	Bibliography		Book	The Department of Women, Kampala	Makerere University
	Musoke,M. G.N.			67	Information and its value to health workers in rural Uganda : a qualitative perspective	2001	Health information	3	Article	Health Libraries Review	Makerere University
	Biringi,P.	Musoke,M.G. N. and <i>et al</i>		68	SCECSAL XVI : towards a knowledge society for African development: papers presented at the SCECSAL XVI ,5 th -9 th July 2004,Kampala,Uganda	2004	Congresses		Book	Uganda Library Association	Makerere University
	Kakembo, R.J.K			69	Access to health information through partnership: problems	1998	Health information	1	Article	Health Libraries Review	Makerere University

					and benefits						
Somalia				0		0					Somalia National University
Sudan				0		0					University of Khartoum

DATABASE COLLECTION SPREADSHEET FOR SOUTHERN AFRICA FROM WORLDCAT/ LISTA DATABASE

COUNTRY	AUTHOR	CO-AUTHOR	CO-AUTHORS AFFILIATION	NO	TITLE OF DOCUMENT	YP	SUBJECT	NOP	DOC TYPE	JOURNAL	LIBRARY
Botswana	Morupisi,N.M.	-	-	1	Using OPAC at the University of Botswana	2006	OPAC		Article	Information Development	University of Botswana
	Nfila,N.R.	Darko-Ampem, K.	-	2	Development in academic library consortia from the 1960's through to 2000 : a review of the literature	2002	Library consortia		Article	Library Management	University of Botswana
	Nfila,N.R.	Dintwe, M.N. & <i>et al</i>	-	3	Experience of systems migration at the	2005	Libraries automation		Article	Program: electronic library	University of

					university of Botswana library: a case study					and information systems	Botswana
	Fidzani, B.T.	-	-	4	Information needs and information seeking behavior of graduate students at the university of Botswana	1998	Library orientation		Article	Library Review	University of Botswana
	Fidzani, B.T.	-	-	5	The impact of user education at the Botswana library	1998	User education		Article	Information Management	University of Botswana
	Fidzani, B.T.	Oladokun, O.S.		6	Assessment of library services as a support system in the institute of health services(HIS) in Botswana	2001	Library services		Article	Library Review	University of Botswana
	Esilaba, A.	-		7	HIV/AIDs in Botswana : an annotated bibliography	2003	HIV/AIDS(Disc ase)-Botswana		Book	National AIDS Coordinating agency ,University of Botswana	University of Botswana
	Ojedokun, A.	-	-	8	Transforming the library into a "teaching – learning laboratory" the case of University of Botswana library	2003	Libraries for teaching		Article	Campus- Wide Information System	University of Botswana
	Ojedokun, A.A.	-	-	9	CD-MARC bibliographic databases as an alternative to other	1996	CD-MARC		Article	The Electronic Library: the international	University of Botswana

					information sources: cataloguers' evaluation of the use of Library of Congress CD-MARC at Kenneth Dike Library, University of Ibadan, Nigeria					journal for microcomputer, and software applications in libraries	
	Ojedokun, A.A.	Kgomotso, H.M.	-	10	The emerging market for information professionals in Botswana and the skills requirement	2005	Information science-study and teaching		Article	Education for Information	University of Botswana
	Ojedokun, A.A.	Lebotse, E.K. & <i>et al</i>	-	11	Serial selection at the University of Botswana Library	2000	Serial control systems- Automation		Article	Library Management	University of Botswana
	Lumande, A.M.	-	-	12	Information seeking behavior among university of Botswana science faculty	1999	Information retrieval		Article	Information Management	University of Botswana
	Lumande, A.M.	Mutshewa, A.		13	The Botswana library association: attitude to membership among librarians in Botswana	2002	Library science		Article	Information Management	University of Botswana
	Kgosiemang, R.T.	-	-	14	Libraries and library services in Botswana	1999	Library services		Article	Information Development	University of Botswana

	Ojedokun A.A.	Moahi,K.I.I.	Dept of LIS,Botswana	15	Information and communication technology(ict) systems in Botswana	2006	Technologies innovations		Articles	South African Journal of LIS	University of Botswana
	Oladokun, O.S.	-	-	16	The networked world of lifelong learning and the challenging role of the library	2006	Information literacy		Article	Information Management	University of Botswana
	Ojedokun,A.A.	Lumande, E.	University of Botswana	17	The integration of information literacy skills into a credit – earning programme at the university of Botswana	2005	Information literacy		Articles	African Journal of Library, Archives and Information Science	University of Botswana
	Lumande,E.	Ojedokun, A.A.	University of Botswana library	18	Collecting mapping as an evaluation technique for determining curriculum and collection relationship: the university of Botswana experience	2005	Academic libraries		Article	African Journal of Library,Archives & Information	University of Botswana
	Ojedokun, A.A.	Lumande,E.	University of Botswana library	19	Cooperative electronic networks of academic libraries in Southern Africa	2005	Electronic networks		Article	Information Development	University of Botswana
	Ojedokun,A.A.	-	-	20	The evolving sophistication of Internet	2005	Internet		Article	International Information	University of

					abuses in Africa					Review	Botswana
	Rao, K.N.	Mutshewa, A		21	Enhancing access through electronic resources: the university of Botswana library experience	2000	Information access		Article	Library Hi tech Journal	University of Botswana
	Rao, K.N.	Lundstrom, T.E.		22	The digitization of past examination papers at the university of Botswana library	1999	Academic libraries		Article	Program: electronic libraries and information system	University of Botswana
	Mbaakanyi, D.M.	Lumande, E.		23	Subject authority control in a computerized system: use of CDMARC subjects in an academic library	1993	Academic libraries		Article	Electronic libraries	University of Botswana
	Nfila, R.B.			24	Academic library-supplier relationship :the experience of supplier selection and evaluation at the university of Botswana library	2004	Academic libraries		Article	African Journal of Library ,Archives and Information Science	University of Botswana
	Nfila, R.B.	-	-	25	The Botswana collection :an evaluative study the university of Botswana library special collections	2001	Libraries-special collection		Article	African Journal of Library ,Archives and Information Science	University of Botswana
	Kgosiemang, R. T.	-	-	26	Education and training	2005	cataloguing		Article	Cataloguing &	University

					for cataloguing at the university of Botswana library: an interview					Classification Quarterly	of Botswana
	Kgosiemang, R. T.	-	-	27	Role changes: cataloguing, technical services and subject librarianship at the university of Botswana University	2000	cataloguing		Article	Cataloguing & Classification Quarterly	University of Botswana
	Jain, P.	-	-	28	On – the – job training : a key to human resource development	1999	Library employee		Article	Library Management	University of Botswana
	Kgosiemang, R.T.	-	-	29	Retrospective conversion : the experience at the university of Botswana library	1999	IT- Cataloguing		Article	Cataloguing & Classification Quarterly	University of Botswana
	Jain, P.	-	-	30	Perceptions on empowerment and productivity in academic and public libraries	1998	Library employee productivity		Article	Library Management	University of Botswana
Lesotho	Moshoeshoe-Chadzingwa, M.	Kimane, I. & <i>et al</i>	-	31	Human rights documentation in Africa: Selected papers presented at the ISAS/HRI workshop on human rights	1996	congresses		Proceedings	National University of Lesotho	National university of Lesotho

					documentation in Africa held in Maseru 24 th -28 th August 1987						
	Moshoeshoe-Chadzingwa, M.	-	-	32	Library and information science text for Africa	2005	Book review		Article	South African Journal of LIS	National university of Lesotho
	Moshoeshoe-Chadzingwa, M.	IPLA & Institutions section on Government information and official publication & <i>et al</i>		33	Selected papers of the IPLA Anglophone Africa seminar on government information and official publications held at the University of Zimbabwe in Harare 15 th -18 th December 1994	1998	Congresses		proceedings	Boston Spa, British Library	National University of Lesotho
	Moshoeshoe-Chadzingwa, M.	-		34	Women in Lesotho:an annotated bibliography	1996	Bibliography		Article	Institute of Southern African studies, National University of Lesotho	National University of Lesotho
	Moshoeshoe - Chadzingwa,M			35	Libraries and information services in the 21 st century and beyond: proceedings of the 12 th SCECSAL X11:held in Maseru Lesotho from 9 th	1998	Congresses		proceedings	Lesotho Library Association	National University of Lesotho

					December 1996						
	Moshoeshoe - Chadzingwa,M	IFLA institutions		36	Anglophone Africa seminar on government information and official publications University of Zimbabwe,Harare,15 th - 18th	1998	congresses		proceedi ngs	Boston Spa British Library	National University of Lesotho
	Moshoeshoe -- Chadzingwa, M.	Kimane,I. & <i>et al</i>		37	Human rights documentation in Africa	1996	Human rights		Book	National University of Lesotho	National University of Lesotho
	Kakoma,A.K.	-	-	38	Reconstruction years are the best years: establishing good school libraries in South Africa	1997	Curriculum		Article	Information Management	National University of Lesotho
	Taole,N.	-	-	39	Proceedings of the workshop for library assistants on public relations and communication in libraries: held at the Mmelesi Lodge,Thaba -- Bosiu,19 th -20 th October 2000	2000	Congresses		proceedi ngs	Maseru	National University of Lesotho
	Taole,N.	-	-	40	Evaluation of OPAC: user searching behavior	1997	OPAC		Thesis	University of Cape Town	National University of Lesotho

	Letsolo, .P	Boadi, B.Y.		41	Information needs and information seeking behavior of distance learners at the institute of extra mural studies in Lesotho	2004	Information science		Article	Information Development	National University of Lesotho
Malawi	Ngwira,M.E.	Msiska, A.W.C.		42	Steve Simon Mwiyeriwa	2004	Obituary		Article	Library and Information Update	University of Malawi
	Chiwaya, M.			43	Chancellor college law library in Malawi	2004	Law libraries		Article	International Journal of Legal Information.	University of Malawi
				0							Mzuzu University
	Ngwira,M.E.	Levey, L.A. & <i>et al</i>	-	44	CD-ROM for African research needs: guidelines for selecting databases	1996	CD-ROMs- Africa		Book	Sub-Saharan African Program	University of Malawi
	Ngwira,M.E.	Malawi Library & information consortium & <i>et al</i>	-	45	MALICO: proceedings of the stakeholders workshop on consortium building, Blantyre,7 th May, 2003 and of opportunity knocks: the MALICO consortium building training workshop Lilongwe,18 th	2003	congresses		Proceedings	MALICO	University of Malawi

					– 19 th June 2003						
	Kadzamira, G.A.	Ngwira, M.E. & <i>et al</i>	-	46	Review of fisheries information resources in Malawi: case study	2004	Fish information		Article	FAO Fisheries Report	University of Malawi
	Phiri, D.B.V.	Msisko, W.C. & <i>et al</i>	-	47	Proceedings of the 11 th standing conference of Eastern, Central and Southern African librarians: SCECSAL XI, Blantyre, Malawi, 25 th – 29 th July 1994	1995	Congresses		Proceedings	Malawi Library Association	University of Malawi
	Uta, J.J.	-	-	48	Determining the research methodology for a community library survey : a Malawi experience	1994	Community library		Article	International Journal of Information and Library Research	University of Mzuzu
	Uta, J.J.	Chibambo, R.V. & <i>et al</i>	-	49	Third conference of the Association of parliamentary librarians in Eastern and Southern Africa (APLESA): 9 th – 13 the June, 1997, Blantyre, Malawi	1997	Congresses		proceedings	APLESA	University of Mzuzu
	Uta, J.J.			50	Directory of Malawi libraries	1990	Library directory		Book	Zomba, Malawi	University of Mzuzu
	Alenina, A.A. & <i>et al</i>	Chifwepa, V.		51	The role of libraries in the use of African-	2001	African-published		Article	The International Information and	University of Zambia

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	Chifwepa, V.	-	-	52	The use of the Internet and Intranet by teaching staff of the university of Zambia	2003	Intranet and Internet		Article	African Journal of Library, Archives and Information Science	University of Zambia
	Alemna, A.A. & <i>et al</i>	Chifwepa, V.		53	African journals: an evaluation of their use in African Universities	2000	African-published journals		Article	African Journal of Library, Archives and Information Science	University of Zambia
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	Chifwepa, V.	-	-	55	Developing indexing and abstracting tools and guidelines for Zambia	1998	Indexing and abstracting		Article	Information development	University of Zambia
	Chifwepa, V.	-	-	56	Rural information provision in Zambia : problems and prospects	1997	Information for rural		Article	Information development	University of Zambia
	Chifwepa, V.	-	-	57	Agricultural library cooperation in Zambia	1993	Library cooperation		Article	Information development	University of Zambia
Namibia	Van Rooi, H	Synman, R.		58	A central analysis of literature regarding knowledge management opportunities	2006	Knowledge management		Article	ASLIB Proceedings	University of Namibia
	Sturges, P.	Katjilungwa, M. & <i>et al</i>		59	Information in the national liberation	2005	Information accessibility		Article	Journal of Documentation	University of Namibia

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	Hansmann, L.	National library of Namibia		60	Namibia national bibliography :1993 - 1995	1999	Namibia-Imprint-Periodicals		Book	National Library of Namibia	University of Namibia
	Hansmann, L.	National library of Namibia		61	Namibia national bibliography :1996-1998	2002	Namibia-Imprint-Periodicals		Book	National Library of Namibia	University of Namibia
	Morgenstern,R.	-		62	Computerization of government libraries in Namibia	1995	Libraries-Automation		Article	INSPEL	University of Namibia
	Morgenstern,R.	National Archives(Namibia)		63	Central register of theses on Namibia January 1997	1997	Theses register		Book	National Archive of Namibia	University of Namibia
	Namhila,E.N.	-	-	64	Filling the gaps in the archival record of the Namibia struggle for independence	2004	Archives		Article	IFLA Journal	University of Namibia
	Namhila,E.N.	-	-	65	Perception of visual materials in rural Namibia	1995	Visual learning		Book	Social sciences Division,Multi-Disiplinary Research Center	University of Namibia
	Mchombu, C.	-	-	66	Information needs of women in small businesses in Botswana	2000	Information need		Article	The International Information and Library Review	University of Namibia

	Visagie,S.	-	-	67	Scholarly communication science and engineering research in higher education	2006	Book review		Article	South African Journal of LIS	University of Namibia
	Ohene, S.A.	Awuku,O.I.		68	Productivity in university libraries of developing countries: a Western & Southern African perspective	1995	Library administration		Article	Library Management	University Namibia
South Africa	Darch,C.	-	-	69	Tanzania	1996	Bibliography		Book	Clio Press	University of Cape Town
	Darch,C.	-	-	70	Frog voices, whispers, and silences; problems and issues in collecting for an African library in Africa	2004	Library collection		Article	The Reference Librarian	University of Cape Town
	Darch,C.	Underwood P.G.		71	Dirt road or yellow brick superhighway? Information and communication technology in academic libraries in South Africa	1999	Libraries- Automation		Article	Library Hi Tech	University of Cape Town
	Darch, C.	-	-	72	New rights—New laws: legal information in a changing world IALL 22 nd course on	2004	Legal information		Article	International Journal of Legal Information: the Official	University of Cape Town.

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	Darch,C.	Rapp,J. & <i>et al</i>	-	73	Academic library consortia in contemporary South Africa	1999	Library consortias		Article	Library Consortia management: an international journal	University of Cape Town
	Khangala,B.N.	-	-	74	An investigation into the prevalence of knowledge management practices within the libraries of two institutions on the verge of a merger :Cape Technikon and Peninsula Technikon	2004	Knowledge management		Book	University of Stellenbosch	University of Cape Town
	Woolfrey,L.	Omar, L. & <i>et al</i>		75	An investigation of public libraries in the greater Cape area	1993	Public libraries- South Africa		Article	Library and Information Workers Organisation	University of Cape Town
	Dilshaad,B.	-		76	The Brand Van Zyl Law Library (commat) the	2005	Law libraries		Article	Legal Information Management	University of Cape

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	Sales, D.	-		77	Acquisitions and the South African experience	1995	Acquisition		Article	Collection Development	University of Cape Town
	Hoover, J.	Rapp, J.		78	Mercantile library forms partnership with university of Missouri – St. Louis	1997	Library partnership		Article	College Research Libraries	University of Cape Town
	Barben T.	-		79	By rock and heath & pine: Rudyard Kipling and the University of Cape Town	2003	Kipling, Rudyard		Article	Quarterly Bulletin of National Library of South Africa	University of Cape Town
	Lesley, H.	-	-	80	Architectural records and their preservation	2003	Academic libraries		Article	Quarterly Bulletin of National Library of South Africa	University of Cape Town
	Amoah, J.K.			81	Environmental factors influencing the strategic planning of academic libraries: a comparative case study of the universities of Fort Hare and Port Elizabeth libraries	1998	Strategic planning		Article	University of Cape Town	University of Fort Hare.
	Amoah, J.K.	-	-	82	Environmental factors influencing the strategic planning of academic	1999	Strategic planning-academic		Thesis	University of Cape Town	University of Fort Hare.

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	Oosthuizen,S.	-	-	83	The role and function of e-mail as a form of computer mediated communication for research purposes; comparative study	2004	E-mail		Thesis	University of Cape Town	University of Fort Hare.
	Namponya,C.R.	Aina,I.O. & <i>et al</i>		84	Using micro-computers for agricultural information work: proceedings of a training course on micro-computer databases management systems for agricultural librarians and documentalists in the SADCC region, held in Lilongwe,Malawi,3 rd – 15 th December 1990	1991	Information storage and retrieval systems- Agriculture		Book	South Africa Center for Cooperation in Agricultural Research and Training	University of Free State
	Namponya, C.R.	Hailu, M. & <i>et al</i>		85	SACCAR/IDRC planning workshop for the establishment of a Southern African	1991	congresses		proceedings	Southern African Center for Cooperation in Agricultural	University of Free State

					Agricultural Information System: 18 th – 20 th June 1990 Mbabane, Swaziland					Research & Training	
	Namponya, C.R.	Nkwanyana, C.T.	-	86	Agricultural research priority setting: proceedings of SACCAR'S first conference on research priority: Francistown, Botswana, 24 th – 28 th September 1990	1990	Congresses		proceedings	Southern African Center for Cooperation in Agricultural Research & Training	University of Free State
	Namponya, C.R.	Thiendou, N.	-	87	Agricultural information services in the SADCC combines: a review	1990	Agriculture-Africa, Southern-Information services		Book	Southern African Center for Cooperation in Agricultural Research & Training	University of Free State
	Arko- Cobbah, A.	-	-	88	Civil society and good governance challenges for public libraries in South Africa	2006	Public libraries		Article	Library review	University of Free State
	Raju, J.	Raju, R.		89	Descriptive and subject cataloguing : a workbook	2006	Descriptive cataloguing		Book	Chandos	University of Kwa Zulu Natal
	Dubbeld, C.E.			90	CD-ROM – A visible	1991	CD-ROM		Article	Electronic	University

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	Dubbeld,C.E.			91	Reflecting apartheid :South African short stories in English with socio- political themes,1960 – 1987 : a select and annotated bibliography	1990	Bibliography		Article	South African Institute of International Affairs	University of Kwa Zulu Natal
	Dubbeld,C.E.			92	Richard Rive: a select bibliography	1990	Bibliography		Book	Malherbe Library	University of Kwa Zulu Natal
	Buchanan, N.			93	The use and management of government publications in a university library	1990	Government publications		Thesis	University of Natal	University of Kwa Zulu Natal
	Kuhn,R.			94	A guide to the literature on Pietermaritzburg and surrounds	1994	Bibliography		Book	University of Natal	University of Kwa Zulu Natal
	Darries,F.			95	The impact of the Internet on reference service in higher education libraries in South Africa	2002	Internet		Book	University of Cape Town	Cape Peninsula University of Technology
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	Herbert, K.	-	-	96	Rock art Southern Eastern Africa and Lesotho, 1808 to 1997: an annotated bibliography	1998	Bibliography		Book	Natal Museum Council	Durban University of Technology
	Latsky, H.	-	-	97	Research at the R.A.U 1967 – 1994: a bibliography	1995	Bibliography		Book	Johannesburg University	University Of Jo'burg
	Shokane, J.K.	-	-	98	The use of business information by small and medium sized enterprises in Acornhock	2003	Business information		Article	South African Journal of LIS	University of Limpopo
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	Larney, T.	-	-	100	Telematic learning : new demands for libraries	1998	Telematic libraries		Article	Mousaion	University of North - West
	Pienaar, H	Russell, Mary – Rose & <i>et al</i>	-	101	Organisational transformation at an academic information service	1999	Information service		Article	Library Management	University of Pretoria
	Pienaar, H	-	-	102	Design and development of an academic portal	2003	Libraries- automation		Article	Libri	University of Pretoria
	Pienaar, H.	Penzhorn, C.	-	103	Using the balanced scorecard to facilitate strategic management at an academic information service	2002	Strategic management		Article	Libri	University of Pretoria
	Pienaar, H.	-	-	104	Creative and innovative university libraries	1995	Academic libraries		Article	South African Journal of LIS	University of Pretoria
	Pienaar, H.	-	-	105	Relationship between creativity and innovation in university libraries	1996	University libraries		Article	South African Journal of LIS	University of Pretoria

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	Pienaar,H.	-	-	106	Die ontwerp van 'n webportal vir akademici	2001	Web portal		Thesis	University of Pretoria	University of Pretoria
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	Pienaar,H.	-	-	108	Die geïntegreerde persoonlik akademiese inligtingstelsel 'n verkennende studie	1990	Academic librarians		Thesis	University of Pretoria	University of Pretoria
	Egbert ,G.	Pienaar ,H.	-	109	A key to the new library	1999	libraries		Book	Eric	University of Pretoria
	Van der Westhuizen, E.	Croft, V.F.	-	110	Running wild, running free: capturing, harnessing and disseminating knowledge flow support of animal health: proceedings of the 5 th international conference of animal health information specialists 4-7 July 2005...	2006	Congresses		Proceedings	Veterinary Science Library	University of Pretoria
	Van der Westhuizen, E.	Miller ,E.S.	-	111	Electronic communication in Africa—the promotion	1995	Animal health information		Article	Electronic library	University of Pretoria

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	Van der Westhuizen, E.	-	-	112	Ostrich bibliography :update 1995 - 2005	2001	Bibliography		Book	Veterinary Science Library	University of Pretoria
	Van der Westhuizen, E.	Earle,A. & <i>et al</i>	-	113	Ostrich bibliography	1993	Bibliography		Book	Veterinary Science Library	University of Pretoria
	Van der Westhuizen, E.	Veterinary Science Library University of Pretoria & <i>et al</i>	-	114	African rhinoceros bibliography	1994	Bibliography		Book	Veterinary Science Library	University of Pretoria
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	Van der Westhuizen, E.	Veterinary Science Library University of Pretoria & <i>et al</i>	-	116	Proceedings of the 1 st conference of African animal health information workers: 3 rd – 16 th July 1995,University of Pretoria Onderstepoort,South Africa: Animal health information for Africa	1997	Congresses		proceedi ngs	Veterinary Science Library	University of Pretoria
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	Marais, H.	-	-	119	Videomaterials in biblioteke van onderwysirings	1993	Cataloguing		Book	University of Pretoria	University of South Africa
	Van der Merwe, I.	Van Eeden, W.	-	120	Remote electronic resources and the OPAC : illustrated by the UNISA library experience	1998	Electronic resource		Book	For Full Text	University of South Africa
	Tise, E.R.	-	-	121	Strategies by LIASA to develop library science and the profession in South Africa	2004	LIASA		Article	Information Management	University of Stellenbosch
	Sieherhagen, E.A.	-	-	122	The design and development of a digital information program for an academic library	2005	Academic libraries		Thesis	UNISA	Tshwane University of Technology
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	Mahlangu, N.	-	-	123	Barrier to information	2001	Information		Thesis		Vaal

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	Muswazi,P.	-	-	124	The Internet in Swaziland; services under transformation	2000	Internet		Article	Information Outlook	University of Witwatersr and
	Muswazi,P.	-	-	125	Illusion of Internet grey literature boon: for developing nations:	2001	Grey literature		Article	INSPEL	University of Witwatersr and
	Muswazi,P.	-	-	126	HIV/AIDS information resources and services: a Swaziland case study	2000	AID(Acquired immune deficiency syndrome)		Article	Library Review	University of Witwatersr and
	Muswazi,P.	-	-	127	The practicality of the Swaziland union catalogue :a retrospective study	1998	Union catalogue		Article	Libri	University of Witwatersr and
	Muswazi,P.	-	-	128	Distance education library services in Swaziland	2003	Digital libraries		Article	Information Management	University of Witwatersr and
	Muswazi,P.	-	-	129	Freedom of information:	1999	Censorship		Article	IFLA journal	University

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	Muswazi, P.	-	-	130	Swaziana: an assessment	2000	Bibliography		Article	African Research and Documentation	University of Witwatersr and
	Muswazi, P.	-	-	131	Transforming the Swaziland National Bibliography (SNB) : visions of currency, access, coverage and quality	2001	Swaziland National Bibliography		Article	For Full Text	University of Witwatersr and
	Muswazi, P.	-	-	132	Library and information Services(LIS) strategic planning in a developing country	2003	Library strategic planning		Article	Science and Technology Libraries	University of Witwatersr and
	Ubogu, P.N.	Kekana, A. & <i>et al</i>	-	133	Library subject portals: an investigation of possibilities for the university of Witwatersrand library	2006	Libraries- Automation		Article	Program :electronic library and information system	University of Witwatersr and
	Ubogu, F.	-	-	134	Spreading the ETD gospel: a southern African perspective	2001	ETD		Article	The International Information and Library Review	University of Witwatersr and
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	Myers,G.	-	-	138	Robin hood in interlending: charging the information rich to help the information poor	1991	Inter library loan		Article	Interlending and Document Supply	University of Witwatersr and
	Myers,G.	-	-	139	Evidence-based medicine as a web – based information seeking model for health care practitioners	2002	Evidence – based Medicine		Article	Rand Afrikaans University	University of Witwatersr and
	Mgobozi,M.N.	-	-	140	The use of electronic journals for the dissemination of scholarly information by the University of Natal	2002	Electronic journal		Thesis	University of Zululand	University of Zululand

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	Barben,T.	-	-	142	The strategic stewardship of cultural resources: to preserve and protect. Papers from the library of congress symposium to reserve and protect: the strategic stewardship of cultural resources	2006	Book review		Book review	South African Journal of LIS	University of Cape Town
	Thomson I.	--	-	143	It's time for reward	2006	Libraries award		Article	Cape librarian	University of Cape Town
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	Caroline ,D.E.	-	-	145	Serials in the park: proceedings of the North American serials interest group,inc.18 th annual conference, June 26-29,2003,Portland State	2005	Book review		Book review	South African Journal of LIS	University of Cape Town

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	Visser,A	-	-	147	Interlibrary loan and document delivery in the larger academic library	2005	Book review		Book review	South African Journal of LIS	University of Cape Town
	Thomson,I.	-	-	148	LIASA Western Cape branch award 2005: are you making a difference?	2005	Associations; Institute		Article	Cape Librarian	University of Cape Town
	Darch,C.	Underswood,P.G		149	Freedom of information legislation , state compliance and the discourse of knowledge: the South African experience	2005	Freedom of information		Article	International Information and Library Review	University of Cape Town
	Darch, C.	Underwood,P.G.		150	Are pre-compiled citation indexes of peer- received journals an adequate control for research quality? A case study of library and information science	2005	Documentation		Article	South African Journal of LIS	University of Cape Town
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	Darch, C.	-		153	Digital divide or unequal exchange? How the Northern intellectual property rights regime threatens the South	2004	Intellectual property		Article	International Journal of Legal Information	University of Cape Town
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	Rolf, P.	Nikki,C. & <i>et al</i>	-	154	A first in Afrika: implementation of Metalib and SFX at the Cape Technikon library	2004	Libraries automation		Article	Electronic Journal of Academic and Special Librarianship	Cape Peninsula University of Technology
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	Sander, H.	Van Vuren A. & <i>et al</i>	University of Johannesburg	158	Library live: embedding and contextualizing information resources in the virtual learning environment	2006	Digital libraries		Article	IATUL annual conference proceedings	University of Johannesburg
	Bopape, S.	-	-	159	Management development needs of library managers belonging to Gauteng and environs library and	2005	GAELIC region		Article	South African Journal of LIS	University of Limpopo

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				0							University of North – West
	Hammes,M.	-	-	160	Beyond: scholarly communication in the knowledge era	2001	Communication		Article	Mousaion	University of Pretoria
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	Tise,E.	Lor, P.	-	164	Renaissance of a library	2001	National libraries		Article	Quarterly Bulletin of the National Library of South Africa	Stellenbosch University

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	Swanepoel, A.	-	-	167	Involving university library staff in ongoing research	2006	Libraries and education		Article	IATUL annual conference proceedings	Tshwane University
	Swanepoel, A.	-	-	168	Lessons learned from library mergers at colleges of higher education in Flanders	2005	Libraries merger		Article	South African Journal of LIS	Tshwane University
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	Swanepoel, A.	-	-	170	Concern and expectation of library staff before and after merger	2004	Library merger		Article	IATUL annual conference proceedings	Tshwane University
	Gwenda, T.	Fourie M.	-	171	International perspectives...academic library consortia in South Africa: where we come from and where	2006	Academic libraries		Article	Journal of Academic Librarianship	University of Rhodes

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	Gwenda, T.			173	Building bridges: I.IASA and leadership development in South Africa	2002	Library science-societies		Article	IFLA Journal	University of Rhodes
	Gwenda, T.			174	The information specialist and the challenges of the Internet: a marathon with no finish	2000	Information specialist		Article	South African Journal of LIS	University of Rhodes
	Gwenda, T.			175	Review	1995	Book Review		Book review	South African Journal of LIS	University of Rhodes
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	Muswazi,P.	-	-	177	The integration of print and electronic sources: a case study of the University of Swaziland library	2005	Education		Article	African Journal of Library, Archives and Information Science	University of Witwatersr and
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Kingdom of	Anbu ,K.J.P.	-	-	180	Towards a vertical	2006	Web portal		Article	Information	University

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	Anbu, K. J.P	-	-	181	Circulation statistics: deriving information from numbers using CD/ISIS circulation photo types	2006	Libraries – circulation analysis		Article	Information Studies	University of Swaziland
	Reuben,G.P.	Anbu,J.P.		182	CDS/ISIS : an overview	1998	Data structure		Article	KeptoBulletin	University of Swaziland
	Yumba,D.	-	-	183	Whither Africa in the information age	2002	Information structures		Article	Information Development	University of Swaziland
	Ngcobo,Z.G.	-	-	184	An annotated bibliography on Women :Swaziland	1993	Bibliography		Book	The Project	University of Swaziland
Zambia	Banda, C.	Mutula,S.M.	University of Botswana	185	Information needs assessment for small scale business community in Zambia: case study of Chisokonk Market,Kitwe	2004	Information need		Article	Malaysian Journal of Library and Information Science	Copper belt University
	Makondo,F.N.S.	-	-	186	An assessment of the sustainability technology of the University of Zambia library	2002	Library automation		Book	Botswana University	University of Zambia

	Makondo,F.N.S.	Mutula,S.M.		187	IT skills needs for collection development at the Univesity of Botswana library	2003	IT		Article	Library Hi Tech	University of Zambia
	Nkhoma,B.P.	-	-	188	A critical analysis of library computerization at copperbelt and University of Zambia	2003	Library automation		Article	African Journal of LIS	Copperbelt University
	Chimfwembe, L.M.	Lungu, C.B.M.		189	Into the information age: computerization of Copperbelt University Library	2002	Library automation		Article	Oxford	Copperbelt University
	Lungu,C.B.M	-	-	190	Educating library users at the Copperbelt University	1990	User education		Article	Information Development	Copperbelt University
	Nyumba,J.B.	Edited by Chimfembe, L. M.& Lungu,C.B.M		191	Into the information age: computerization of Copperbelt University Library	2005	Library automation		Article	South African Journal of LIS	Copperbelt University
Zimbabwe	Chikonzo,A.	Aina,L.O	-	192	The information environment of Veterinary researchers at the University of Zimbabwe	2001	Information need		Article	The International Information and Library Review	University of Zimbabwe
	Chikonzo,A.	-	-	193	The potential of information and communication	2006	Information storage and retrieval system		Article	The International Information and Library Review	University of Zimbabwe

					technologies in collecting,preserving and disseminating indigencous knowledge in Africa						
				0							Midlands State University
	Sibanda,M.	-	-	194	Challenges for legal information provision in undergraduates education : the university of Zimbabwe law library	2004	Law libraries		Article	International Journal of Legal Information	University of Zimbabwe

APPENDIX B

TABLE 10: UNIVERSITY OF NAIROBI STAFF

NAIROBI UNIVERSITY LIBRARY STAFF		
NO.	NAME OF STAFF	QUALIFICATION/DESIGNATION
1	Munavu Salome	University librarian
2	Were Jacinta	Acting Deputy University librarian
3	Irura G.	Senior librarian
4	Kamau Emily	Librarian
5	Nyalwal G.	Librarian
6	Inoti, V.I	College librarian
7	Gikenye Margaret W.	Senior librarian
8	Mungai S.N.	Librarian
9	Were J.	Senior librarian
10	Chepkwony J.	Senior librarian
11	Wambua N.N.	Head Binder
12	Mwangi J. K.	Librarian
13	Weche P.	Senior librarian
14	Noreh A.	Acting College librarian
15	Mwangi Ephraim N.	Librarian
16	Maina, P.M.	Librarian
17	Macharia E.	College librarian
18	Anyona D.	College librarian
19	Kabugu A.N.	College librarian
20	Gaturo G.M.	Librarian
21	Matanji Peter	Senior librarian
22	Esther Obachi	Senior librarian
23	Dorothy Njiraine	Senior librarian
24	Liyai, H.A.	Senior librarian

Source: University of Nairobi libraries.2008. *Staff directory*. <http://library.uonbi.ac.ke/website/dir/staff.htm>

TABLE 11: MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY LIBRARY STAFF

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY LIBRARY STAFF		
NO.	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Shibanda ,George G.	Acting University librarian

Source: Masinde Muliro University of Science and technology: 2008. *Library staff*
<http://www.wust.ac.ke/libstaff.html>

TABLE 12: MOI UNIVERSITY LIBRARY STAFF

MARGARET THATCHER LIBRARY STAFF		
NO.	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Dr. Tirong arap Tanui	University librarian
2	W. Ochieng	College librarian
3	G.G. Njoroge	College librarian
4	Catherine Mukoma	Senior librarian
5	Emily Bosire - Ogechi	Senior librarian
6	P.Kurumei	Senior librarian
7	Penina W. Gathuku	Senior librarian
8	Christopher Koech	Senior librarian
9	Zipporah Chepkoech	Senior librarian
10	Daniel Murgor	Senior librarian
11	S.I.D Khamadi	Deputy University librarian
12	I.E.Edebe-Musisi	Librarian
13	S.K. Mutai	System librarian
14	A.S.Kiloi	Senior librarian
15	S.M.Odini	Senior librarian
16	Bii H.K.	Senior librarian
17	P.G.Wanyama	Librarian

Source: Moi University. 2008. *Moi University Library Services* [http:// www.mu.ac.ke/library.mtl.html](http://www.mu.ac.ke/library.mtl.html)

TABLE 13: UNIVERSITY OF DAR ES SALAAM LIBRARY STAFF

UNIVERSITY OF DAR ES SALAAM LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	A.G.Nkoma-Wamunza	Senior library staff
2	J.Nawe	Senior library staff
3	M.P.Nyerembe	Senior library staff
4	P. Manda	Senior library staff
5	J.Msuya	Senior library staff
6	E.Kiondo	Senior library staff
7	A.M.Kabudi	Senior library staff
8	P.D.Mwaimu	Senior librarian
9	A.K.Nkebukwa	Senior librarian
10	F.E. Mukangara	Senior librarian
11	R.J.Kidyalla	Senior librarian

Source: University of Dar es salaam. 2008. *Library Information service* http://www.library.udsm.ac.tz/about_us/senior_staff.php

TABLE 14: MZUMBE UNIVERSITY LIBRARY STAFF

MZUMBE UNIVERSITY LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Leonard Michael	HOD Readers services
2	Sarah Mwambalaswa	HOD Technical services
3	Anna S. Mbughuni	HOD Library services & information management

Source: Mzumbe University: 2008. *Senior officers of Mzumbe University* <http://www.mzumbe.ac.tz/officers.htm>

TABLE 15 : MAKERERE UNIVERSITY LIBRARY STAFF

MAKERERE UNIVERSITY LIBRARY STAFF		
NO.	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Maria G.N.Musoke	University librarian
2	Robert Kakembo	Deputy University librarian
3	Hellen Byamugisha	Senior librarian
4	Margaret Nakiganda	Head Africana
5	Eliz Nassali State	Acting Head Technical Services
6	Eunice Sendikadiwa	Senior librarian
7	Jane Namukama	Head, IACE
8	Rachel Nakalembe	Senior librarian
9	Joan Batungu	Librarian I
10	Jane Kawalya	Librarian I
11	Edith Lutwama	Head Forestry
12	Rhoda Nalubega	Head Education
13	Miriam KaKai	Head Periodicals
14	Walter Omona	Head MISR
15	Clement T.Namusisi	Head Technology
16	Agnes Namaganda	Librarian I
17	Charles B.Hashakimana	Head Reference
18	Emmanuel K.Luyombya	Librarian II
19	Wilberforce Musoke L.	Senior librarian
20	George Ntambaazi	Administrative Assistant

Source: Makerere University, 2008. *Library staff* <http://www.mulib.mak.ac.ug/row-link/contacts.html>

TABLE 16: UNIVERSITY OF CAPE TOWN LIBRARY STAFF

UNIVERSITY OF CAPE TOWN LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Susanne Noll	Subject librarian (Accounting)
2	Sandy Shell	Subject librarian (African Studies)
3	Bell Angus	Subject librarian (African Studies)
4	Colin Darch	Subject librarian (African Studies)
5	Busisiwe Khangala	Subject librarian (African Studies)
6	Allegra Louw	Subject librarian (African Studies)
7	Sue Ogterop	Subject librarian (African Studies)
8	Antoinette Davy	Subject librarian (Afrikaans)
9	Saskia Vonk	Acting Head librarian (Health Science Library)
10	Tessa Davies	Science and Technology Inform. Service librarian
11	Gcobisa Mziba	Subject librarian(Architecture & Planning)
12	Clement Kotze	Subject librarian(Botany)
13	Fiona Jones	Head Science and Engineering
14	Sadiq Keraan	Subject librarian(Child Health)
15	Alex D'Angelo	Manager Humanities Information Service
16	Mdu Ncongwane	Subject librarian(Clinical Laboratory Science)
17	Gillian Morgan	Branch librarian
18	Ndileka Mtshizana	Subject librarian(Economics)
19	Ingrid Thomson	Subject librarian(Education)
20	Siviwe Bangani	Subject librarian(Electrical Engineering)
21	Emily Krige	Subject librarian(Environmental Geography and Science
22	Tanya Barben	Senior Librarian (Rare Books)
23	Susanne Noll	Subject librarian(Finance)
24	Laureen Rushby	Head librarian
25	Abby Collinson	Subject librarian(Government Publications)
26	Anita Visser	Subject librarian(Government publications)
27	Hajiera David	Subject librarian(Government Publications)
28	Jean Risien	Subject librarian(Human Biology)
29	Mary Shelton	Subject librarian(Human Biology)
30	Latifa Omar	Subject librarian(Health Sciences)
31	Amanda Barran	Subject librarian(Law)
32	Pamela Snyman	Subject librarian(Law)
33	Dilshaad Brey	Subject librarian(Law)
34	Balo Booï	Subject librarian(Law)
35	Thundeza Mawane-Mashiyi	Subject librarian(Management and Marketing)

36	Julie Strauss	Subject librarian(Music)
37	Cyrill Walters	Subject librarian(Music)
38	Sadiq Keraan	Subject librarian(Pediatrics)
39	Celia Walter	Subject librarian(Political Science)
40	Alfred Faltein	Subject librarian(Sociology)
41	Caroline Dean	Subject librarian(Electronics)
42	Sandy Shell	Head librarian(African Studies)
43	Clement Kotze	Branch librarian(Bolus Herbarium)
44	Jean Uys	Librarian(Collection Development)
45	Marilyn Smith	Manager(Knowledge Commons)
46	Digby Sales	Librarian(Collection Development)
47	Joan Rapp	Library Director
48	Diana Hunter	Deputy Library Director
49	Janine Dunlop	Librarian(Manuscripts and Archives)
50	Najefeh Davids	Librarian(Short loans)
51	Lesley Hart	Special Collection Manager
52	Seta Jackson	Training librarian
53	Veronica Belling	Senior librarian

Sources University of Cape Town. 2008. *Library staff*
<http://www.lib.uct.ac.za/index.php?html=/2004/info/sublibs.htm&libid=88>

TABLE 17: UNIVERSITY OF FORT HARE LIBRARY STAFF

UNIVERSITY OF FORT HARE LIBRARY STAFF		
NO.	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Yolissa Soul	University Librarian
2	Caroline Kukubo	Library Administrative Officer
3	Lindsay Reid	IT Coordinator
4	Suzette Oosthuizen	Senior librarian
5	Lungelwa Madyibi	Librarian
6	Pyrene Bokwe	Librarian
7	Nomzingisi	Librarian
8	Mzwandile Mavuso	Librarian
9	N.Zandile Mogiba	Senior librarian

10	Phumla Ndlela	Librarian
11	Andile Magocoba	Librarian
12	J. Kwadwo Amoah	Librarian
13	Horst Busch	Librarian
14	Mosoabuli Maamoe	Archivist
15	Mariette Lotter	Senior Librarian
16	Jan Ritcher	Librarian
17	Brenda Nsanzya	Librarian
18	Lynne Woods	Librarian
19	Lulama Sodidi	Librarian

Sources: University of Fort Hare. 2008. *Library staff* <http://www.ufh.ac.za/library/staff.php>

TABLE 18: UNIVERSITY OF PRETORIA LIBRARY STAFF

UNIVERSITY OF PRETORIA LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Badenhorst Rita	Information Specialist
2	Baloyi Junior	Interlending Specialist
3	Beukes Gerda	Management Information Specialist
4	Bezuidenhout Annamarie	Interlending Specialist
5	Brassel Maureen	Information Specialist
6	Breytenbach Amelia	Cataloguer and Metadata Specialist
7	Brits Rika	Circulation officer
8	Buys Marieta	Information Specialist
9	Coertze Elsa	Information Specialist
10	Coetsee Tertia	Information Specialist
11	De Leeuw Lorret	Information Assistant
12	De Villiers Philip	Coordinator: Cataloguing
13	De Wee Janice	Information Specialist
14	Delpont Sonja	Information Specialist
15	DuPisanie Maureen	Faculty Library Manager
16	DuPlessis Riki	Information Specialist
17	Fabris-Rotelli Fay	Cataloguer
18	Groenewald Hettie	Information Specialist
19	Groenewald Ria	Digitization Specialist

20	Hadebe Thembi	Campus librarian
21	Hammes Monica	Assistant Director
22	Habangwane Suidy	Assistant Information Specialist
23	Hobyane Samuel	Information Assistant
24	Janse Van Vuuren Hendriette	Information Specialist
25	Kemp Antoinette	Information Assistant
26	Killerman Barbara	Information Assistant
27	Khoza Maria	Information Assistant
28	Kilian Thea	External Client Officer
29	Kriel Hilda	Deputy Director
30	Kruger Danie	Information Specialist
31	Kruger Olivia	Cataloguer
32	Kruidenier Retha	Information Specialist
33	Laka Francina	Interlending Specialist
34	Lee Magriet	Faculty Library Manager
35	Lombard Eldorene	Circulation Officer
36	Lourens Antoinette	Information Specialist
37	Louw Jansie	External Client Officer
38	Luwaca Sibongile	Information Specialist
39	Maboko Abel	Document Delivery Officer
40	Madihlaba Tumishi Jan	Senior Internet/LAN Administrator
41	Magoro Eric	Head Circulation
42	Mahlangu Rachel	Interlending Specialist
43	Maibelo Patrick	Document Delivery Officer
44	Malan Danie	Information Specialist
45	Malan Katrien	Information Specialist
46	Maritz Marinda	Journals Administrator
47	Marsh Susan	Faculty library Manager
48	Maseko David	Journal Administrator
49	Matatiele Rafilwa	Information Specialist
50	Matlala Asia	Information Assistant
51	Matlala Rosinah	Information Assistant
52	Matsoma Celia	Circulation Officer: Coordinator
53	Matukane Elliot	Journal Officer
54	Mayekiso Nozzi	Information Specialist
55	Mbokane Richard	Interlending Specialist
56	Ndhluhi Celiwe	Cataloguer
57	Meyer Gertrud	Cataloguer
58	Minnaar Emelia	Interlending Specialist
59	Mmafeahlo Josephine	Document Delivery Officer

60	Mokgonoane January	Information Assistant
61	Moloto Ellias	Circulation Officer
62	Monakhisi Sonty	Circulation Officer
63	Moremi Kenny	IT Consultant
64	Moropa Robert	Director
65	Mothutsi Jacob	Copyright Officer
66	Moropane Maggie	Information Specialist
67	Muller Hennie	IT Help Desk Analyst
68	Muller Leone	Information Specialist
69	Munonoka Adam	Circulation Officer
70	Naude Faan	Information Specialist
71	Nel Marguerite	Cataloguer
72	Ngcongo Thuli	Circulation Officer
73	Ntshangase Charles	Journal Administrator
74	Nyakale Suzy	Information Specialist
75	Oosthuizen Myleen	Information Specialist
76	Otto Rieta	Cataloguer
77	Phahia Rachel	Circulation Officer
78	Pienaar Annemarie	Human Resource Officer
79	Pienaar Heila	Deputy Director
80	Ramorulane Dave	Information Assistant
81	Randall Elna	Faculty Library Manager
82	Roux Eridine	Information Specialist
83	Satgoor Ujala	Faculty Library Manager
84	Schaffner Elsa	Information Specialist
85	Scheepers Susan	Information Specialist
86	Schroder Shirley	Faculty Library Manager
87	Segoe Ivy	Information Specialist
88	Skosana Maria	Document Delivery Officer
89	Smith Ina	Information Retrieval Manager & Electronic Specialist
90	Steyn Christelle	Information Specialist
91	Steyn Heleen	Coordinator Ordering
92	Steynberg Sunette	Information Specialist
93	Stieger Liesl	Information Specialist
94	Stolz Salomie	Human Resource Officer
95	Swanepoel Marie	Electronic journal Administrator
96	Swanepoel Soekie	Coordinator-IMPS
97	Theron Marie	Information Specialist
98	Theunissen Jacqueline	Information Specialist
99	Tonsing Rolf	Senior Information System Consultant

100	Trichardt Tamal	Information Specialist
101	Van der Walt Isobel	Information Specialist
102	Van der Westhuizen Erica	Faculty Library Manager
103	Van der Westhuizen Marietjie	Coordinator Circulation
104	Van der Merwe Pieter	Coordinator Special Collections
105	Van Schalkwyk Mari	Information Assistant
106	Van Schalkwyk Monica	Information Assistant
107	Van Wyk Johann	Faculty Library Manager
108	Venter Clarise	Information Specialist
109	Verheem Elsie	Information Assistant
110	Vermeulen Julene	Information Specialist
111	Viljoen Liana	Information Specialist
112	Volschenk Mike	Information Specialist
113	Wydeman Leonora	Coordinator ICT Unit
114	Young Anna-Marie	Cataloguer

Source: University of Pretoria.2008. *Staff A – Z* <http://www.ais.up.ac.za/aboutus/governance.htm>

TABLE 19 : UNIVERSITY OF RHODES LIBRARY STAFF

UNIVERSITY OF RHODES LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Berger J. Jeanne	Head Librarian: Collection & Technical Services
2	Botha V.J. Vivien	Head :Public Service
3	Dampies G. J. E. Gareth	System Administrator
4	Kabwato S. B. Shirley	Head Librarian Cory Library
5	Thomas G. M. E. Gwenda	Director Library Services.

Source: University of Rhodes. 2008. *Staff directory* <http://www.ru.ac.za/library/about/contacts/staffdir.html>

TABLE 20: WESTERN CAPE UNIVERSITY LIBRARY STAFF

WESTERN CAPE UNIVERSITY LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Andrea J.S.	Deputy Librarian
2	Bailey D.J.	Section Head Acquisition
3	Coetzee	Section Head Cataloguing
4	Davids E.	Section Head Interlibrary Loan
5	De Wet	Faculty Librarian
6	Cook K.	Faculty Librarian
7	Fortuin J.C.	Special Collection Librarian
8	Fortune T.G.	Section Head Circulation
9	Hendricks H. W. G.	Faculty Librarian
10	Knoll V.D.	Faculty Librarian
11	Kekana K.	Deputy University Librarian
12	Koen Z. K.	Faculty Librarian
13	Londt M.	Multimedia Librarian
14	Mackenzie F.	Faculty Librarian
15	Mandubu B.	Faculty Librarian
16	Mitchell-Kamalie L.A.	Faculty Librarian
17	Moses G.	Section Head Binding
18	Ntshunshu-Matshaya Pateka	Director University Library Services
19	Tarkey S.	Faculty Librarian
20	Van Der Walt W.	Section Head LIC T
21	Van Rooyen T.W.	Faculty Librarian

Source: University of the Western Cape. 2008. *Staff contact*
<http://www3.uwc.ac.za/index.asp?webpageid=3592&pagemode>

TABLE 21 : UNIVERSITY OF STELLENBOSCH LIBRARY STAFF

UNIVERSITY OF STELLENBOSCH LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Ellen Tise	Senior Director
2	Johan Englebrecht	Deputy Director
3	Sarah Kibirige	Assistant Director (Technical Services & Electronic Resource Manager)
4	Elda Notte	Assistant Director (Client Services)
5	Wouter Klapwijk	IT
6	Henri Wirth	Chief Restorer(Restoration)
7	Marianna Kritzingen	Cataloguing JS Gericke Library
8	Annemarie Schoeman	Circulation JS Gericke Library
9	Marita Landsberg	Serial JS Gericke Library
10	Mimi Seyffert	Special Collection
11	Delene Pretorius	Information Service Division
12	Henriette Swart	USBI (Bellville Park Campus Information Centre)
13	Lucia Schoombe	Webservices & Communication
14	Corinna Truter	Librarian Engineering and Forestry Library
15	Beulah Gericke	Librarian Music Library
16	Linda Coetzee	Librarian Health Science Library

Source: University of Stellenbosh.2008. *staff directory* <http://www.lib.sun.ac.za/library/pers/default.asp>

TABLE 22: UNIVERSITY OF WITWATERSRAND LIBRARY STAFF

UNIVERSITY OF WITWATERSRAND LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Cornelia Bothma	Law librarian
2	Aysha Patel	Deputy law librarian
3	Mark Sandham	Education librarian
4	Alison Chisholm	Deputy librarian (Education)
5	Carhy Dryden	Commerce librarian
6	Veena Jayaram	Senior librarian(Commerce & Management)
7	W. Kalushi	Head, Main desk Short Loan Collection
8	Linda Mbonambi	Deputy Arts librarian

9	Joalane Mathe	Information & Reference Desk Librarian
10	Simon Lesejane	Multimedia librarian
11	Maryna Van den Heever	Senior librarian (Engineering librarian)
12	Paiki Muswazi	Head librarian Cullen library
13	Stephen R.Mitchell	Senior librarian
14	Felix Ubogu	University librarian
15	Clare Walker	Deputy University librarian
16	Simon Mofokeng	Manager: Library Computer Services
17	Rebecca Senyolo	Education & training librarian
18	Judy Marshall	Deputy Acquisition librarian
19	Margaret Northey	Africana librarian
20	Janie Johnson	Architecture librarian
21	Linda Mbonambi	Atrs & Humanities librarian
22	Steve Mitchell	Biology & Physical Science librarian
23	Maira Moore	Caraloguing librarian
24	Denise Nicholson	Copyright Services Librarian
25	Jennifer Croll	Corporate user scheme librarian
26	Peter Duncan	Early & fine printed book librarian
27	Juliet Herbstein	Geography and Maths librarian
28	Glenda Myers	Health science librarian
29	Carole Willis	Library systems coordinator
30	Janet Zambri	Interlibrary loan librarian
31	Michelle Pickover	Manuscripts curator
32	Patricia Mothopeng	Management librarian
33	Cynthia Warren	Periodical librarian
34	Jay Mathe	Information and reference service librarian

Source: University of the Witwatersrand. 2008. *The Library: Library academic staff*
<http://web.wits.ac.za/Library/AboutUs/Staff/>

TABLE 23: UNIVERSITY OF JOHANNESBURG LIBRARY STAFF

UNIVERSITY OF JOHANNESBURG LIBRARY		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Kaunda Neil	Campus librarian
2	Madendo Mduduzi	Team leader lending services
3	Aramugam Anusuya	Functional head shared support services
4	Botha Marina	Cataloguing

5	Bouwer Anza	Cataloguing
6	Dlangamandla Beauty	Team leader cataloguing
7	Janse Van Vuren Annette(Dr)	Functional head client services
8	Latsky Henriette	HOD Archiving ,special collection & Information retrieval
9	Lienbenberg Annette	HOD Acquisition, cataloguing & physical processing
10	Maluleke Atline	Archiving librarian
11	Mashishi Thapelo	Copyright librarian
12	Ndaba Victor	Campus librarian
13	Sander Hannie	Executive librarian
14	Raju Santha	Team leader Information service
15	Van der Westhuizen Janina	Campus librarian
16	Mojwadlamba Sandile	Team leader lending services
17	Paris Julia	Campus librarian
18	Kunene Charlotte	Campus librarian

Source: University of Johannesburg 2008. *Library information centre: staff*
<http://www.uj.ac.za/library/AboutUs/Staff/tabid/4191/Default.aspx>

TABLE 24: NELSON MANDELA METROPOLITAN UNIVERSITY LIBRARY STAFF

NELSON MANDELA METROPOLITAN UNIVERSITY LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Elna Burger	Senior Manager System,ERM & Quality)
2	Philip Clarke	Senior Manager bibliographic services
3	Hester Kritzingier	Senior Manager Information & training services
4	Zingisani Makrwede	Senior Manager circulation
5	Andre Schonken	Director library & information services
6	Isaac Samuels	Administrative Assistant, information & training
7	Amanda Human	Senior librarian
8	Nicky Kendall	Librarian
9	Desiree Minnaar	Senior librarian
10	Sandra Olivier	Librarian
11	Heinrich Oosthuizen	Librarian
12	Nwabisa Rasana	Librarian
13	Salome Stipp	Librarian
14	Nobuzwe Bavuma	Librarian
15	Marlene Du Plessis	Senior librarian
16	Zingi Mantewu	Librarian

17	Maditaba Meltaf	Librarian
18	Khaya Ngcuka	Librarian
19	Elise Viljoen	Senior librarian
20	Omayya Allie	Senior librarian
21	Judy Havemann	Senior librarian
22	Bartina Odendaal	Senior librarian
23	Hilde Van Wyk	Librarian
24	Helene Badenhorst	Librarian
25	Magdalene Breda	Librarian
26	Madeleine Claire	Librarian
27	Pauline Daleman	Senior librarian
28	Deidre Gerber	Senior librarian
29	Pelisa Hlanga	Librarian
30	Vuyani Mhlontlo	Librarian
31	Desiree Ntshinga	Senior librarian
32	Dawn Prinsloo	Librarian
33	Jean Thomas	Librarian
34	Anna Bohler	Web Administrator
35	Roelien Clarke	Senior librarian
36	Marina Ward	Senior librarian

Source: Nelson Mandela Metropolitan University. 2008. *Library and information service: staff list category*
<http://www.nmmu.ac.za/default.asp?id=5095&did=161&mod=staffcat&eh=Staff%20List%20by%20category&bhcp=1>

TABLE 25: UNIVERSITY OF SOUTH AFRICA LIBRARY STAFF

UNIVERSITY OF SOUTH AFRICA (UNISA) LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Jean Maree	Acquisition librarian
2	Marie Coetzee	Archivist
3	Hester Marais	Authority Control librarian
4	Welna Van Eeden	Bibliography standards librarian
5	Judy Henning	Cataloguing & Classification librarian
6	Este Retief	Research and development librarian
7	Jenny Swanepoel	Serials librarians
8	Anne Bath	System administrator

9	Retha Lamprecht	System administrator
10	Letlie Erasmus	INNOPAC Coordinator
11	Dr. Mbambo-Thata	Executive Director

Source: UNISA. 2008. *contact a librarian* <http://www.unisa.ac.za/Default.asp?Cmd=ViewContent&ContentID=454>

TABLE 26: UNIVERSITY OF VENDA LIBRARY STAFF

UNIVERSITY OF VENDA LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Mushoni Mulaudzi	Library director
2	Irene Mashamba	Assistant director
3	Calvin Muloiwa	Librarian
4	Annah Matodzi	Librarian
5	Cynthia Molepo	Librarian
6	Aaron Tshikotshi	Librarian
7	Tshililo Malaba	Librarian

Source: University of Venda.2008. *Library service: staff* <http://www.univen.ac.za/library/staff.php>

TABLE 27: WALTER SISULU UNIVERSITY OF SCIENCE AND TECHNOLOGY LIBRARY STAFF

WALTER SISULU UNIVERSITY OF SCIENCE AND TECHNOLOGY LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	N. Mpeta	Interim Library & information science director

Source: Walter Sisulu University of Science and Technology. 2008..*staff* <http://www.uzulu.ac.za/Staff478.aspx>

TABLE 28: UNIVERSITY OF ZULULAND LIBRARY

UNIVERSITY OF ZULULAND LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Vahed L.	University Librarian
2	Mdletshe E.C.	Deputy University Librarian
3	Gina F. M.	Serial Librarian
4	Guma C.M.N	Acquisition librarian
5	Khumalo B.H.	Social science librarian

6	Mgobozi M.	Circulation librarian
7	Mthembu S.	Serials librarian
8	Ntuli N.C.	Education librarian
9	Sigwebela A.B.	System librarian
10	Sithole M.Z.	Law librarian
11	Ocholla L.	Pure science librarian
12	Jiyane Veli	Subject librarian

Source: University of Zululand.2008. *Library staff* <http://www.uzulu.ac.za/Staff478.aspx>

TABLE 29: CAPE PENINSULA UNIVERSITY OF TECHNOLOGY LIBRARY STAFF

CAPE PENINSULA UNIVERSITY LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Nathan Kalam	Librarian
2	Rolfe Proske	Librarian
3	Yunus Omar	Librarian
4	Sello Borephe	Faculty librarian
5	Brian Radloff	Faculty librarian
6	Mike Moll	Branch librarian
7	Zaba Tshabalala	Faculty librarian
8	Hlongiwe Mzoneli	Faculty librarian
9	Sulaiman Majal	Faculty librarian
10	Sharon Panayiotou	Branch librarian
11	Edena Du Toit	Faculty librarian
12	Veliswa Tshetsha	Faculty librarian
13	Fatima Darries	Faculty librarian
14	Nisa Hendrickse	Faculty librarian
15	Marion Davids	Librarian

Source: Cape Peninsula University of Technology.2008. *Library staff* http://www.cput.ac.za/library_2/librarian.php

TABLE 30: CENTRAL UNIVERSITY OF TECHNOLOGY LIBRARY STAFF

CUT LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	M.Meyer	Librarian
2	Y. Jacobs	Librarian
3	Ackermans	Librarian
4	Jeannet Molopyane	Head of undergraduate information service
5	Tshidi J.	Head of undergraduate information service
6	Anita du Toit	Head of postgraduate information service
7	Lizette Storm	Librarian faculty of management

Source: Central University of Technology. 2008. *Library staff*
<http://www.cut.ac.za/web/academics/library/generalinfo/licstaffbfn>

TABLE 31: DURBAN UNIVERSITY OF TECHNOLOGY LIBRARY STAFF

DURBAN UNIVERSITY OF TECHNOLOGY LIBRARY STAFF		
NO.	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Mkhize Vincent	Material access
2	Cloete Louise	Manager
3	Dlamini Mbali	Processing
4	Eswarlal Rajen	Acquisition
5	Gierke Trish	Cataloguing
6	Greffrath Anna- Marie	Cataloguing
7	Herbert Karin	Processing
8	Joseph Wendy	Periodical
9	Khomo Musa	Periodicals
10	Khumalo Millicent	Acquisition
11	Langner Jeanette	Cataloguing
12	Magagula Reginald	Periodicals
13	Mazibuke Zethu	Cataloguing
14	Moodley Kusturie	Acquisition
15	Moonasar Anushie	Cataloguing
16	Ntshingila Thola	Acquisition
17	Rawlins Annemarie	Cataloguing
18	Sithole Ziningi	Processing

19	Steyn Eileen	Periodicals
20	Thumbadoo Camilla	Cataloguing
21	Mapumlwane Daliwonga	Information service
22	Mhlongo Patrick	Material access
23	Peter Trevor	Material access
24	Ndewonde Zithulele	Material access
25	Ndawonde Daliwonga	Information service
26	Nguloane Ntsili	Material access
27	Govender Pam	Web Officer
28	Iwara Bongani	Material access
29	Khan Sarah	Computer technician
30	Kunene Zak	IT- Co -ordinator
31	Maharaj - Rakesh	Coordinator : Material access
32	Makathini Sizeni	Material access
33	Moses Abel	Legal reference collection
34	Mthembu Queen	Material access
35	Mthethwa Nonjabulo	Material access
36	Myeza Joyce	Information service
37	Naidoo Ini	Material access
38	Ngubelanga Bongani	Media access
39	Ntsele Lindiwe	Information service
40	Pillay Vino	Material access
41	Radebe Siza	Manager
42	Zulu Philani	Coordinator
43	Mpendulo Nobuntu	Manager
44	Muller Nickey J.	Deputy director
45	Mchunu Sipho	Material access
46	Naicker Andrew	Material access
47	Spershott Claire	Site Coordinator
48	Gumede Lindiwe	Information service
49	Madho Molly	Material access
50	Mayelo Vuyani	Inter library loan
51	Naicker Kogie	Coordinator : material access
52	Naidoo Segarani	Information service
53	Ncwane Prince	Material access
54	Ramlugun Vinesh	Material access
55	Shah Anita	Training librarian
56	Thomas David	Media Center

Source: Durban University of Technology. 2008.*DUT library: library staff* <http://library.dit.ac.za/staffing.htm>

TABLE 32: TSHWANE UNIVERSITY OF TECHNOLOGY LIBRARY STAFF

TSHWANE UNIVERSITY OF TECHNOLOGY LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Jeanette Bijl	Library head Nelpruit
2	Ruth Segage	Librarian Nelpruit
3	Musa Sibambo	Librarian Nelpruit
4	Anee Sieberhagen	Librarian Nelpruit
5	Winnie Khoza	Librarian Nelpruit
6	Eunice Leseyane	Campus director Ga Rankuwa
7	Thipa Ntja	Campus circulation desk Ga Rankuwa
8	Rhandzu Mhinga	Library head Polokwane
9	Dr. Adriaan Swanepoel	Library director Pretoria
10	Abram Kheswa	Circulation desk Pretoria
11	Jacomi Cathro	Library head
12	Sonto Mabena	Information librarian
13	Adreyette Booysse	Inter library loan
14	Joyce Mohlala	Circulation librarian
15	Lynette Bester	ERC
16	Marlene Beetge	Head branch library
17	Maria Maletse	Information librarian
18	Billy Mahlangu	Circulation librarian
19	Maria Maletse	Inter library loan
20	Jean Du Plooy	Head branch library
21	Rina White	Information librarian
22	Sithsaba Gaulana	Information librarian
23	Alice Machele	Information librarian
24	Eunice Mhlangu	Information librarian
25	Malebo Ratlou	Information librarian
26	Brenda Swanepoel	Health science librarian
27	Martie Van Der Merwe	Information & communication technology librarian
28	Magdeline Mashilo	Information & communication technology librarian
29	Susan Appeleryn	Hospitality librarian

Source: Tshwane University of Technology.2008. *Library and information services: library staff contact details* <http://lib.tut.ac.za/libraries/arcadia.htm#>, <http://lib.tut.ac.za/libraries/arts.htm#ls>

TABLE 33: VAAL UNIVERSITY OF TECHNOLOGY LIBRARY STAFF

VAAL UNIVERSITY OF TECHNOLOGY LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	A.J. Gozo	Senior director
2	Miriam Sandase	Administrator
3	Nomoya Mahlangu	HOD circulation
4	Karien Du Bruyn	Subject librarian
5	Lungiswa Hlazo	Subject librarian
6	Zodwa Somi-Thomson	Subject librarian
7	Dudu Leshega	Subject librarian
8	Susan Mok	HOD acquisition
9	Lionel Luvhengo	HOD
10	Hendrina Grove	Subject librarian
11	Charles Ngolele	Librarian user education & training
12	Benny Maleu	Librarian
13	Sibongile Khulelaphi	Librarian

Source: Vaal University of Technology..2008..staff contact:who's who
<http://www.vut.ac.za/metadot/index.pl?id=13444&isa=Category&op=show>

TABLE 34: UNIVERSITY OF BOTSWANA LIBRARY STAFF

UNIVERSITY OF BOTSWANA LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	E. Mpotokwane	Accounting & Finance librarian
2	F. K. Tawete	Adult education librarian
3	G. Isaac	African language & literature librarian
4	A. M. Mtologi	Architecture & planning librarian
5	R. K. Ntseane	Biological sciences librarian
6	C. V. Radiporo	Botswana & Documents & special collection
7	Molebatsi K.	Civil engineering librarian
8	Dr. P. Jain	Computer science librarian
9	Maphakwane G.	Economics librarian
10	Taweta F.K.	Education foundation librarian
11	Seanego J. M.	Education technology librarian
12	Molebatsi K.	Electrical engineering librarian
13	Kgosiemang, R.T.	English librarian

14	Ketshogilena D.	Environmental health librarian
15	Nkrumah K.	French librarian
16	Motlogi A. M.	Geology librarian
17	Morupisi L.	Home economics librarian
18	Nfila R.B.	Industrial design & technology librarian
19	Mologanyi B.	Education librarian
20	Radijena K.	Law librarian
21	E. Mpotokwane	Marketing librarian
22	E. Asofu Adjaye	Management librarian
23	Dr. P.Jain	Mathematics librarian
24	Seanego J. M.	Mathematics & science education librarian
25	G.Isaac	Political science librarian
26	B.Mologanyi	Primary education librarian
27	Fidzani,B.	Director
28	Mbaakanyi, D.M.	Resource manager
29	Qobose,E.N.	Customer and extension services
30	Esilaba,A.O.	Librarian
31	Willet, S.	Librarian
32	Radiporo, V.C.	Librarian
33	Motlogi, A.M.	Librarian
34	Moseki, G.O.	Librarian
35	Masonya, O.	Librarian
36	Nkrumah – Boateng, K.	Librarian
37	Ojedokun, A.A.	Librarian
38	Lekau, A.A.	Librarian
39	Radijeng K.	Librarian
40	Toteng, B.	Librarian
41	Sumathiamma, J.	Librarian
42	Rao, K.N.	Senior librarian
43	Dimbungu ,M.M	Librarian
44	Dintwe, M.N.	Senior librarian
45	Mwemutsi	Librarian
46	Lumande, E.	Senior Librarian
47	Badisang B.	Senior librarian
48	Oladokun, O. S.	CCE librarian
49	Kiberu, H.	HOORC, librarian officer

Source: University of Botswana. *Libraries.2008. subject librarians subject portals*

http://www.ub.bw.librarv_sp.cfm?pid=471

TABLE 35: UNIVERSITY OF ZAMBIA LIBRARY STAFF

UNIVERSITY OF ZAMBIA LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Dr. A. Akakandelwa	Acting deputy university librarian
2	Makondo Francina	Head medical library
3	Chifwepa Vitality	University librarian
4	Precious Nganga	Cataloguer
5	Chitwa	Chief binder
6	Mtonga Levison	Senior binder
7	Mwamba J	Senior binder
8	Sitwala H.L.	Head collection development
9	Shameenda L.K.	Head Public Service
10	Mumba N.M.	Acting head of serial division
11	Mwafuilwa C.	Head collection division
12	Chewe P.	Head cataloguing
13	Chitumbo Eness	Cataloguing specialist
14	Pangani H.Zulu	Serial librarian

Source: University of Zambia.2008. *Library staff*

http://www.unza.zm/units/library/index.php?option=com_content&task=view&id=14&Itemid=60

TABLE 36: UNIVERSITY OF SWAZILAND LIBRARY STAFF

UNIVERSITY OF SWAZILAND LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Mavuso M.R.	Librarian
2	Ngcobo Z. G.	Deputy librarian
3	Chibambo M. N.	Senior assistant librarian
4	Mkhonta F.T.	Senior assistant librarian
5	Phiri Z. M.	Senior assistant librarian
6	Anbu J. P.	Assistant librarian
7	Omobitan B.O.	Assistant librarian
8	Thwala A.	Assistant librarian
9	Yumba D.	Assistant librarian
10	Dlamini N.	Assistant librarian
11	Mathebela N.	Trainee assistant librarian
11	Vilakazi N.	Trainee assistant librarian
12	Ndzimandze A. T.	Trainee assistant librarian

Source: University of Swaziland. 2008. *Library administration* <http://library.uniswa.sz/>

TABLE 37: UNIVERSITY OF NAMIBIA LIBRARY STAFF

UNIVERSITY OF NAMIBIA LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Kahengua Kavevangua	Special collection librarian
2	Hazel Van Rooi	Information & communication studies librarian
3	Stephen Visagie	Literature, languages, religion ,philosophy & theology librarian
4	Siegfriede Karsten	Education, psychology, social work, librarian
5	Mbenae Katjihingua	Distance education librarian
6	Ohene Awuku	Law, political science, public administration, criminology librarian
7	Maggy Marenga	Agriculture
8	Kutzner Jochen	Head archivist
9	Katjiveri Mercia	Assistant archivist
10	Irmela Buchholz	Cataloguing librarian
11	Hansmann Louise	Cataloguing librarian
12	Margenstern Renate	HOD technical services & systems
13	Namhila Ellen Ndeshi	University librarian

Source: University of Namibia. 2008. *Library staff* <http://library.unam.na/libr-staff.html>

TABLE 38: UNIVERSITY OF MALAWI LIBRARY STAFF

UNIVERSITY OF MALAWI LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Vuma Kaunda	College librarian
2	Margaret Ngwira	College librarian
3	Geoffrey F.Salanje	College librarian
4	Phiri ,DB.V	Librarian

Source: University of Malawi. 2008. *Library staff* <http://www.bunda.unima.mw/Lib/Library.htm>

TABLE 39: UNIVERSITY OF MZUZU LIBRARY STAFF

UNIVERSITY OF MZUZU LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Uta J.J.	University librarian
2	Sachs, I	Readers services
3	Malemia,L.	Periodicals, e-journal
4	Chapunula, A.	Acquisition
5	Majawa, F	Technical services
6	Dube G.	Children's library
7	Komatsu,R.	ICT System engineer

Source: University of Mzuzu. 2008. *Library staff* <http://www.mzuni.ac.mw/library.htm>

TABLE 40 : NORTH-WEST UNIVERSITY LIBRARY STAFF

NORTH-WEST UNIVERSITY LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Tom Larney	Director
2	Hester Spoelstra	HOD loan services
3	Jubrie Oosthuizen	HOD acquisition & processing
4	Louise Vos	HOD information services
5	Corrie Breitenbach	HOD information systems
6	Henriette Groenewald	HOD administration
7	Ester Venter	Librarian
8	Bucwa Yvonne	Information service librarian
9	Erasmus Jannie P.C.	Loan services librarian
10	Grobler Annatjie	Course reserve librarian
11	Harmse Madri	Student help librarian
12	Lotter Marthie P.	Acquisition & processing librarian
13	Van Belkum Martea	Acquisition & processing librarian
14	Venter E.J. Nestus	Information service librarian
15	Gerda Van Rooyen	Information librarian
16	Malie Smit	Information librarian
17	A. C. Janie Lamprecht	Information librarian
18	Anriette Pretorius	Information librarian
19	Ursula Franke	Information librarian

Source: University of North – West. 2008.*Library staff*

http://www.puk.ac.za/biblioteek/aboutman_e.html

TABLE 41 : UNIVERSITY OF LIMPOPO LIBRARY STAFF

UNIVERSITY OF LIMPOPO LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Chuene M.M.	Acting library director
2	F.T.M. Hlatywayo	Section head cataloguing
3	Mathopa C.	Librarian
4	Maphopha K. A.	Librarian
4	E.M. Josias	Subject cataloguer
5	S.S.Sehlodimelo	Education librarian
6	Shokane J.K.	Health librarian
7	Bopape S.T.	Law librarian
8	E. L. Mothapo	Section head readers services
9	L. P. Thosago	Circulation librarian
10	Ramoshai M. E.	Library administrator
11	Maluleko S.T.	Assistant librarian
12	Ramoshai M.E.	Library administrator assistant
13	Ngobeni T.F.	Assistant librarian

Source: University of Limpopo. 2008.*Library staff* <http://www.ul.ac.za/Library/lib-stafflist.htm>

TABLE 42: SOKOINE NATIONAL AGRICULTURAL LIBRARY STAFF

SOKOINE NATIONAL AGRICULTURAL LIBRARY(SNAL) STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	F.W. Dulle	Library director
2	R.T. Mulimila	Senior librarian Assoc. director
3	A.M. Chailla	Senior librarian readers services
4	D.S. Matovelo	Senior librarian
5	M.J.F.Lwehabura	Senior librarian
6	L.S.P.Busagala	Assistant librarian
7	W. Leonard	HOD librarian SNAL-SMC
8	A. S. Sife	HOD librarian ICT
9	E. T. Lwoga	Assistant librarian
10	G. Emanuel	Assistant librarian
11	A. W. Malekani	Assistant librarian trainee
12	C. Angello	Assistant librarian trainee
13	P. Nyinondi	Assistant librarian trainee
14	P. Joram	Assistant librarian trainee

Source: Sokoine National Agricultural University, 2008. *Library staff* <http://www.suanet.ac.tz/lib/academstaff.html>

TABLE 43: COPPERBELT UNIVERSITY LIBRARY STAFF

COPPERBELT UNIVERSITY LIBRARY STAFF		
NO.	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Lungu C. B. M.	University librarian
2	Mbewe G. L.	Senior sub librarian
3	Chitwamali E. M.	Sub librarian 1
4	Nkhoma B. P.	Sub librarian 1
5	Mwamba A.	Sub librarian 1
6	Banda C.	Sub librarian 1
7	Chiinza N. C.	Assistant librarian
8	Maambo C.	Assistant librarian
9	Muunga A.	Assistant librarian
10	Chipembe M.	Assistant librarian

Source: Copperbelt University.2008. *Library staff* http://www.cbu.edu.zm/units/lib/lib_staff.asp

TABLE 44: UNIVERSITY OF KWA ZULU – NATAL LIBRARY STAFF

UNIVERSITY OF KWA ZULU – NATAL LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Lindiwe Soyizwapi	Subject librarian (Accounting and auditing)
2	Ashika Ramlakhan	Librarian
3	Lynne Phipson	Subject librarian (Agricultural economics)
4	Rebecca Msomi	Subject librarian (Antropology)
5	Tusiwe Hadebe	Subject librarian (Applied languages)
6	Tim Reddy	Subject librarian (Architecture, planning & housing)
7	Ashika Pramlal	Subject librarian (Audiology)
8	Browyn Jenkins	Subject librarian (Audiology)
9	Richard Beharilal	Subject librarian (Biochemistry)
10	Rosemary Khun	Subject librarian (Chemistry)
11	Pravina Laljeeth	Librarian
12	Faith Bhengu	Subject librarian (Classiscs)
13	Anita Kromberg	Librarian Pietermaritzburg
14	Omesh Jagarnath	Subject librarian (Criminology)
15	Margaret Bass	Subject librarian (Culture, communication, & media studies)
16	Nomonde Maqubela	Subject librarian (Education)
17	Avenal Finalyson	Subject librarian (Engineering)
18	William Dansoh	Subject librarian (Life Science)
19	Zenkosi Majola	Librarian Business School
20	Reggie Raju	Subject librarian (law)
21	Rani Moodly	Subject librarian (Medical sciences)
22	Sara Mitha	Subject librarian (Medical science)

23	Heather Gale	Subject librarian (Music)
24	Catherine Dubbeld	Subject librarian (Nursing)
25	Phumla Luhabe	Subject librarian (Optometry)
26	Rence Damonse	Librarian Pietermaritzburg
27	Mark Moonsamy	Principal library officer
28	Rari Govender	Senior library officer
29	Segree Reddy	Senior library officer
30	Caroline Naidoo	Senior library officer
31	Dees Hurripardsad	Principal library officer
32	S. Majola	Library officer
33	Abdul Ahmed	Senior library officer
34	Sira Moonsamy	Senior librarian
35	Krish Pillay	Senior librarian
36	Kerny Moodly	Senior library officer
37	Sanjeeth Munshi	Principal library officer
38	Roy Dorasamy	Senior library officer
39	Thiru Munsamy	Senior library officer
40	Juggie Authar	Acting director
41	John Sydney	Senior librarian
42	Reddy Tim	Branch librarian
43	Shongwe Bongwe	IT Consultant
44	Tait Jill	Head technical service
45	Buchanan Nora	Library Director
46	Gumede Sibusiso	Reference collection
47	Kercival Claudette	Administrative library officer
48	Naidoo Sherwin	Administrative library officer
49	Naidoo Susheila	Cataloguer
50	Grieve Helen	Cataloguer

Source: University of Kwa Zulu Natal. 2008. Library staff <http://library.ukzn.ac.za/SubjectLibrarians172.aspx>

TABLE 45: MANGOSUTHU TECHNIKON LIBRARY STAFF

MANGOSUTHU TECHNIKON LIBRARY STAFF		
NO.	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Mrs Ndaki	Library Director
2	Dudu Radebe	Circulation librarian
3	Patience Ntuli	Circulation librarian
4	Pinky Mkhwanazi	System librarian
5	Magubane Senamile	Subject librarian
6	Magwaza Elizabeth	Subject librarian
7	Muyandla Maso	Subject librarian
8	Mallalose Nokuthula	Subject librarian
9	Mkhise Tholakele	Subject librarian
10	Mqadi Daphney	Subject librarian
11	Msimango Hoekie	Subject librarian
12	Mthembu Shepherd	Subject librarian
13	Naidu Yegis	Subject librarian
14	Nawane Siyabonga	Subject librarian
15	Ndaba Dalton	Subject librarian
16	Nduki Lindiwe	Subject librarian
17	Ndlovu Nokuthula	Subject librarian
18	Ngubane Noel	Subject librarian
19	Nzama Linda	Subject librarian
20	RathepebLungile	Subject librarian
21	Shezi Thuli	Subject librarian
22	Zimu Nomusa	Subject librarian
23	Zulu Freeman	Subject librarian

Source: Mangosuthu Technikon . 2008. *Library contact* <http://www.mantec.ac.za/library/contact.htm>

TABLE 46: UNIVERSITY OF LESOTHO LIBRARY STAFF

UNIVERSITY OF LESOTHO LIBRARY STAFF		
NO.	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Moshoeshoe-Chadzingwa	Acting university librarian
2	S.M.Mohai	Head technical service
3	A.K.Kakoma	Client access extension services
4	J.S.Molapo	Archives

5	M. Lephoto	Librarians
6	M.A.N.Mohapi	Librarian
7	M.Mukela	Librarian
8	I.M.Phoofolo	Librarian
9	L.Sejane	Librarian
10	M.L.Makara	Assistant librarian
11	W. Mokotjo	Assistant librarian
12	L.Mariti	Assistant librarian
13	C.K.Qobo	Archivist
14	J.N.Tsoenyo	Assistant librarian
15	E.R.P.Sgwane	Assistant librarian
16	N.Taole	Senior librarian
17	P.Letsolo	Librarian

Source: University of Lesotho. 2008. *Library staff* <http://www.nul.ls/library/default.htm>

TABLE 47: UNIVERSITY OF ZIMBABWE LIBRARY STAFF

UNIVERSITY OF ZIMBABWE LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Chikonzo, A.	Acting librarian
2	Gurira, J.	Deputy librarian
3	Namtoro, J.	Head reader services
4	Moyo,S.	Circulation librarian
5	Hadebe, Z.	Agriculture and engineering librarian
6	Muganhiri,P.	Commerce librarian
7	Mwatsiya, P.	Arts librarian
8	Tasikana ,E.	Serial studies librarian
9	Chicheroo, G.	Science librarian
10	Tavera, S.	Special collection librarian
11	Tapfuma, M.	Government publication librarian
12	Mbirizah,J.C.	Head bibliographic services
13	Chimuka, Y.	Acquisition librarian
14	Patsanza,J.	Office and information manager
15	Chikombah, R.T.	Education librarian
16	Sagonda,A.	Map librarian

17	Mlambo, E.	Librarian
18	Sibanda, M.	Law librarian
19	Marufu, J.	Vetinary librarian
20	Nyaruwata, N.	Chief technician bindery section
21	Mutsikiwa, A.	Acting ICT manager
22	Mukwenha, P.	Analyst programmer

Source: University of Zimbabwe Zimbabwe library.2008.*library staff*

<http://www.uz.ac.zw/library/staff/librarians.html>

TABLE 48: ZIMBABWE OPEN UNIVERSITY STAFF

ZIMBABWE OPEN UNIVERSITY LIBRARY		
NO.	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Maenzanise J. L.	Director
2	Makurumure A.	Manager

Source: Zimbabwe open University.2008. *Zimbabwe Library: library staff*

<http://www.zou.ac.zw/service/library/staff/staff.htm#>

TABLE 49: MIDLANDS STATE UNIVERSITY STAFF

MIDLANDS STATE UNIVERSITY LIBRARY		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Macheke N.P.	Acting librarian
2	Chitsamatanga	Sub librarian
3	Tokwe T.	Head special collection
4	Makandwa A.	Head reader services
5	Tsuro T.	Head law library
6	Makeke E.	Head E-Resource
7	Nyamubarwa W.	Head acquisition
8	Masimbiri R.	Head Barani library
9	Moyo T.	Head Bindery

Source : . Midlands.2008 State University . *Library staff* <http://www.msu.ac.zw/libraries/staffdirectory.htm>

TABLE 50: UNIVERSITY OF KHARTOUM LIBRARY STAFF

UNIVERSITY OF KHARTOUM		
NO.	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Hassan Abdalla Almgory	Librarian
2	Ahmed Hassan Garinat	Deputy librarian
3	Abdel Karim Hassan	Deputy librarian digital library

Source: University of Khartoum.2008. *Library staff* <http://www.uofk.edu/index.php?id=28>

TABLE 51: ALEMAYA UNIVERSITY OF AGRICULTURE LIBRARY STAFF

ALEMAYA UNIVERSITY OF AGRICULTURE LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Mammo, Y.	Head librarian
2	Mhadi Ahmed	Head Alemaya agriculture library

Source: Alemaya University of Agriculture.2008. *Library staff*
<http://www.abysiniacybergateway.net/ethiopia/aaau/alemaya.html>

TABLE 53: UNIVERSITY OF FREE STATE LIBRARY STAFF

UNIVERSITY OF FREE STATE LIBRARY STAFF		
NO	NAME OF STAFF	QUALIFICATIONS/DESIGNATION
1	Namponya C.R.	University librarian
2	Arko-Cobbah	Deputy university librarian
3	Ronet Vrey	Librarian Afro Asiatic studies & language
4	Annemarie du Preez	Librarian agricultural economics
5	Rene du Plessis	Librarian architecture
6	Senovia Welma	Librarian communication & information studies
7	Mariechen Jansen	Librarian economics & management science
8	Moipone Goliath	Librarian education
9	Du Plessis	Librarian geography
10	Radulene le Grange	Librarian health science
11	Elma Van Der Merwe	Librarian health science
12	Ria Van der Voort	Librarian health science
13	Hesma Van Tonder	Librarian law
14	Eene du Plessis	Librarian political science
15	Senovia Welma	Librarian social work

SOURCE :: University of Free State.2008. *Library staff*

<http://www.uovs.ac.za/faculties/content.php?id=3152&FCode=12&DCode=4>

TABLE 54: OPEN UNIVERSITY OF TANZANIA LIBRARY STAFF

OPEN UNIVERSITY OF TANZANIA LIBRARY STAFF		
NO.	NAME OF STAFF	DESIGNATION/QUALIFICATION
1	Samzugzi A.S.	University librarian
2	Aristaric Maro	Deputy university librarian
3	Mbana Rajabu	Librarian
4	Sefu Hamis	Librarian
5	Rehema Machimo	Librarian
6	Restituta Kisamo	Librarian
7	Habib Vicent	Librarian
8	Salama Musa	Librarian

Source: Open University of Tanzania .2008. *Library staff* <http://www.out.ac.tz/Library-librarystaff.htm>

TABLE 55: EGERTON UNIVERSITY LIBRARY STAFF

EGERTON UNIVERSITY LIBRARY STAFF		
NO.	NAME OF STAFF	DESIGNATION/QUALIFICATION
1	Mwanzilo P.K.	Head information resource and packaging
2	Nyamboga C.M	Librarian

Source: Ebscohost (LIST

TABLE 56 : KENYATTA UNIVERSITY LIBRARY STAFF

KENYATTA UNIVERSITY LIBRARY STAFF		
NO.	NAME OF STAFF	DESIGNATION/QUALIFICATION
1	Gakobo	Acting librarian
2	Muiruri	Librarian
3	Mbae	Librarian social sciences
4	Mbua	Head Parklands library
5	Kimani G.	Acquisition librarian
6	Kanuri	Librarian Parklands
7	Wambua	Librarian

Source: Joyce Kinyanjui

TABLE 58 : SOMALIA NATIONAL UNIVERSITY LIBRARY STAFF

SOMALIA NATIONAL UNIVERSITY LIBRARY STAFF		

Source:Somalia