Cataloguing practices from creation to use: A study of Cape Town Metropolitan Public Libraries in Western Cape Province, South Africa

by

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Abstract

Cataloguing is the process of creating metadata representing information sources such as books, sound recordings, digital video disks (DVDs), journals and other materials found in a library or group of libraries. This process requires the use of standardised cataloguing tools to achieve the bibliographic description, authority control, subject analysis and assignment of classification notation to generate a library catalogue. The well-generated library catalogue serves as an index of a collection of information sources found in libraries that enables the library users to discover which information sources are available and where they are in the library. Such a catalogue should provide information such as the creators' names, titles, subject terms, standard number, publication area, physical description and notes that describe those information sources to facilitate easy information retrieval.

This study sought to investigate cataloguing practices from creation to use in Cape Town Metropolitan public libraries in South Africa with the aim of deepening the understanding of the importance of cataloguing standards in creating bibliographic data for the libraries. The study also sought to address the following research questions: "What skills do the cataloguers of Cape Town Metropolitan libraries possess?", "To what extent do cataloguers in Cape Town Metropolitan public libraries adhere to international standards when creating records in the online catalogue?", "How are the cataloguing records created on the system by cataloguers in the Cape Town Metropolitan used within and across the public libraries?", "How are the new Resource Description and Access (RDA) standards applied in public libraries in the Cape Town Metropolitan to ensure they accommodate entities and attributes as described by the international cataloguing standards?", "What records quality control measures are used in computerised cataloguing by public libraries in the Cape Town Metropolitan?", "How effective is the computerised cataloguing system of Cape Town Metropolitan public libraries?", "What are the challenges experienced by public libraries in the Cape Town Metropolitan in computerised cataloguing?"

The study was underpinned by a combination of the IFLA's Functional Requirements for Bibliographic Records (FRBR), Functional Requirements for Authority Data (FRAD) and Functional Requirements for Subject Authority Data (FRSAD). The study adopted a pragmatic paradigm associated with the mixed methods (MMR) approach where the

qualitative aspects were dominant. The study adopted a case study design and data were collected using focus group discussions, face-to-face interviews, questionnaires, and document review methods. The population of the study comprised cataloguers, senior librarians, librarians and library assistants of 10 libraries in the City of Cape Town Metropolitan. Reliability and validity of the instruments were ascertained through a pilot study. The data collected were presented and analysed both qualitatively and quantitatively. The qualitative data were analysed thematically, presented in narrative description, while the quantitative data were coded and analysed using Statistical Package for the Social Sciences (SPSS), and presented in tables, graphs and charts, where applicable.

The findings of the study revealed that although the cataloguers were experienced in their work, some catalogue records did not fully adhere to the cataloguing rules. Furthermore, there were no continuous development programmes in place to update the cataloguers' knowledge and cope with dynamic changes in the cataloguing fields. In addition, the findings revealed that some catalogue records did not have adequate information descriptions to facilitate effective retrieval of information. The study also found that a peer review mechanism was used to facilitate quality control; the system used for cataloguing did not have all MARC tags and cataloguers experienced some challenges with the use of the cataloguing standards and assigning subject headings for non-roman sources. From the findings of the study, it was concluded that cataloguers did not adhere to international cataloguing standards when creating the catalogue records.

A number of recommendations were therefore proffered among them that Cape Town Metropolitan Libraries (CCTML) should consider to improve their catalogue quality control measures. Moreover, cataloguers need adequate skills to enable them to implement and sustain the computerised system for cataloguing and retrieval. The CCTML need policies that provide the guidelines in the application of cataloguing rules and standards. The cataloguing department should consider planning for a re-cataloguing project to modify the records that did not have enough descriptions on the system Online Public Access Catalogue (OPAC) to improve retrieval.

Declaration

I, Madireng Jane Monyela declare that:

1. The research reported in this thesis, except where otherwise indicated, is my original research.
2. This thesis has not been submitted for any degree or examination at any other university.
3. This thesis does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.
4. This thesis does not contain other persons' writing, unless specifically acknowledged as being sourced from other researchers.
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--   23 June 2019

Madireng Jane Monyela   Date

--   23 June 2019

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Supervisor: Prof. Stephen Mutula   Date

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Dedication

To God be the glory; I thank God, the Father, the Son and the Holy Spirit for giving me strength and wisdom to complete this study. I dedicate this thesis to my parents, Samuel and Aletta Monyela, for sacrificing everything they had to ensure that I receive an education. Mom and Dad, *Ke a leboga,* because you laid a good foundation for me. I also dedicate this thesis to my wonderful kids, Keletso, and the boys, Ofentse and Nana, for understanding that mom had to spend little time with them and dedicate more time to her studies. Special thanks go to Keletso for playing the role of mother to the little ones while I spent most of my evenings at the office completing this work. I also want to thank everyone who has been praying with and for me to complete this study. Moreover, this thesis is dedicated to my late grandmother who practically raised me. Ramoraswi Sekantla Monyela, *ageeegeee Masekoameng a leso shateeee Pheladi!*

Table of Contents

List of tables

List of figures

List of abbreviations

AACR2:   Anglo American Cataloguing Rules, Second Edition

CCTLS: City of Cape Town Library System

CCTML: City of Cape Town Metropolitan Libraries

CIP: Cataloguing in Publication

DDC: Dewey Decimal Classification Scheme

DVD: Digital Video Disk

FRAD: Functional Requirements Authority Data

FRBR: Functional Requirements Bibliographic Records

FRSAD: Functional Requirements Subject Authority Data

ICT: Information Communication Technology

IFLA: International Federation Library Association

ISBD: International Standard Bibliographic Description

ISBN: International Standard Book Number

LCSH: Library of Congress Subject Headings

LMS: Library Management System

MARC: Machine Readable Catalogue

MMR: Mixed Methods Research

NACO: Name Authority Cooperative Program

OCLC: Online Computer Library Centre

OPAC: Online Public Access Catalogue

RDA: Resource Description and Access

RDF: Resource Description Framework

SLIMS: SITA Library Information Management System

SPSS: Statistical Package for Social Scientists

Chapter One

Introduction

1.1   Background to the research problem

Cataloguing is the process of creating metadata representing information sources such as books, sound recordings, serials, graphic materials and digital video disks (DVDs) found in a library or group of libraries (Bair, 2005). This process of cataloguing is usually performed by a cataloguer and requires the use of standardised cataloguing tools to achieve the bibliographic description, authority control, subject analysis and assignment of classification notation to generate a library catalogue (Bair, 2005). Lazarinis (2014) refers to cataloguing as bibliographic control. Hagler (1997) defines bibliographic control as the sum of all practical operations a cataloguer undertakes to organise documents and their description so that they can be located most directly and efficiently. Hagler further adds that bibliographic control is the organisation of the library materials to facilitate discovery, management, identification and access. There are two main types of cataloguing, namely: original cataloguing and copy cataloguing. Original cataloguing refers to the preparation of a bibliographic record from scratch without the aid of a pre-existing catalogue record for the same edition of the same manifestation, which is usually time-consuming for the cataloguer since the cataloguer must record all the bibliographic information of the manifestation (Kim, 2003).

The core stages of original cataloguing that the cataloguers should practice as stated by Lazarinis (2014) are as follows: The cataloguer receives the information source and identifies the appropriate chapter in the content standard such as the Anglo-American Cataloguing Rules, Second Edition (AACR2) or the RDA to catalogue that information source. For example, content standard of chapter 2 of the AACR2 contains the rules for cataloguing books, chapter 3 contains rules for cataloguing cartographic materials such as maps, while chapter 5 describes cataloguing of music, and chapter 6 presents rules for cataloguing sound recordings. The cataloguer must then identify the chief source of information based on the general rules of the respective chapter of the content standard, determine the level of description suitable for the library as outlined by the AACR2 rule 1.0D, transcribe bibliographic information of the information source guided by the rules of the content standard, transcribe the identification data to the catalogue using the correct punctuations guided by the standards for electronic catalogue under the proper Machine Readable Catalogue (MARC) tags and determine the headings (main and added) and their authorised forms by consulting the rules of the content standard and the

authority file of the library. In contrast, copy cataloguing involves the adaptation of a pre-existing bibliographic record from other bibliographic databases to fit the characteristics of the item in hand with modifications to correct obvious errors and minor adjustments such as inclusion of publication area, physical description subjects, classification notation and verifying authority control in the case of the Cataloguing in Publication (CIP) record to reflect locally accepted cataloguing practice (Kim, 2003). There are different procedures of cataloguing, namely descriptive cataloguing, authority control, subject cataloguing and classification. Descriptive cataloguing, according to Lazarinis (2014), deals with description of resources, identifying all its features and the determination of access points (names of persons or corporate bodies) considered responsible for or associated with a resource, or any index term that could help a user to locate an information source when searching the catalogue. The intention of this task is to identify the work and distinguish it from other works by the same author, or with the same title or on the same subject. The features are then represented in the catalogue using standardised tools.

The next task is the specification of the access points, which are the possible ways a user might search for a material. Keenan and Johnston (2000) define access points as the heading in an index, catalogue or database, which is used to identify specific records or entries in a file such as creators' names, subject terms, title, keywords, international standard number and classification code. These are also called entry points and they are usually used on the catalogues as headings (main or added headings). According to the Joint Steering Committee for Revision of Anglo American Cataloguing Rules (AACR) and American Library Association (1998), the main entry is the name appearing first in the wording or layout on the item being catalogued in the case of shared responsibility and the names of other creators involved in the work and referred to as added entries if there are not more than two (Joint Steering Committee for Revision of AACR and American Library Association, 1998). If no specific name is identified as an author, cataloguers should make these decisions based primarily on a set of rules defined in the cataloguing standard applied. In case of single responsibility, the author is regarded as the main entry (Joint Steering Committee for Revision of AACR and American Library Association, 1998).

The other procedure of cataloguing is called authority control. Gorman (2004) asserts that bibliographic control and authority control are two sides of the same coin, with bibliographic control being literally impossible without authority control. Cataloguing cannot exist without standardised access points, and authority control is the mechanism by which we achieve the necessary degree of standardisation. "Cataloguing deals with order, logic, objectivity, precise denotation, and consistency, and must have mechanisms to ensure these attributes. The same name, title or subject should always have the same denotation each time it occurs in a bibliographic record" (Gorman, 2004). Taylor (1984) defines authority control as the process of maintaining consistency in a bibliographic file or catalogue through reference to an authority file. The purpose of authority control, according to Tillet (1989), is to ensure that the works of a creator are grouped together. The cataloguer needs to determine whether the name has been used before in the catalogue, verify that the name has been established correctly, and adjust if required. The same form must be used throughout the catalogue to ensure consistency. If the name to be used for the heading cannot be traced in the catalogue, the cataloguer is required to establish the form of the name to be used as a heading following cataloguing standards. Subject cataloguing is divided into subject analysis and classification. Subject cataloguing is also referred to as subject analysis, although analysis is the preliminary step of subject cataloguing (Lazarinis, 2014). This stage deals with the identification of the intellectual properties of the item such as what the item is about.

The cataloguers should use the standardised subject headings to assign and verify the subjects such as Library of Congress Subject Headings (LCSH), Sears List of Subject Headings and other specialists' subject headings, such as Medical Subject Heading (MeSH), to ensure vocabulary control and consistency in the creation and representation of subject terms in the catalogue (Lazarinis, 2014). Classification, on the other hand, refers to the process of arranging objects into categories. In libraries, classification deals with the determination of the primary subject of a work and the assignment of the specific notation. This is used for retrieval purposes and for ordering the item in a systematic catalogue as well as for shelving the item with other items on similar subjects. This is done by using a classification scheme such as the Dewey Decimal Classification Scheme (DDC), the Library of Congress Classification Scheme (LCC) and others. The process of classification ends with assigning a numerical or alphabetical code to the item (depending on the notation the scheme is using). This is then called a classification notation. The classification notation serves as a basis for defining the call number for the item, which is a unique code assigned by the cataloguer to define the location of the item on the

shelf. The allocation of the call number depends on local library policies (Lazarinis, 2014). The good library catalogue serves as an index to a collection of information sources found in a library or group of libraries that enable the library user to discover which information sources are available and where they are located in the library. Such catalogues should provide information such as creators' names, titles, subject terms, standard number, publication area, physical description and notes that describe those information sources (Joachim, 2003; Welsh & Batley, 2012). If well generated, the library catalogue should "enable an unambiguous display of bibliographic relationships among entities and should make it possible for users to easily find and locate related works by offering clear pathways to records representing those works" (Noruzi & Arsenault, 2013). The objectives of the catalogue as indicated by Cutter (1904) are as follows:

- Identifying objective – to enable a person to find a book by author, title, subject, or date of publication

- Collocating objective – to show what the library has by a given author, on a given subject, in each kind of literature

- Evaluating objective – to assist in the choice of a book as to its edition (bibliographically), and character (literally or topically).

Hegna (2007) opines that in order to achieve the objectives of the catalogue, cataloguers must have principles and follow the necessary rules when cataloguing information sources. The first principle of cataloguing, according to Hegna, is to have the users in mind when making the catalogue. The second principle is to adhere to international cataloguing standards. For the user to identify the information source by an author, the cataloguers need to transcribe the author entry on the catalogue with the necessary references as stipulated by the international standards. For the user to find an information source by title, the title entry is required, while the subject entry is required for subject search. For users to identify sources in each kind of literature, the language entry is important, and for the user to choose the information source by its edition, edition entry is needed. For the user to choose the information source as to its character, the catalogue must have the notes entries (Hegna, 2007).

Willer (1999) asserts that in the late 1930s, when cataloguers in the United States of America (USA) were dissatisfied with the contents of their cataloguing rules and standards, they proposed new rules and standards that were adopted internationally. In the late 1960s, the

automation of cataloguing began with the translation of the existing procedures for the creation of catalogue cards according to cataloguing rules into the new Machine-Readable Cataloguing System of Codes (MARC) (Anderson, 1974). According to Das (2004), the MARC is a communication format computer code that consistently handles the catalogue data recorded on the cataloguing system. It is the international standard for the dissemination of the bibliographic data. The MARC was invented by the American computer scientist, Henriette Regina Davidson Avram (Library of Congress, 1974). Avram designed a mathematical code, using cataloguing numbers, letters and symbols to denote different elements or fields of bibliographic information. The result was a system that could be shared among libraries, greatly increasing access to their materials and reducing the time needed to find them (Library of Congress, 1974).

The philosophy behind the MARC as stated by Avram (1968) was the "design of one format structure (the physical representation on a machine readable medium) capable of containing bibliographic information for all forms of materials (books, serials, maps, music and other library information sources)". The content designators in the MARC (tags, indicators and subfield codes) are used to explicitly identify or to additionally characterise the data elements and the contents of data itself. Tags are three-digit numbers assigned to each attribute of the manifestation in the MARC format. A tag identifies the field and the kind of data that follows. Indicators are two-character positions that follow each tag. These are digit codes (numbers 0-9) that are listed right after the tag number. The first indicator is used to give the computer processing instructions, for example in the 245 field, a '0' indicates that no title added entry is needed, but a '1' indicates that there should be a title added entry.

The second indicator gives information about the contents of the field. In the 245-field mentioned above, this number is used to indicate how many non-filing characters are at the beginning of the title (initial articles or nouns such as '*A, An*, or *The'* are ignored in alphabetical filing) because, mostly, the users of the Online Public Access Catalogue (OPAC) do not use them when searching for information. For example, if the title of the book is "The Knowledge Management", and the users are looking for information on knowledge management, they are likely to type 'knowledge management' on the OPAC and skip 'The'. Therefore, the second indicator on the title field instructs the computer to skip the non-filing character or articles such as 'The'. Each field in the MARC has its own indicators, and the same numbers will indicate different things depending on what the requirements of each specific field are.

Subfield codes are characterised by one lowercase letter that specifies the type of information in each subfield shown in a MARC record. Depending on the style of the MARC display, the subfield code will be listed immediately after each delimiter or grouped together after the tag and indicators. Subfield codes are like indicators because the same letter may mean different things in different fields. It is very important in MARC records that the subfield codes and other content designators be correctly specified to enable the computer to transfer data (Avram, 1968). The MARC format offers new possibilities for the retrieval of information. It enables libraries to share their catalogue records. In addition, union catalogues are possible without costly editing for consistency, thus facilitating interlibrary loans (Hegna, 2007). The processes of cataloguing are also made uniform. Duplication of efforts is avoided because the records are shared and networking is facilitated because libraries can share resources. Cataloguers can access various databases and share the cataloguing skills. For example, the cataloguers in South Africa can access South African Bibliographic Catalogue (Sabi cat) and World Catalogue (World Cat) if affiliated through the use of standard protocol. In addition, services to the users are improved (Library of Congress, 1974).

In October 1997, the cataloguers and other interested stakeholders held an international conference to examine the principles and future of its most prominent standards. A constant theme in the conference papers was the fact that the cataloguing standard, the AACR2, still did not provide records that exploited the full range of possible links within information resources (Dorner, 2000). The AACR2, according to Gorman (2004), is a content standard that denotes what information should be recorded in the catalogue and how it should be recorded, the rules cover the description of the library materials and the provision of access points. The AACR2 was published jointly by the American Library Association (ALA), Canadian Library Association (CLA) and the Chartered Institute of Library and Information Professionals (CILIP) in the United Kingdom (UK). Ridley (1998) and Velluci (1998) stress the importance of incorporating standards that could identify and provide access points to the work as distinct from the work's manifestations. Howarth (1998) observes that "cataloguing rules are used in all kinds and sizes of libraries, and this must be kept in mind when considering changes to the code". Cataloguing rules have been designed to facilitate the construction of files of records of documents. Fidel and Grandall (1988) assert that during this automation era, the catalogue code is a set of rules essential to the creation of bibliographic records on the database.

On the other hand, users' expectations of the catalogue have grown since the introduction of the OPAC. The OPAC is an online catalogue that enables users to locate library materials from a remote area if connected to the internet. "The first large-scale online catalogues were developed at Ohio State University in 1975 and at the Dallas Public Library in 1978" (Borgman, 1996). The OPAC tended to closely reflect the card catalogues it was intended to replace (Husain & Alam, 2006). Using a dedicated terminal or telnet, users could search many pre-coordinate indexes and browse the resulting display from a remote area in much the same way they had previously navigated the card catalogue. Throughout the 1980s, library catalogues began to provide and improve search mechanisms, including Boolean and keyword searching (International Federation of Library Association and Institutions (IFLA), 1998). According to Lawrie (1997), in 1992, many organisations in South Africa benefited from the opportunities that the internet offered, such as the libraries, which too benefited from online catalogues. IFLA (1998) indicates that "the existing OPACs demonstrate differences in the range and complexity of their functional features or search index". Due to these differences, the division of bibliographic control formed the task force on guidelines for OPAC display in 1997 during the (IFLA) conference in Copenhagen, Denmark (IFLA, 1998). Following this, conference guidelines were sent out to library professionals worldwide for their inputs that were subsequently used to finalise the guidelines.

In addition, the task force ensured that the principles and recommendations articulated in the final set of guidelines both accommodated current development in the design of OPAC systems and displays that were compliant with the Functional Requirements for Bibliographic Records (FRBR) (IFLA, 1998). Public libraries, being information providers for different shades of users in society, require user-friendly OPAC functional features for patrons to access information sources efficiently and conveniently. Dorner (2000), Fabunmi (2013) and Tella (2018) state that in a technological environment, many library users increasingly expect to use the catalogue to search and obtain all types of resources, including monographs, journal articles, conference papers, archival documents and so forth, whether in print or in electronic form, regardless of where these resources are located. Moreover, "users now expect access to the full text of documents found through the catalogue. Users of libraries are no longer satisfied with being able to find and identify material held only in their local collection. They are also less satisfied with the linear approaches to information retrieval left over from the paper-based card and book catalogues, including complex functional features of online catalogues

which are still embedded in the libraries' cataloguing systems worldwide (Dorner, 2000; Fabunmi, 2013).

1.1.1 Cape Town Metropolitan libraries

The City of Cape Town Metropolitan has 103 libraries, which are categorised as follows: Two city-wide libraries (Bellville library and Central library), 18 regional libraries (Brackenfell library, Durbanville library, Edgemead library, Milnerton library, Table View library, Pinelands library, Somerset west library, Kuyasa library, Goodwood library, Parow library, Athlone library, Town Centre library, Claremont library, Meadowridge library, Rondebosch library, Wynberg library, Fish Hoek library and Grassy Park library), 81 community libraries (Avondale library, Bloubergstrand library, Brooklyn library, Kensington library, Kloof Street library, Koeberg library, Langa library, Maitland library, Mamre library, Observatory library, Sea Point library, Vredehoek library, Wesfleur library, Woodstock library, Camps Bay library, Hangberg library, Hout Bay library, Kommetjie library, Lansdowne library, Lotus River library, Masiphumelele library, Mowbray library, Muizenberg library, Ocean View library, Ottery library, Plumstead library, Retreat library, Simon's Town library, Southfield library, Tokai library.

Brown Farm library, Harare library, Khayelitsha library, Kulani library, Lentegeur library, Masakhane library, Mitchell's Plain library, Moses Mabhida library, Nazeema Isaacs library, Phillipi East library, Rocklands library, Strandfontein library, Tafelsig library, Weltevreden library, Westridge library, Belhar library, Bridgetown library, Bishop Lavis library, Bonteheuwel library, Crossroads library, Delft library, Delft South library, Gugulethu library, Hanover Park library, Heideveld library, Manenberg library, Nyanga library, Rylands library, Valhalla Park library, Adriaanse library, Bellville South library, Bothasig library, Eikendal library, Elsies River library, Fisantekraal library, Huguenot Square library, Kraaifontein library, Kuils River library, Leonsdale library, PD Paulse library, Ravensmead library, Scottsdene library, Tyger Valley library, Eerste River library, Gordon's Bay library, Lwandle/ Hector Peterson library, Macassar library, Melton Rose library, Mfuleni library, Sir Lowry's Pass library, Strand library and Suider Strand library) and two mobile bus service points (Imizamo Yethu Satellite library, Pelican Park Satellite library) that operate at the small towns where there are no libraries.

As per the information provided by the City of Cape Town Metropolitan libraries' human resource administration, by 29 February 2016, the total number of staff in all libraries was 943. Library professional staff, which included chief librarians, principal librarians, senior librarians, and librarians, totalled 296. There were a total of 92 management and admin support staff, and 555 non-professional staff, which include library assistants, library aids and library general workers. These libraries are connected to the internet and they cater for everyone in the society, regardless of the demographic factors. The libraries' materials comprise books (fiction and non-fiction), electronic materials, journals, DVDs, CDs, reference materials and textbooks. Cataloguing of all libraries is done at one central cataloguing point at the collection development services. The City of Cape Town Library and Information Services currently operates the Brocade Library Management System (LMS), also known as SITA Library Information Management System (SLIMS) or Brocade Library Services (Ruppelt, 2015).

The system is used for cataloguing, circulation, and acquisition services. Brocade is an LMS-using cloud (web-based) software developed by the University of Antwerp and was launched in Belgium in 2002, where it is supported and distributed by CIPAL (Centre of Informatics in the Province of Antwerp and Limburg). Kirsch (2014) (as cited in Ruppelt, 2015) explains, "In cloud computing, you the client therefore interface through a web browser (Internet) to Software as a service provider (Brocade) via a computer, laptop, PDA, mobile device, tablet, etc. Brocade web application is a communication between user and library system via a standard web browser (Internet Explorer, Mozilla Firefox, Google Chrome, etc.)".

1.2   Statement of the problem

The researcher's experience as a resource person for cataloguing workshops to some librarians from public libraries of Eastern Cape and Western Cape provinces in 2014 and 2015 identified inconsistency in the current practices of cataloguing in public libraries. In addition, preliminary examination of the catalogue records of the City of Cape Town Metropolitan Libraries revealed that the electronic information system used for cataloguing, to a large extent, did not accommodate the MARC standard. Furthermore, there seemed to be low utilisation of cataloguing standards because some records did not contain all the information as prescribed by the standards. In addition, the librarians seemed to have little knowledge about cataloguing. Since the cataloguing system did not accommodate some MARC fields, collaboration with other libraries in such areas as cooperative cataloguing and interlibrary loans

was not effective because attributes such as statement of responsibility subfield and alternative author field, to name but a few, were not coded. Das (2004) states that the MARC is a communication format and computer code that consistently handles the data recorded in a catalogue and, in effect, minimises or altogether prevents duplication of work and allows libraries to better share bibliographic resources. Using MARC formats enables libraries to acquire cataloguing data that are reliable. Standardisation in the exchange formats and structure of a database is also essential to facilitate the exchange of data between libraries in efficient and effective ways. One of the purposes of computerised cataloguing is to share the records, skills and information sources. Das (2004) further observed that the problem of different bibliographic catalogue encoding presents a serious obstacle hampering international interlibrary communications and worldwide library search, since WorldCat contains different records of the same manifestation. In addition, many cataloguing systems do not have search software with fuzzy search capability, resulting in most records containing incorrect spellings of different authors and publishers. The fuzzy facility is the search strategy that can find matches even when users misspell words or only enter partial words for the search (Bates, 1989). On the other hand, vendor records that are loaded in the bibliographic utilities for libraries to copy and use tend to be of very low bibliographic quality. Beall (2000) and Martin and Mundle (2010) observed that "vendors do not follow minimal-level cataloguing standards and generally do not have authorised forms for names, series, and subject headings. Vendor catalogue records have other significant shortcomings in that they require editing and enhancement before they can meet the minimal-level cataloguing requirements of libraries" (Beall, 2000).

Martin and Mundle (2010) state that those problems include incorrect choices or forms of headings that affect authority control, missing call numbers, missing or duplicate records, typographic errors and MARC coding errors. Furthermore, the vendor's efforts are directed at cataloguing and do not extend to covering the submission of complete name authority records to the authority files (El-Sherbini, 2001), but instead their records tend to be provisional. Despite the low quality of the records, they are described as "fast, selective, and precise bibliographic information" on the Online Computer Library Centre (OCLC) (Beall, 2000). Beall (2000) further states that "for many libraries, the addition of vendor records to the utility has slowed access to materials, the low-quality vendor records have likely had an impact on inter-library loans because these records have missing or non-standard series, author, and title headings, they may not be retrieved and a user's request for a particular information

source may go unfulfilled". The other problems are the gaps in the cataloguing literature. The literature seems to focus on the creation of the records, but pay little attention to the access and retrieval of the records. For these reasons, this study sought to investigate the cataloguing practices from creation to use in Cape Town Metropolitan public libraries to gain a deeper understanding of the extent to which the MARC standards are adopted and applied. Access to public libraries and access to information is a basic human right. Therefore, its catalogue should be of good standing. In this regard, Arinola, Adigun, Oladeji and Adekunjo (2012) assert that the extent of the use of library resources depends greatly upon the quality of the library catalogue.

The outcome from this study is expected to inform the necessary steps that should be taken when acquiring the cataloguing information system and also inform the understanding of the importance of cataloguing standards in creating bibliographic data for the libraries. In addition, the outcome of the study is aimed at informing the development of appropriate cataloguing policies that can enhance standardisation, promote sharing of catalogue data and reduce costs of collection development. It is also expected that the outcome of this study would contribute towards enhancing the quality and consistency of cataloguing practices across the public libraries in the Western Cape province and, consequently, improve the delivery of information services to the patrons.

1.3 Objectives of the study

The study addressed the following research objectives:

1) To find out what skills the cataloguers of Cape Town Metropolitan libraries possess.

2) To ascertain the extent to which cataloguers in public libraries in the Cape Town Metropolitan adhere to international standards when creating records in the online catalogue.

3) To establish how the catalogue records, created on the system in Cape Town Metropolitan are used within and across the public libraries.

4) To find out how the new RDA standards are applied in public libraries in Cape Town Metropolitan to ensure they accommodate entities and attributes as described by the international cataloguing standards.

5) To determine what quality control measures are used in computerised cataloguing by public libraries in Cape Town Metropolitan.

6) To investigate the effect of the computerised cataloguing system of Cape Town Metropolitan public libraries on cataloguing and retrieval.

7) To identify the challenges experienced by public libraries in Cape Town Metropolitan in computerised cataloguing.

1.4   Research question

The major research question this study sought to address is: "What are the current practices in cataloguing the information resources of the Cape Town Metropolitan public libraries to enable effective retrieval?"

To address this question, the study answered the following subsidiary research questions:

1) What skills do the cataloguers of Cape Town Metropolitan libraries possess?
2) To what extent do cataloguers in Cape Town Metropolitan public libraries adhere to international standards when creating records in the online catalogue?
3) How are the catalogue records created on the system in Cape Town Metropolitan used within and across the public libraries?
4) How are the new RDA standards applied in public libraries in Cape Town Metropolitan to ensure they accommodate entities and attributes as described by the international cataloguing standards?
5) What records quality control measures are used in computerised cataloguing by public libraries in Cape Town Metropolitan?
6) How effective is the computerised cataloguing system of Cape Town Metropolitan public libraries in retrieving information sources?
7) What are the challenges experienced by public libraries in Cape Town Metropolitan in computerised cataloguing?

1.5   Rationale of the study

According to Creswell (2003), rationale, motivation or significance of any study is determined by: how the study adds to scientific research and literature in the field, how it improves practice in the area of interest, and how it improves policy. The current study was necessitated by the fact that cataloguing is a critical aspect of the library work without which there would be total chaos in the organisation of library materials, making location and use of such materials almost impossible. Therefore, the outcomes of this study are expected to contribute to policy, practice and theory. From the policy perspective, the study contributes towards cataloguing policies and capacity-building plans and guidelines for cataloguing in Cape Town Metropolitan libraries. From the practical perspective, the study contributes towards

local cataloguing standards for non-roman information sources, helping libraries in adhering to cataloguing standards when creating bibliographic data for their libraries; promoting sharing of catalogue data to reduce costs of collection development; enhancing quality and consistency in cataloguing practices in public libraries. From the theoretical perspective, the study contributes to the existing body of literature in cataloguing.

1.6   Delimitation of the study

The study was confined to investigating the cataloguing practices from creation to use in public libraries in Cape Town Metropolitan, Western Cape Province South Africa. South Africa has nine provinces, namely: Western Cape, Eastern Cape, Northern Cape, KwaZulu- Natal, Free State, North West, Gauteng, Limpopo and Mpumalanga. The study was restricted to the Western Cape because of the higher concentration of public libraries in the region compared to the other provinces in South Africa (National Library, 2012). It was therefore assumed the province would present more bibliographic records. In addition, the public libraries in the region participated more in the world catalogue than other public libraries in the rest of the country. Furthermore, the Cape Town Metropolitan was selected because all the libraries in the metropolitan were automated, contributed to the OCLC world catalogue and used the OPAC, as opposed to those libraries in other provinces and other parts of Western Cape that still used the traditional manual catalogue.

The fact that all libraries were automated enabled the researcher to come up with a representative sample to gather rich and adequate data to understand the practices of cataloguing in public libraries in the metropolitan. The study focused on public libraries because they provide all forms of knowledge and information to all segments of the populace in society regardless of race, nationality, age, gender, religion, language, disability, economic and employment status. Public libraries cover a broad scope that has far-reaching implications for sharing cataloguing experiences and data. Raju and Raju (2010) opine that democratic societies are dependent on institutions such as public libraries to uphold fundamental principles of democracy. Wijetunge (2000) cited in Raju and Raju (2010) states that the public library is an essential element in literacy and lifelong learning as it provides a sanctuary for learning. In developing countries such as South Africa where many individuals cannot afford their own learning materials, the public library plays a significant role in propagating literacy and lifelong learning (Wijetunge, 2000, cited in Raju & Raju, 2010).

Cataloguing practices in the context of this study refers to the way of organising information for retrieval in libraries, the cataloguing standards used, the cataloguing procedures followed, the description of library materials such as title, statement of responsibility, publication, physical description, notes, subject coverage, standard number (Chapman, Day & Hiom, 1998). The participants of the study included cataloguers, senior librarians, librarians, library assistants and OPAC records. The principal and chief librarians were not included in the study, because their duties are largely to oversee the library management and they do not deal with the issues of the catalogue, as these are the responsibility of the senior librarians. Similarly, the library patrons were not included in the study as the researcher was of the view that, at most, the patrons ask the librarians for help whenever they cannot retrieve information in the library, as the previous studies also confirmed.

Mehtab (2008) conducted a study of the awareness and use of the OPAC in five Delhi libraries and found that the majority of the respondents were able to use the OPAC but sought help from the library staff when their searches failed to retrieve the documents. Kumar (2015) also carried out a study of the use of patterns of the OPAC among the faculty members in Great Lakes Institute of Management at Chennai and found that some users directly browsed the shelves without using the OPAC, and some accessed materials with the help of library staff. In a study on information seeking behaviour of postgraduate students at Rhodes University and the University of Fort Hare in South Africa, Monyela (2013) found that some respondents browsed the shelves without consulting the OPAC, while the majority of respondents consulted librarians when seeking information.

1.7   Conceptual frameworks

The substantive coverage of the models underpinning this study are presented in chapter two. However, this section is intended to provide an introduction to the conceptual models that are covered in the next chapter. The study was underpinned by the IFLA (1998), FRBR, supplemented by the IFLA (2009), FRAD and the IFLA (2010), (FRSAD) models. The FRBR is a model that denotes how information is described and organised on the online catalogue, it is a conceptual model that can express common international understanding of what bibliographic records should be and what they should be expected to accomplish (notably easy retrieval). Therefore, an FRBR compliant record should "enable the user to find, identify, select and obtain information sources" (IFLA, 1998).

This researcher strongly believes and acknowledges the FRBR as a model for cataloguing because it presents a systematic view of phenomena by specifying relationships among variables and can also be used as lenses when data is analysed. Caliendo and Kyle (1996) and Zhang and Salaba (2009a) also observe that "the FRBR offers a new perspective and a broader view of the bibliographic universe, providing many opportunities for libraries to develop catalogues that function more effectively and provide better user service during the process of accessing bibliographic data in an information environment that is becoming increasingly electronic". A study of usability of digital institutional repositories in South Korea by Hyun and Yong (2008) applied FRBR concepts to restructure catalogue databases.

Similarly, Mimno, Crane and Jones (2005) built the FRBR-based hierarchical catalogue for Persus Digital Library. They found that the FRBR-based catalogue was of a high quality that could be maintained, distributed and searched more easily. Moreover, Bennet, Lavoie and O'Neill (2003) applied the FRBR model to randomly selected WorldCat records and found that the FRBR model with its definition of concepts and relationships associated with bibliographic entities improves the functionality of search and retrieval tools for catalogue users. On the other hand, the FRAD ensures consistency in representing the creators' names (controlled access point) (IFLA, 2009), whereas the FRSAD stipulates consistency in representing subject terms in the catalogue (IFLA, 2010).

1.8 Preliminary literature review

The literature is substantively reviewed in chapter three (literature review) and covers empirical and theoretical sources. This section only serves to introduce key aspects of reviewed literature in relation to cataloguing. The literature reviewed here covers the following themes: The use of cataloguing international standards, cataloguing skills, training of cataloguers, implementation of the online cataloguing system, quality catalogue, challenges of online catalogue and OPAC user interface.

Nampeya (2009) asserts that the majority of cataloguers seldom use international cataloguing standards when cataloguing library information sources. This may be due to the fact that a lot of information sources already exist in many libraries and the catalogue entries of such resources are readily available on the world catalogue and cataloguers download or copy those records to their local databases, editing the obvious errors such as pagination in terms of printed books and adding the holdings in their databases, assuming that the existing catalogue

record is of good quality. Because of the CIP, a massive number of bibliographic records already exist on WorldCat when published. The CIP is basic cataloguing data for a work, prepared in advance using pre-publication galleys or front matter from publishers cooperating in the CIP by the national library of the country where the work is principally published. However, there is lack of quality in the CIP records because different cataloguing agencies deposit different records of the same work in WorldCat.

On the other hand, Cabonero and Dolendo (2013) in their study of "cataloguing and classification skills of library and information science practitioners" revealed that cataloguers did not have adequate cataloguing skills, since their document analysis findings revealed different records of the same manifestation by different cataloguers on the same system. The study also assumed that the years of experience that cataloguers had could have contributed to the inconsistency of those records. On the issue of training of cataloguers, Maphopha's (2000) study of the training of cataloguers in university libraries in South Africa discovered that entry-level cataloguers were usually not ready for the job and cataloguers disclosed that they lacked cataloguing skills. Hegna (2007) states that the catalogue records that contain all the required entities and attributes of the information sources allow full access of the information held by libraries and resource centres. On the other hand, Thomas (1996)) asserts that quality cataloguing should consist of "consistent application of cataloguing rules and principles of subject analysis, as well as accurate content designation". Arinola et al. (2012) in their study of impact of ICT on cataloguing and classification, revealed that some libraries faced challenges such as lack of funds to implement and maintain ICT as well as lack of technical skills among cataloguers. Schneiderman (1997) opines that OPAC user interfaces should provide helpful messages to explain search results and to support progressive refinement. The literature reviewed does not to a large extent cover the impact that the cataloguing information system may have on cataloguing practices or on the use of cataloguing international standards, quality control measures of WorldCat and cataloguing as a specialised field in librarianship. These gaps are considered in the substantive literature review, presented in chapter 3 of this thesis.

1.9   Methodology

The substantive methodological issues are covered in chapter four (Research methodology). The study adopted the pragmatic paradigm with the mixed methods in which the qualitative epistemology was used as the dominant epistemology while the quantitative was the less

dominant epistemology with case study design. Face-to-face interviews, focus group discussions, questionnaires and document analysis techniques were used to collect data. The study population comprised cataloguers, senior librarians, librarians and library assistants of the selected libraries in the Cape Town Metropolitan, as well as the OPAC records. A census was taken while simple random sampling (SRS) was used to select the OPAC records. Validity and reliability were ensured by pre-testing the data collection tools on a similar population as that of the main study.

The study complied with the University of KwaZulu-Natal's code of research ethics. In addition, a research permit was sought from the relevant authorities of the Cape Town Metropolitan public libraries (Appendix M) and further permission to conduct the study was obtained from the respective libraries. Participants also signed the consent form (Appendices G, H, I) to ensure their consent was obtained to participate in the study.

1.10 Definition of key terms
This section defines the terms used in this study as follows:

1.10.1 Bibliographic control
Bibliographic control is a broad term comprising all the activities involved in creating, organising, managing, and maintaining the file of bibliographic records representing the items held in a library or archival collection, or the sources listed in an index or database, to facilitate access to the information contained in them (Gorman, 2004).

1.10.2 Cataloguers
Cataloguers are a group of trained specialists (librarians) responsible for bibliographic control, information management and the creation of resource discovery tools that aid users in their search for materials (Bothmann, 2007). Similarly, a cataloguer can be defined as a trained librarian responsible for the processes of description, subject analysis, classification, and authority control of library materials. Cataloguers serve as the foundation of all library services, as they organise information in such a way that makes it easily accessible (Bair, 2005).

1.10.3 Cataloguing

Cataloguing is the process of creating metadata representing information sources, such as books, sound recordings, moving images, etc. Cataloguing provides information such as creator names, titles, and subject terms that describe resources, typically through the creation of bibliographic records. The records serve as surrogates for the stored information sources. Since the 1970s, these metadata were in machine-readable format and indexed by information retrieval tools, such as bibliographic databases or search engines; typically, the cataloguing process results in the production of the library catalogue (Bair, 2005).

1.10.4 Cataloguing codes

Cataloguing codes prescribe which information about a bibliographic item is included in the entry and how this information is presented for the user; they also aid to sort the entries in printing the catalogue. Currently, most cataloguing codes are like, or even based on, the International Standard Bibliographic Description (ISBD), a set of rules produced by IFLA to describe a wide range of library materials (Miksa, 2004).

1.10.5 Cataloguing resources and tools

Cataloguing resources and tools are any devices or documents (print based or electronic) that assist in the creation of an original bibliographic record or in the verification of bibliographic information such as input rules, metadata formats and standards, cataloguing software and textbooks, continuing education programmes/workshops, cataloguer's web-based software, etc. (Miksa, 2004).

1.10.6 Integrated library system

An integrated library system (ILS), also known as an LMS, is an enterprise resource planning system for a library, used to catalogue; track items owned, orders made, bills paid, circulation, retrieval and access of library materials (HardCastle, 2004).

1.10.7 Library catalogue

A library catalogue is a register of all bibliographic items found in a library or group of libraries, such as a network of libraries at several locations (Bair, 2005).

1.10.8 Metadata

Metadata are the bibliographic data associated with a resource that aids a user in finding that resource (find); discover where, and by whom it was created (identify); decide whether the resource is of value to the user (select); and conclude whether there is feasible access to the resource (obtain) (Miller, 2004).

1.10.9 Open access catalogue

Open access catalogue is a computerised library catalogue, which is available to the public and provides bibliographic information about information resources in the library (Fabunmi & Asubiojo, 2013).

1.10.10 Public library

A public library is a library that is accessible to the public and is generally funded from public sources, such as taxes (Rubin, 2010).

1.10.11 Resource sharing

Resource sharing is sharing of library resources by certain participating libraries among themselves, based on the principle of cooperation. This is applicable in sharing of documents, manpower, services, space and equipment (Muthu, 2013).

1.11 Structure of the study

The study is divided into eight chapters as shown below.

Chapter One: Introduction

This chapter introduces the subject under investigation and covers the background to the research problem, statement of the problem, research questions, research objectives, significance of the study, delimitation of the study, synopsis of theoretical frameworks, preliminary literature review, brief research methodology and definitions of key terms.

Chapter Two: Conceptual frameworks

This chapter provides a detailed overview of conceptual frameworks and models underpinning this study. These include the FRBR, the FRAD and the FRSAD.

Chapter Three: Literature review

This chapter presents a detailed review of both empirical and theoretical literature in print and electronic format on the subject under study from the international and South African perspective contained in books, book chapters, conference proceedings, journal articles, electronic databases and technical reports.

Chapter Four: Research methodology

This chapter outlines the research paradigms, research approach, research design, and population of the study, sampling methods, data collection, data analysis, validity and reliability and ethical considerations.

Chapter Five: Data analysis and presentation: Focus group, interviews and survey questionnaires

This chapter analyses data and presents findings from focus group, interviews and questionnaires datasets.

Chapter Six: Data analysis and presentations: OPAC records

This chapter analyses data and presents findings on OPAC records.

Chapter Seven: Discussion of findings

This chapter provides a discussion of findings supported by extant literature and the theoretical models that underpin this study.

Chapter Eight: Summary, conclusions and recommendations

This chapter provides a summary of research findings, conclusion and recommendations. In addition, the contribution and originality of the study are adduced, as well as areas of further research.

Chapter Two

Conceptual Frameworks

2.1 Introduction

The chapter provides the conceptual foundation for the study and the models used. A conceptual framework, according to Sekaran (2003) is a framework that makes logical sense of the relationships among several factors that have been identified as important to a problem. Theories or models act as an orienting lens shaping the questions to be asked, who participates in the study, how data are collected and the plan of the dissertation (Creswell, 2003). According to Polit and Beck (2004), the purpose of a theoretical or conceptual framework is to make research findings meaningful and generalizable, thus stimulating research and the extension of knowledge by providing both direction and impetus. The purpose of this study was to investigate the cataloguing practices from creation to use in Cape Town Metropolitan public libraries in South Africa. The study is underpinned by the IFLA (1998) FRBR, the IFLA (2009) FRAD and the IFLA (2010) FRSAD models.

These three conceptual frameworks guide the cataloguing process from creation to use and they complement each other in the sense that the shortcomings of one are complemented by the strength of the other framework. Each framework caters for a specific procedure of cataloguing. The FRBR addresses the issues of descriptive cataloguing; the FRAD addresses the issues of authority control whereas the FRSAD addresses the issues of subject cataloguing. All three these procedures make a complete catalogue record. These frameworks indicate the entities and attributes needed on the catalogue records to facilitate easy retrieval of information resources found in libraries. The FRBR indicates that the catalogue records should have the attributes such as title, author and ISBN, to name a few, in order for the user to retrieve the information sources, whereas the FRAD indicates that to facilitate easy retrieval, the catalogue records and the authority files should have the attributes such as name of the author, dates associated with the author, title of the author and other designation associated with the author. On the other hand, the FRSAD indicates that to enhance retrieval and sharing of the catalogue, the catalogue records should have attributes such as subjects that were assigned using the controlled vocabulary cataloguing standards.

2.2   Functional Requirements for Bibliographic Records Model

The FRBR is a conceptual entity relationship model developed by the IFLA (IFLA, 1998). "The model presents the relationship between user tasks of retrieval and access in online library catalogues and bibliographic databases from users' perspectives. It represents a more holistic approach to retrieval and access as the relationships between the entities provide links to navigate through the hierarchy of relationships. The purpose of the FRBR model is to identify the functional requirements of information in bibliographic records and to facilitate the specified user tasks. The basic entities of the FRBR model are the result of a logical analysis of the data typically represented in bibliographic records. The model consists of three elements: *entities, attributes,* and *relation* between entities. It is a theoretical model that can be used to cluster bibliographic records retrieved on the OPAC search into a more meaningful display, thus assisting users in selecting items from bibliographic collections" (Hyun & Yong, 2008: 864).

The entities are divided into three groups. The first group comprises the products of intellectual or artistic endeavour that are named or described in bibliographic records: *work, expression, manifestation, and item*. The second group comprises those entities responsible for the intellectual or artistic content, the physical production and dissemination, or the custodianship of such products: *person* and *corporate body*. The third group comprises an additional set of entities that serve as the subjects of intellectual or artistic endeavour: *concept, object, event, and place.* Although in the FRBR model, the entities of all three groups are defined, the focus is on the first group. The developers of the FRBR envisioned that its extensions would cover the additional data that are normally recorded in authority records such as the creators of the work and the subjects of the work.

2.2.1   The entities

The entities in the FRBR are defined as "Work, Expression, Manifestation and Item (WEMI). Work is referred to as a distinct intellectual or artistic creation. Work is recognised through individual realisations or expressions, but the work itself exists only in the commonality of content between and among the various expressions of the work. For example, when we speak of *Shakespeare's comedy* as a work, our point of reference is not a recitation or text of the work, but the intellectual creation that lies behind all the various expressions of the work. The second entity defined in the model is expression: the intellectual or artistic realisation of a work in the form of alphanumeric, musical, or choreographic notation, sound, image,

object, movement, or any combination of such forms. An expression is the specific intellectual or artistic form that a work takes each time it is "realised." Expression encompasses, for example, the specific words, sentences, paragraphs that result from the realisation of a work in the form of a text, or the notes, phrasing resulting from the realisation of a musical work. The third entity defined in the model is manifestation; the physical embodiment of an expression of a work. The entity defined as manifestation encompasses a wide range of materials, including manuscripts, books, periodicals, maps, posters, sound recordings, films, video recordings, CD-ROMs and multimedia kits. As an entity, manifestation represents all the physical objects that bear the same characteristics, in respect of both intellectual content and physical form. When a work is realised, the resulting expression of the work may be physically embodied on or in a medium such as paper, audio tape, video tape, canvas, plaster and any manual or technological device. That physical embodiment constitutes a manifestation of the work. For example, if the work is expressed through moving images, the manifestation of that work will be a DVD; and if the work is expressed through text, the manifestation will be books (print or online), journals, conference proceedings and any text format. Some works are contained in more than one manifestation; for example, the same work can be expressed through text and moving images and embodied in the book and DVD, or any text and technological format.

The fourth entity defined in the model is item; a single exemplar of a manifestation. The entity defined as item is a concrete entity. It is in many instances a single physical object such as a copy of a one-volume monograph, a single audiocassette or DVD. There are instances, however, where the entity defined as item comprises more than one physical object such as a monograph issued as two separately bound volumes, or a recording issued on three separate compact discs. In terms of intellectual content and physical form, an item exemplifying a manifestation is normally the same as the manifestation itself. However, variations may occur from one item to another, even when the items exemplify the same manifestation, where those variations are the result of actions external to the intent of the producer of the manifestation such as damage occurring after the item was produced or binding performed by a library. Item identifies individual copies of a manifestation and helps the librarian to describe those characteristics that are unique to that copy and that pertain to transactions such as circulation involving that copy, and to draw relationships between individual copies of manifestations" (IFLA, 1998).

2.2.2 Group 1 entities: Work, expression, manifestation and item

The entities in the first group as described in Figure 1 below represent "the different aspects of user interests in the products of intellectual or artistic endeavour. The entities defined as work (a distinct intellectual or artistic creation) and expression (the intellectual or artistic realisation of a work) reflect intellectual or artistic content. The entities defined as manifestation (the physical embodiment of an expression of a work) and item (a single exemplar of a manifestation), on the other hand, reflect physical form. The relationships depicted in the diagram indicate that a work may be realised through one or more than one expression (hence the double arrow on the line that links work to expression). An expression, on the other hand, is the realisation of one, and only one, work (hence the single arrow on the reverse direction of that line linking expression to work). An expression may be embodied in one or more than one manifestation; likewise, a manifestation may embody one or more than one expression. A manifestation, in turn, may be exemplified by one or more than one item; but an item may exemplify one, and only one, manifestation" (IFLA, 1998:13).
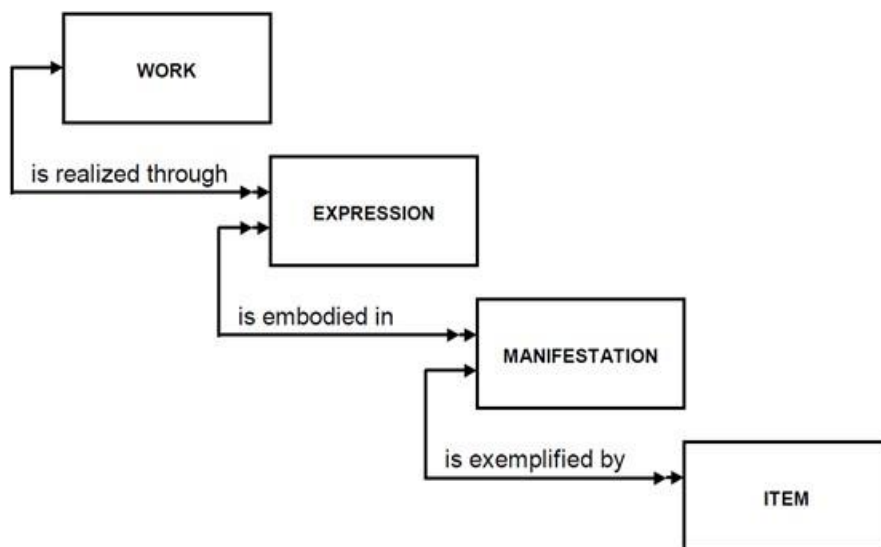
Figure 1: Group 1 entities and primary relationships (Source: IFLA, 1998)

Figure 1 above indicates that the work, after being created, is realised through expression such as text or moving images, audio and illustrations then embodied in manifestations such as a book, journal, conference proceedings, DVD, CD, cassette and exemplified by an item. The item, which is the individual copy of the manifestation, is then placed on the library shelf or system for the patrons to use.

2.2.3 Group 2 entities: Person, corporate body

The entities in the second group as outlined in Figure 2 below "represent those responsible for the intellectual or artistic content, the physical production and dissemination, or the custodianship of the entities in the first group. The entities in the second group include person (an individual) and corporate body (an organisation or group of individuals and/or organisations)" (IFLA, 1998:14).

The figure depicts the type of "responsibility" relationships that exist between the entities in the second group and the entities in the first group. The figure indicates that "a work may be created by one or more than one person and/or one or more than one corporate body. Conversely, a person or a corporate body may create one or more than one work. An expression may be realised by one or more than one person and/or corporate body; and a person or corporate body may realise one or more than one expression. A manifestation may be produced by one or more than one person or corporate body; a person or corporate body may produce one or more than one manifestation. An item may be owned by one or more than one person and/or corporate body; a person or corporate body may own one or more than one item" (IFLA, 1998:15).
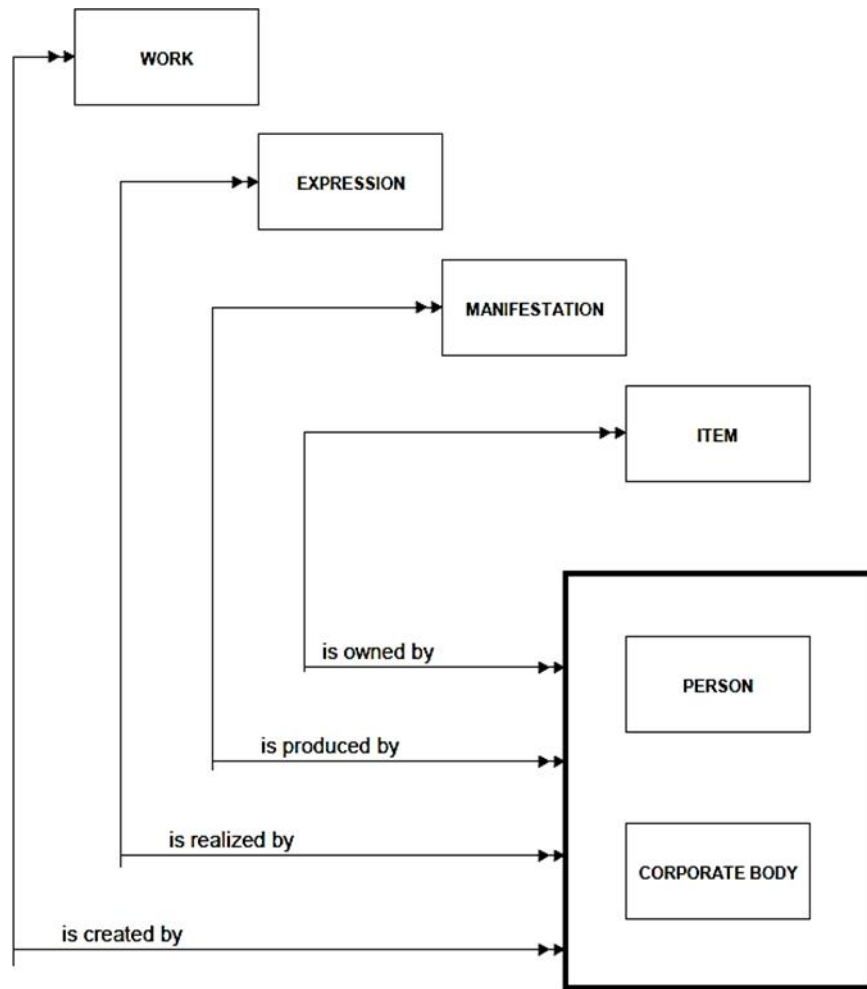
Figure 2: Group 2 entities and responsibility relationships (Source: IFLA, 1998)

Figure 2 above depicts that the work is owned, produced, realised or created by a person or a corporate body. The person or corporate body is the authority of the work, and the name of the person or corporate body responsible for the work should be used for authority control on the authority file and the catalogue. The users identify the works of that person or corporate body on the catalogue by that distinctive name.

2.2.4 Group 3 entities: Concept, object, event and place

The entities in the third group outlined in figure 3 below represent "an additional set of entities that serve as the subjects of the works. The group includes concept (an abstract notion or idea), object (a material thing), event (an action or occurrence), and place (a location). The

above figure depicts the "subject" relationships between entities in the third group and the work entity in the first group.

Figure 3 indicates that a work may have as its subject one or more than one concept, object, event, and/or place. Conversely, a concept, object, event, and/or place may be the subject of one or more than one work.

Figure 3 also depicts the "subject" relationships between work and the entities in the first and second groups. It indicates that "a work may have as its subject one or more than one work, expression, manifestation, item, person, and/or corporate body". The subject of the work could be the concept, object, event or a place. For example, if the work is about a particular place or location such as South Africa, then the subject of that work is South Africa. The patrons will be able to search and retrieve the work by that subject on the catalogue.
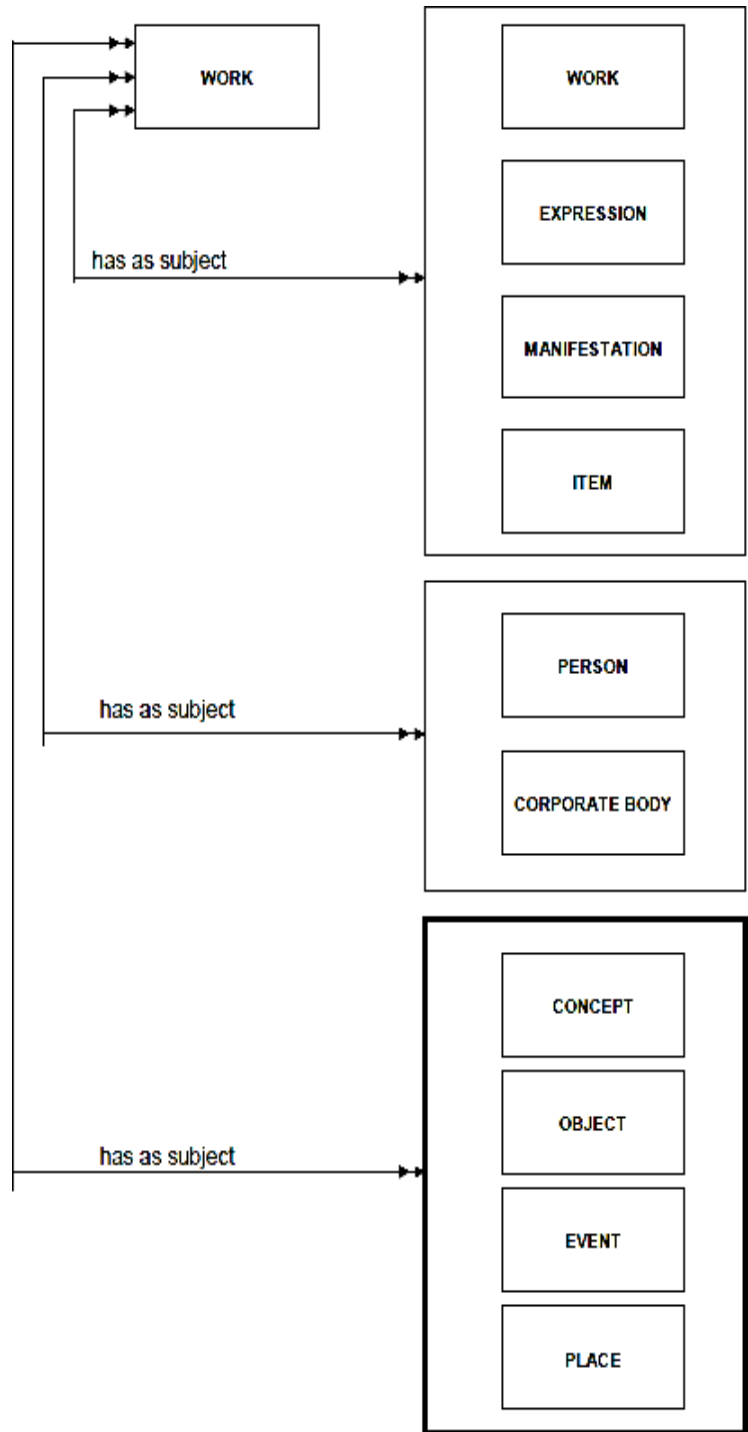
Figure 3: Group 3 entities and subject relationships (Source: IFLA, 1998)

Figure 4 is the pictorial description of the complete FRBR model.
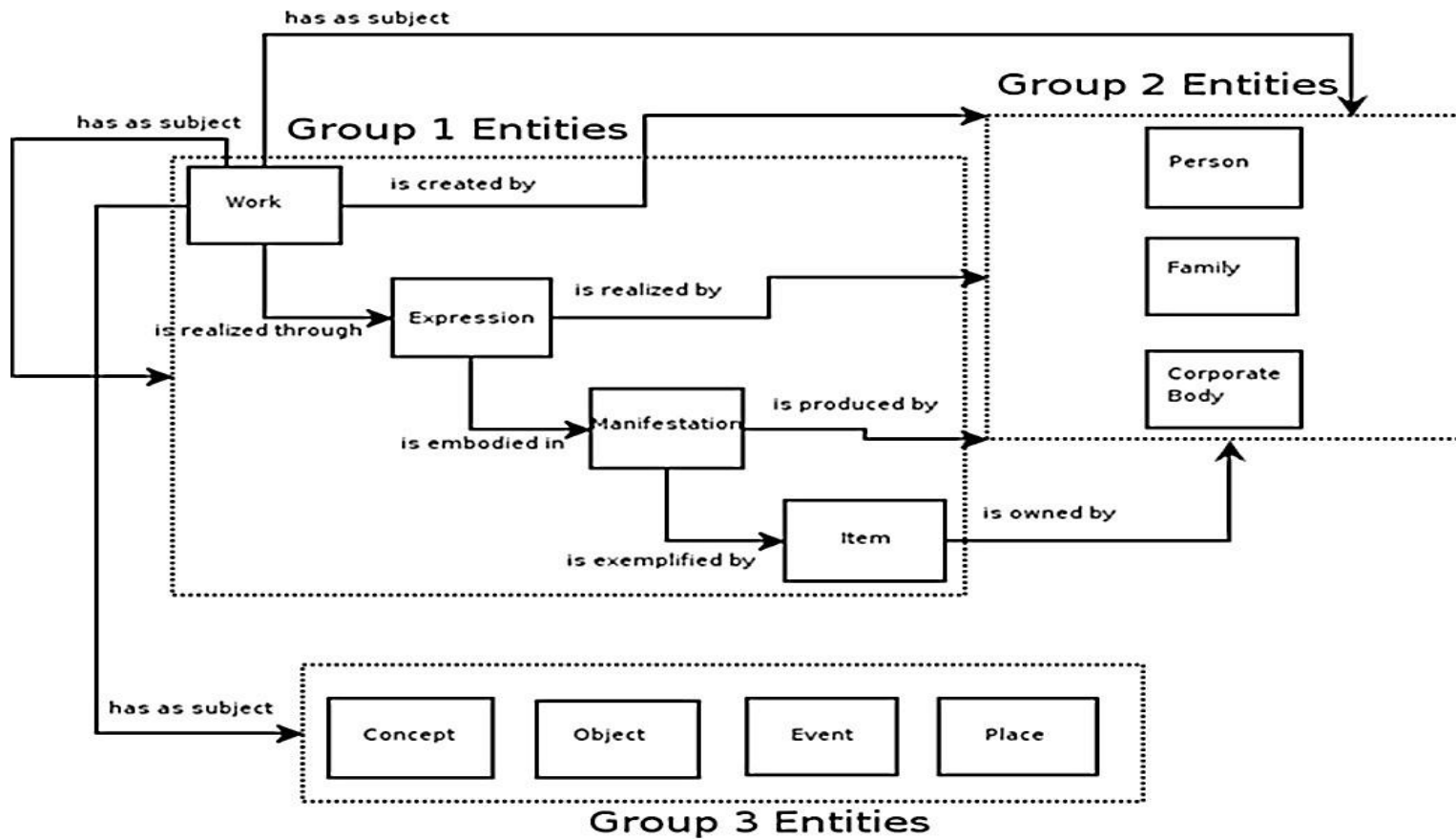
Figure 4: FRBR model (Source: IFLA, 1998)

2.2.5 Attributes of entities

Each of the entities defined in the model is associated with a set of characteristics or attributes. The attributes of the entity indicate how users formulate queries and interpret responses when seeking information about a particular entity. Therefore, the cataloguers should transcribe the required attributes of the information sources being catalogued. There are several attributes, including attributes of work, attributes of an expression, attributes of manifestation, attributes of an item, attributes of a person, attributes of a corporate body, attributes of the subject, attributes of a concept, attributes of an object, attributes of an event and attributes of a place. Attributes of work include: *title of the work; form of work; date of the work, other distinguishing characteristics* (*a distinguishing characteristic is any characteristic that serves to differentiate the work from another work with the same title*); *intended termination; intended audience; context for the work; medium of performance (musical work)* (*piano, violin, or any other instrument, orchestra, men's voices); numeric designation (musical work*); *key (musical work); coordinates (cartographic work); equinox (cartographic work)*.

In contrast, the attributes of an expression includes: *title of the expression; form of expression* (through alpha-numeric notation, musical notation, spoken word, musical sound, cartographic image, photographic image, sculpture, dance and mime) *date of expression; language of expression*; *other distinguishing characteristics*; e*xtensibility of expression*; *reversibility of expression; extent of the expression (number of words in a text or play time of a recording*); *summarisation of content; context for the expression; critical response to the expression; use restrictions on the expression* (copyright law); *sequencing pattern (serial); expected regularity of issue (serial); expected frequency of issue (serial); type of score (musical notation); medium of performance; image/object); projection* (c*artographic image/object); presentation; technique (cartographic image/object); representation of relief (cartographic image/object); geodetic, grid; and vertical measurement (cartographic image/object); recording technique (remote sensing image); special characteristic (remote sensing image); technique (graphic or projected image*). As for a manifestation, the attributes are: *title of the manifestation; statement of responsibility* (authors, composers etc.); *edition/issue designation; place of publication/ distribution; publisher/distributor; date of publication/ distribution/fabricator/manufacturer; series statement; form of carrier; extent of the carrier* (for example number of sheets, discs, reels, etc.); *physical medium; capture mode* (analogue, acoustic, electric, digital and optical); *dimensions of the carrier* (for example 30 centimetre disc)

manifestation identifier (such as international standard number (ISBN or ISSN)); *source for acquisition/access authorisation; terms of availability* (for example free to members of a particular association); *access restrictions on the manifestation; typeface (printed book); type size (printed book* such as large print); *foliation (hand-printed book); publication status (serial)* (whether it is currently published or has ceased publication); *numbering (serial)* (for example volume 1, number 1 (January 1971)); *playing speed (sound recording); groove width (sound recording); kind of cutting (sound recording); tape configuration (sound recording); kind of sound (sound recording); special reproduction characteristic (sound recording)* such as Dolby et cetera.); *colour (images); reduction ratio (microform); polarity (microform or visual projection); generation (microform or visual projection).* Generation is a reflection of the number of times an image on film has been transferred from one carrier to another (for example, a first-generation camera master, a second-generation printing master, a third-generation service copy, et cetera.); *presentation format (visual projection); system requirements (electronic resource); file characteristics (electronic resource); mode of access (remote access electronic resource); access address (remote access electronic resource* such as URL).

The attributes of an item, on the other hand, consist of *item identifier* (such as call number, accession number and bar code); *fingerprint; provenance of the item; marks/inscriptions; exhibition history; condition of the item* (for example, missing pages, plates, brittleness, faded images, et cetera.); *treatment history (archival materials* such as acidification and restoration.); *scheduled treatment; access restrictions on the item.* Attributes of a person comprises *name of person; dates associated with a person; title of person; other designation associated with a person.* Similarly, attribute of a corporate body comprises *name of the corporate body; number associated with the corporate body; place associated with the corporate body; date associated with the corporate body* (such as the date of its incorporation); *other designation associated with the corporate body* (such as Inc., Ltd., musical group, et cetera.) Attributes of the subjects include: *concept, object, event, place, chronological term, uniform title and name (personal name, corporate name, meeting name)* or anything the work is about. Furthermore, the attributes of the concept as indicated in the model could include *term for the concept (such as economics, existentialism, radioactivity, et cetera).* For example, if the information source is about "economics", the concept "economics" should be transcribed as a subject of the information source on the catalogue. To maintain vocabulary control and improve consistency, the subject-heading manual should be used as a guideline of the correct terminology to be used. (Taylor, 2006).

With regard to the attributes of an object, they are usually terms associated with an object such as a building, a ship and more. The attributes of an event could be a term for the event such as IFLA conference, African National Congress rally, Battle of Hastings and others. Finally, the attributes of a place are associated with a place as indicated in the model and could include a term for the place such as South Africa or Scottsville race course or London or St. Lawrence River.

2.2.6 Bibliographic relationships in the context of the model

"Relationships serve as the vehicle for depicting the link between one entity and another, and thus the means of assisting the user to "navigate" the universe that is represented in a bibliography, catalogue, or bibliographic database. Typically, the user will formulate a search query using one or more attributes of the entity for which he or she is searching (for example, *title of the manifestation*) and it is through the attribute that the user finds the entity sought. The relationships reflected in the bibliographic record provide additional information that assists the user in making connections between the entity found and other entities that are related to that entity. Relationships are examined in the context of the entities defined for the model; they are analysed specifically as relationships that operate between one work and another, between one expression and another, and between a manifestation and an item" (IFLA, 1998:55).

Relationships as depicted in the entity-relationship diagrams in Figures 1 to 3 are often reflected simply by concatenating attributes of one entity with attributes of the related entity in a single record. Relationships help the users to link the entities and evaluate the work before surfing the database or browsing the shelf, thus saving the user's time and minimising information overload (IFLA, 1998).

2.2.7 Mapping attributes and relationships to user tasks

The FRBR model provides a structure within which data requirements can be analysed in a systematic way. The structure provided by the model serves as a framework for analysing the uses that are made of bibliographic data with specific reference to the entity that is the object of the user's interest and to the attributes and relationships that are relevant to the task being performed by the user. Each attribute and relationship can be mapped directly to the user tasks they support. Four generic user tasks have been defined for the purposes of this study. The tasks are defined in relation to the elementary uses that are made of the data by the user:

to *find* entities that correspond to the user's stated search criteria (such as to locate either a single entity or a set of entities in a file or database as the result of a search using an attribute or relationship of the entity); to *identify* an entity (confirm that the entity described corresponds to the entity sought, or to distinguish between two or more entities with similar characteristics); to *select* an entity that is appropriate to the user's needs (to choose an entity that meets the user's requirements with respect to content, physical format or to reject an entity as being inappropriate to the user's needs); to acquire or *obtain* access to the entity described (such as to acquire an entity through purchase, loan, or to access an entity electronically through an online connection to a remote computer).

Studies that used the FRBR model to assess the OPAC retrieval agree that the FRBR catalogue improves OPAC retrieval. A study of usability of digital institutional repositories in South Korea by Hyun and Yong (2008) applied FRBR concepts to restructure catalogue databases and found that the FRBR concept improved the digital collection system's effectiveness and usability of the collection. Similarly, Mimno et al. (2005) built the FRBR- based hierarchical catalogue for Persus Digital Library and affirmed that the FRBR catalogue was a higher quality catalogue that can be maintained, distributed and searched more easily. Moreover, Bennet et al. (2003) applied the FRBR model to randomly selected WorldCat records and found that the FRBR model with its definition of concepts and relationships associated with bibliographic entities improved the functionality of search and retrieval tools for catalogue users. Taniguchi (2003) opine that users of the library materials are not concerned with a physical manifestation, but rather with the intellectual aspect.

Taniguchi (2003) further observed that almost all users are usually concerned with a text or a work. For instance, in three main working papers prepared for the International Conference on Cataloguing Principles in 1961, Lubetzky (1963), Verona (1963) and Jolley (1963) all agreed on this point. In this regard, Taniguchi (2003) asserts that a method of providing more detailed information on the text and work involved in an item is required. A model of this type will have the capability to satisfy such a requirement toward a text in a straightforward manner that the FRBR model does not cover. According to Taniguchi (2003), electronic resources on a network (typically on the internet) force users to neglect the physical medium in which they are minimised. There is little need to provide information on the medium/carrier in the bibliographic descriptions. Hence, a strategy of shifting from physical manifestations to texts is needed. However, the MARC 21 covers the physical description of the electronic resources

by guiding the cataloguer to indicate the content, medium and carrier of such resources on tags 336, 337, 338 and 538, respectively.

2.2.8   Gaps in the FRBR

The FRBR model does not present entity relationships with attributes in all cases where parallels could be drawn. For example, "place of publication/distribution" is defined as an attribute of the manifestation to reflect the statement appearing in the manifestation itself that indicates where it was published. As much as the model also defines place as an entity, it would have been important to define an additional relationship linking the entity's place either directly to the manifestation or indirectly through the entity's person and corporate body, which in turn are linked through the production relationship to the manifestation. To produce a fully developed data model for further definition of that kind would be appropriate. In addition, group 2 entities do not, to a large extent, cover the "analysis of functional requirements for the kind of authority data that is required to support authority control and for the international sharing of authority data" (IFLA, 2009). Hence, the researcher incorporated the FRAD model.

2.3   Functional requirements for the authority data model

The FRAD was established by IFLA (2009) as an extension of the FRBR. The primary purpose of this conceptual model is to provide a framework for the analysis of functional requirements for the kind of authority data that are required to support authority control and for the international sharing of authority data. The model focuses on data, regardless of how it may be packaged in authority records. More specifically, the conceptual model has been designed to: provide a clearly defined, structured frame of reference for relating the data that are recorded by authority record creators to the needs of the users of that data; assist in an assessment of the potential for international sharing and use of authority data in the library sector, museums and archives. Authority data in the context of the model are described as the aggregate of information about a person, family, corporate body, or work whose name is used as the basis for a controlled access point for bibliographic citations or records in a library catalogue or bibliographic file and authority file.

 Authority data represent the controlled access points and other information that institutions use to collocate works by a specific person, family, or corporate body. Controlled access points include authorised forms and variant forms of name assembled by cataloguers to identify

an entity (IFLA, 2009). Authority control benefits end users and enables them to search any controlled form of an author's name or of a title to retrieve bibliographic resources in catalogues. The model declares persons and corporate bodies as entities and can be simply described as follows: Entities in the bibliographic universe (such as those identified in the functional requirements for bibliographic records) are known by names and/or identifiers. In the cataloguing process (whether it happens in libraries, museums, or archives), those names and identifiers are used as the basis for constructing controlled access points. (IFLA, 2009). Figure 5 below depicts the FRAD model.
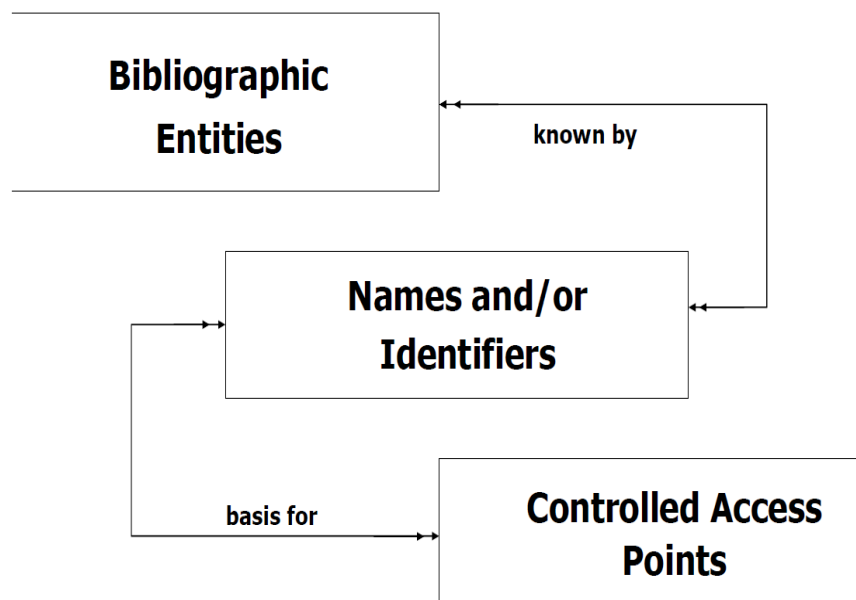
Figure 5: FRAD model (Source: IFLA, 2009)

Bibliographic entities which are the work of a creator are known by the name of that creator and it should be accessed by that name, which is the basis for controlled access points. A fuller form of the conceptual model for authority data is presented in Figure 6.
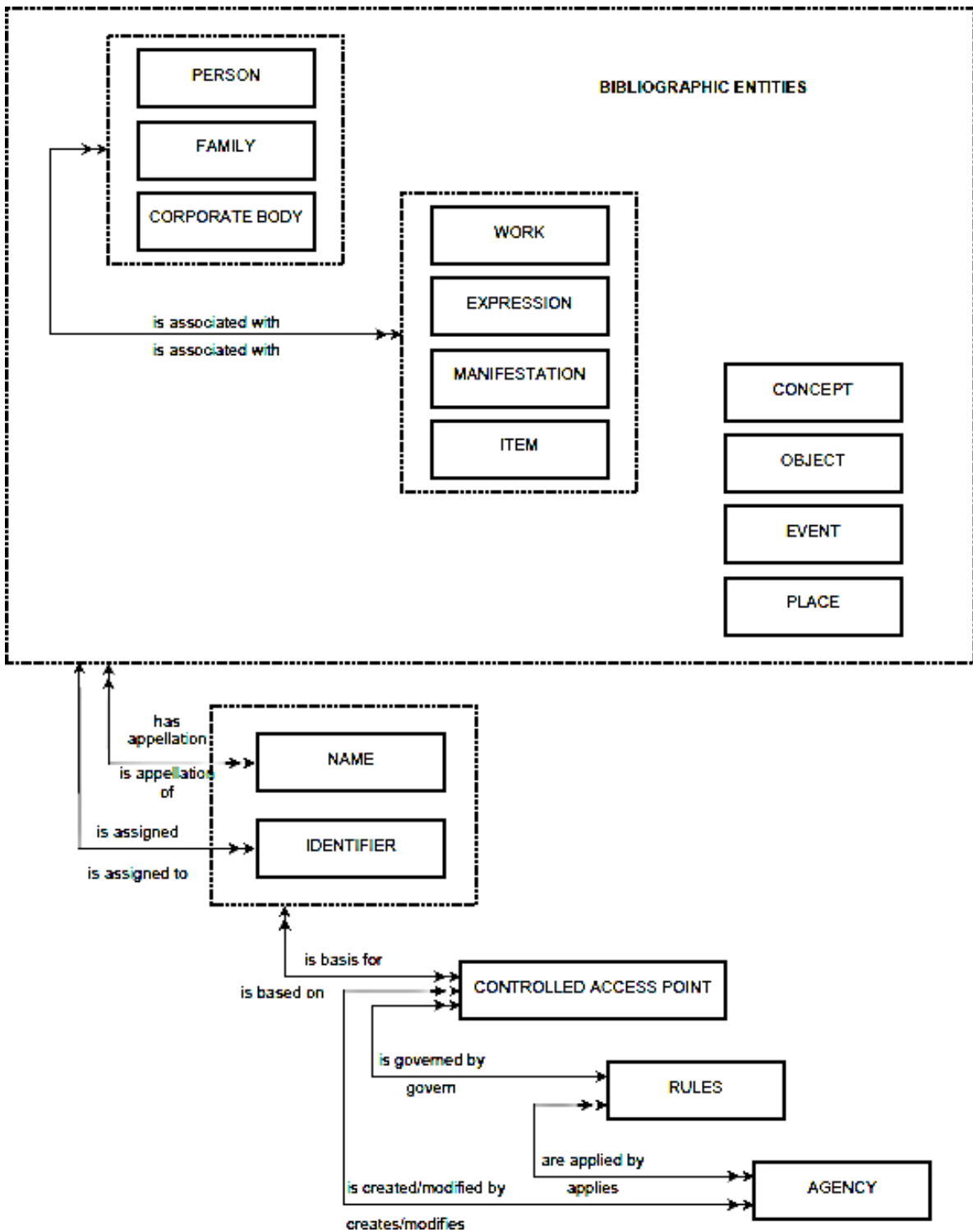
Figure 6: Conceptual model for authority data (Source: IFLA, 2009)

2.3.1 Relationship between entities

The relationships depicted in Figure 6 above reflect the "inherent associations between the various entity types" (IFLA, 2009: 6). The lines and arrows connecting the entities in the upper part of figure 6.

36

With those in the lower part represent the relationships between name and identifier and the bibliographic entities with which they are associated (person, family, corporate body, work, expression, manifestation, item, concept, object, event, and place). A specific instance of any of those bibliographic entities may be known by one or more names ("has appellation" relationship) and, conversely, any name may be associated with one or more specific instance of any of the bibliographic entities ("is appellation of" relationship). Similarly, a specific instance of any one of the bibliographic entities may be assigned one or more identifiers ("is assigned" relationship), but an identifier may be assigned to only one specific instance of a bibliographic entity ("is assigned to" relationship). Figure 6 also depicts a relationship ("is associated with" relationship) that may apply between a person, a family, or a corporate body, on the one hand, and a work, expression, manifestation, or item, on the other hand. The entity relationship in the FRBR reflects the high-level relationships between entities' work, expression, manifestation and item (a work is realised through expression, embodied in a manifestation, and exemplified by an item). It also depicts a number of specific relationships between person, family and corporate body, on one hand, and work, expression, manifestation and item, on the other hand (a work may be "created, produced and realised by" a person, family or corporate body.)

Those same relationships are conceptually valid for the FRBR entities that are represented in the conceptual model for authorities (FRAD). The relationships depicted in the lower part of Figure 6 represent the associations between the entity's name and identifier and the formal or structural entity-controlled access point, as well as the association between that entity and the entity's rules and agency. A specific name or identifier may be the basis for a controlled access point ("is basis for" relationship), and conversely a controlled access point may be based on a name or identifier ("is based on" relationship). A controlled access point may be based on a combination of two names and/or identifiers, as in the case of a creator/title access point representing a work that combines the name of the author with the name (the title) of the work. The controlled access point will be centred on an instance of the work entity. However, to function effectively, the access point will need to reflect the relationship of that work, not only with instances of the name entity (to the various titles by which the work is known), but also its relationship with instances of the other entities depicted in the upper part of the Figure 6 (most notably, the person, family, or corporate body responsible for the work). The result is a creator/title access point. Controlled access points may be governed by rules ("is governed by/govern" relationships) and those rules in turn may be applied by one or more

agencies (are applied by/applies relationships). Likewise, controlled access points may be created or modified by one or more agencies (is created by/creates and is modified by/modifies relationships) (IFLA, 2009). The FRAD identifies the following entities, which should be used in the authority file as a point of reference when creating the catalogue.

2.3.1.1 Entities as described in the model

The entities presented in the model and which are each described below include: person, family, corporate body, controlled access point, name, identifier rules and agency. "An individual, a persona or identity established or adopted by an individual or group includes real individuals, personas or identities established or adopted by an individual through the use of more than one name (such as the individual's real name and/or one or more pseudonyms)" (IFLA, 2009). The rules in the AACR2 and the RDA provide guidelines to decide on which name to use to identify that individual, and such name should be used in the authority file for authority control. The catalogue should use that name to help the patrons to collocate the works of that particular creator. In the case of two or more persons related by birth, marriage, adoption, civil union, or similar legal status, or who otherwise present themselves as a family, the family should be identified by a name in the authority file and catalogue to link them to their work for access points and easy information retrieval as well as proper citation and referencing by the patrons or end users of the information sources (IFLA, 2009).

An organisation or group of persons or organisations identified by a particular name acting as a unit includes occasional groups and groups that are founded as meetings, conferences, congresses, expeditions, exhibitions, festivals, fairs; musical performing groups, groups of visual artists and dance companies producing collective work; organisations that act as authorities, exercising or claiming to exercise government functions over a certain territory such as a federation, a state, a region, a local municipality; organisations and groups that are defunct as well as those that continue to operate; fictitious organisations or groups of persons. Such distinct name should be used throughout the catalogue for consistency and to improve retrieval. On the other hand, controlled access points refer to a name, term, code or symbol under which a bibliographic or authority record or reference will be found. This includes access points designated as authorised (or preferred) forms of names (authorised access points) as well as those designated as variant forms of name (variant access points). The controlled access points are used for consistency and uniformity on the catalogue and on the search index on the OPAC to facilitate information retrieval. However, a name as indicated

by the FRAD is referred to a character, word, or group of words and/or characters by which an entity is known, and includes names by which persons, families, and corporate bodies are known. The proper form of that name should be transcribed on the authority file and catalogue. The identifier, on the other hand, is a "unique number, code, word, phrase, logo, device, or symbol that is associated with an entity and that serves to differentiate that entity from other entities within the domain in which the identifier is assigned". That unique identifier should be used throughout the authority file and catalogue when identifying the authority of the work. With regard to rules of transcribing access points, the FRAD emphasises the use of rules, which are a set of instructions relating to the formulation, and/or recording of controlled access points (authorised forms, variant forms or references) includes cataloguing rules / codes and interpretations of those rules. The cataloguers should refer to the rules of description in the RDA or the AACR2 when creating the authority control of the works. According to the FRAD, an agency is an organisation responsible for creating or modifying a controlled access point, and for application and interpretation of the rules it creates and/or uses. The agency may also be responsible for the creation and maintenance of identifiers within its domain. These include libraries, national bibliographic agencies, bibliographic utilities, consortia, museums, archives, rights management and organisations. The FRAD model emphasises that the agency must apply the cataloguing rules when creating the controlled access points for the catalogue (IFLA, 2009).

2.3.1.1.1 Characteristics of entities

The entities described above have characteristics or attributes that pertain to them and that are used in the catalogue and authority file to define the data elements. In certain cases, the characteristics of an entity may change over time (such as the field of activity in which the creator of the work has changed the name). In such cases, the cataloguing agency should update the authority file. The model does not make "an explicit distinction between attributes that may change over time and those that are not subject to change. If attributes were defined at the data element level, they would be noted as being either repeatable or non-repeatable data elements" (IFLA,2009:16). The cataloguing agency should use the encoding standards such as the MARC to code the data elements of the attributes when creating the catalogue data. The FRAD model identified some additional attributes to those that already exist on the FRBR model. The extension of the attributes on the FRAD model to the creator of the work is used to increase consistency and to differentiate between persons, families and corporate bodies who may have similar characteristics associated with them such as names and dates.

The following creator's attributes are described in the FRAD model and should be transcribed in the authority file to facilitate authority control: "*Gender; Place of birth; Place of death; Country; Place of residence; Affiliation; Address; Language of Person; Field of activity; Profession/Occupation; Biography/history; Type of family*; *Dates of family; Places associated with family; Language of family; Field of activity; History of family; Language of the corporate body; Address; Field of activity; History; Type of controlled access point; Status; Designated usage (such as variant access points); Undifferentiated access point; Language of base access point; Language of transcribing access point (cataloguing); Script of base access point; Script of cataloguing; Transliteration scheme of base access point; Transliteration scheme of cataloguing; Source of controlled access point; Base access point; Addition (includes other designations associated with persons families and corporate bodies added to the base access point).* The rules and agency also have the attributes to define them and should be identified in the catalogue and authority file such as *citation for rules, rules identifier, name of agency, agency identifier and location of the agency"* (IFLA, 2009:18). Identifying the rules and the agency's names in the bibliographic and authority files helps the cataloguers to learn from each other, and the bibliographic utility to identify the agency and compensate them accordingly.

2.3.2   Gaps in the FRAD

The model approves the agencies to determine the content and form of access points according to their judgement and local needs. As a result, many authority files have different forms of the name or spellings for one person, family or corporate body. This can bring about confusion since researchers may miss some information. For example, the heading for Princess Diana has different authorities in the WorldCat. The correct form of the name is *Windsor, Diana, Princess of Wales,* which is an official heading (Virtual International Authority file); although the database contains various forms of the name such as *Diana; Diana, Princess of Wales; Diana, Princess of Wales, 1961-1997; Diana, Princess of Wales 1961-1997; DIANA, PRINCESS OF WALES, 1961-1997; Diana, Princess of Wales, - Iconography* (Virtual International Authority file).Authority control governed by the usage of rules reduces these entries to one unique entry or official authorised heading, termed an access point. Hence, the agencies must follow the rules without alteration to improve the global sharing of the skills and the record. Authority control

is about using a single, distinct spelling of a name (heading) or a numeric identifier for each topic (Gorman, 2004). Although the Working Group on Functional Requirements and Numbering of Authority Records (FRANAR) has included some aspects of subject data in their FRAD model, they have not undertaken the full analysis of the entities and relationships relevant to subject authorities. Hence, the subject is one of the key points for retrieval and access to information. For example, in case the user does not know the author, title, standard identifier of the information source, the subject is the more relevant search index to use, since the user will always know the aboutness of his or her query such as "*I am looking for information on economics*" and the subject term on the catalogue is the key to access. Hence, the researcher incorporated the FRSAD model in the study.

2.4   Functional Requirements for Subject Authority Data

The FRSAD is the continuation of the FRAD. "The IFLA Working Group on the Functional Requirements for Subject Authority Records (FRSAR) was formed to address subject authority data issues and to investigate the direct and indirect uses of subject authority data by a wide range of users. The role of the FRSAR working group was to build a conceptual model of group 3 entities within the FRBR framework as they relate to the aboutness of works; to provide a clearly defined, structured frame of reference for relating the data that are recorded in subject authority records to the needs of the users of that data; to assist in an assessment of the potential for international sharing and use of subject authority data both within the library sector and beyond" (IFLA, 2010: 6). Although the FRBR and the FRAD models cover subject entities, the FRSAD model extends the entities to 'thema' and 'nomen'; it also emphasises the relationships among the subject terms. The cataloguer should assign the subject terms and their relationships on the catalogue to improve access on the OPAC. For example, if the information source is about "Goats", the thema or subject heading of that source in the catalogue is "goats". The broader subject "Animals" should also be assigned as another subject heading of that information source to which are the hierarchical relationships between the two themas "goats" and "animals". Subject access to information has been a significant approach of users to satisfy their information needs. Research results have demonstrated that the integration of controlled vocabulary information with an information retrieval system helps users perform more effective subject searches (Joudrey, Taylor & Miller, 2015). This integration becomes possible when subject authority data (information on subjects from authority files) are linked to bibliographic files and made available to users (IFLA, 2010).

"The purpose of the FRSAD model is to ensure consistency in representing a value – a name of a person, a place name, or a term or code representing a subject – in the elements used as access points in information retrieval" (IFLA, 2010: 8), that makes copy cataloguing effective and saves time for the cataloguer. Hence, the indexers should index as many subjects as possible accurately using standardised subject authority systems or subject heading lists to sustain vocabulary control and ensure easy retrieval. The FRSAD are defined in relation to the following general tasks that are performed by users: finding one or more subjects and/or their appellations that correspond(s) to the user's stated criteria, using attributes and relationships; identifying a subject and/or its appellation based on its attributes or relationships (such as distinguishing between two or more subjects or appellations with similar characteristics and confirming that the appropriate subject or appellation has been found); selecting a subject and/or its appellation appropriate to the user's needs; choosing or rejecting based on the user's requirements and needs; exploring relationships between subjects and/or their appellations (such as exploring relationships in order to understand the structure of a subject domain and its terminology). The FRSAR Working Group introduced the following two entities in addition to *Work* that the FRBR has already defined: *Thema* as any entity used as a subject of a work; *Nomen* as any sign or sequence of signs (alphanumeric characters, symbols or sound) that a thema is known by, referred to, or addressed" (IFLA, 2010). Figure 7 is the pictorial representation of the FRSAD model.

Figure 7: FRSAD conceptual model (Source: IFLA, 2010)

The model indicates that the work has a subject thema, and thema is the subject of the work. In addition, thema has appellation nomen, and nomen is appellation of thema. The subject of the work can be used as an access point in the case where the patron does not know the title, author or international number of the information source. The subject may also be used when the patron is performing a subject citation pearl growing search strategy to group the works of a particular subject. The cataloguers also use the subject to allocate the classification notation of the information source to be retrieved on its location in the library. Apart from the

concept, object, event and place representing the subject of the work as indicated by the FRBR model, the FRSAD model includes the thema and the nomen as representation of the subjects.

2.4.1 Thema

Thema is defined as any entity used as a subject of a work. Therefore, this model confirms one of the basic relationships defined in the FRBR: WORK has as subject THEMA / THEMA is subject of WORK. According to Delsey (2005), the first broad objective of the FRSAD is to ensure that the scope of the entities defined is sufficient to cover everything that a user of a library catalogue might view as a "subject". We may therefore see thema from different points of view. From the point of view of end-users and intermediaries, thema comprises the aboutness of the (possibly unknown) resources that will satisfy the information need. From the point of view of information professionals who create metadata (cataloguer), one or more themas capture the aboutness of a resource. Hence, the cataloguer should index many subjects for the work. Themas can vary substantially in complexity or simplicity. Depending on the circumstances (the subject authority system, user needs as well as the nature of the work), the aboutness of a work can be expressed as a one-to-one relationship between the work and the thema; this means that the totality of the aboutness is encompassed in a single thema. In other circumstances, the relationship is one-to-many, meaning that the aboutness of the work is captured in two or more themas (IFLA, 2010).

2.4.1.1 Types of thema

The group to which a thema belongs is in the context of a knowledge organisation system. In implementation, themas can be organised based on category, kind, or type. The thema in the MARC bibliographic format and standards are indicated in the field 6XX that represents the subject access field. The different types of themas and their MARC tags as indicated in the MARC 21 are as follows: Personal name (tag 600); corporate name (tag 610); Meeting name (611); Uniform title (630); Chronological term (tag 648); Topical term (tag 650); and Geographical name (tag 651).

2.4.2 Nomen

Nomen is defined as "any sign or sequence of signs (alphanumeric characters, symbols or sound.) that a thema is known by, referred to, or addressed as" (IFLA, 2010:17). Nomen is a superclass of the FRAD entity's name, identifier, and controlled access point. In other words,

'thema' is a preferred term of the 'subject' in the 'subject heading list', whereas 'nomen' is the variant form of the subject or alternative term, which uses cross-references to link the terms. All these should be indicated in the authority file that the cataloguer uses as a point of reference when assigning subject headings for the work. In case the cataloguer does not know the name of the subject due to a foreign language, rare information sources or unfamiliar work, the nomen can be used to identify the subject. The cataloguer should identify the scheme or cataloguing standard, "including value encoding schemes, subject heading lists, thesauri, name authority lists, syntax encoding scheme in which the nomen is established.

2.5   Relationships

The FRSAD model establishes two sets of relationships: relationships between different types of entities: work-to-thema and thema-to-nomen and relationships between entities of the same type: thema-to-thema and nomen-to-nomen (IFLA, 2010).

2.5.1   Work-to-thema relationships

"Any work can have one or more themas, and any thema may be the subject of one or more works" (IFLA, 2010:25). For example, the work *The Unwritten Rules of PhD Research* by Rugg, Gordon and Petre Marian has several themas such as *Degrees, Academic, Research, Doctor of Philosophy degree, Education,* and *Higher-Research*. Research may be a subject of any work that is about research, *Degrees* and *Academic* may be a subject of any work, so are the other themas listed above and there are many other works about any of these themas.
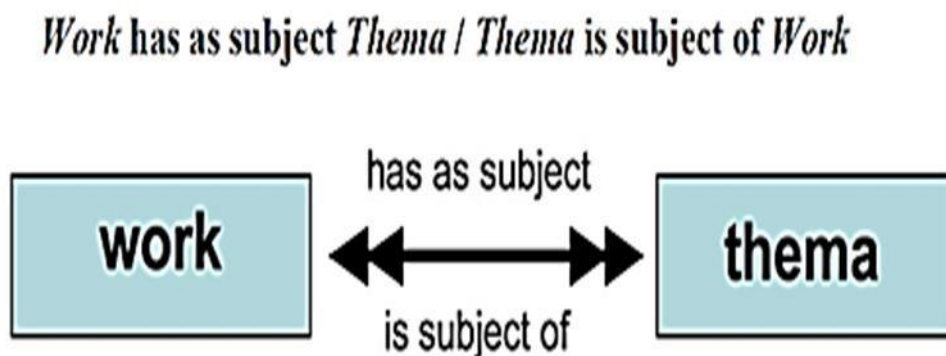
Figure 8: Work to Thema Relationships (Source: IFLA, 2010)

2.5.2 Thema to nomen relationships

A nomen is another name of thema or terminology describing the thema. It can also be represented by an abbreviation or a unique number or symbol. A thema has one or more nomens and there may be a nomen referring to more than one thema. The "has appellation/ is appellation of" "relationship is a many-to-many relationship". Figure 9 is the pictorial representation of the above statement.
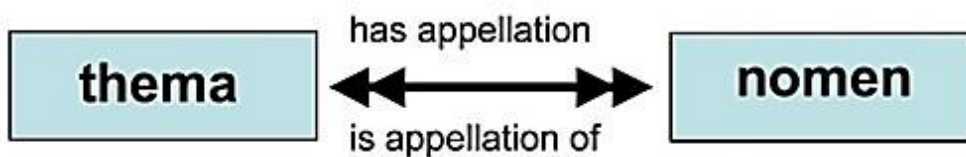
Figure 9: Thema-nomen relationships (Source: IFLA, 2010)

Figure 9 indicates that a thema has one or more nomens. For example, the thema 'South Africa' may also be identified as the abbreviation SA and the South African flag. In addition, a nomen may refer to more than one thema. A nomen 'SA' may also address the thema 'South America' or 'Saudi Arabia'. However, to avoid confusion in indexing and retrieval, a nomen should be a term of only one thema such as the unique number or flag or symbol of the nomens indicated in Figure 9. If the cataloguer uses the nomen as a subject of the work, the thema should also be used as cross-references in the authority file so that other cataloguers could be able to identify and transcribe them in the catalogue to enhance retrieval.

2.5.3 Thema-thema relationships

These represent the semantic relationships among terms. The cataloguers should assign many subject headings to the work to improve access. For example, when indexing a work about *sparrow*, the term *bird* should also be indexed for users to identify the work. Again, if the work is about Organic Chemistry, *Chemistry* should also be indexed as the subject. The following semantic relationships as found in the subject heading lists can be used when assigning the subjects to enhance retrieval of the information sources. There are three main thema-thema relationships, namely: hierarchical relationships, polyhierarchical relationships and associative relationships. Hierarchical structures show relationships between and among

themas and classes of themas and reveal degrees or levels of superordination and subordination, where the superordinate term represents a class or a whole, while subordinate terms refer to its members or parts. Hierarchical relationships provide disambiguation functions to assist with the 'identify user task', yet they are the most effective in furthering linking and navigation objectives and satisfying the 'select user task', especially, the 'explore user tasks'. They aid users with undefined or very broad information needs and they allow users to improve their searching". Polyhierarchical relationships refer to concepts that belong to more than one superordinate concept such as biochemistry. Biochemistry is part of biology and it is also part of chemistry. Therefore, when indexing a chemistry work, biology and biochemistry should also feature as the subjects of the work. Associative relationships cover affiliations between pairs of themas that are not related hierarchically, yet are semantically or conceptually connected and co-occurring. The indexers should also check those terms in the subject authority system and see if they fit to be transcribed as themas of the work (IFLA, 2010).

2.5.4   Nomen-to-nomen relationships

Two nomens are equivalent if they are terms of the same thema; for example, if they are synonyms, "near or quasi-synonyms, have lexical variants, regarded as unnecessarily specific and it is represented by another nomen with broader scope, and if regarded as unnecessarily specific and it is represented by a combination of two or more terms known as compound equivalence" (IFLA, 2010: 31). A nomen may have components (parts). These components may or may not be a nomen on their own. For example, nomen *968* is the notation for History of South Africa in the DDC scheme, 9 alone cannot represent a nomen.

2.5.5   Scope note

Scope note is very important in the authority file, as it helps the cataloguer to assign the correct thema that represents the subject of the work. Scope note (SN) is also defined as a text describing and/or defining the thema or specifying its scope within the particular subject authority system (IFLA, 2010). For example, in the LCSH Subject Authority System, the thema *Food poisoning* scope note indicates "Here are entered works on poisoning due to food contaminated by bacteria or bacterial toxins". Works on the toxic effects of food containing naturally poisonous substances or toxic chemical residues are entered under "Food – Toxicology"). If the cataloguer is cataloguing an information source about food containing natural poisons such as mushroom, they will allocate the subject "Food – Toxicology" and

therefore be able to assign the correct classification notation for the information source that will help the patrons to find the information sources easily in the library.

2.6 Relationship between conceptual models the FRBR, the FRAD, the FRSAD and the use of the catalogue

IFLA (1998), IFLA (2009), IFLA (2010) and Tillet (2004) assert that for the user to *find* the work by its title, author or subject, those attributes (title, author, or subject) should be recorded on the catalogue. Similarly, to *identify* the manifestation by its ISBN, the ISBN should be recorded to *select* the manifestation by its edition; the edition should be recorded on the catalogue. If all the above metadata are available on the catalogue record, the user would be able to *obtain* or acquire the item through loan or electronic remote access. Table 1 below illustrates the relationship of the models used to underpin the study and the catalogue.

Table 1: Mapping the entities to the conceptual models (IFLA, 2010)

FRBR	FRAD	FRSAD
Find entities that correspond to the user's stated search criteria to locate either a single entity or a set of entities in a catalogue as the result of a search using an attribute or relationship of the entity.	**Find** an entity or set of entities corresponding to stated criteria to find either a single entity or a set of entities using an attribute or combination of attributes or a relationship of the entity as the search criteria, or to explore the universe of bibliographic entities using those attributes and relationships" (such as using citation pearl growing search strategy and access all the works of a creator).	**Find** one or more subjects and/or their semantic relationships, that correspond to the user's stated criteria, using attributes and relationships to search for the information source/s.
Identify an entity to confirm that the entity described corresponds to the	**Identify** an entity to confirm that the entity represented corresponds to	**Identify** a subject and/or its terms based on their attributes or relationships, to

FRBR	FRAD	FRSAD
entity needed or to distinguish between two or more entities with similar characteristics (such as the edition of the manifestation).	the entity sought, to distinguish between two or more entities with similar characteristics" such as personal authors with the same names and surnames. The cataloguer should transcribe the dates associated with the authors' attributes to differentiate the authors.	distinguish between two or more subjects or terms with similar characteristics and to confirm that the appropriate subject or term has been found. For example, when assigning the subject heading for *Spirit* as the conception of spirit as differentiated from soul not methylated spirit or alcohol, the cataloguers should transcribe other subjects related to "Spirit" such as Christianity, religion and verify the vocabulary from the standardised subject authority system for the purpose of consistency so that the user can easily access the information source on the OPAC.
Select an entity that is appropriate to the user's needs, to choose an entity that meets the user's requirements with respect to content or physical format, or to reject an entity as being inappropriate to the user's needs.	**Select** choose or reject a work based on the user requirement by selecting an author according to a user's need. For example, authors known by the same name could be differentiated by professions or date of birth such as Michael Jackson the	**Select** a subject and/or its appellation appropriate to the user's needs, to choose or reject the information source based on the user's requirements and needs". For example, in case the user is looking for information on *Party* as a

FRBR	FRAD	FRSAD
	lawyer or Michael Jackson the pop artist,	social gathering, not a political party, the cataloguer should transcribe semantic relationships on the catalogues such as birthday parties, et cetera to help the user to select the appropriate source as per the users need**.**
Obtain access to the entity described, to acquire an entity through purchase or loan or to access an entity electronically through an online connection to a remote computer".	**Obtain** the required information source by a call number containing the first letters of the creator or the title of the work.	**Explore** relationships between subjects and/or their appellations, to explore relationships to understand the structure of a subject domain and its terminology". For example, if a cataloguer is cataloguing an information source about *sparrow*, he or she should index *bird* as the other subject to help the user to understand that a sparrow is from the family of bird, therefore those terms are related.

2.7   Summary

The models that underpinned this study are interrelated and complement each other. The models asserted that cataloguers should follow the international cataloguing standards and transcribe all required entities and attributes of the manifestation on their catalogue records in order to improve access of information sources regardless of the form it is expressed in. The

FRBR facilitates descriptive cataloguing, the FRAD facilitates authority control, whereas the FRSAD addresses subject cataloguing. For these reasons, the models were chosen to underpin the study.

Chapter Three

Literature Review

3.1   Introduction

Literature review is a process that involves finding, reading, understanding and forming conclusions about the published research and theory on a topic (Burns & Grove, 2003). It assumes that knowledge accumulates and that people learn from and build on what others have done (Neuman, 2006). Polit and Beck (2007:722) add that a review of literature provides a critical summary of research on a topic of interest to put a research problem into context. Reviewing literature helps the researcher to establish how other scholars have investigated the same problem (Mouton, 2008; Neuman, 2006). A review of literature therefore is conducted to generate a picture of what is known about a situation or area of study and the knowledge gaps that exist in the field. According to Lyons (2005), the purposes of literature review in research are as follows: it identifies new ways to interpret and shed light on any gaps in previous research studies, thus helps in reviewing the field that allows the researcher to build on the platform of existing knowledge and ideas; identifies relationships among seemingly contradictory previous studies; places one's original work in the context of existing literature; and identifies research methods that could be relevant to the research. Boote and Beile (2005) identify the following purposes of literature review: ensure that the research is not a replicate study, justify the research and provide a context for the research.

Hofstee (2008) opines that the literature review should serve the following purposes: the work has significance and will lead to new knowledge. The purpose of this study was to investigate the cataloguing practices from creation to use in Cape Town Metropolitan public libraries in South Africa with the view to gaining an understanding of the importance of cataloguing standards in creating bibliographic data for the libraries. The study was expected to inform the necessary steps that should be taken when acquiring the cataloguing information system to enhance the access and use of library materials. The following research questions were addressed: "What skills do the cataloguers in Cape Town Metropolitan libraries possess?"; "To what extent do cataloguers in Cape Town Metropolitan public libraries adhere to international standards when creating records in the online catalogue?"; "How are the cataloguing records created on the system by cataloguers in the Cape Town Metropolitan used within and across the public libraries?"; "How are the new RDA standards applied

51

in public libraries in the Cape Town Metropolitan to ensure they accommodate entities and attributes as described by the international cataloguing standards?"; "What records quality control measures are used in computerised cataloguing by public libraries in the Cape Town Metropolitan?"; "How effective is the computerised cataloguing system of Cape Town Metropolitan public libraries in retrieving information sources?" "What are the challenges experienced by public libraries in the Cape Town Metropolitan in computerised cataloguing?"

Empirical and conceptual literature reviewed in this chapter was obtained from books, journals, theses, conference proceedings, databases and electronic resources. Kothari (2004) identifies two types of literature – the conceptual literature concerning the concepts and theories, and empirical literature, which discusses related studies. The chapter is organised around themes of research questions, key variables of the underlying theory, and broader issues around the research problem. Thematic areas for the research questions include: international cataloguing standards, catalogue records, cataloguing skills, training of cataloguers, catalogue quality, cataloguing systems, challenges of cataloguing, impact of cataloguing on users, online catalogue user interface and bibliographic utilities. Key variables from the underlying theories are the catalogue entities and attributes. Moreover, the broader issue around the research problem in this study includes inconsistency with the current practices of cataloguing, cataloguing system, and low utilisation of cataloguing standard. On each theme, international context is reviewed first followed by regional and local context.

3.2   International cataloguing standards

Miksa (2004) defines cataloguing standards as devices, manuals, tools or documents (print-based or electronic) that assist in the creation of the catalogue records (original bibliographic records in the case of original catalogue, or in the verification of bibliographic information in existing records in the case of copy cataloguing). These tools are used internationally to ensure consistency and to allow sharing of the records and skills. Standards ensure consistency within and across information retrieval systems and make it possible for machines to process information (Dorner, 2000). Chandrappa and Harinarayana (2018) assert that cataloguing standards act as a guideline for the creation of catalogue records and as benchmark for evaluation of those records. Sung (2013) outlines the basic cataloguing tools to include: the AACR2/ the RDA, the MARC 21 Formats for Bibliographic Data, Web Dewey and/or printed DDC, the LCC or any faceted classification scheme, the LCSH, Sears lists od subject headings OCLC Bibliographic Formats and Standards, and Library of Congress (LC) Name Authorities.

Dorner (2000) indicates that the high level of standardisation has allowed a tremendous amount of cooperation in resource sharing and in system development work among libraries around the world. It also has allowed libraries to aim for Universal Bibliographic Control. The AACR2 is a content standard that indicates how the bibliographic information of an information source should be transcribed on the catalogue (Fritz, 2006). The AACR2 was first published in 1967 and has been revised thereafter. It includes instructions for describing library materials and for establishing access points for the creators of those materials. The description rules are organised by material type and based on the areas defined by the ISBD (Welsh & Batley, 2012). The RDA is also a content standard designed for the digital world built on foundations established by the AACR and it is to replace the existing AACR2. Tillet (2011) observes that the Joint Steering Committee (JSC) of the RDA recognised that the AACR2 was not a cataloguing code or standard that would serve the 21st century users. Its structure was based on manual catalogues and linear displays of citations created before the internet and well-formed metadata that could be used by computer systems. During the 1990s, the JSC received many complaints about the AACR2 which include the following:

- Information had become increasingly complex as updates were added, particularly to address new electronic resources, and the AACR2 could not cater for those resources.
- The AACR2 lacked a rational structure and instead focused on individual rules for each type of material rather than on commonalities and basic principles for a simplified consistent approach.
- The AACR2 was arranged by class of materials which caused problems when cataloguing electronic resources with multiple attributes.
- The AACR2 did not adequately address bibliographic relationships, whereas the internet is all about networks of inter-connected information.
- The AACR2 displayed a strong Anglo-American bias, even though it is used worldwide (Tillet, 2011).

Conversely, the RDA has been introduced as an alternative to past cataloguing practices for the electronic and digital environment. This new code for identifying resources has emerged

from years of international collaborations and it produces well-formed, interconnected metadata for the digital environment, offering a way to keep libraries relevant on the World Wide Web (Atinmo, 2011). The RDA provides a comprehensive set of guidelines and instructions on resource description and access covering all types of content and media (IFLA, 1998). It is based on the functional requirements for bibliographic records in order to relate the user task of retrieval and access in an online library catalogue and biographic database from a user's perspective (IFLA, 1998). Cataloguing and indexing should no longer be based on imaginary subject listing, but rather on user need (Esse, 2013). The MARC formats are standards used for the representation of bibliographic and related information for books and other library materials in machine readable form and their communication to and from other computers (Kumar, 2018; Welsh & Batley, 2012). The Faceted Classification Scheme is a classification scheme used in organising knowledge into a systematic order.

A faceted classification uses semantic categories, either general or subject-specific, that are combined to create the full classification entry or notation that will be used on the shelf in case of physical material to shelf materials of the same subject together (Wynar & Taylor, 1992). The LCSH is a controlled vocabulary subject heading list used to assign subjects for the library materials to increase consistency and easy retrieval (Olson & Boll, 2001). Bibliographic Formats and Standards is a guide to bibliographic information in machine- readable cataloguing records in the WorldCat database. It provides tagging conventions, input standards and guidelines for entering information (Welsh & Batley, 2012). The Library of Congress Name Authorities is a name authority list that contains all names of creators/ authors and is used to verify the correct forms for names of persons, families, organisations and conferences (Olson & Boll, 2001).

Miksa (2004) in a study on the extent and utilisation of cataloguing tools and resources in the North Texas public libraries of the United States of America, found low utilisation tools and resources among participants. The study questioned whether the low utilisation is a reflection of cataloguers' satisfaction that the cataloguing product provided is sound and of good quality, or whether it is a reflection of there being little knowledge of and education in tools and resources, or of sound cataloguing practices. It also raised questions on how well cataloguing educators had prepared students to be cataloguers. In a survey of some USA academic libraries, Marais (2004) explored how authority control was carried out in libraries and established that authority control is a highly developed skill in the USA, since it contains the

main access point of the catalogue. The authority file consists of authority records, identifying the established or authoritative form of access points, cross-references from variant forms to the preferred form of the access point, links between earlier and later forms of headings, links relating to broader and narrower subjects and information concerning the scope of certain items (Marais, 2004). The findings of Marais' (2004) study indicated that in most libraries, the number of cataloguers involved in authority control were limited and the majority of cataloguers were not involved in authority control. Only one out of five cataloguers was involved. When asked about the activities they performed on the cataloguer about authority control, the majority of respondents (53%) indicated that they downloaded and created authority records, while the minority (11%) created authority files. When asked if they used bibliographic utility in the process of authority control, 98% indicated that they used bibliographic utility, 90% of which used the OCLC to download and deposit authority records. Concerning the number of authority records that each respondent created in a year, the results indicated that the majority of respondents (43%) created less than 100 authority records a year.

The participants were then asked if they had outsourced authority control at some stage and the majority (71%) indicated that they outsourced authority records. They also indicated that shortage of staff and lack of expertise forced them to outsource. Concerning quality control of vendor records, 57% indicated that they carried out quality control measures on those records, whereas 43% did not carry out quality control measures. The other question was to determine whether libraries changed authority records received from vendors by adding references and/or notes. The results indicated that 45% of the respondents who exercised quality control on vendor records, added references and/or notes to such authority records, while 55% did not change the vendor authority records, although authority control is a highly developed skill in the USA. These results would appear to suggest that cataloguers believed that the records downloaded from bibliographic utilities were of high quality. At most, vendor authority records are created through a CIP process.

The CIP records are created using prepublication galleys or front matter from publishers cooperating in the CIP program. Because of the CIP program, cataloguing data can be reproduced before a work is published and is often transcribed by the publisher on the verso page (in case of print materials) when the work is published. Taylor and Simpson (1986) observe that there is a perceived lack of quality in CIP records produced by the Library of

Congress Cataloguing in the Publication Division and emphasise that the process can cause problems when publishers make any changes to the work between the time the CIP data are transcribed and the actual printing of the work. Such changes mean that the finished copy may sometimes vary greatly from the CIP version that may have already been used by many libraries. Hence, the researcher wanted to investigate the cataloguing practices in public libraries in the Western Cape province in South Africa. Khalid and Mahmood (1997) surveyed the status of cataloguing practices in the university libraries in three developing Asian countries (Malaysia, Pakistan and Saudi Arabia) and examined the extent of the use of international cataloguing standards such as the AACR, the ISBD, classification schemes (DDC, LCC) and subject heading lists (Sears, LCSH). Findings indicated that there was an overall uniformity in the use of cataloguing tools. Khalid and Mahmood (1997) in another study on subject cataloguing in Pakistani Libraries found that libraries in Pakistan usually maintained classified catalogues without subject indexes and the use of subject headings was most infrequent.

Therefore, the utilisation of subject heading lists such as the LCSH and Sears lists were minimal. Šauperl (2005) in a study on the subject cataloguing process of Slovenian and American cataloguers found that when assigning subject headings, all cataloguers attempted to determine what the information source was about. While the American cataloguers tried to understand the topic and the author's intent, the Slovenian cataloguers appeared to focus only on the topic. Slovenian and American academic library cataloguers did not demonstrate any expectation of possible uses that users might have of the information source, while this was important for American public library cataloguers. All cataloguers used existing records to build new ones and/or to search for subject headings. The verification of subject representation with the indexing language was the last step in the subject cataloguing process of American cataloguers, often skipped by Slovenian cataloguers, suggesting that Slovenian cataloguers did not make use of the subject heading lists.

Mansor and Ramdzan (2014) studied RDA perceptions among Malaysian cataloguers in selected libraries in Malaysia and found that, in general, although Malaysian cataloguers were aware of the RDA, they were only familiar with the basics of the RDA and its related topics. They were mainly aware of topics regarding the overview and development of the RDA, and indicated low understanding of other topics, such as the FRBR, related to the RDA. The study found that respondents acknowledged the inadequacy of their basic understanding and usage

of the RDA. Cronin (2011) states that some cataloguers at the University of Chicago favoured the RDA for expressing relationships between entities and wanted more examples of complete RDA records. However, there were some negative comments expressed by cataloguers, as they felt that the new RDA terminologies such as media, carrier, content and types are difficult to understand. Most of them were confused on FRBR group 1 entities, especially in differentiating "work" and "expression", and the use of abbreviations in the RDA. Frederick (2017) asserts that the RDA Toolkit is a subscription service containing RDA instructions, specific guidelines such as Program for Cooperative Cataloguing policy guidelines, various national library guidelines, music cataloguing options, examples and links to related resources such as the metadata registry. Frederick (2017) further observed that because the RDA is much more complex than the AACR2 and is updated twice annually, it is not practical for cataloguers to attempt to learn the RDA in the same way they learned or memorised the AACR2. In addition, libraries that attempted to create local policy manuals, which include RDA instructions for paraprofessional staff, often found that it was nearly impossible to keep their documentation up to date because of the ongoing changes in the RDA. This reality has more or less forced the majority of cataloguers to depend on the RDA Toolkit. Unfortunately, it is very difficult to navigate the RDA Toolkit. It seems that with each revision of the RDA guidelines and with each addition of new community guidelines such as for music librarians, audio-visual cataloguers, serials and librarians, the complexity and confusion experienced were the Toolkit was getting worse. By early 2016, there was no question that the cataloguing community was feeling considerable pain because of the general inability to keep up with all of the changes and to use the RDA Toolkit in an effective way (Frederick, 2017).

Another study on the use of the RDA reported by Young and Bross (2011) uncovered some difficulties faced by respondents when selecting options in the cataloguing instructions and with the coding/tagging of records. These difficulties included the use of terms in relation to the transcription of what is seen versus abbreviations, and the use of MARC field 300 for online resources. The participants in the RDA test at Kent State University opined that it would be problematic to fit serial materials into the FRBR model (McCutcheon, 2011). Young and Bross's (2011) study found that cataloguers took more than one hour to catalogue serials. There were comments from team members that blue-ray discs and video-streaming cataloguing work took five hours each and two hours for sound recording material. This could

be due to a lack of familiarity with RDA rules and guidelines, as more time was spent to consult the rules using supporting documents and the RDA Toolkit.

In Africa, Nampeya (2009) carried out a study on the use of cataloguing tools and resources by cataloguers in the University of Malawi (UNIMA) libraries and the Malawi National Library Service (MNLS) in providing access to information. The study used 35 cataloguers and directors of libraries to draw rich and accurate data. The study revealed that the majority of cataloguers in the UNIMA libraries and the MNLS used the cataloguing tools and resources, but relatively infrequently. Results also revealed that the cataloguers experienced various problems with the cataloguing tools, which most of them attributed to a lack of training to prepare them adequately for cataloguing requirements. In addition, the majority of libraries had cataloguing backlogs which were attributed to various factors such as a lack of professionally trained staff in cataloguing and a lack of cataloguing tools and resources. In their study of knowledge management culture among library cataloguers at the University of Zambia library, Chitumbo and Kanyengo (2017) revealed that the use of existing rules or standards such as the AACR2 and LCC schedules with its subject headings was compromised by the poor grounding of cataloguers. In South Africa, a study of authority control in an academic library consortium using a union catalogue maintained by a central office for authority control by Marais (2004), revealed that authority control in South Africa had not developed alongside other library activities such as bibliographic description or inter-lending, which is still in its infancy. The reasons why authority control has lagged behind, according to Marais (2004), are as follows:

- **Short-sightedness on the part of library managers**: Decisions were often made without considering long-term implications, such as refraining from purchasing, developing, or maintaining computerised authority files (computerised authority control).

- **Lack of cohesion**: South Africa did not have an institution such as the Library of Congress in the United States to take the initiative in the development of authority control. A lack of combined effort resulted in institutions working in isolation.

- **South African National Bibliography:** Authority records on the South African National Bibliography (SANB) were created on the Dobis/Libis library system, one of the few automated library systems available to South African libraries during the international sanctions of the eighties. The Dobis/Libis format is not compatible with

current international automated library systems used in South African libraries and Dobis/Libis records are therefore not easily available to South African libraries (De Klerk, 2001). Authority headings were available in the printed SANB and electronically on Sabinet, but variant headings for the same entry exist because authority records were not prescribed or readily available.

- **Disparity between libraries**: Libraries are at different levels of development and have different authority control requirements. The most developed libraries in South Africa need to establish authority control policies and practices in line with international developments. This may create uncertainty and confusion in the smaller libraries that lack the resources. Because of these factors, Marais (2004) observed that South African libraries were faced with a backlog of authority work, such as headings without authority records, different formats for the same author, spelling and errors. Marais's study was carried out 12 years ago and the current study will therefore investigate the current practice of Cape Town Metropolitan libraries about the use of international standards such as authority control standards, and suggest some possible solutions to the problems faced.

Marais (2018) indicates that by 2016, only six libraries in South Africa created few authority records even though the Name Authority Cooperative Program (NACO) offers authority control training to its members, free online access to training materials and selected cataloguing documentation. NACO membership is open to institutions willing to support their staff through a process of training, review and direct contributions of records to the NACO name authority file (Marais, 2018).

3.3   Catalogue records

Catalogue records are bibliographic records of the information sources held by libraries. The records are compiled by the cataloguers, following the international cataloguing standards and kept in a file or system that allows access to users (Bair, 2005). The records serve as surrogates for the stored information sources. With the advantage of the MARC, libraries now share the catalogue records through WorldCat by copying the existing records to their own database; thus saving time and avoiding duplication of records on WorlCat (Kim, 2003). Beall (2000) observed that these records that cataloguers are copying from the World Catalogue are mostly vendor records. By large, vendor records are brief, non-standard bibliographic records created by booksellers and loaded into the bibliographic utilities.

Because many libraries are choosing to copy these records from the utilities to their local online catalogues without editing or enhancing them, much effort is being duplicated, as individual libraries make the same enhancements locally (Beall, 2000). The main way in which the advent of vendor records in the OCLC has had a negative impact on cataloguing is that many libraries are importing vendor records from the OCLC into their local online public access catalogues and editing and enhancing the records in their local system only, without editing and improving the record in the utility.

By updating the records exclusively at the local level and not at the national level, libraries are often not providing a means for other libraries to benefit from the enhancements they have made to the record since they are not enhanced libraries (libraries that have the authority to correct and augment records online in the OCLC) (Beall, 2000). Shedenhelm and Burk (2011) states that this places a bigger burden on enhanced libraries to correct things; each library must do the work locally, which hinders the philosophy of cooperative cataloguing. One major impact that vendor records have had on cataloguing departments' workflow is the less time that is left for original cataloguing to be carried out. Instead, professional cataloguers are spending more of their time enhancing the copy on the vendor records. Again, the existence of this provisional level, the (order) record has prevented other libraries from inputting an original record. Libraries are not creating new full-level records, because these minimal records already exist (Breeding, 1999). One of the purposes of cooperative catalogue is to prevent duplication of records on WorldCat. Beall (2000) states that in the OCLC, libraries are given credits for creating original records; they are charged for using records that already exist, including vendor records. Therefore, because the OCLC has flooded WorldCat with vendor records, many libraries are now being charged for services for which they previously would have had an opportunity to earn a credit. Economically, this change has benefitted the utility and hurt the member libraries. El-Sherbini (2001) carried out a study of copy cataloguers and their changing roles at the Ohio State University Library and found that the copy cataloguing section consisted of civil service staff (para-professionals) and members of various ranks.

A professional librarian managed the section. Staff were responsible for very simple copy cataloguing, adapting a copy from the OCLC database, and performing copy cataloguing. Beall and Kafador (2002) carried out a study on the effectiveness of copy cataloguing in eliminating typographical errors in shared bibliographic records. The study used the OCLC

World Catalogue database and examined 100 typographical errors in records. The catalogues of five libraries holding the items described by the bibliographic records which contained typographical errors were searched to determine whether each library had corrected the errors. The study found that only 35, 8% of the errors had been corrected. The study suggested that the majority of libraries are continuing to share non-quality records and "feed" their users with such poor catalogue records. Typographical errors in bibliographic records can cause retrieval problems especially in online catalogues (Beall and Kafador, 2002).

The presence of a typographical error in a bibliographic record can adversely affect the ability of a library user to find needed information, or, in other words, a single error can render a document virtually irretrievable (Bade, 2002). Typographical errors can occur in almost any part of a bibliographic record. Errors that occur in headings, such as authors, titles and subjects, can be more of an obstacle to library users because they may cause a record not to be retrievable in an OPAC search, thereby preventing a user from accessing information about an item that the library actually holds. For example, if a user is looking for a work by Shakespeare and the author heading for the bibliographic record for that work uses an erroneously spelled name, "*Shkespeare,* William, 1564–1616", the error will prevent the user from accessing the desired work. Typos that occur in the non-heading elements of a bibliographic record, such as contents notes, also can obstruct access when the data in these fields are included in a library's keyword indexes. Banks (2007) carried out a study of scrutinising cataloguing copy records at Southeast Missouri State University (SEMO) during 2006. The study questioned if copied cataloguing records were still acceptable as they were in the past when more professional librarians were working with bibliographic records, considering the upswing in clerical staff editing catalogue copy and even creating original records in some libraries. The study randomly selected a monographic copy which came through the catalogue department with the corresponding books at SEMO during 2006 to determine what changes and additions were made to the catalogue records. The study used 379 records and found that 72% of the records needed editing although they passed through copy cataloguers. The records needed classification numbers, authority work (proper access points) and subject headings, and some had misspelled words.

This is evidence that cataloguers are copying low quality records, perhaps because some of the cataloguing responsibilities at some libraries have been moved to clerical staff. Purongo (2014) undertook a study titled *Global records, local catalogues: Investigating local editing*

practices in copy cataloguing. The study used six countries, namely New Zealand, Australia, United Kingdom, United States, Canada and South Africa. One hundred and twenty academic library records and 120 public library records were used. The findings indicated that, on average, libraries made 11 modifications per record downloaded into their catalogue, 7,15% of which were quality aspects modification. Overall, the country that produced the most user-centred modification for academic libraries was South Africa, followed by Australia. Purongo assumed that libraries of African countries do have individual and varying needs that cannot be met by one universal record, unlike American countries that formed the standards to suit their user's information needs. South African public libraries were not sampled in Purongo's study due to a lack of information.

In Malawi, Nampeya (2009) found that 50% of her study participants performed copy cataloguing, although the utilisation of international standards was low. This could be attributed to catalogue records downloaded from WorldCat being of high quality. In South Africa, Maphopha's (2000) study indicated that academic libraries performed both original and copy cataloguing. The study also revealed that some cataloguing was done by unqualified staff. The formation of library consortia in academic libraries of South Africa aims to reduce original cataloguing significantly and release professional staff from cataloguing. Cataloguing work was divided among professionals and paraprofessionals in academic libraries studied by Maphopha. It is assumed that professionals would perform original cataloguing, while paraprofessionals performed copy cataloguing in these libraries. Dockel (1992) opines that, copy cataloguing is used much more than original cataloguing and this signifies the beginning of deprofessionalisation. Deprofessionalisation, according to Dockel (1992), is brought about by the increased use of technology in cataloguing work. Cloete, Snyman and Cronje (2003) assert that copy cataloguing is now one of the most important tasks of cataloguers. To adapt and utilise a copy record for a library's own purposes, it is essential that the cataloguer should have a sound knowledge of cataloguing principles. Such knowledge can only be achieved through proper education and training in cataloguing.

Coetzee and Skelly (2008) in their study of converting the card catalogue of the National Library of South Africa, Cape Town campus, into a machine readable format, assert that different methods may be used when converting a card catalogue to OPAC, such as using catalogue cards to create records manually, or finding records in machine-readable format and downloading or copying them from the OCLC. Coetzee and Skelly (2008) also state that

downloaded records may need upgrading. Local information such as shelf numbers, specific collection, loan conditions and other bibliographic information has to be added to the record. If no record is found to download, then original records should be created. It is the view of the researcher that copy cataloguing should be carried out by qualified experienced cataloguers that will be able to edit the existing records, guided by the cataloguing standards.

3.4   Cataloguing skills

Park and Camei (2009) and Alajmi and ur Rehman (2016) assert that, from ancient times, cataloguers and their skills have been the cornerstone of librarianship. They facilitate library service with the provision of organisation and orderly means of retrieving materials from the collection. According to Bello and Mansor (2013), surveys of cataloguers' job descriptions continue to reveal that knowledge of cataloguing and classifications such as original/copy cataloguing, authority control, descriptive/subject cataloguing and use of standard tools (AACR, LSCH, LCCS, MARC) is the most frequently required, therefore, cataloguers essentially provide a coordinated approach to the contents of all kinds of resources available in the library. In modern times, with the application of Information and Communication Technologies (ICT) to library operations and services, cataloguers' skills have been recognised in the creation of thesauri and in database management. However, the skills, roles and duties of cataloguers in the paradigm shift of Information Technology (IT) have been a subject of continuous debate. Sally (2007) opines that the development in library digitalisation and growth in e-resources collection has not changed the functions and services required of cataloguers or the demand for their skills, but instead tasks the cataloguers with expanding their skills in access description to e-resources. Cataloguers therefore remain an essential complement requirement to library efficiency and effectiveness.

Bello and Mansor (2012) state that surveys conducted on the duties, skills and functions of cataloguers indicated swift changes in cataloguing duties and function, and many reports revealed that cataloguers have taken to more challenges in view of developments in their profession. Bothmann (2011) indicates that the skills required of the professional cataloguer for practice include descriptive and subject cataloguing skills, classification skills, subject analysis and authority control skills, knowledge in the use of subject headings, the MARC, the AACR, the database and IT skills. Buttlar and DuMont (1996) assert that the other skills needed for cataloguing include design, implementation and customisation of information systems as well as for the input of data in them. Paiste and Mullins (1990) point out that new

cataloguing job advertisements frequently require qualifications related to systems analysis skills. They note that the cataloguer's role will have to move from manually based to more technology based.

In the United States, Jung-ran, Caimei and Linda (2009) conducted a study on the state of responsibilities and skills sets required of cataloguing professionals at Drexel University in Philadelphia. The study identified emerging rules and competencies focusing on the digital environment, and how they relate to the established knowledge of traditional cataloguing standards and approaches. Findings of the study revealed that technological advances increasingly demanded knowledge and skills related to electronic resource management, metadata creations, and computer and web applications. Cabonero and Dolendo (2013) carried out a study on "cataloguing and classification skills of library and information science practitioners in their workplaces" at the University of Nebrasca, Lincoln, in the USA, and found that although the respondents showed proficiency in the basic areas of cataloguing, there were different records of the same work and item by different cataloguers on the same system. The study concluded that the years of experience that cataloguers had could have contributed to the inconsistency of those records. The study also revealed that the LIS practitioners had difficulties with subject analysis; their interview responses also validated the document analysis findings.

It was evident that the determination of subject content of the material was complex. Miller (2007) asserts that the cataloguer must determine the subject area of the work and identify it with explicit terms from a subject analysis thesaurus. Bello and Mansor (2013) assert that employers in all types of libraries predominantly seek persons with common cataloguing skills (knowledge of the AACR and the MARC) as well as technical qualities and experiences. That is evidence of the essential role of cataloguers and their skills for organisation and control of library resources for optimal services. Ard, Clemmons, Morgan, Sessions, Spencer and Tidwell (2006) concur that, with their skills, knowledge and ability, cataloguers could determine whether the library will be an information powerhouse or dreary warehouse. Saye (2002) is of the view that cataloguers also lack the managerial skills required to satisfactorily practice their profession. Relevant service provision, according to Stites (2009), depends on cataloguers' effective skills development to cope with new challenges. The study Bibliographic control of theses and dissertations in four selected universities in Kenya by Ndungu (2017) found delays in capturing theses and dissertations in the libraries' OPAC

and lack of consistency and uniformity in the bibliographic records. In South Africa, Maphopha's (2000) study revealed that the majority of respondents lacked subject cataloguing and authority work skills, although they held qualifications in Library Science and many years of cataloguing experience.

Mavume's (2013) study of the new roles and skills of cataloguers in managing knowledge in an academic library, with special reference to Walter Sisulu University Libraries, Eastern Cape, South Africa, found that competencies required by cataloguers were as follows: the ability to understand the cataloguing change processes and how these impact daily activities; involvement in the facilitation of the integration of new types of data description into traditional technical services workflow; ability to maintain a conducive atmosphere by encouraging group/team work flexibility as cataloguer so as to set priorities and deadlines; commitment to service excellence; continually seeking out new technology challenges and opportunities for the improvement of information analysis in new online cataloguing and classification tools; full participation in projects such as reclamation projects of database clean-up; complete enthusiasm to learn new developments and adopt new and emerging standards such as Metadata Schemes (Dublin Core) Electronic Thesis and Dissertations – Metadata Standards, RDA and other recommended standards so as to be relevant to information needs of the users.

Mavume (2013) asserts that cataloguers, equipped with the above roles, skills and competences, would be able to identify the importance of changing roles in the profession anytime during their career. Raju (2017) compiled the LIS competency index for South Africa using 23 academic library job advertisements from the year 2014 to 2016 and found that skills required for cataloguers were metadata creation and management, including cataloguing, subject analysis and classification, as well as skills in the use of relevant metadata standards such as the RDA, the AACR2, the DDC, MARC 21, Dublin core, the LCSH, the LCC, National Library of Medicine (NLM), MeSH, including applications of standards to digital objects. Sibiya and Shongwe (2018) carried out a comparison of the cataloguing and classification curriculum and job requirements in South Africa and used cataloguing and classification course outlines obtained from six LIS schools, interviews with professional cataloguers and job advertisements from newspapers, as well as the Library and Information Association of South Africa (LIASA) list. The study found that LIS schools aimed to provide students with the knowledge and skills to organise knowledge in libraries so that users can easily retrieve it.

This was achieved by teaching cataloguing and classification standards and rules, tools such as the AACR, the DDC, the RDA, the LCSH and the MARC21. Findings from job advertisements indicated that apart from LIS qualification and work experience, skills required for cataloguers were knowledge of cataloguing and classification tools such as the DDC, the AACR2 or the RDA, the USMARC and the LCSH, knowledge of the OCLC, SLIMS; knowledge of online cataloguing tools, for instance web Dewey, cataloguer's desktop, WebClass; a good sense of general knowledge, experience with taxonomy, metadata and tagging for digital content management, robust digital content experience; familiarity with common social platforms; knowledge of legal deposits; knowledge of Millennium system; knowledge of Z39.50 and Unicorn; knowledge of the OPAC library system, South African catalogue (SAcat) and WorldCat, Connection, Inmagic, Basic and advanced computer skills (MS Office Suite, e-mail and internet). Darries (2017) asserts that cataloguing skills should include the application of standards to digital objects and knowledge of Metadata Authority Description Standards (MADS).

3.5 Training of cataloguers

Gourkova (2007) believes the cataloguing librarians have been the cornerstone of library services for centuries. The quality of their education highly influences their ability to effectively deal with the versatile challenges in the demanding field of knowledge management. Joudrey (2002) notes that in nearly half of the American Library Association (ALA) and accredited Library and Information Studies (LIS) programmes, there was no requirement that students should take any cataloguing-related course in order to receive a degree. Snow, Hoffman, McCurry and Sandy (2018) observe that cataloguing education is still an important part of LIS education, even though general information organisation courses are still required by most LIS programmes, and cataloguing and metadata courses that include a balance of theory and practice which are often "buried" as electives within LIS school curricula. Information organisation principles and techniques (both theory and practice) are highly relevant in today's information environment. In Canada, Haycock (2007) observed that Canadian graduate schools taken together require more common courses than their US counterparts, which demonstrates a much wider range of required credits. Courses are typically required in the core competency areas, by whatever name, of professional foundations, cataloguing, reference, management, information technologies and research methods. Terris (2003) and Takeuchi and Kim (1999) assert that the increasing dominance of electronic media has resulted in the disappearance of traditional cataloguing and

classification in some UK library schools. Terris (2003) points out that the semantic web brings some recognition of the need to improve some sort of logical structure on the web, which is the field of trained cataloguers. In Africa, Oparah (2006) notes that the curricula of the Nigeria University Library and information science schools were reasonably adequate in the provision of ICT courses. However, the contents of library and information science curricula were generally lacking in the application of ICT. Gourkova (2007) carried out a study of the Education for Library Cataloguing from an international perspective, in different countries of the world (South Korea, Slovenia, Poland, Spain, British Isles, Egypt, Iran, Israel and Saudi Arabia) and found that in South Korea, academic libraries indicated the necessity for the cooperation of formal education and organised job training as well as the opportunity to learn foreign languages to understand and process foreign information and publications. The study also revealed that in Slovenia, emphasis on cataloguing and classification courses allows Slovenia to have a healthy LIS programme. A well-developed librarian education system structure exists in Poland with an almost 200-year-long tradition; the first matter of library education was university lectures on bibliography and naturally linked teaching on cataloguing and classification since the 19th century.

In Spain, Gourkova (2007:439) found that "the cataloguing module in the library science programmes was well accepted as a core and compulsory subject within the three-year programme, which was concluded by a practice work of students in libraries to receive an important practical experience in cataloguing". Whereas in British Isles, the results of Gourkova's (2007) study showed that not enough was being taught on cataloguing and classification. In Egypt, the library curricula showed the increasing focus on machine- readable cataloguing and the automated environment, while strengthening the practical part of cataloguing education (Gourkova, 2007). In Iran, training of cataloguing professionals experienced great modifications in terms of better compatibility with international cataloguing standards, greater use of computers and electronic media and the internet. The cataloguing module was a requirement in the instructional frameworks in Israel, but the length of the course has been reduced over the years.

There seems to be a necessity for continuing education for cataloguers in Saudi Arabia due to the lack of recent changes in cataloguing courses and slow response to the new trends and issues in the organisation of information (Gourkova, 2007). Ocholla, Ocholla, Olson, Glover and Guimaraes (2012) carried out a study on cataloguing and classification education and

training in library and information science/ studies in South Africa, Brazil and the USA. Their findings indicated that US respondents agreed, although not whole-heartedly, that cataloguing and classification should be available to students. Most of them suggested it be an elective rather than a required course. Hsieh-Yee in Ocholla et al. (2012) suggests that the traditional manual catalogue, while trusted by users, is not the first choice in finding information and is no longer cost-effective. She concludes, however, that theory and principles of knowledge organisation are still necessary and need to relate to technological knowledge.

In Brazil, information processing, including classification, indexing, abstracting, cataloguing and information retrieval, was believed to be the core of LIS education and constitutes an average of 25% of the hours of the total library course (in accordance with the Mercosul LIS educational agreements). Agreement on this basic concept rests on the relationship between the role of information science as a theoretical domain supporting the practical information domains like archival science, library science, as well as museology. All the respondents professed that classification and cataloguing teaching in library schools was very essential, but also considered the need for changes and adaptations to fit new patrons' needs, including the need to offer technological empowerment to librarians and patrons/ clients.

The respondents from eight LIS schools offering Cataloguing and Classification Education (CCE) in South Africa considered cataloguing and classification to be a core LIS course; the backbone of librarianship's professional qualification; a course that supports knowledge of library information, reference and interlibrary loan services; extremely useful for the critical analysis and synthesis of a library collection by knowledge domains/ structures for effective information services; and essential for the organisation of knowledge in libraries. Ocholla et al.'s (2012) study also revealed a strong common core of concepts covered in the CCE in the three countries surveyed such as the AACR2; abstracting; authority control; bibliographic control; bibliographic description; cataloguing: theory, process, tools, manual, computerised, online; classification: theory, history, schemes, processes, policies, practical, the DDC; the LCC; the UDC; descriptive cataloguing; Dublin Core; indexing; information retrieval; the LCSH; library catalogues; the MARC 21; bibliographic metadata; subject organisation and access; and thesaurus construction (Ocholla et al., 2012). Furthermore, Ocholla et al. (2012) found commonalities of pedagogical approach across the countries' studies which were

mainly through lectures, exercises, workshops, projects and online instructions. Concerning the level that the institutions of the surveyed countries offered CCE, it was found that in the USA, most library schools taught cataloguing and classification only at master's level. In Brazil, all LIS undergraduate schools (as well as the other Mercosul schools) had classification and cataloguing as mandatory disciplines in their curricula whereas in South Africa, generally, cataloguing and classification courses were taught in professional library schools to third- and fourth-year students and/or master's students (Ocholla et al., 2012). The challenges experienced in CCE in the countries surveyed by Ocholla et al. (2012) were similar and included students lacking knowledge in the case of South Africa. Students' lack of critical thinking seemed to be a challenge for both countries surveyed. In the USA, the results of Ocholla et al.'s (2012) study showed that students did not have an interest in learning the theory of cataloguing and classification. Brazil seemed not to be affected; however, students indicated that they needed individual attention.

In language concerns, the USA was not affected because the medium of instruction is their language, and the linguistics and terminology used in the international cataloguing standards is in their spoken language. Concerning the teaching tools for CCE, the USA reported to have better tools than other countries surveyed. Ocholla and Ocholla (2011) carried out a similar study in South Africa and discovered that some information schools did not teach cataloguing and classification because it was irrelevant to their qualification programmes (University of Johannesburg and University of Stellenbosch). In other institutions where non-professional LIS qualifications were offered such as undergraduate qualifications/ degrees in publishing, records management and multimedia, information science (e.g. University of Pretoria), it was not offered very well.

However, there was a consensus that all future professional librarians should be taught cataloguing and classification with some suggesting that all information school graduates should be offered the courses(s), as it is relevant for information services of all kinds. Regarding the levels at which CCE was offered at the institutions that offered it, Ocholla and Ocholla (2011) revealed that it was largely offered to senior students from second year of university study, but mostly to third- and fourth-year students (where applicable).There were cases where the courses were offered from first year in a university although, normally, starting with basics. Where LIS education is offered at postgraduate level, CCE was covered in the programme. De Boer, Coetzee and Coetzee (2001) report that the thinking preferences of

cataloguing students at the University of Pretoria did not correspond with the skills and techniques required in cataloguing. The students specifically did not like analysing, problem-solving, implementing and organising skills. Yet, these skills are essential for cataloguing tasks. The suggestion is that more attention should be given to the less preferred but essential skills and that teaching methods should be adapted to use preferences to develop needed skills. Activities such as simulations, case studies and small group activities could all form part of active learning. This is especially applicable to a cataloguing course. A training resource that includes interactive instruction with the utilisation of multimedia could provide this meaningful learning opportunity (De Boer, Coetzee & Coetzee, 2001).

A study of facilitating the continuing education needs of professional cataloguers in South Africa titled "A framework for self-directed learning" by De Klerk and Fourie (2017) found that practitioners were involved in training to gain knowledge or skills in formal or informal ways. Concerning continuing education needs, 79,66% of the participants indicated that they needed training standards to record information sources, 72,88% needed information on recording of information source formats, whereas 69,49% needed training on information systems for storage/ retrieval. De Klerk and Fourie (2017) assert that although education and training systems provide for continuing education, it is the duty of professionals themselves to take responsibility for their continuous learning needs. Dockel (1996) asserts that training and development of cataloguers is of high priority and has to be continuous. Properly structured training programmes should be put in place to develop the knowledge and skills of cataloguers.

Cloete, Snyman and Cronje (2003) in their study of the training of cataloguing students using a mix of media and technologies in Technikon SA found that students were generally satisfied with the training resource programme, and they found the drill-type exercises on the computer program and questions for self-assessment on the computer program used to be very helpful for practice. The study concluded that many of the requirements of trained cataloguers cannot be met in the traditional contact class or through the traditional distance training methods. The opportunities provided by the mixed mode training resources that were researched by the study should contribute to improved knowledge and interaction. It would offer students many more possibilities of interacting and being active in mastering the cataloguing course. Furthermore, Cloete et al. (2003) assert that, usually when graduates enter cataloguing posts, they need a refresher course in cataloguing conducted by the supervisor or senior staff member of the department.

They also need in- service training to understand and master the specific procedures at the library where they are employed. Library assistants or clerks (without any formal library education or training) are often employed in cataloguing departments to perform certain routine, administrative cataloguing tasks. They are given in- service training by the supervisor or senior staff member. These in- service training periods stretch over a period of about six to nine months. During that period, the trainee cataloguer is not very productive as far as work output is concerned. Moreover, the supervisor or senior staff member conducting the training has to perform this function, which includes evaluating the trainee's work and discussing problems on a full- time basis. This means that this senior staff member does not perform other cataloguing tasks for which he/she has originally been appointed.

3.6   Catalogue quality

Catalogue quality could be defined as accurate bibliographic information that meets patrons' needs and provides appropriate access to information sources in a timely fashion (Cataloguing quality, 1995). For cataloguing librarians quality is defined by excellent original cataloguing based on AACR2 full-level standards/ the RDA; name authority records created to standards set by the National Authority Cooperative Program (NACO); effectively supervise support staff, including timeously resolve questions and problems; keep to a reasonable turnaround time for materials so that a backlog is not created or growing; is responsive to needs of internal and external patrons; completely and effectively respond to queries and complaints (Snow, 2011). In February 1990, the Collections Services Unit at the Library of Congress launched the Cataloguing Forum; a group open to all Library of Congress staff and designed to be an independent body dedicated to the open discussion of cataloguing policy and practices at the Library of Congress (Mann, 1991). The Cataloguing Forum published a series of six opinion papers starting in 1991. Four of those six publications focused specifically on cataloguing quality. The respondents were of the view that quality cataloguing should consist of "consistent application of cataloguing rules and principles of subject analysis, as well as accurate content designation" (Cataloguing Quality, 1995:28). In addition, records should be as complete and accurate as possible when first created, saving the time of institutions who will reuse the record later. The respondents also felt that quality cataloguing is the reflection of the integrity of the institution. All the Cataloguing Forum opinion papers demonstrated the view that there is increasing loss in cataloguing quality.

Chapman and Massey (2002) opine that the need for performance measurement and quality targets for services to users requires suitable performance indicators for libraries to use; as a result, they used a self-assessment catalogue quality audit tool developed by UKOLN, in collaboration with Essex libraries, to test the quality of the University of Bath's library catalogue. Their study concentrated on the accuracy of bibliographic records and the presence of "dirty data on the records. The desire for an objective performance indicator led to greater emphasis being placed on mechanical accuracy in transcription than on subjective intellectual accuracy. Errors identified in records were divided into (a) fields containing incorrect information and (b) omitted fields, rather than distinguishing misspellings, MARC coding errors and deviations from cataloguing rules. The following checklist was used: title, material description, statement of responsibility, author heading(s), edition, physical description, imprint, series, class mark/ shelf mark, subject headings, genre/category, and location (or branch). The study used convenient and systematic sampling to sample Bath University library catalogue records. The convenient sample was used as a pilot. Seventy- nine records were systematically sampled and checked within two and half hours. The study found 30 errors from 27 records, nine of which were major errors. The total error rate (27/79) was 34, 2% with a 10, 5% margin of error at the 95% confidence level. The fields with the most errors were imprint (21, 5%), followed by series (16, 3%), edition (10%) and title (8,7%).

Similarly, De Fino and Wang (2012) carried out a study of counting cataloguing: moving beyond statistics to measure the value of cataloguing at New Jersey academic libraries and found that regarding quality control of the catalogue records, the respondents were carrying out informal and formal quality control. Informal quality control consisted of randomly reviewing or target-checking bibliographic and authority records. Informal quality control was performed on as-needed basis. Errors were corrected as they were identified. Administrators periodically requested quality analyses to be run on the system. Formal quality control was conducted more regularly. All bibliographic records were reviewed. Bibliographic and authority reports were run regularly and monitored for errors by database managers or administrators. Records that were created by paraprofessionals or new cataloguers were approved before they were released. Bibliographic records underwent a final review by a professional cataloguer before they were released to the OPAC. Problems were identified by scanning new book lists. Authority records were often reviewed. Respondents detailed methods of bibliographic records' quality control that ranged from supervisors reviewing original records with or without the material in hand to scanning an output record of all field tags added to the system.

Schultz-Jones, Snow, Miksa and Hasenyager (2012) in their study of the historical and current implications of cataloguing quality for next generation cataloguers, are of the view that the librarian and user viewpoints of quality could be seen as two sides of the same coin when examined from the perspectives of library Next Generation Cataloguers (NGC). Quality data and coding are the backbone of a useful NGC. However, cataloguing practice long used to create traditional online catalogues as viewed by Schultz-Jones et al. (2012) must reimagine quality cataloguing in light of the possibilities created by NGCs.

Breeding (2010) in Schultz-Jones et al. (2012) opines that quality cataloguing for NGCs should focus on two major areas: conveying the full range of a library's collections and then presenting these collections using an interface that behaves more like sites on the internet. Breeding (2010) further indicates that the narrow scope of traditional online library catalogues often neglects individual chapter titles of books, individual article titles in periodicals and specific items within larger collections. The library website may provide descriptions of books, periodicals, collections, and both print and electronic information sources as a whole, but there may be different resources outside the catalogue that provide more granular information, and the user must determine how to locate these resources. According to Breeding (2010), this narrow scope may cause problems for users accustomed to search interfaces that provide more granular information and integrated results. In addition, to the problem of content, Breeding (2010) states that it is the interface itself. Many users expect the online public access catalogue to behave like the internet. In "In today's environment", Breeding (2010) wrote "it's just expected that web-based services allow users to think about what they want to accomplish on the site, not about the mechanics of operating the interface.

Furthermore, Breeding (2010) opines that NGCs should provide the means for users to locate desired information using intuitive interfaces and familiar features. Some of the current next-generation features include faceted browsing that presents users with various options and then allows them to drill down to what they want; relevancy rankings; images such as book cover art; outside and library user reviews and recommendations during the search process; as well as in search results, tag clouds and personalisation. Several of these upgrades can be accomplished by complete and correct coding in variable and fixed MARC fields, as well as

correct and complete summaries, tables of contents, and subject headings/ subheadings coded correctly in MARC coding (Breeding, 2010). Calhoun, Cantrell, Gallagher and Hawk (2009) conducted a study for the OCLC titled "Online catalogues: What users and librarians want". Their study looked at both user and librarian ideas of cataloguing quality.

Calhoun et al. (2009) in a study found that there was discord between user and librarian perceptions of quality and that these perceptions were driven by different outlooks and goals. The user identifies more with the information environment on the World Wide Web and seeks more direct access to online content. Users also wanted more of what the OCLC calls "enrichment data", such as tables of contents and summaries in catalogue records (Calhoun et al., 2009). Calhoun et al. further found that the librarians, on the other hand, were more focused on the most efficient means of fulfilling work assignments. Therefore, librarians' ideas of quality cataloguing were biased toward attributes like the elimination of duplicate records and fixing MARC coding errors, which may or may not affect information retrieval on the user's end. These findings do not mean that the librarians' views of quality were inconsistent with the users' views. Users are often unaware of what goes on behind the scenes of catalogue creation and do not understand the mechanisms that allow them to find what they seek. However, the OCLC report recommends that considering these findings, librarians pay more attention to the library's delivery services and the data elements that support a positive experience for the end user.

Hill (2008) examined quality cataloguing from a managerial point of view at the United States libraries and found several factors, such as the shift from local control of the library catalogue to cataloguing in a cooperative environment; the decrease in the professional review of cataloguing at the local level; and the change in catalogue technology from cards to computers that have forced a rethinking of what quality cataloguing means in the modern online era. Hill (2008) suggests that examining quality cataloguing from the point of view of the accuracy of the individual record is not enough. Instead, cataloguers need to re-examine the cataloguing process and focus on the bigger picture: "extent and content of individual records; extent and content of the database as a whole; the effectiveness and accuracy of mechanisms to expose those records; and that database to the World Wide Web have become the real measures of database quality" (Hill, 2008:23).

Yusuf (2009) carried out a study of management of change in cataloguing and surveyed practices in the Covenant University and the University of Lagos Nigeria and found the following methods that were adopted to ensure quality control over non-professionals' involvement in cataloguing: close supervision by librarians; training; designation of a librarian to constantly edit the catalogue for possible re-cataloguing; and the use of prepared worksheets by librarians to be keyed in by non-professionals. In South Africa, Retief and Terblanche (2006) carried out the inventory control project at the University of South Africa (UNISA) academic library. Their study examined the possible impact of inventory control on the service quality of the library and identified the library catalogue as a service quality component, considering that the library catalogue is a finding aid to provide relevant and accurate information to assist a patron in discovering information sources located in the library and that the quality of the metadata will affect the ability of the library to deliver quality services (Retief & Terblanche, 2006).

Matthews (2000) refers poor quality of metadata to incomplete, inconsistent and inaccurate bibliographic and authority records. Two performance measures were chosen, namely client complaining regarding the perceived state of the library catalogue before and after inventory control and the number of changes to the library catalogue after inventory control, indicating the number of incorrect item records on the catalogue. The project discovered 27 202 problems on the catalogue and the problems were corrected accordingly (Retief & Terblanche, 2006). Coetzee and Skelly (2008) opine that a good quality catalogue should be created in accordance with accepted standards. Darries (2017) indicates that at the University of South Africa (UNISA) library, quality assurance of the catalogue was done at different stages, self quality assurance was used for copy cataloguing and peer quality assurance was used for original cataloguing. Majola (2018) also indicates that catalogue quality assurance at UNISA was given priority and it also formed part of the key performance areas for cataloguers. The following areas were considered when checking the quality of the catalogue records: accuracy, completeness and compliance with the cataloguing standards.

3.7 Cataloguing systems

The library is now competing with the internet; therefore, the cataloguing systems or technologies should support the objectives of the library catalogue. Brisson (1995) opines that cataloguers have to operate and evaluate continually-changing hardware and software systems and work with systems personnel and computer vendors to either select new or

enhance existing systems. This will help the libraries to fit the information system into the library and not to make the library fit into the system. Cataloguers also need to be "fluent in reading systems manuals and must have knowledge of local in-house or other national formats" (Brisson, 1995). Arinola et al. (2012) point out that most libraries have moved away from manual cataloguing to embrace technologies. Mohammed (1997) is of the view that information technology is rapidly transforming the content and services of libraries. Mason (2004) observes that libraries are a classic example of how automation has impacted on the traditional ways in which work is done, particularly in cataloguing departments – changing how, and by whom, the way cataloguing is done.

Ajibero (2003) also notes that because of the impact of ICT on technical services, the roles of cataloguers have completely changed to now involve operations that have become integrated. Ajibero (2003) further asserts that cataloguers have become inter-dependent in their endeavour to provide bibliographic control and access. Brisson (1995) observes that "the cataloguer's role has been transformed into one that requires extended computing knowledge to act as mediator between computing and cataloguing activities". During this era of advanced technology, the library users must be able to access information resources at a remote area through the good catalogue. Arinola et al. (2012) carried out a study on the impact of ICT on cataloguing and classification of library materials in South West Nigeria and found that 57% of the libraries surveyed had adopted ICT for cataloguing and classification, while 43% did not.

When asked about the reasons for not adopting cataloguing systems, the respondents indicated that they lacked technical skills, the high cost of maintenance, systems applications failure, cost of staff training and lack of funds to implement. Their study thus recommended the adoption of ICT-oriented cataloguing and classification as it has an impact on cataloguing and classification, such as easy and increased accessibility, resource sharing, resource availability, reduced duplication of efforts and reliable storage and accuracy. Hard-Castle (2008) and Clayton (2018) are of the view that the organisation should carry out a feasibility study before implementing an information system to ensure that the project of implementing is a viable proposition for all users. The project could also consider the following system build steps: *Programming* (the IT department must programme the system, the programming must support the analysis and design phases and, if not, it means what was designed could not be programmed); *Develop the software code* (evaluate installation and maintenance efforts of

the software); *Customisation* (modification of software to meet organisational needs without destroying integrity of package thus raising development costs); *Testing* (check if the system produces desired results); *Unit testing* (test each unit separately. Pilot or introduce the new system into a single area of the organisation such as acquisition. If all goes well, install the new system in other areas; *System testing* (check if all parts function as planned); *Final certification and Documentation* (description of how the system works). The JISC and SCONUL LMS Study Report (2008) states that libraries reviewing and renewing LMSs contracts should seek increased value from their LMS investment, looking at ways to improve services by implementing features around the core LMSs. Libraries should work internally to develop interoperability across institutional systems based on a service oriented architecture; this will lay vital foundations for future services, possibly involving the de- coupling of LMS components.

Tonta (2008) observes that library information systems are facing a major change and in the near future, the library community will need to rethink and improve the way it provides its information services. In addition, libraries need to create an infrastructure that would support exchange and reuse of their rich data beyond the library domain. Because they provide information where the users are, they will also have to take better advantage of their centuries of experience in order to bring users back to the library by offering (in an effective and user-friendly way) information and services that other providers, such as internet, do not., Merčun, Švab, Harej and Žumer (2013) opine that the FRBR is not only bringing changes to the bibliographic data, but also to the cataloguing information systems. They assert that the changes that the model is bringing to the cataloguing environment are only the beginning (and not the end) of the road ahead, and the next steps are crucial for the success of the model and the transition towards more modern and useful bibliographic information systems. Mercun et al. (2013) assert that future online catalogues based on the FRBR should be able to create exploratory environments that move beyond the "list of manifestations" concept. The question, however, remains how such systems should be designed to better exploit the richness of the new bibliographic framework.

Coetzee and Skelly (2008) observes that, when the National Library of South Africa, Cape Town campus, converted the card catalogue to machine readable catalogue format, the cataloguing system was also considered when planning the conversion project. As a result, the software program called pMarc was created. It provided for sophisticated stable

programming, which was based on the AACR2/MARC 21 rules. The program had a capture screen that appeared as a form to be filled. All essential fields and tags had their own section on the capture screen. The essential fields or metadata considered were the physical description, publisher information, the language selection, user identification, title and shelf number. The non-essential fields were contained in a separate space where the cataloguers were allowed to select the fields to be used. Since most of the cataloguing rules were included in the program's design, pMarc can insert the subfield codes and the associated punctuations when creating the catalogue records.

3.8   Challenges of cataloguing

The Library of Congress Cataloguing Forum (1990) revealed the following problems mentioned by respondents as challenges they encounter in cataloguing: wide variation in practice from team to team and within teams; use of copy that is not reviewed for appropriate subject access; lack of timely maintenance of records and tools and degradation of the LCSH as a tool due to inconsistent policies; lack of management concern for quality cataloguing as reflected in abandonment of formalised quality control reviews; dismissal of quality review as too costly and time consuming; lack of corrective action; lack of appreciation for language and subject expertise, among other challenges.

Coyle and Hillmann (2007) assert that changes in the context in which libraries function have brought the library and its catalogue to a crisis point. According to them, the development of computer technology and electronic document production presents a significantly different challenge from what libraries had been 50 years ago; a time when information resources were rooted in the era of books and periodicals, and the card catalogue was the entry point to the library's physical holdings. Wilson (2003) observes that electronic information and technology have transformed the information environment that grasping of content, in order to organise, make accessible and relate them to other information resources meaningfully has become more challenging to cataloguing professionals. Nwosu (2013) asserts that the intrusion of ICT into the library and information business with its burgeoning new technologies, especially Web 2.0, has opened a new vista of challenges for cataloguers. Besides, since cataloguing rules are also changing, it is difficult to accommodate the technological innovation with data created using the old rules. Cerbo (2011) in Nwosu (2013) indicates that in today's cataloguing milieu it is a fact that digital technology has changed the profile of what cataloguers do, as well as their environment. Similarly, as the materials in most

libraries change from print to more digital and electronic formats, cataloguers and cataloguing continue to change as well, learning to work in broader digital environments such as digital repositories. These changes have caused some anxiety across the libraries as well as with society at large (Cerbo, 2011).The introduction of new cataloguing terms such as Resource Description Framework (RDF), the RDA, the FRBR and the FRAD also raised anxiety of cataloguing. Adebayo (2013) carried out a study on the challenges associated with cataloguing electronic resources in selected university libraries in South West Nigeria and found the following challenges, among others: lack of ICT skills, insufficient number of professional cataloguers and lack of knowledge of computer language such as the MARC and Dublin core. Glasser (2007) asserts that to meet the challenges of today's catalogue positions, cataloguers should develop a broader set of skills in addition to the traditional theory and practice of principles of bibliographic control and metadata standards, including management skills, computer skills, the ability to work in a team, flexibility and, perhaps most important of all, a willingness and ability to learn and embrace continuous change.

McCutcheon (2011) found the challenges of copy cataloguing using the RDA when surveying copy cataloguers at Suppressed State University. McCutcheon found that on average, the RDA records took more time to copy catalogue than records using the AACR2. Furthermore, McCutcheon (2011) states that, "just as with original cataloguing, the likelihood is that with practice and increased familiarity with RDA records, the time to copy catalogue will diminish to AACR2 levels in time. Striking in the literature of the AACR1 to the AACR2 and also the AACR2 to the RDA, is the lack of attention paid to copy cataloguing operations and the educational needs of copy cataloguers. It is as if copy cataloguing is expected to fall into place easily, without effort. Despite the wealth of literature about the transitions from one cataloguing code to another, there appears to be no literature addressing explicitly how copy cataloguing was affected by the AACR2, and how copy cataloguing will be affected by the RDA. One may glean lessons about learning a new cataloguing code to share with copy cataloguers from articles geared toward original cataloguers" (McCutcheon, 2011).

3.9   Impact of cataloguing on users

Xiaojuan and Na (2013) opine that cataloguing does not face users directly. However, the quality of catalogue is the important factor that affects user experience. Classification decides the subjects that a manifestation belongs to, which is the baseline of shelf listing. Users find

books depending on the support of classification. The descriptive cataloguing and subject headings help users to search books in the OPAC. The Precision Ratio and Recall Ratio of the OPAC are related to cataloguing and are affecting searching effectively. Cataloguing could be regarded as the "connecting bridge" between users and the library materials of any format or embodied in any manifestation. Hider (2008) investigated catalogue use at the state library of Victoria in Melbourne, Australia, in order to determine whether a broader spectrum of users might benefit from high-quality catalogue records and the findings indicated that users wanted more bibliographic, data including more content details and additional elements such as reviews and summary. They considered that all kinds of cataloguing errors and omissions in the catalogue might affect identification and selection of items. Errors with titles, summary, omission and incorrect information, typographical errors were identified to obstruct retrieval.

However, all errors, even punctuation errors, were considered at least sometimes relevant to hinder access of information sources and it is recommended that there should be no errors or omission in the state library catalogue. The elements that were considered useful, very useful or essential by at least 50% of users were title, author, subjects, contents, summary, dates and alternative authors (Hider, 2008). Jetty, Paul, Jain and Hopkinson (2011) and Chandrappa and Sunil (2017) states that users prefer OPAC 2.0 developments enabled by Web 2.0 technologies that have emerged such as: extending the usefulness and search features of the catalogue by harnessing more bibliographic MARC and circulation data for searching, and seamlessly incorporating data from other resources; social networking with personalisation and user community tagging and reviewing to provide a richer discovery experience. With an OPAC 2.0, library users may add comments or rating to records of books they have borrowed from the library. All this information may help another reader to know if the book they just identified will satisfy them. This is just an amplification of a specific feature of OPAC 2.0.

Various other functions of OPAC 2.0 are experimented, isolated or in specific groups of Integrated Library System environments (Jetty et al., 2011). Tomm (2012) points out that the availability of data such as author, title, summary, notes and others on the catalogue, opens possibilities for general overviews or comparisons of active interests that were previously not feasible and argues that the great value of a consistent form of description as well as effective access to complete metadata contributes positively to users' needs. Welsh (2015) opines that cataloguers should be concerned about how metadata could be used by researchers not just as

a source of information about where to find resources, but also as research data itself. Davis and Kent (2017) in their study of improving user access to Soviet military mapping: current issues in libraries and collections around the globe, surveyed forty libraries that hold Soviet military maps across the globe in the USA, UK, Latvia, Australia, Spain, Netherlands, Switzerland, Canada, Sweden, Estonia, Ireland, Denmark, Finland and New Zealand. Their study found inconsistencies and errors, especially in the recording of author name, title, place and dates on the catalogues. These inconsistencies prohibited users' access to those maps. Ndumbaro (2017) carried out a study of understanding user system interactions: analysis of OPAC users' digital footprints at the University of Dar es Salam library in Tanzania and found that users were likely to retrieve records when they searched for known items such as keywords, name of author, title, year of publication, subject terms and corporate authors. Tella (2018) states that the majority of undergraduate students in selected Nigerian universities used the OPAC on a weekly basis to locate books and other materials, as well as electronic materials.

3.10   Online catalogue user interface

Ruzegea (2012) asserts that most of the OPAC's interfaces were designed to minimise online connection time and printing options. It is therefore expected that a user-friendly designed interface would have, for instance, a simplified menu-driven interface utilising offline storage of search strategy, automatic logon procedures, and software-controlled navigated searching techniques. Boston, Rajapatiran and Missingham (2005) emphasise the importance of considering appropriate screen labelling, terminology and layout that would assist users to anticipate, understand and fully exploit the delivery of the clustered FRBR results. Umarani, Nagarkar and Jagtap (2008) state that the designs of the interfaces of some systems are not user friendly; while personal and extended help is possible from library staff to the users to search the OPAC effectively within the library, it becomes difficult to provide such help to online users. Therefore, it becomes essential to design user-friendly OPACs and to test them for usability on a regular basis.

Ruzegea (2012) carried out a study of usability of OPAC interface features among post-graduate students at International Islamic University (IIUM) Malaysia and found that there was no multimedia interface feature in the IIUM Library OPAC system. The majority of respondents (76, 7%) reported that the library OPAC had no multimedia interface like video, real players and audio features. This renders a weakness to the system as it reduces the level

of interaction of users to the system. These results underscore the conclusion reached by other studies that the design of any online IR system such as OPACs needs to be clear about user involvement and system role in order to facilitate user-system interaction. The OPACs' design should consider user needs and download sound documents to increase users' interactions. Concerning multimedia navigation on the OPAC of IIUM, Ruzegea's (2012) study indicates that the IIUM Library OPAC system interface supports multiple navigation, as the majority of respondents (80%) agreed. Multiple navigation is the ability to search multiple sources in one interface; for example, searching the library's catalogue, an online journals database, and/or a local image database through the library's OPAC. The benefit of multiple navigation is that it allows quick, efficient access to multiple sources of information without the user leaving the OPAC. O'Brien (1994) asserts that "most OPAC studies have identified the need to tackle related issues like free text search, field-directed searching, training users, adjunct thesaurus help, and ranking of retrieved references to reduce search failures, as most users could not be expected to put in extra effort into subjects".

Mehtab and Ansari's (2007) study of awareness and use of OPAC in five Delhi libraries found that the majority of respondents (51%) searched the document through the author approach, 28% through subject approach, 12% used title, whereas 9% used keywords search. Concerning simple and complex OPAC searches, Mehtab and Ansari's (2007) study revealed that respondents preferred simple searches to complex searches as users faced some difficulties in a complex search interface. The study also indicated that the majority of respondents (50%) were moderately satisfied with the successful operation of the OPAC. Morupisi and Mooko's (2006) study of using the OPAC at the University of Botswana revealed the limited use of advanced searching techniques by participants, although they were using the guiding menu. Respondents mostly used title; author and keyword search strategies and they indicated that they had difficulties with subject search. The majority of respondents reported to have encountered problems with the OPAC interface, they experienced the problem of typographical errors in search formulations and felt that the OPAC should display materials that nearly match their search terms, even when they contain errors, instead of display a "no matches found" message. In South Africa, Vorster's (2012) study of an analysis of web searches on Academic Online Public Access Catalogue, using the University of Cape Town as a case, found preference for general keyword searching over keywords from specific indexes and a low use of subject searching. The title search was also used frequently, followed by the author search. The study suggested that the lesson learnt from OPAC studies should

be used to improve the OPAC interface and the interface should be simplified with the needs of the user in mind.

3.11 Bibliographic utilities

Bibliographic utilities are "the collective names for a group of computer service organisations that maintain large databases of cataloguing records and offer various cataloguing support services and related products to libraries and other customers who access those records on an online, time-sharing basis" (William, 1998). The databases maintained by most bibliographic utilities are essentially online union catalogues. It is reported that all bibliographic utilities acquire cataloguing records in machine-readable form from the Library of Congress and other subscription sources. In most cases, their databases also include cataloguing records contributed by participating libraries. Furthermore, William (1998) indicates that regardless of source, databases maintained by bibliographic utilities contain two kinds of information: (1) descriptive cataloguing, authority, subject and classification data in the MARC format appropriate to the items being catalogued and (2) holdings information for libraries that have added specific items to their collections (Williams, 1998). Bibliographic utilities share their catalogue records through the WorldCat. WorldCat is a union catalogue that itemises the collection of approximately 72,000 libraries that participate in the OCLC global cooperative bibliographic utility (Blackman, Moore, Seikel and Smith, 2014).

The participating libraries collectively maintain the WorldCat database. According to Blackman, et al. (2014), the participating libraries share the catalogue through the OCLC by creating, editing and exporting the records. It is the responsibility of the participating libraries to maintain the catalogue and create accurate records (OCLC website). The OCLC was established in Dublin, Ohio, in 1967. It was founded by a small group of libraries that believed that by working together, they could find practical solutions for sharing records and reducing information costs (OCLC website). On the other hand, in 2000, a new company called Sky River launched a bibliographic utility directly challenging long dominant OCLC (Blackman, et al.). The founder, Jerry Kline, and Skyriver president, Leslie Straus, affirm that the services of Skyriver compete on quality, not on quantity, which is the size of its bibliographic database. They confirm that Skyriver has been populated with high-quality MARC records omitting substandardised, incomplete, skeletal records that often confound cataloguing records (Richardson, 2012). William (1998) indicates that there are some other bibliographic utilities such as the Research Libraries Group (RLG) which operates the Research

83

Libraries Information Network (RLIN); the Western Library Network (WLN); Auto-Graphics Incorporated, which operates the Impact/ ONLINE CAT service; A-G Canada, a subsidiary of Auto-Graphics that operates Impact/MARCit, a bibliographic utility originally developed by Utlas; Brodart Automation, which operates the Interactive Access System (IAS); the Library Corporation, which offers the ITS.MARC cataloguing service and Data Research Associates, which operates Open DRA Net, an internet-based information service that provides online access to cataloguing records and other databases.

3.12 Summary and gaps in literature

This chapter provided a review of the empirical and descriptive literature from different parts of the world on the subject under study. The literature review was organised thematically using themes gathered from the models and frameworks underpinning the study and the research questions. Therefore, the following issues were discussed: International cataloguing standards; cataloguing records; cataloguing skills; training of cataloguers; catalogue quality ; cataloguing systems; challenges of cataloguing, impact of cataloguing on users; online catalogue user interface and bibliographic utilities. Previous studies under each theme were highlighted where possible. Literature reviewed indicates the minimal use of cataloguing international standards, especially subject headings and authority control manuals. Cataloguers did not possess sufficient skills required by the library industry since the cataloguing standards are always reviewed. Literature also indicated that the cataloguers did perform quality control of their records. The concern regarding the use of cataloguing records by library users was not widely addressed by the literature. Literature is more on the cataloguing than on retrieval and satisfaction with these records when accessing information sources in their libraries.

The researcher believes that, even if the cataloguers could give the catalogue the necessary professional touches, as long as the users of the catalogue are not happy or cannot access the indexed documents, then the cataloguers' labour is in vain. The literature also shows a shortage of public libraries. Most studies were carried out in academic libraries. The cataloguing research in public libraries was not given enough attention by researchers. For example, the use of cataloguing international standards was not widely investigated in public libraries of the African continent, respectively. Cataloguing skills of public library cataloguers were also not widely investigated by researchers. Purongo's (2014) study on local editing practices in copy cataloguing did not sample public libraries of South Africa due to lack of information.

This study bridged the gaps by investigating the cataloguing practices from creation to use at the City of Cape Town libraries. The information systems used to catalogue is also not widely covered by the literature.

<center>**Chapter Four**</center>

<center>**Research Methodology**</center>

4.1   Introduction

Nachmias and Nachmias (1989) assert that research methodology is a "scientific system of explicit rules and procedures upon which research is based and against which claims of knowledge are evaluated". Leedy and Ormrod (2005) state that research methodology is the general approach a researcher follows when carrying out a research project. Shensul (2012) regards methodology as the strategies that researchers use to ensure that their work can be critiqued, repeated and adapted. These strategies guide the choices that researchers make with respect to sampling, data collection and analysis. There must therefore be a close association and integration among research questions, research methodology and methods of data collection. This chapter is organised into the following thematic sections: paradigm, research methods, research design, population of the study, sampling procedures, data collection procedures, data analysis strategies, validity and reliability of data collection instruments, ethical considerations and summary.

4.2   Research paradigms

According to Weaver and Olson (2006), paradigms are patterns of beliefs and practices that regulate inquiry within a discipline by providing lenses, frames and processes through which investigation is done. Lauden (1995) asserts that a paradigm is a "set of assumptions about the basic kinds of entities in the world, about how these entities interact, and about the proper methods to use for constructing and testing theories of these entities". Cole (2006) identifies the following paradigms: Positivist and interpretive paradigms. The positivist paradigm arose from the philosophy identified as logical positivism and is based on rigid rules of logic and measurement, truth, absolute principles and prediction (Cole, 2006). "The positivist philosophy argues that there is one objective reality. Therefore, valid research is demonstrated only by the degree of proof that can correspond to the phenomena that study results stand for" (Hope & Waterman, 2003). In contrast, the interpretive paradigm advocates for worldwide and universal truth, the view that there are many truths and multiple realities and focuses the holistic perspective of the person and environment (Cole, 2006). Creswell (2003) observes that the pragmatist posits that knowledge claims arise out of actions, situations and consequences, rather than antecedent conditions. Studies using pragmatism are concerned with "what works" and solutions to problems, rather than the methods used. In this case

<center>86</center>

researchers use all approaches to understand the problem. This paradigm is therefore suited for mixed methods approaches and was used to underpin this study.

4.2.1 Pragmatic paradigm

The paradigm recognises that there are many ways of interpreting the world and that in undertaking research, there is no single point of view that can give an entire picture of a phenomenon since there may be multiple realities (Saunders, Lewis & Thornhill, 2012). Creswell (2003) identifies the following two characteristics of the pragmatic paradigm: It is not committed to any one system of philosophy and reality, making enquirers adopt it to liberally draw from both quantitative and qualitative assumptions when they engage in their research. In this case, researchers are free to choose the methods, techniques and procedures of research that best meet their needs and purposes; it does not see the world as an absolute unity and truth, but what works at the time. The pragmatic paradigm is not based on a strict dualism between the mind and a reality completely independent of the mind.

This study adopted the pragmatic paradigm since it allows for the use of both qualitative and quantitative approaches, which makes it possible to look at the "what" and "how" of the study, thus providing full coverage of the research questions. This study sought to investigate the cataloguing practices of Cape Town Metropolitan libraries with the aim of informing the development of appropriate policies and helping to formulate capacity-building plans in public libraries. For the research problem to be fully addressed, both qualitative and quantitative data were required, hence the choice of the pragmatic paradigm. Moreover, since the pragmatic paradigm is concerned with what works and the fact that solutions to problems are more important than the methods used, it was found to be suitable in underpinning the current study. This study collected data from the technical staff (cataloguers), information staff (senior librarians, librarians and library assistants) and documents (OPAC records).

The pragmatic paradigm was therefore useful since participants were given an opportunity to express their views about their cataloguing practices and the use of the catalogue. In addition, the researcher was able to collect measurable data and information on statistical details such as how many records contained the required entities and attributes for easy access as emphasised by the international cataloguing standards. Ocholla and Ocholla (2011) also used mixed methods research and applied pragmatic paradigm when collecting data for their study of cataloguing and classification education and training in library and information science.

Their study also used content analysis to confirm interviews and questionnaire responses. Zhang, Salaba, Zeng, Zumer, Subirats, Nicolai, Hillmann and Neal (2010)also applied pragmatism in their study of FRBR implementation and user research of ACM digital library.

4.3   Research methods

Sarantakos (1997) defines methods as the tools of data generation and analysis. These are often chosen based on criteria related to or even dictated by the major elements of the methodology in which they are embedded, such as perception of reality, purpose of the research, and type of research units. According to Cohen, Manion and Morrison (2007) methods refer to a range of approaches used in research to gather data which are to be used as a basis for inference and interpretation for explanation and prediction. Most research methods can be classified based on the distinctions between qualitative, quantitative and mixed methods research approaches (Creswell, 2003; De Vos, Strydom, Fouche & Delport, 2005). According to McRoy (1995), the qualitative approach refers to research that elicits participants' account of meaning, experience or perceptions. It also produces descriptive data in the participants' own written or spoken words. The approach stems from an anti- positivistic, interpretive paradigm, it is idiographic and holistic in nature and aims mainly to understand social life and the meaning that people attach to everyday life. The quantitative approach aims to objectively measure the social world, to test hypotheses and to predict and control human behaviour.

A quantitative study may therefore be defined as an inquiry into a social or human problem based on testing a theory composed of variables, measured with numbers and analysed with statistical procedures in order to determine whether the predictive generalisation of the theory holds true (Creswell, 1994). On the other hand, the mixed methods approach lends itself to triangulating data sources by seeking convergence across qualitative and quantitative methods (Creswell, 2003). This study adopted the mixed methods approach where the qualitative aspect was dominant and the quantitative aspect embedded within it. The qualitative data were gathered from the cataloguers, senior librarian, librarians and library assistants. On the other hand, quantitative data was gathered from OPAC records, senior librarians, librarians and library assistants.

4.3.1 Mixed methods research

MMR focuses on collecting, analysing and mixing both quantitative and qualitative data in a single study or series of studies. Its central premise is that the use of quantitative and qualitative approaches in combination provides a better understanding of research problems that either approach alone cannot (Creswell & Clark, 2007). Tashakkori and Creswell (2007) note that MMR improves the quality of the research by minimising biases, limitations and weaknesses of one method. Creswell and Clark (2007) further asserts that the crossover achieved through MMR in a study tests the consistency of findings obtained using different instruments. It also increases the ability to control, or at least assess, some of the threats to the validity of the results and it reduces the risk of systematic distortions inherent in the use of only one method. Creswell (2014) asserts that MMR is a "research approach popular in the social, behavioural and health sciences, in which researchers collect, analyse and integrate both quantitative and qualitative data in a single study or in a sustained long- term programme of inquiry to address their research questions". Creswell and Clark (2007) identify the four major types of mixed methods as follows: triangulation, embedded, explanatory and exploratory.

This study used the embedded MMR approach in which the quantitative data set provided a supportive secondary role to the qualitative data set. Creswell, Plano, Gutmann and Hanson (2003) state that the premises of the MMR design are that a single data set is not sufficient, that different questions need to be answered and that each type of question requires different types of data. This study used MMR for the following reasons: MMR can answer research questions that other methodologies cannot. According to Punch (1998), quantitative research has typically been more directed at theory verification, while qualitative research has typically been more concerned with theory generation. The advantage of using MMR is that it enables the researcher to simultaneously answer confirmatory and exploratory questions and therefore verifies and generates theory in the same study. This study used the quantitative approach when analysing OPAC records to verify the data collected from the respondents as well as to verify the FRBR theory in the records by checking if the records contain the required entities and attributes as indicated by the FRBR. The qualitative approach was used to explore people's opinions and experiences of the FRBR and cataloguing in general. Creswell, Goodchild and Turner (1996) postulate that methods should be mixed in a way that has complementary strengths and non-overlapping weaknesses; one method gives greater

depth, while the other gives greater breath. In this study, the OPAC results complemented the primary data obtained from participants.

4.4 Research design

According to Stangor (2011), research design is a specific method a researcher uses to collect, analyse and interpret data. Ngulube (2009) and Du Plooy (2009) define research design as a plan of how the research will be conducted, indicating who or what is involved, and where and when the study will take place. Babbie (2010) asserts that research design provides the logical and strategic framework for conducting the research project and enables the researcher to gather evidence that answers the research questions. Mouton (2008) defines research design as a plan or blueprint of how one intends to conduct the research. De Vos (2005) is of the view that various designs used by researchers will differ depending on the purpose of the study, the nature of the research question and the skills and resources available to the researcher. Creswell (1998) identifies the following designs used in qualitative research: biography, phenomenology, grounded theory, ethnography and case study. Quantitative research design includes true experiments, quasi-experiments, correlation and survey studies designs (De Vos et al., 2005). Creswell (2003) identifies the following research designs as used in different approaches: quantitative (experimental designs, on- experimental designs such as surveys), qualitative (narratives, phenomenologies, ethnographies, grounded theory, case studies), MMR (sequential, concurrent and transformative). This study adopted sequential procedure in which the researcher seeks to elaborate on or expand the findings of one method with another method rooted in case study design.

4.4.1 Case study

According to Creswell (1998), a case study can be regarded as an exploration or in-depth analysis of a bound system (bounded by time and/ or place), or single or multiple cases over a period of time. The exploration and description of the case takes place through detailed, in-depth data collection methods, involving multiple sources of information that are rich in context. These may include interviews, focus group discussions, documents and questionnaires. A case study, according to Cohen, Manion and Morrison (2007), is an in-depth study of a particular situation; it provides a unique example of real people in real situations. Nisbet and Watt (1984), cited in Cohen, Manion and Morrison (2007), assert that a case study is a specific instance that is frequently designed to illustrate a more general principle

it is the study of an instance in action. The single instance is of a bound system, for example, a class, child, school, community and more. Yin (2014) suggests the following types of case studies: exploratory, descriptive and explanatory case studies. An exploratory case study is a type of study that is used to find patterns when performing a case study, hoping to be able to construct a model or establish a theory. A descriptive case study is built on the exploratory case study, but the goal is to obtain a deeper understanding of a certain topic. The researcher focuses on more detailed aspects of the subject, such as its effects or looks at it from other perspectives. An explanatory case study takes the research even one step further to explain how or why a certain action resulted in a certain way. The case study design was suited for this study because it allows the researcher to highlight specific events that are relevant to the case and focuses on groups of participants and seeks to understand their perception of events (Hitchcock & Hughes, 1995). Furthermore, the descriptive case study design was suited for this study as the researcher wanted to gather in-depth original data about cataloguing practices and the use of the catalogue in public libraries in the Cape Town Metropolitan.

A case study analysis of cataloguing and classification skills of library and information science practitioners in their workplace by Cabonero and Dolendo (2013) also used a case study to gather in-depth data about cataloguing and classification skills of information science practitioners at Benguet State University. Furthermore, Arinola et al. (2012) also used a case study of South West Nigeria when investigating the impact of ICT on cataloguing and classification of library resources. Similarly, Sadeh (2008) used a case study at City University London on users' experience in the library.

4.5   Population of the study

David and Sutton (2004) assert that population is every possible case that could be included in a study. A population therefore is the entire group of people that the researcher desires to learn about (Strangor, 2011:110); any set of persons or objects that possesses at least one common characteristic (Busha & Harter, 1980) or a target group who would be the subject of the research and about whom one is trying to say something (Punch, 2003). Onwuegbuzie and Collins (2007) describe a population as group of interest to the researcher; the group to which she or he would like the results to be generalised to. The population of this study consisted of cataloguers, senior librarians, librarians, library assistants and OPAC records in the 103 public libraries in the City of Cape Town Metropolitan. As of 29 February 2016 when the study was initiated the total number of permanent senior librarians, librarians and library assistants

in the 103 City of Cape Town Metropolitan libraries was 721 and the number of OPAC bibliographic records were around 500 000 (Western Cape Library Service Annual Review, 2015). Table 2 below presents the population of selected library personnel as well as OPAC records that were studied.

Table 2: Population of the study (Source: Western Cape Library Service Annual Review, 2015)

City of Cape Town libraries personnel and OPAC records				
Cataloguers	Senior Librarians	Librarians	Library Assistants	OPAC records
6	29	260	426	500 000

The six cataloguers were based in one centralised point at the Collection Development Unit, Cataloguing Section of the City of Cape Town Library and Information Services. Twenty-nine senior librarians, 260 librarians and 426 library assistants were all spread across the 103 libraries of the Cape Town Metropolitan public libraries.

❖ **Cataloguers**

Cataloguers were responsible for creating the catalogue records for all 103 libraries in one centralised system (OPAC) accessed by all Cape Town Metropolitan public libraries. They were selected for inclusion into the study because they are the actual creators of the records and were considered information rich in relation to international cataloguing standards and the cataloguing practices in general as far as policy issues are concerned.

❖ **Senior librarians**

Senior librarians held managerial positions in the libraries. They oversee all the activities of the libraries, including the catalogue. They were assumed to know the catalogue their libraries were using well. The responsibilities for the day-to-day activities of the libraries were vested in the senior librarians as well as the role of policy making, such as involvement in the selection of cataloguing system, collection development and so on.

❖ **Librarians**

Librarians were chosen for inclusion in the study because they used the catalogue on a daily basis. They help library patrons to access information in the libraries using the catalogue, they also train the patrons on how to use the catalogue, and they use the catalogue for material selection purposes, weeding out records whose information materials are no longer in use, adding the items, checking the duplicates of information sources, performing interlibrary loans and verifying the information sources available in the library.

❖ **Library assistants**

In most libraries, library assistants assist in all areas of the library; their main duties include shelving and shelf reading. When shelving, they use the notation allocated by the cataloguers on the spine of the book and other physical materials. They also assist patrons with searching the catalogue to obtain information sources. They were considered relevant for the study since they rely on the catalogue to manage the shelves, organise knowledge and satisfy the patron's information needs when retrieving information sources on the catalogue.

❖ **OPAC records**

These are the actual catalogue records that are created by the cataloguers and are used by the patrons to *find, identify, select* and *obtain* information sources held by the libraries. They were selected for inclusion in the study to verify the data obtained from the above respondents and to find out if they meet the requirements for bibliographic records as emphasised by the FRBR as well as to explore if they meet the objectives of the catalogue.

4.5.1 Sampling

According to Trochim and Donnelly (2001), sampling involves selecting units such as people, organisations, schools, libraries, communities, documents and more, from a population of interest so that one may fairly generalise the results of a study back onto the population from which they were chosen. Sampling is necessary because surveying every person or a whole set of units in a population is often impossible and it may be very costly in terms of time, money and handling of data (Huysamen, 1994). Furthermore, since research requires reliable forms of evidence from which to draw robust conclusions, samples help by enabling the detailed examination of a sizeable group or case to take place (Huysamen, 1994).

4.5.2 Sample size

Scholars tend to have different opinions concerning what constitutes the appropriate sample size. Chair, Sheatsley, Turner and Waksberg (nd) believe there is no rule governing what sample size should be used for all surveys. However, Krathwohl (1998) advises on the following key questions that should be considered when deciding the sample size for a study: "How precise do you want it to be?", "How much variation is there in the studied population?" Krathwohl asserts that a sample of 10-20% of the population is sufficient for the study. This study therefore considered 10 libraries, which is 10% of the population of libraries to form the sample as advised by Krathwohl. Within the 10 libraries studied there were 81 professional librarians, 10 of whom were senior librarians holding managerial positions, 24 librarians and 47 library assistants. The total number of the OPAC records available on the City of Cape Town Library System (CCTLS) was around 500 000. To determine the sample size for the catalogue records, Krejcie and Morgan's (1970) table of determining sample size was used. Krejcie and Morgan (1970) point out that the sample size depends on the purpose of the study, data collection methods and the style of research. Furthermore, Krejcie and Morgan (1970) assert that the population between 75 000 to 1 000 000 can use a sample size of 384. Leedy and Ormrod (2010) advise that when considering the sample size for a population beyond 5 000, the sample size is almost irrelevant and the general principle to apply is that, the larger the population, the smaller the sample and vice versa. Kumar (2014) opines that the researcher must limit the scope of the research to what is possible to reach a goal. The sample size for the OPAC records chosen was therefore 384. OPAC records were used as a supportive secondary role and to support the findings from the cataloguers, senior librarians, librarians and assistant librarians. Table 3 below indicates the distribution of the population of library personnel in the surveyed public libraries and OPAC records in all the 103 libraries available on the CCTLS union catalogue.

Table 3: Population of the study in the selected public libraries and sample of OPAC records

Staff population in the surveyed 10 libraries			Sample of OPAC records available on the CCTLS
Senior librarians	Librarians	Library assistants	OPAC records
10	24	47	384

The population of the selected 10 public libraries was stratified into three (senior librarians, librarians and library assistants). A census was applied on each stratum. Leedy and Ormrod (2010) posit that a census survey may occur if the entire population is less than 100 units. Moreover, Cohen, Manion and Morrison (2007) state that variability within homogenous subgroups is lower than the variation when dealing with the entire population. Furthermore, a census of 6 cataloguers was applied. The sample of 384 was used for OPAC records.

4.5.3 Sampling procedures

There are two major types of sampling methods used in research: probability and non-probability sampling. Kemper, Stringfield and Teddlie (2003) are of the view that a probability sample is one in which each unit in the population has the same known probability of being selected. Cohen, Manion and Morrison (2007) assert that probability sampling seeks representativeness of the wider population and is useful if the researcher wishes to make generalisation. The methods of probability sampling include simple random sampling, systematic sampling, stratified random sampling and cluster sampling. De Vaus (1991) argues that probability samples are most likely to produce representative samples. The researcher used systematic sampling to sample 10 libraries in the City of Cape Town Metropolitan. According to De Vos et al. (2005), with systematic sampling, the first case is selected randomly and then all subsequent cases are selected according to an interval, such as each fifth or tenth case on a list of names, depending on the percentage sample needed. The list of all libraries was available, the researcher randomly chose the 3rd library on the list and then used the interval of 10 (n= 10) to select the subsequent libraries. The libraries sampled were as follows: Belville library, Tafelsig library, Wynberg library, Milnerton library, Pinelands library, Plumstead library, Strandfontein library, Observatory library, Mowbray library and Grassy park library. OPAC records were sampled from the CCTLS database retrieved from a remote location via its portal coct.slims.gov.za. Simple random sampling was applied randomly to select the records. The records were accessed randomly using the surnames of the creators/ authors of the information sources from letters A to Z.

4.6 Data collection techniques

Data collection occurs when using different techniques or tools such as questionnaires, focus group discussions, observations, interviews and document analysis (Barbie, 2010). This study employed focus group discussions, individual face-to-face interviews, questionnaires and

document analysis to gather data. Table 4 indicates the instruments used to collect data from each category of participants.

Table 4: Instruments used to collect data from different participants

Instruments	Participants	Number of Participants
Focus group interviews	Cataloguers	6
Face to face interviews	Senior librarians	10
Questionnaires (A)	Librarians	24
Questionnaires (B)	Library assistants	47
Document analysis	OPAC records	384

4.6.1   Focus group

Focus group was used to collect data from six cataloguers. Krueger and Casey (2000) define the focus group as "carefully planned discussions designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment". Morgan (1997) describes focus groups as a "research technique that collects data through group interaction on a topic determined by the researcher". Focus group participants are selected because they have certain characteristics in common that relate to the topic of the focus group. Prince and Davies (2001) are of the view that middle-sized groups of six to 12 members can provide better results with respect to the quality of ideas and the satisfaction of group participants. Focus group discussions offer the participants the chance to express their views and share experiences to questions such as the challenges they encounter when cataloguing as well as their cataloguing practices in general. The semi-structured questions were used for further development of questions based on the cataloguing practices. Krueger (1998) opines that focus groups are typically 60 to 120 minutes long and indicates that open-ended questions are essential for focus groups. Questions should be kept simple and probing and follow-up questions should be used. The number of questions should be limited to time, attention and clarity constraints. Hyun and Yong (2008) used focus groups to collect data when testing FRBR compliant OPACs for their study of usability of digital institutional repositories in South Korea.

4.6.2 Interviews

Kvale (1996) defines a research interview as an interchange of views between two or more people on a topic of mutual interest. The interview is a flexible tool for data collection enabling multi-sensory channels to be used: verbal, nonverbal, spoken and heard (Cohen, Manion & Morrison, 2007). According to Walliman (2005), there are two main methods of conducting interviews: face to face and telephonic. Face-to-face interviews can be carried out in a variety of situations such as home, at work, outdoors or any place where the interviewer and interviewee feel comfortable and can be able to carry out the interview. Face-to-face interviews were used to collect data from senior librarians since it was convenient for them, as they were mostly required to be at their work stations to manage their respective libraries and to attend to major queries. Walliman (2005) identifies three categories of interviews as structured, semi-structured and unstructured.

The structuring of the interviews, according to Walliman (2005), depends on the type of information one wishes to elicit. For very precise answers to be obtained from quantitative and statistical analysis, a tightly structured interview is required with closed-ended questions formulated in a method like a questionnaire. However, if one needs to explore a situation and wishes to obtain information which one cannot predict, a very open and unstructured form of interview is appropriate. A semi-structured interview falls between the two, achieving defined answers to defined questions, while leaving time for further development of those answers and including more open-ended questions. Since the researcher interviewed 10 senior librarians individually, semi-structured interviews were used for the respondents to focus on the problem and, at the same time, provide opportunity for further developments in the questions and answers. This also helped the researcher to analyse data based on the questions asked. Related studies such as the study by Ocholla and Ocholla (2011) on cataloguing and classification education and training in library and information science/ studies departments in South Africa also used interviews to collect data from lecturers teaching cataloguing and classification courses.

Nampeya (2009), in a study of the use of cataloguing tools and resources by cataloguers in the University of Malawi libraries and the Malawi National Library Services in providing access to information, also used interviews to collect data from cataloguers and directors of libraries. Cabonero and Dolendo's (2013) study of cataloguing and classification skills of library and information science practitioners in their work place used interviews to collect data

from the participants. Miksa's (2004) study of survey of extent and utilisation of cataloguing tools and resources within technical services in the North Texas Public Libraries used interviews to collect data from participants. Schultz-Jones et al.'s (2012) study of historical and current implications of cataloguing quality for the next generation catalogue also used interviews to collect data.

4.6.3 Questionnaires

Questionnaires were used to collect data from librarians and library assistants. A questionnaire is a document containing questions designed to solicit information appropriate for analysis and it is usually expected to be completed personally by the respondent (Babbie, 2004). Pickard (2007) asserts that questionnaires are, without doubt, the single most popular data collection tool in any research involving human subjects. They are therefore widely used and useful instruments for collecting survey information, providing structured, often numerical data to be administered without the presence of the researcher and often are comparatively straightforward to analyse (Blaxter, Hughes & Tight, 2006). Denscombe (2007) identifies two types of questions: open-ended questions which leave the respondent to decide the wording of the answer, the length of the answer and the kind of matters to be raised in the answer; and closed-ended questions which structure the answers by allowing only answers which fit into categories that have been established in advance by the researcher. Denscombe (2007) opines that the data gathered by the open-ended questions are more likely to reflect the full richness and complexity of the views held by the respondents.

Pickard (2007) identifies the following reasons for using questionnaires: the researcher can reach a large and geographically dispersed community at a relatively low cost; data can be harvested from a larger sample than would be possible using any other technique and anonymity can be offered as well as confidentiality. They also tend to be used for descriptive or explanatory research. The choice of a questionnaire as one of the data collection instruments for this study was informed by the fact that the nature of the work of the targeted group of respondents (librarians and library assistants) requires them to be libraries serving patrons. In addition, they were spread over the selected 10 libraries which are geographically dispersed. As a result, it was also convenient for the researcher to distribute questionnaires in their respective libraries when visiting senior librarians for interview schedules. Interviewing them as well would be more time consuming because there were many of them. The use of the questionnaire therefore afforded them flexibility to complete the questionnaires at their

own convenient time. The questionnaires were structured to gather both quantitative and qualitative data. Therefore, closed-ended and open-ended questions were used to gather rich data about the use of the catalogue in Cape Town Metropolitan libraries. Similar studies such as Maphopha's (2000) study of the training of cataloguers in university libraries in South Africa. Schultz-Jones et al. (2012), Nampeya (2009) and Ocholla and Ocholla (2011) also used the questionnaires to collect data for their studies.

4.6.4 Document analysis

Maree (2007) observes that documents can be used to provide relevant data that are useful to corroborate evidence from other sources. When documents are used as a data gathering technique, the focus is on types of written communication that may shed light on the phenomenon being investigated. Document analysis can be used to supplement information obtained by other methods; for instance, when the reliability of evidence gathered from interviews or questionnaires is checked (Bell, 2010). According to Bell (2010), document research can involve the analysis of photographs, films, CD ROMS, videos, slides and other non-written sources and records kept in electronic form. Documents can be categorised into primary and secondary sources. Primary sources of data or original source documents are those which are usually unpublished and which the researcher has gathered from the participants or organisations directly (Maree, 2007). Secondary sources of data refer to any materials that are based on previously published works (Maree, 2007).

Examples of document data sources include company reports, published or unpublished documents, newspapers, journals, letters, websites and other internet materials (Bell, 2010). The researcher accessed the Cape Town Metropolitan libraries' OPAC and used the ISBD checklist to check if the records were compliant with the International Cataloguing Standards by checking how many records used the required tags as per the MARC coding and how data was coded. The OPAC display according to IFLA (2005) must be designed to serve the functions of the catalogue and ultimately to address the information needs of the library users. The OPAC records were accessed using the author's surname, which is one of the main entries and access points in the catalogue. Within the alphabet A to Z of authors' surnames, two records on each letter were randomly selected. For the selected records, the researcher examined and verified entities, attributes and their relationships such as author, dates associated with the author, title, edition, publication, description, notes, subjects, other authors, ISBN, classification notation and call number. The entities examined included the

WEMI, creators and subjects as stipulated by the ISBD, the FRBR, the FRAD and the FRSAD models. These models indicate the entities and attributes that should be transcribed in the catalogue records for the users to access them on the OPAC.

Chen and Chen (2004) opine that, in order to clarify the process of metadata analysis, conceptual models such as the FRBR can be used. The entities and relationships in the FRBR can be considered as a basic structure for record representation. Chen and Chen (2004) further indicate that it becomes popular to adopt the FRBR model as a foundation framework for metadata analysis and developing metadata format. Desley (2002) opines that in order to respond to user requests in the digital era, the FRBR model is selected for analysing MARC records. On the basis of the MARC 21 analytical report, Desley (2002) created a record metadata entry which includes attributes and relationships associated with records, segments, fields and data elements such as title, author, physical description, notes, standard number, subjects and so on. Hickey, O'Neil and Toves (2002) initiated a series of experiments on the FRBR model and selected 1 000 bibliographic records from the WorldCat database as an examination of the FRBR model. The FRBR model, which is full of relationships between entities, was found useful for analysing bibliographic records and as a real example of how to achieve finding, identifying, selecting and obtaining functions.

Furthermore, Tillet (2004) emphasises that for the user to find the work by its author, the author should be recorded on the catalogue, to identify the manifestation by its ISBN, the ISBN should be recorded to select the manifestation by its physical format, the physical description should be recorded and so on. If all the above metadata are available on the catalogue record, the user would be able to acquire an entity through loan or electronic remote access (Tillet, 2004). In addition, the entity relationship model from the database management field by Chen (1976) was considered as a reference for data analysis. The entity relationship model is an abstract and conceptual representation of data or pieces of metadata such as title, author, date, description, subjects and notes to complete the catalogue record or a set of connected parts forming a complex whole. The researcher therefore used the ISBD checklist as indicated in the AACR2 (10. B1) to check if the required metadata are available, accurately recorded and comply with the cataloguing standards since they are OPAC display and user interface. Moreover, the researcher used the checklist evaluation tool created by Ajis and Manaf (2013), which they used to analyse bibliographic records sampled from Malaysian union catalogue known as Katalog Induk Kebangsaan (KIK). The bibliographic data were analysed

based on its compliance with the MARC 21 and Anglo American Cataloguing Rules 2nd Revision (AACR2R). The same method was used by Chapman and Massey (2002) whereby two sets of checklists were developed by the UK Office for Library and Information Networking (UKOLN) to evaluate the accuracy, validity and reliable catalogue records.

4.7   Data collection procedures

This section gives an account of how the researcher prepared for and undertook the data collection. Prior to the commencement of data collection, the researcher prepared the instruments to be used in the data collection, including the focus group schedule for the cataloguers, the interview schedules for the senior librarians, and the questionnaire for librarians and library assistants. These instruments were later subjected to a peer debriefing to improve the validity of the instruments (Polit & Beck, 2004). Peer debriefing, according to Polit and Beck (2004), involves sessions with peers to review and explore various aspects of the inquiry. Polit and Beck (2004) assert that peer debriefing exposes components of research such as research instruments to a critical review by other researchers who could be experienced in either the methods of naturalistic inquiry, the phenomenon being studied, or both. In this study, the supervisor was asked to critique the data collection tools and his inputs helped improve the tools. Pilot study was carried out to prepare for the main study (see section 4.8.). After receiving the written permission to carry out the study from the City of Cape Town executive director of community services, (see Appendix M) and the University of KwaZulu-Natal research office (see Appendix J), the researcher contacted the cataloguing section at the collection development unit and sampled libraries to schedule appointments.

The management of the libraries and cataloguing section was helpful and permitted the researcher to visit their libraries at any time on the selected days to carry out the study. The researcher first visited the cataloguers at their working stations, and then they gathered in the boardroom for the focus group discussion. The researcher introduced herself and the study. She also explained its aims and ethical clearance to the cataloguers indicating to them that they were not forced to participate in the study, then handed the written informed consent document and asked them to sign the consent form if they agreed to participate in the study, which they all did. Focus group discussions were audio recorded with the permission of the respondents, and the researcher also made hand-written notes as a backup to the audio recording. Denscombe (2007) states that audio recording of interviews offers a permanent record and one that is fairly complete in terms of the speech that occurred. Denscombe also opines

that audio recording lends itself to being checked by other researchers; hence the researcher recorded the interviews. The focus group discussion took about 40 minutes to complete.

After the focus group with the cataloguers, the researcher visited one library every day, introduced herself to the senior librarian who then introduced her to the librarians and library assistants. The researcher then introduced the study, its aim and ethical clearance to the librarians and library assistants, indicating to them that they were not forced to participate in the study and that all the information was available on the first page of the questionnaires; the informed consent document and form were attached to the questionnaires. The questionnaires were then handed to those who were willing to participate in the study. The senior librarians were interviewed in their offices. The researcher started by reading the informed consent document and gave them consent forms. Interviews with the senior librarians were audio recorded, but some refused to be recorded. The researcher then made hand-written notes and relied on them when analysing data. The interviews took about 20 to 30 minutes, depending on each participant. While interviewing the senior librarians, the librarians and library assistants who agreed to participate in the study were completing the questionnaires; those who wanted more clarification about the questions waited for the researcher and asked her when she was done with the interviews. All the questionnaires were then collected from each library every day.

4.8   Data analysis strategies

Marshall and Rossman (2016) describe data analysis as the process of bringing order, structure and meaning to the mass of collected data. Data analysis, according to Barbie (2010), is the process of obtaining meaning and implications from raw data. The data analysis methods associated with mixed methods research are content analysis, descriptive statistics and statistical testing (Edwards & Talbot, 1994). The methods used in the analysis of data in this study were dependent on the methods used for data collection. According to Kreuger and Neuman (2006), qualitative and quantitative analyses are similar in four ways. Both forms of data analysis involve:

- Inference – the use of reasoning to reach a conclusion based on evidence
- A public method or process – revealing the study design in some way

- Comparison as a central process – identification of patterns or aspects that are similar or different
- Striving to avoid errors, false conclusions and misleading inferences

In this study, the researcher used the field data (interviews, focus group and questionnaires) and OPAC records as evidence to reach a conclusion on cataloguing practices of the CCTML. To avoid false conclusions and misleading inferences, the researcher rephrased the statements of the participants, identified main themes ("meaning units") within the transcribed text and rephrased it to be plain and easy to understand text. Qualitative data findings were quoted, interpreted and presented using thematic categorisation and narration, including verbatim quotes to reflect the voices of respondents. Greeff (2011) outlines the following procedures of qualitative content analysis:

❖ **Recording of data** in this study was done by audio recording on a digital voice recorder, taking notes served as further backup and provided the context to the interviews.

❖ **Verbatim transcription** of the responses from the interview commenced as soon as possible; the original interview of the completed verbatim transcription was listened to again. Transcription notation symbols, comments and the taking of field notes as suggested by Henning, van Rensburg and Smit (2004) were used to capture non-transcribable text to gain as much of the complete picture as possible. In an endeavour to ensure the reliability and validity of the data, the entire transcribed text and field notes were thoroughly read at first to obtain an overall and comprehensive impression of the content and context. This was done before the abstraction process of coding began, where units of meaning are identified or labelled. The transcribed text was arranged in meaningful themes and categories. The process of qualitative analysis outlined above served as a framework to ensure that the initial data (focus group and interviews) were systematised by thematic organisation to form part of the data that were connected to and combined with the quantitative data. Questionnaire data were analysed using thematic categorisation and statistical analysis to cover quantitative data, whereas the OPAC records were analysed using SPSS to generate frequencies, numbers and inferential statistics in tables. Firstly, the quantitative data were presented in either table format or by means of charts and other graphics to present data visually for a quick understanding. Each presentation of data provided an indication of numerical scores and

percentages according to related categories to provide an overview of the particular grouping of data. Secondly, the visual presentation of data (tables, charts and graphics) in numbers and percentages enabled the researcher to offer an analytical description and interpretation of data by means of descriptive statistical procedures.

4.9   Validity and reliability

Reliability refers to the ability of a technique, applied repeatedly to the same object to yield the same result each time, whereas validity can be defined as the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration (Babbie & Mouton, 2001). Cohen et al. (2007) identify the following kinds of validity: content validity, criterion-related validity, construct validity, internal validity, external validity, concurrent validity, face validity and systematic validity. To ensure the validity of the instruments for this study, the researcher applied content validity. Cohen et al. (2007) assert that to demonstrate this form of validity, the instrument must show that it fairly and comprehensively covers the domain that it purports to cover. The researcher must ensure that the elements of the main issue to be covered in the research are a fair representation of the wider issue under investigation.

The tools used to collect data for this study were improved by peer debriefing. To achieve the reliability of the instruments, the researcher carried out a pilot study at the Msunduzi Municipality public libraries, because the Msunduzi Municipality also used the same cataloguing system as the CCTML and they served the same patrons from the public domain as the CCTML. The pilot used a focus group of three cataloguers based at the Bessie Head Library in Pietermaritzburg, KwaZulu-Natal province. The pilot helped to record the time spent on the focus group and decided whether it was reasonable, assessed whether each question gave an adequate range of responses and checked that all questions were answered appropriately. In addition, the researcher randomly sampled 10 library staff members (senior librarians, librarians and library assistants). Face-to-face interviews were carried out with three senior librarians and questionnaires were distributed to three librarians and four library assistants. The results of the pilot study helped to reword or rescale questions that were not answered as expected. Ten OPAC records of the Msunduzi Municipality Public Libraries were also retrieved to check if the chosen access points would be able to retrieve the information sources on the OPAC.

4.9.1 Pilot data findings

The researcher carried out a focus group discussion with three cataloguers based at Bessie Head Library, three senior librarians, thee librarians and four library assistants of the Msunduzi Municipal Libraries in KwaZulu-Natal (East Wood Library, George Town Library and Ashdown Library). Ten OPAC records were retrieved to check the accuracy of the search index and access points in retrieving the information sources. The aim of the pilot was to gage the time of the focus group discussion, interviews and completion of the questionnaires as well as to gather whether respondents would understand the questions and the contents of the questionnaires. The pilot also helped to redirect the questions to the correct group. For example, when interviewing the senior librarians, they were calling the librarians and library assistants to come and assist with other questions and also indicated that they were not involved in issues such as searching the catalogue. That helped the researcher to redirect those questions to the librarians.

4.9.1.1 Findings from focus group

All participants were qualified librarians and obtained their qualification from different institutions. The participants indicated that cataloguing skills include knowledge of cataloguing tools, ability to create accurate catalogue records and knowledge of computers. Concerning cataloguing training, the participants indicated that they were taught cataloguing at their respective library schools and were taught descriptive cataloguing, subject analysis and classification. They also indicated that they attended a three-day RDA workshop at their workplace. Concerning the use of international cataloguing standards, the participants indicated that they used the AACR, the DDC and the LCSH. The RDA was not yet used by the participants. The participants indicated that they did not have the in-house standards; they used the international standards when creating catalogue records. About how they created the catalogue records, the participants indicated that they first checked if the record existed on their database and, if it existed, they added the item information; if it did not exist they created the new record on their local database. Regarding the type of cataloguing the participants performed, findings indicated that they performed mostly copy cataloguing because most of the information sources already existed on the OCLC and some had already been catalogued by the provincial libraries' cataloguers. However, they indicated that some of the records existing on the OCLC were not accurate and were missing some information; they then created the new records. The other questions were about the WEMI. The participants did not understand the question even after the researcher had explained; therefore

the researcher changed the question to the entities and attributes where the participants were asked which entities and attributes they transcribed on their catalogue records. The participants indicated the *title, author, publication, physical description, subject, standard number and classification number.* About the quality control mechanisms they used to maintain the quality of their records, findings indicated that they did not have the catalogue quality control mechanisms in place. The other question was about the cataloguing system they used and how they were involved when the system was purchased. The findings indicated that the cataloguers were not involved at all when the new cataloguing system was purchased. Regarding the challenges, they experienced in cataloguing, the participants indicated that they were understaffed and had to catalogue many sources. They also indicated the difficulties of adhering to standards sometimes and the time they spent when performing copy cataloguing as the catalogue records they copied had limited information. The findings from the pilot study were satisfactory and the researcher was confident that she would draw rich, satisfactory data from the participants of the main study, as they would be able to understand and answer the questions accurately.

The pilot also trained the voice of the researcher when asking and rephrasing questions in the language that the participants understood. Some questions such as the WEMI question were rephrased in order for the participants to understand it. Another question of the bibliographic utility was also removed from the questions because the participants did not understand it. The researcher was also able to measure the time and estimate the time that the focus group of the main study could take.

4.9.1.2 Findings from senior librarians' interviews
The participants were asked how useful the catalogue records were in accessing the information sources. Their responses indicated that some information was not fully transcribed on the catalogue records and made it difficult to retrieve the information sources. They were also asked to define the quality catalogue and their responses indicated that the quality catalogue should facilitate access to information sources. The participants were again asked to evaluate the quality of CCTML catalogue and they indicated that some catalogue records were not of good quality. Furthermore, the participants were asked to explain the extent that they used advanced search strategies and techniques when they search the catalogue. They then called the librarians to come and assist in answering the question and it was indicated that the senior librarians did not always search the OPAC, the librarians did.

The researcher then removed the question from the senior librarians' interview to the librarian's questionnaire.

The following questions (search techniques offered by the OPAC, entities and attributes, access points' attributes and OPAC interface ease of use) were also moved from the senior librarians' interview schedule to the librarians' questionnaire because the senior librarians indicated that the librarians could answer those questions better. The participants were then asked if their OPAC offered fuzzy search techniques and they indicated that it did not. The researcher asked if the OPAC accommodated complex searches such as Boolean, limits and others. The participants were not sure but indicated that to the best of their knowledge, their OPAC did accommodate complex searches. Regarding the OPAC user interface, the participants were asked about the extent to which the OPAC has influenced the use of the system to meet users' needs. The responses indicated that the participants did ask the library staff for help when seeking for information. They were asked if they were involved on the purchase of the system. The respondents indicated that they were not involved at all when the decision of purchasing the system was taken. The participants were asked if they offered their staff OPAC training and responses indicated that they did have some workshops on the use of the system. The participants were asked about the challenges they encountered concerning the OPAC and they indicated that their challenges were related to the network where they could not use the OPAC when the system was down and when there was no electricity in the libraries. The pilot with this group also helped the researcher to rephrase some questions and direct some questionnaires to the librarians.

4.9.1.3 Findings from librarians' questionnaires

The librarians' questionnaires were also piloted to find out if the librarians would be able to understand the questions and provide satisfactory results. The questionnaires also had a question to rate the usability of the catalogue records in retrieving information sources, using the scales from poor to excellent. The majority indicated fair and one rated it good. They then defined a quality catalogue as the catalogue that provides full information that would lead to access of information sources. Concerning what they used the OPAC for, the majority of respondents indicated that they mostly used the catalogue to assist patrons. About the OPAC interface's perceived ease of use, the participants indicated that their OPAC was user- friendly. The participants were asked to explore their use of the OPAC advanced search strategies and techniques. Their responses indicated that they mostly used basic searches such as author

and title search. They were also asked which entities and attributes their catalogue had and the other question on entities and attributes their catalogue lacked. Their responses indicated that their catalogue always contained author, title, ISBN and call number, and they indicated that their catalogue lacked notes, summaries and subjects. There was also a question of search techniques offered by the OPAC. The responses indicated that their OPAC mostly offered the basic searches. The questionnaire also had a question of OPAC challenges where the participants indicated that they had challenges with the network – the system was often down and when the spelling was wrong, the OPAC did not access information sources. These responses seemed to suggest that the librarians understood the questions on the questionnaire; however, some asked the researcher for clarification of the questions they did not understand.

4.9.1.4 Findings from library assistants

The participants were asked to indicate the activities performed on the catalogue, the participants indicated that they mostly assist patrons when using the catalogue. The participants were asked to rate the usability of the catalogue given the scaling rate (poor, fair, good and very good). The responses indicated that they rated their catalogue as fair and good. They were also asked how frequently they used the catalogue when helping patrons given the options (always, very often, sometimes, rarely and never). Their responses indicated that they sometimes used the catalogue when helping patrons. Concerning the OPAC access point they used to retrieve information sources, the majority of participants indicated the title and author. The other question was about how the participants modified the search queries when they did not retrieve the desired results and were given the options (I change the access point; I ask colleague for help; I ask the cataloguer and I give up). The participants indicated that they asked their colleague for help. About the challenges of the OPAC, they indicated that sometimes the internet is offline or too slow. About the OPAC training, the respondents indicated that they attended training and it helped them to understand the OPAC better. According to the responses, the researcher was of the view that the participants understood the questions and provided satisfactory results.

4.9.1.5 OPAC records

The researcher was able to access the OPAC records using the author entry. It showed that the author access point could be used as the main entry to access the catalogue records for the main study.

4.10 Ethical considerations

Ethics are as important as scientific considerations when reviewing a research project. Respect for dignity, safety and wellbeing of participants should be a primary concern in the research involving human participants (Barbie, 2010). There are two perspectives from which one can view the ethical issues in research according to Walliman (2005). One is concerned with the values of honesty and frankness and personal integrity, the other with those of ethical responsibilities to the subjects of research such as consent, confidentiality and courtesy. The research complied with principles relating to access, power, harm, deception, secrecy and confidentiality in the study as indicated by Cohen et al. (2007). In this regard, respondents were duly protected by anonymity in terms of confidentiality during the process of data collection, analysis and publication of the dissertation or when disseminating the outcomes of the study. The names of the respondents were not quoted anywhere when data were analysed and interpreted; the researcher also made sure that the answers given by the respondents when the data were collected were not linked to them when the data were reported. To address ethical issues, the study complied with the University of KwaZulu- Natal's code of research ethics, which is guided by the following principles: honesty and integrity; safe and responsible methods; and fairness and equity for the respondents. The permission to carry out the study was sought and secured from the executive director of community services at the City of Cape Town and the management of the respective libraries. The respondents were assured that their privacy, confidentiality and anonymity would be observed throughout the research process. They were asked to sign the informed consent, which, among other things, explained that there was no monetary gain for those who chose to participate in the study, that they could voluntarily withdraw from the study at any time without any sanctions and the results of the study would be treated with confidentiality and anonymity. All sources used for the study were acknowledged and referenced.

4.11 Limitations of the study

Leedy and Ormrod (2010) assert that limitations are potential weaknesses in the study and are out of the researcher's control. Although the gatekeepers, cataloguers and senior librarians were willing to participate in the study, some of the librarians and most library assistants were not willing to participate; they also had a problem with signing the consent form and writing their names. They indicated that if they signed, their participation would no longer be confidential. Some, especially library assistants, were scared and did not participate in the study.

These limitations affected the results of the study as the researcher was hoping to get everyone to participate to obtain more results and opinions concerning the study. The researcher assumed that since majority of them may have not experienced tertiary education, they did not have much information concerning research. To overcome the limitations, the researcher indicated that they did not have to sign the consent forms if they did not want to do so and that they may continue to complete the questionnaire without signing the forms, but they should still read the information on the consent document. They then continued to participate in the study.

4.12 Summary

This chapter described the research methodology used in the study. It discussed the overall research approach for the study and presented the research design. The chapter presented research paradigms, research methods, research design, population of the study, sampling procedures, data collection techniques, data analysis strategies, validity and reliability and ethical considerations. Table 5 below is a mapping of research questions to the research approach, instruments and data analysis strategies.

Table 5: Mapping of research questions to approach, instruments and analysis strategies

Research questions	Approach	Instrument	Analysis
What skills do the cataloguers of the Cape Town Metropolitan libraries possess?	Qualitative	Focus group	Content analysis
To what extent do cataloguers in the Cape Town Metropolitan public libraries adhere to international standards when creating records in the online catalogue?	Qualitative	Focus group Document analysis	Content analysis SPSS
How are the catalogue records created on the system by cataloguers in the Cape Town Metropolitan used within and across the public libraries?	Qualitative & quantitative	Focus group interviews questionnaires	Content analysis SPSS
How are the new RDA standards applied in public libraries in the Cape Town Metropolitan to ensure that they accommodate entities and attributes as described by the international cataloguing standards?	Qualitative Quantitative	Focus group Document analysis Interviews Questionnaires	Content analysis SPSS
What records quality control measures are used in computerised cataloguing by public	Qualitative	Focus group	Content analysis

Research questions	Approach	Instrument	Analysis
libraries in the Cape Town Metropolitan?			
How effective is the computerised cataloguing system of the City of Cape Town Metropolitan public libraries in retrieving information sources?	Quantitative	Questionnaire	SPSS
What are the challenges experienced by public libraries in the Cape Town Metropolitan in computerised cataloguing?	Qualitative Quantitative	Focus group Interviews Questionnaires	Content analysis

Chapter Five

Data Analysis and Presentation of Findings

5.1 Introduction

Marshall and Rossman (1990) describe data analysis as the process of bringing order, structure and meaning to the mass of collected data. They describe the process as a messy, ambiguous, time-consuming, yet creative and fascinating process. Analysis, according to Neuman (2006) means the categorising, ordering, manipulating and summarising of data to obtain answers to research questions. The purpose of analysis is to reduce data to an intelligible and interpretable form so that the relationships of research problems can be studied, tested and conclusions drawn. Walliman (2005) asserts that analysis must be made in relation to the nature of the research problem and the specific aims of the research project, and indicates that the reasons for doing research are to measure, make comparisons, examine relationships, forecast, construct concepts and theories, explore, control and explain.

This study sought to address the following research questions: "To what extent do cataloguers in public libraries in the Western Cape province adhere to international standards when creating records in the online catalogue?", "What skills do the cataloguers of Cape Town Metropolitan libraries possess?", "How are the cataloguing records created on the system by cataloguers in the Western Cape province used within and across the public libraries?", "How are the new RDA standards applied to ensure they accommodate entities and attributes as described by the international cataloguing standards in public libraries in the Western Cape province?", "What records quality control measures are used in computerised cataloguing by public libraries in the Western Cape Province?", "What are the challenges experienced by public libraries in the Western Cape province?" This chapter therefore presents and analyses data obtained from the population of the study.

The data were gathered through focus group discussions with the cataloguers, face-to-face interviews with the senior librarians, questionnaires with the librarians and library assistants. Qualitative data gathered through the focus group, face-to-face interviews and open-ended questions from questionnaires were analysed thematically and presented in narrative discussions as well as coding from the exact words of participants, whereas quantitative data gathered from the questionnaires through closed-ended questions were analysed using SPSS

software to generate descriptive statistics that were presented in tables, charts and percentages.

5.2   Response rate

In research, response rate also known as completion rate or return rate is the number of people who answered the survey divided by the number of people in the sample. It is usually expressed in the form of a percentage (Holbrook, Krosnick & Pfent, 2007). Punch (2003) advises that this rate is important and should not be left to chance. High survey response rates help to ensure that survey results are representative of the target population. According to Punch (2003), a survey must have a good response rate to produce accurate, useful results. Groves (1990) indicates that the acceptable response rates are important when the study's purpose is to measure effects or make generalisations to a larger population, but less important if the purpose is to gain insight into a phenomenon. The purpose of this study was not to generalise to other metropolitans or provinces, but to gain insight into the practices of cataloguing in the CCTML.

According to Groves (1990), depending on how the survey is administered, acceptable response rates may vary: for mail: 50% is adequate, 60% is good, 70% is very good; for phone: 80% is good; for email: 40% is average acceptable rate, 50% is good, 60% is very good; for online administration: 30% is the acceptable rate and average; for classroom paper: more than 50% is considered good; for face-to-face administration: 80-85% is considered good. Other scholars have different opinions about the acceptable response rate levels. Babbie and Mouton (2001), for instance, believe a response rate of 50% is adequate for analysis and reporting, while a response rate of 60% is good and 70% is very good. For this reason, different studies may obtain different but acceptable response rates depending on the purpose and nature of the study. This present study obtained data by using different techniques from different categories of respondents. The response rates of the different techniques used as presented in Tables 6 and 7 concur with Groves (1990) that the smaller the required proportionately adequate sample, the bigger the response rate should be and vice versa.

Table 6: Focus group interviews response rates

Target group	Target number	Participated	Percentage
Cataloguers	6	6	100%

Table 7: Individual face-to-face interviews response rates

Target group	Target number	Participated	Percentage
Senior librarians	10	10	100%

A similar case study analysis of "cataloguing and classification skills of library and information science practitioners in their workplaces" by Cabonero and Dolendo (2013) targeted a small group of five cataloguers at Baguio-Benguet libraries and obtained a 100% response rate. For the current study, in addition to the cataloguers and senior librarians, 24 questionnaires were distributed to librarians and a response rate of 75% (18) was reached. Forty-seven questionnaires were distributed to library assistants and a 60% (28) response rate was reached. The study of awareness and use of the OPAC by students of Obafemi Awolowo University, Ile-Ife, Nigeria by Fabunmi and Asubiojo (2013) also used a questionnaire and received a response rate of 65%.

5.3 Findings from focus group

The researcher conducted one focus group interview with six cataloguers based at the collection development unit, cataloguing section at the City of Cape Town Library and Information Services. The focus group interview commenced with the recording of demographic information of the participants. Findings were then organised into themes obtained from the research questions indicated above. The themes were as follows: cataloguing skills; international standards; cataloguing records; entities and attributes; catalogue quality control; cataloguing system and challenges of cataloguing.

5.3.1 Demographic background

Demographic questions are designed to help survey researchers determine what factors may influence a respondent's answers, interests and opinions. Similar studies such as that of Morupisi and Mooko (2006), Cabonero and Dolendo (2013) and Hosein and Bowen-Chang (2008) also started their questions by gathering demographic background of the participants to make informed conclusions. The demographic information of the respondents included

age, professional qualification, institution from which they graduated and the year of graduation.

5.3.1.1 Age of the respondents

Although cataloguing is a team effort, it has been shown in various scientific disciplines that opinions on a vast number of topics differ between different age groups. For example, Cabonero and Dolendo (2013) conclude that the inconsistency of the records found in their study might be due to the age of the cataloguers. In the current study, the researcher wanted to find out what the ages of the respondents were. The findings indicated that out of six cataloguers, five were aged between 46 to 50 years, and one was 60 years old. This dominance of a mature population is also found in other cataloguing studies and it highlights an urgent need for succession planning within the cataloguing department because in the next ten years, all these cataloguers may be due for retirement. Already one cataloguer was due for retirement at the time of the study.

5.3.1.2 Professional qualifications of respondents

Cataloguers require at least a degree in library and information studies or postgraduate diploma in library and information studies or Bachelor of Technology Information Studies in order to perform the cataloguing duties. All the participants were qualified librarians, two had obtained postgraduate degrees, one had a master's degree, two had obtained a BBibl., one had PGDIS and BTech, obtained from different accredited universities in South Africa, such as Rand Afrikaans University (RAU), University of Cape Town (UCT), Stellenbosch University, University of Western Cape (UWC) and Cape Technikon. Two participants obtained their qualifications in 1989, two in 1993, one in 1991 and one in 2014. The findings suggest that the cataloguing team consisted of qualified staff who seemed to have experience in the LIS sector and who could contribute a lot to the cataloguing sector using the knowledge they acquired through academic training and job experience.

5.3.1.3 Duration of cataloguing

In order to determine the participants' experience in cataloguing, the researcher wanted to find out the period which the participants have spent working as cataloguers. The findings indicated that one has been cataloguing for 15 years, four participants have been cataloguing for between five and eleven years and one has been cataloguing for two years. These findings

indicate that the cataloguers had extensive experience in cataloguing and can contribute a lot to the WorldCat by uploading their records.

5.3.2 Cataloguing skills

To determine if the respondents had the knowledge of cataloguing, the researcher asked them to indicate the skills required for a cataloguing librarian. The respondents indicated the following: qualification in LIS, good general knowledge, knowledge of cataloguing tools, computer skills, and attention to details, accurate, adaptable, willing to change, teamwork and information sharing. The responses revealed knowledge of cataloguing by respondents. The findings indicated that the cataloguers had a good grasp of theoretical and practical knowledge of cataloguing, as they also indicated that a cataloguer must be willing to change. This is in view of the fact that cataloguing standards are always reviewed and modified to suit the information organisation processes and to improve retrieval.

5.3.2.1 Skills possessed by cataloguers

The researcher wanted to find out what skills the participants possessed. The findings revealed that the participants had all the skills required for a cataloguer. Due to the years they spent in cataloguing and the fact that they obtained a formal qualification in librarianship, the participants had knowledge of cataloguing; one gains experience by doing the actual cataloguing every day. The respondents' daily duties were to catalogue the information resources of 103 libraries. Being only six in the section, each had a large volume of work of cataloguing.

5.3.2.2 Cataloguers' training

Different LIS schools offer different curricula and some institutions, like the University of Pretoria (UP), Stellenbosch University and University of Johannesburg (UJ), did not offer cataloguing and classification of their programmes (Ocholla & Ocholla, 2012). The researcher wanted to find out if the participants were taught cataloguing and classification while at the tertiary institutions. The findings indicated that all the participants were taught the modules in cataloguing at different levels in their academic programmes; some were taught in their final year of study, some were taught from second year to the final year, while some indicated that they were taught the modules throughout their qualifications. One respondent who obtained a postgraduate diploma in information studies was taught cataloguing and classification at postgraduate level. Cataloguing and classification are the core modules in LIS.

The library cannot function without organised information sources for easy retrieval. Therefore, every LIS student must be introduced to cataloguing from the first year to the final year of study. Besides, the modules should also be taught at postgraduate level as an area of specialisation. Indeed, cataloguing and classification are specialised skills, hence the City of Cape Town Metropolitan libraries had only six cataloguers out of 289 qualified librarians.

5.3.2.3 Cataloguing processes taught at LIS institutions

There are different processes of cataloguing, which include descriptive cataloguing, where one is taught to transcribe all entities and attributes of the information sources when creating the catalogue records; this process is emphasised by the FRBR model. The second process is authority control, where one is taught to assign the correct standardised form of headings to facilitate controlled access points; this process is emphasised by the FRAD model. The third process is subject analysis, where by one is taught to assign subject headings and index them in the correct manner by means of controlled vocabulary; this process is facilitated by the FRAD model. The last process is classification, which is the last part of subject analysis. This is where one is taught to assign the classification notation for the information sources. The participants were asked to indicate the cataloguing processes they were taught at their LIS schools. The findings indicated that they were taught all processes of cataloguing, except authority work. They noted that they were taught more theory than practical work.

5.3.2.4 Continuous professional development training attended

Since the participants graduated a long time prior to this study, with some over 25 years since they left LIS schools, the researcher wanted to find out if they had any continuous development programmes in place to increase their knowledge, as the cataloguing standards change from time to time. The findings indicated that there were no such programmes in place, but the participants attended training workshops when available and when needs arose. Such workshops included an RDA workshop in 2013 and 2016 for a period of two to three days and another training workshop on how to catalogue e-resources in 2013. Cataloguers are required to attend continuous training and implement what they have learnt when creating the records to be on par with other agencies and also be able to share resources and skills easily.

5.3.3 Use of cataloguing standards

The researcher wanted to find out what cataloguing standards cataloguers at the Cape Town Metropolitan libraries used to ensure standardisation of the catalogue records. The findings indicated that the cataloguers used the AACR2, the DDC and the LCSH. The AACR2 is a content standard that is recognised worldwide and is used by cataloguers when they transcribe bibliographic records. The AACR2 is now being replaced by the RDA. On the other hand, the DDC is a classification scheme that was developed by Melville Dewey and first published in 1876. It is used to allocate classification notations for the information sources, whereas the LCSH is a vocabulary-controlled subject heading system that is used to assign subject headings. The participants did not mention any scheme for authority work as they indicated that they outsourced authority records from the OCLC. Bibliographic control and authority control are two sides of the same coin (Gorman, 2004). The literature seems to prove that authority control is one of the processes of cataloguing that seems to be neglected by many cataloguers.

Moreover, the participants indicated that they did not exceed three digits after the decimal point when allocating classification numbers, instead they tried to save time by putting their materials under the general number, and they rarely used volume 1 of the DDC. This could be a problem when they share their records, because some cataloguers may find their notations incomplete and waste more time on completing them. In addition, for encoding, tag 082 of the MARC 21's first indicator applies to either full edition or abridged edition. In the case of full edition, the whole set of the DDC should be used. Furthermore, the classification number should be as specific as possible to direct the user to the exact information source. The classification number/ notation serves the navigator that directs the user to the direct information source on the shelf. The respondents did not indicate that they used the MARC bibliographic format and encoding standards. Their cataloguing systems only offered the MARC template that selected only the most used tags such as 100 for author and 245 for title, to name only a few.

The problem would arise when the cataloguers record the manifestation that has more than one author, because the first author should be recorded on tag 100 and the alternative authors should use tag 700; the system used by the cataloguers of the CCTLM did not have the tag 700 and the template of electronic materials does not contain (336, 337, 338), to name just a few. The system did not contain those tags as well. This could make it difficult to upload original records onto the OCLC to be used by other cataloguers.

The RDA is the new content standard for descriptive cataloguing initially released in June 2010 and adopted in March 2013 (Tillet, 2012). It is organised based on the FRBR. The RDA principles identify a hierarchy of relationships in bibliographic data and it is intended to be compatible with any coding schema such as the MARC. Using FRBR principles, each work would be described once and then would be linked to its appropriate expression(s) and manifestation(s). Each FRBR group (1, 2 and 3) helps the user to identify the information they are seeking. Based on the FRBR principles, the user tasks (find, identify, select and obtain) help the cataloguer to display the information that will best help the user find the information sources required (Maxwell, 2013). The researcher wanted to find out if the participants had adopted the new RDA in their cataloguing practices. The findings indicated that although they have attended RDA training, they could not implement it on the information system used to catalogue because the system did not have other coding schema tags, so it would be difficult for them to implement the RDA. The information system could be adjusted to meet the local needs. In addition, the vendors should be known and easily accessible to help whenever the need arose to upgrade the system.

5.3.3.1 In-house standards

In house standards are standards that are created by an agency for their own use. Since the international cataloguing standards did not have rules on how to catalogue grey literature, the researcher wanted to find out if the participants had created their in-house standards for sources that are not covered by the international standards. In addition, given that the call number of the information source was not standardised. The agency must decide on how they would transcribe their call numbers and other basics such as barcodes and item numbers. They should have a filing system and policies to retain the knowledge in the organisation. The findings indicated that participants had in-house standards on how to transcribe indigenous knowledge sources. In-house standards should be used as a guideline when creating catalogue records for grey literature such as unpublished documents, reports, policy statements, issue papers and any information source that the library considers important and wants to make available for access and use by the patrons for research purposes or to fulfil any information need.

5.3.4 Creation of the records

To understand how the catalogue records were created, the participants were asked to indicate the steps they followed when creating the records. The head of the cataloguing section printed the actual steps followed when creating the records and gave it to the researcher. The findings indicated that the participants first checked if the record was available on their system by using an ISBN to search for the information source. For example, the municipality may have purchased the copy of an information source that the province had already purchased and catalogued. In this case, the CCTML may add the copies that are already available on their stock and have been catalogued. In this case, they would add the item on the existing record to avoid duplication. In the case where the catalogue record of the information source is not available on the municipal and province catalogue, they would use the ISBN to search the record of the information source on the WorldCat; if it is found, they download the record to their system and amend the record to conform to their encoding tags, such as statement of responsibility on tag 245 along with the title, preceded by a diagonal slash (/) and delimiter © as per the MARC.

However, the participants transcribed the statement of responsibility under notes. The same would apply to other authors from the downloaded record. Such additional authors will be on tag 700 as per the MARC encoding standard. However, the participants' system did not have tag 700 so they transcribed all the authors under tag 100. They also edited some fields to suit the information source they had and to match their other records. The researcher also observed that in cases where they found pagination transcribed as pages on the physical description of the record, they edited and transcribed pagination as P. They would also decrease the DDC number to three digits after the decimal point, if the number on WorldCat exceeds three digits. Where the record transcribed pages in full, this suggested that the agency created the records using the RDA. In the case where the information source was not found on the WorldCat, they created a new record on their local database using a template on their system with the basic MARC tags such as 100 for author, 245 for title, 260 for publication area and 300 for physical description, to name just a few. They could then fill in the bibliographic details of the information source they had and create the record.

The participants also had the opportunity besides the ISBN to use the author and title of the information source to search, because the record could be on the catalogue but with misspelt ISBN; for example, misrepresenting the digit of the ISBN. In this case, using other access

points could help to access those records that could not be accessed using an ISBN. Since the participants created the new records on their local database, they could not share them on the WorldCat platform but could only share them with other provinces. In this case, they will not get credits from the bibliographic utility of which they were members. They were not the enhanced agency or did not hold membership of the Program of Cooperative Cataloguing (PCC). Therefore, they would not be able to contribute their skills to the WorldCat records, but could only download the catalogue records to their local database.

5.3.4.1 Original cataloguing

Although insight was gained into information about how the participants created their cataloguing records, the question on the extent of performing the original cataloguing by respondents was asked to discover their cataloguing practices to check if they conformed to the other studies. The participants indicated that they mainly performed original cataloguing for indigenous language materials, since they could be the first agency to own the material. They also indicated that it was easy to catalogue the fiction books from scratch rather than download the existing records from the WorldCat because downloading would require more time, especially when they had to edit the records to conform to their system format. Indigenous language sources would give cataloguers opportunity to show their skills on WorldCat since they may be the first agency to own those sources.

5.3.4.2 Copy cataloguing

The researcher wanted to find out to what extent the participants performed copy cataloguing to show their participation in WorldCat. The participants indicated that apart from the fiction books, they relied on the records that already exist on WorldCat by downloading them onto their local database for their patrons to use to retrieve information. The other purpose of joining the bibliographic utility was to benefit from copy cataloguing that was aimed to save time associated with original cataloguing. It would not be prudent for all the cataloguing agencies to create the original cataloguing records for their information sources when other agencies had the catalogue records of similar materials, which could be downloaded and edited for their local use. This would also help in learning how to create better records when they perform original cataloguing.

5.3.4.3 Authority control

The second model that underpinned the study was the FRAD, which emphasises the use of proper entry of the authority. Authority should be standardised and cross-references used to improve retrieval. To create the proper form of the name either personal, family, geographical or corporate, or uniform title entry, one needs to use the standards such as the Library of Congress Name Authority. The participants were asked if they outsourced or created authority records. This was done to find what authority control standard they used since they did not mention any authority standard for their cataloguing tools. The participants indicated that they always downloaded the authorities from WorldCat. These cataloguers were very experienced and with the proper support, they could be able to create new records that are not available on the WorldCat.

5.3.4.3.1 Verification of the authority records

Authority records that are available on WorldCat were created by other agencies such as PCC members, CIP to name just a few. At large, CIP records are created and uploaded to the bibliographic utilities and made available on the WorldCat before the information source is published. Sometimes, there may be changes of authority and bibliographic information when the actual source is published. By that time, the record would have already existed on the bibliographic utility for the members to download to their catalogues to be used by their patrons. It is very important for the cataloguers to verify those records after they have been downloaded. The participants were asked if they did verify the authority records they downloaded from WorldCat. The participants indicated that they sometimes verified the records. When they were asked which standards they used to verify authority, they indicated that they used the LCSH. The LCSH is used to verify the subject authority. The library management should support the cataloguers with all international cataloguing standards needed to carry out all the processes of cataloguing for them to create quality, accurate and competent catalogue records.

5.3.4.4 Determining the subject of the work

The third model that underpinned the study was the FRSAD, which emphasises that the cataloguer should assign subject terms and their semantic relationships using controlled vocabulary standards to improve access. Foskett (1986) asserts that cataloguers have to choose the terms that describe the content of the work and include alternative terms. The subject of an information source is very important for retrieval because users may not know the

title or the author of the information source, but they will always know the information they need. For example, a person may be looking for any information on "artificial intelligence" and they have to use the term artificial intelligence to retrieve information sources concerning that particular term when searching the catalogue. Therefore, it is crucial for each catalogue record to have subject headings to enable easy access. Without the subject, the cataloguer will not be able to allocate the classification notation. Subject analysis is the first step of classification and proper shelving relies on the proper notation. The researcher then asked the participants how they determined the subject of the work. The participants indicated that the system had the default subjects that were not compatible with the LCSH. However, they checked the title, contents, index, back cover, read the book and Google. To determine the subject of the information source, one should check the title, summary, contents, chapters, illustrations and all the above elements mentioned by the participants. These cataloguers are very knowledgeable and could benefit the WorldCat with their records.

5.3.5 Catalogue quality

The participants were asked to define the quality catalogue according to their views. Their responses indicated that a quality catalogue should be accurate, and the record should be usable and lead to accessibility of the information sources. The quality catalogue should feature all the information about the information sources described; it should contain all the entities and attributes that lead to the access of the information sources. For example, for a user to retrieve an information source through its creator/ author, the name of the creator should be correctly transcribed on the catalogue, for the user to retrieve the information source by its title, the title should be transcribed, for the user to retrieve information source by its subject, the subject should be properly transcribed on the catalogue. All the other entities required for access such as ISBN, edition, publication area, physical description, notes, alternative authors, and classification notation should be transcribed on the catalogue without any typographic errors. The cataloguers should understand the quality catalogue and create the quality records that could be downloaded and used by other libraries to increase the quality of the WorldCat.

5.3.5.1 Quality control measures

The participants were asked to indicate the quality control measures they had in place for their catalogue records; their responses indicated that they sometimes used the peer reviews or peer checking by asking a colleague to re-check the records. They also received queries

from the libraries addressing different records of the same manifestation. The cataloguers should have the quality control measures in place, including double-checking the records after cataloguing since the record is available for public use immediately after being created.

5.3.6 Cataloguing system

The cataloguing system enables the cataloguers to create the online catalogue and participate in the WorldCat. The participants were asked about their cataloguing system and the steps that were followed in purchasing the system. The respondents indicated that their system (SLIMS) was purchased because the provincial library services, together with State Information Technology Agency (SITA) of South Africa, wanted to purchase the same library system for all the public libraries. They also indicated that perhaps the system was relatively affordable compared to other systems. There are different steps that should be taken before the system is purchased for any organisation. The system should be checked if it fits into the daily work of the organisation and should be implemented stage by stage and tested at every stage. The process must involve the stakeholders, especially those who will be affected by the system before it is implemented. The participants also indicated that they were never involved in any stage when the system was purchased. They were merely informed that they were migrating from their previous system to a new system. The researcher then asked the participants if they were able to make changes on the system to suit their cataloguing needs and they responded that no changes were made. Schauder (1990) opines that cataloguers should repeatedly assess hardware and software systems and work with both systems personnel and computer vendors to either select new or enhance existing systems.

5.3.7   Challenges of cataloguing

The participants were asked to state the challenges they experienced in cataloguing. They indicated that they had challenges when assigning subject headings for the works expressed in non-roman languages and the languages they did not understand. In cases where they did not have an idea what the subject of the information source would be, they did not know what to do. In addition, in cases where the information sources had more than one publisher and when they could not allocate the correct DDC number. They also indicated that "according to the standards, we must use the title page when cataloguing; sometimes you find that the publisher is written on the title page and on the verso page there is a different publisher, you then end up not knowing what to do". The cataloguing content standards indicate how the

information concerning the description of the information source should be transcribed on the catalogue. For example, AACR2 rule 1.4D5 states that if an item has two or more publishers or distributors, it should be described in terms of the first named publisher, the corresponding places and the subsequently named publishers. The cataloguers should be taught the content standards thoroughly at school and at the work place. There should be refresher courses in the use of the AACR2 because the cataloguers in the surveyed municipality were still using the AAC2. It would be preferable for the cataloguers to understand the AACR2 first and then learn the new RDA, because if they understand how the standard works, they will not struggle to learn another standard.

5.4 Findings from senior librarian's interviews

The senior librarians hold managerial positions in libraries. They deal with issues of policies and major queries concerning access of information sources. The senior librarians were included in the study to find out how they accessed the catalogue records in their libraries. This section presents the findings of data obtained from interview schedules with senior librarians of 10 selected libraries in the City of Cape Town Metropolitan.

5.4.1 Catalogue records

The respondents were asked how useful the catalogue records were in accessing library resources. The responses are summarised in Table 8 below.

Table 8: Usefulness of the catalogue records (n=10)

Respondents	Responses
R1	*Some records are not accurate since you may find multiple entries for one title, which could lead to time constraints.*
R2	*We are struggling to find information, sometimes the books are available on the shelf and not on the system. We end up telling the users that we don't have those sources.*
R3	*Full records and they are useful.*

R4	It depends on who catalogued the book.
R5	The catalogue is not specifically for one library. You have to understand the listing in all libraries. The results depend on the entry point, you need to know how to search.
R6	We sometimes find different numbers for the same tile.
R7	What can I say? Very useful.
R8	Most useful, but not always up to standard.
R9	Mmmm, they are ok.
R10	Takes time to search; it is sometimes easy to go to the shelf without checking the catalogue.

From the responses it is clear that some participants were satisfied with the catalogue records and believed they were useful. However, some participants were not quite satisfied with the records, as they indicated the problems they encountered with the records with regard to information retrieval. The results showed that the records were not accurate, and the librarians were struggling to retrieve sources using these records; some opted to go straight to the shelf without checking the OPAC. The catalogue records should assist the users to obtain information without struggling.

5.4.2 Catalogue quality

To understand the views of the senior librarians about the quality of the catalogue records, the participants were asked to define the quality catalogue from the user's perspective and the responses are summarised as follows:

R1: *I would say the catalogue is of good quality when you find all the information quickly and easily, the catalogue should be accurate, and the cataloguers should double check before downloading*.

R5 & R8: *All the details from the book should be easy to access*.

R6: T*he catalogue must be searchable with one word because sometimes the user remembers one word*.

R2: All catalogue records must have the author, title, subjects and so on so that we can access the books in the library.

R4 & R9: The quality catalogue must contain all the features such as author, title, ISBN.

R3: A good catalogue must give you what you are searching.

R7: A catalogue of high quality must yield good results such as displaying author, title and so on.

The catalogue should help the patrons to find the desired information sources without any barriers and should save the patrons and librarians time. Arinola et al. (2012) are of the view that the extent of the use of the library resources greatly depends upon the quality of a library catalogue. A comprehensive catalogue enhances the reputation of the library.

5.4.2.1 The quality of the CCTML catalogue

The participants were asked about the quality of the CCTML catalogue. The overall responses indicated that the catalogue, according to the responses, was not of good quality. The respondents indicated that:

R5 & R1: *The catalogue is too basic but at least you still find what you need, the catalogue doesn't have the summary. From the professional point of view, I noticed that cataloguers don't go to details when using DDC.*

R6: *The records are not accurate it is sometimes easy to go to the shelf without using the catalogue.*

R7: *Not always up to standard.*

R10: *I believe that the quality of my catalogue records are very good.*

R4: *It depends on who catalogued.*

R3 & R9: *Good.*

R2 & R8: *It takes time to search it is easy to go to the shelf instead and take the book you need without consulting the catalogue.*

The main purpose of creating the library catalogue is to save users time of scanning the shelf for the documents they are looking for. The catalogue should direct the user to the exact material searched. Therefore, the catalogue should be accurate and contain all the necessary information for easy retrieval such as the author, title, summary, contents and subjects of the information source as they indicate to the user what the source is about before the user can go

to the shelf. Besides, the user would be able to decide to obtain or look for the other source by using the catalogue.

5.4.3   Usability of Cape Town Metropolitan libraries OPAC

To investigate the effectiveness of the OPAC, the researcher asked the participants to explain the usability of the CCTML OPAC using their own words. The overall responses showed that the OPAC was useful and the participants did access the library resources using it. From the responses it seems the participants were pleased with the OPAC.

5.4.3.1 OPAC retrieval performance

To determine the retrieval performance of the OPAC, the researcher asked the participants how they used complex searches such as Phrase, Boolean operators, Truncation, Wild card, and others. The use of complex searches improves retrieval because information sources could be indexed using different vocabularies. Most of the participants indicated that the Open Access Catalogue did not make provision for complex searches, but the Brocade facility did. Brocade is the search window that can be used to search the catalogue, but it is only limited to librarians and it is password restricted and not open to the public. The public could only access the OPAC.

R5: *People we serve are not looking for extensive information; we do basic searches that do not overstretch the system.*

R2 & R8: *Not seen that yet.*

R1: *It can but the staff are not trained yet*.

R3: *The user has to be very specific during reference interview.*

R6 & R10: *Not normally use them, some users just come with the content and the librarian use the subjects to search*.

R7 & R 9: *Not aware that it does*.

R4: *We are not trained to use such operators*

From the responses, it seems clear that most of the participants were not aware of such text operators. The library staff should be trained to use the OPAC and all its functions for them to serve the patrons with ease.

5.4.3.2 Fuzzy search technique

The researcher wanted to find out if the respondents make use of fuzzy search techniques when searching the OPAC, since the literature revealed wrong spellings of publishers and authors in the WorldCat. Fuzzy search technique is the technique of finding strings that match a pattern approximately (rather than exactly) on the computer. For example, if the searcher misspells the word, the technique could help to retrieve the words near the misspelled words. The participants were not sure if their OPAC had the technique. When they tried on the computer, they found that the OPAC did not have the fuzzy search technique.

R1: *Lots of problems come with OPAC, there are people who don't speak English, while others speak with different accents. Sometimes patrons come looking for information you don't know, they end up not being helped.*

R4; R9; R10: *Not user friendly because if you look for a title it doesn't suggest options but instead it tells you that no record found.*

R6; R3: *If you misspell the word you will find something different.*

R8: If the user doesn't know the correct title, the system does not retrieve anything

R7; R2: No, the OPAC does not offer fuzzy search

R4: Not at all, you can't find approximate words

Installing the fuzzy search program could improve the retrieval performance of the OPAC and assist in indexing the correct designations on the catalogue.

5.4.3.3 OPAC user interface

The use of the information sources stored in libraries greatly depends on the catalogue. If the catalogue is user-friendly, it would direct the users to the relevant resources. IFLA (1998) sets the guidelines for OPAC displays that are compliant with the FRBR to enable users to find, identify, select and obtain information sources. For that reason, the researcher wanted to find out to what extent the City of Cape Town Metropolitan OPAC's user interface features have influenced the use of the system to meet user's information needs. The participants indicated that they used it sometimes, especially if they had the right search terms such as the title and the author, but at times they went straight to the shelf if they knew where the information source was. They also indicated that some techno savvy patrons used the OPAC at home to find resources; they could also reserve the book from home.

R4: *If the person has the right title or author and knows how to search then you get back what you want. Even some users who can search the OPAC, they sometimes search and reserve books from their homes.*

R2: *It is not like google, google is easier.*

R1 & R6: *I would say yes it meets the information needs if one knows how to search.*

R5: *Sometimes you can find what you are looking for so yes.*

R7 & R3: *If one has the right search terms.*

R8: *I normally go straight to the shelves because I know where most of the books are.*

R9: *In small libraries, users and staff normally knows where the books are, so we go to the shelf without consulting the OPAC.*

R10: *Most of the times I just go to the shelves and pick the books even though I did not consult the OPAC.*

Based on the responses received, the OPAC user interface featured the access points that could lead the user to obtain the information sources if the right searches were made. OPAC training is essential for every library staff member since they use the catalogue to retrieve information sources.

5.4.4 Involvement in acquiring the system

Since the participants held managerial positions in libraries, the researcher wanted to find out to what extent they were involved when the system for cataloguing, acquisition, circulation and retrieval was acquired. The majority of participants indicated that they were not involved at all; they were only told that they were migrating to the new system.

R5 indicated that *I am the member of the technical task team. The technical task team was involved and there were consultations and ongoing training among the technical task team when the system was acquired.* Although it may not be feasible to involve everyone when the new system is purchased, it would benefit the libraries if library management were involved to give inputs to the vendors and to modify some elements of the system to meet their needs. The system should also be introduced gradually into the organisation to ensure that any shortcomings are dealt with before full implementation take place.

5.4.5 OPAC training workshops

The researcher wanted to find out if staff were offered OPAC training. For people to efficiently offer the service, they need to know what to do. A training programme helps to develop

and strengthen skills and background knowledge. It is important for any organisation to equip staff to better enhance service delivery. The findings indicated that there were training manuals on how to use the OPAC and the staff were learning on the job, at times by shadowing the experienced staff. In-house training, especially to non-qualified staff, were also offered. The participants also indicated that the librarians and library assistants were offered training in how to add magazines to the catalogue because these were no longer catalogued centrally. The findings also revealed that the department offered them training workshops whenever there was a need. The duration of the training workshops was between one and three days, depending on the nature of the programme. These findings suggested that management strived for excellent service delivery by offering staff training.

5.4.6 Challenges of the catalogue

The participants were asked to explain the challenges they encountered when using the catalogue. Their responses indicated that they did encounter certain challenges as they expressed them, such as system challenges, the catalogue records, user queries and internet challenges. The participants indicated that they experienced problems with the system as it was not user-friendly, they had challenges with the search options, recall and precision were not accurate as the system could not retrieve exact matching queries within a short time. The system could not yield results in the case of spelling errors. Some information sources that were weeded and taken out of the libraries were still appearing as library holdings on the system. Furthermore, the following problems were also reported: catalogue records were skeletal and incomplete, catalogue records contained typographic errors, records were duplicated on the system, records contained spelling errors, sometimes the same books of the same title and author are given different call numbers and are shelved separately. It was reported that, sometimes, the patrons could not express themselves; they did not really know what they wanted. Although the patrons may know the keywords, the catalogue in some instances did not yield accurate results. In addition, users may have a different accent when pronouncing the title or author, which leads to no results being obtained when searching the catalogue because the library staff would misrepresent the search query. Moreover, when users misspell the query, the OPAC search would not present results. Furthermore, the bandwidth was also reported to be constantly slow and unavailable due to theft of the cables and electricity cut off, especially at the township libraries.

Below are the direct quotes from the participants

R7: *Compared to the previous book plus catalogue, the new catalogue is less user-friendly; there are duplications and incomplete records. Also, inexperienced staff experience challenges with using the advanced search option. They are unfamiliar with using Boolean logic and Brocade workshops are only held annually.*

R10: *The catalogue has human errors such as wrong spellings and incomplete records.*

R6: *The problems that we encounter include different call numbers of the same books. You find that same titles have different call numbers and are shelved separately.*

R5: *We do the cleaning of the database because of the migration from the other system. There are books that indicate that they are available but when you go to the shelf they are not there and are not on loan. We migrated in 2010 but the system is not yet cleaned up.*

R4: *The catalogue may have the title and the author, but the users may not know what they want.*

R2: *The system is not as fast as we wish, the records are not accurate and not user-friendly; this also frustrates users.*

R1: *The problem with our catalogue is that the system takes more time to access the records. It does not present users with recall and precision on search items. In addition, the network is too slow sometimes.*

R9: *When you search the catalogue, there are books indicated to be available in the library, you find that some are still on cataloguing department, some are weeded but still shows that they are available and that confuse patrons"*

R8: *When the internet is down we can't access the OPAC they steal cables here.*

R3: *Sometimes, users have different accent, you may not understand what they are saying and when you ask them to write down they may misspell the title or author, as a result the catalogue will not retrieve information needed.*

These problems of duplication, incomplete, inaccurate and inconsistent records as well as typographic errors could be ameliorated by launching a re-cataloguing project where all the catalogue records could be revisited and modified. The problems of user queries can be minimised by recording the notes on the catalogue. When the keyword is used on the catalogue the information on the notes could appear on the system.

5.5   Findings from librarians' questionnaires

This section presents the findings of data obtained from librarians. The researcher distributed questionnaires containing a mixture of closed- and open-ended questions to allow

respondents to give their opinions regarding the access and use of the OPAC when retrieving information for the users and for personal use. Out of 24 questionnaires, 18 were completed and returned, giving a 75% response rate.

5.5.1   Usability of the catalogue records

The participants were asked to rate the usability of the catalogue records using the scales from poor to excellent. Figure 10 shows the findings.
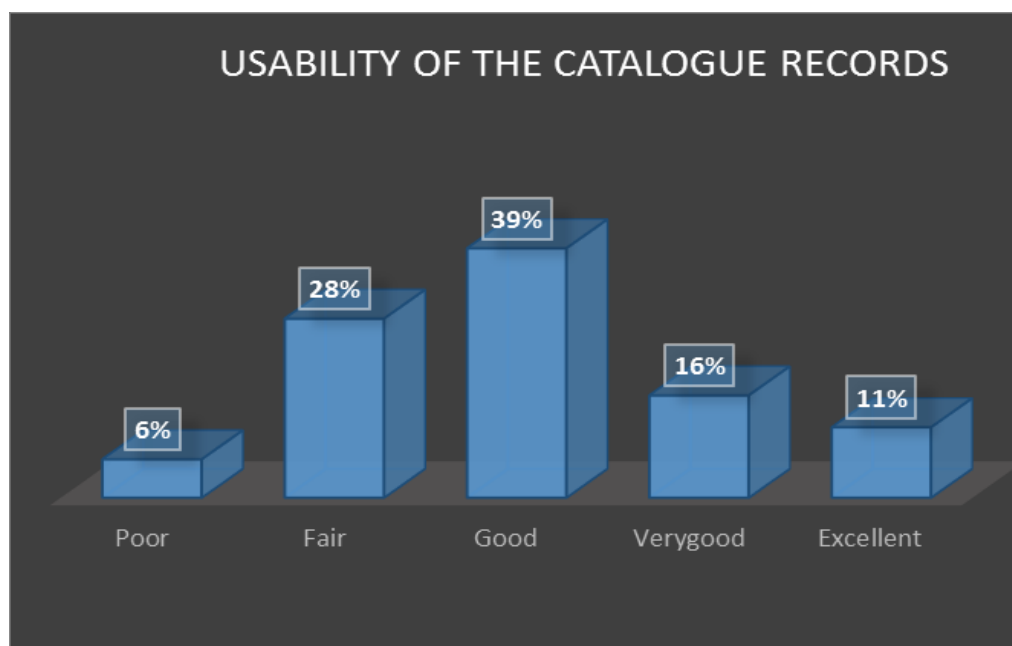
Figure 10: Usability of the catalogue records by librarians (n=18)

The results presented in Figure 10 indicated that like senior librarians, the majority of participants seven (39%) rated the catalogue records as good, five (28%) rated them fair, three (16%) as very good, whereas two (11%) rated them excellent and one (6%) rated them as poor. The results show that the catalogue records were useful.

5.5.2 OPAC use

The main purpose of using the catalogue is to retrieve and locate information sources kept in the library. The library staff may also use the catalogue system for linking the documents and to create the item records if the bibliographic records already exist. To discover how the OPAC was used, the participants were asked about the activities they performed on the OPAC. The options given were *to locate information sources, to assist patrons, to retrieve information needed, to process the information sources and other* where they were asked to specify others.

The findings as presented in Figure 11 below indicate that all the participants 18 (100%) used

the OPAC to locate information sources. Eighteen participants (100%) used the OPAC to assist patrons as well as to retrieve information needed. Two (11%) also used the OPAC to process the information sources such as the magazines as they were not catalogued centrally. Other participants 2 (11 %) indicated that they used the OPAC to link the items. The results showed that the participants knew how to use the OPAC and some could also perform the basic cataloguing. In addition, one participant (6%) indicated that they also taught the patrons how to search for information using the OPAC. The results are summarised in Figure 11.
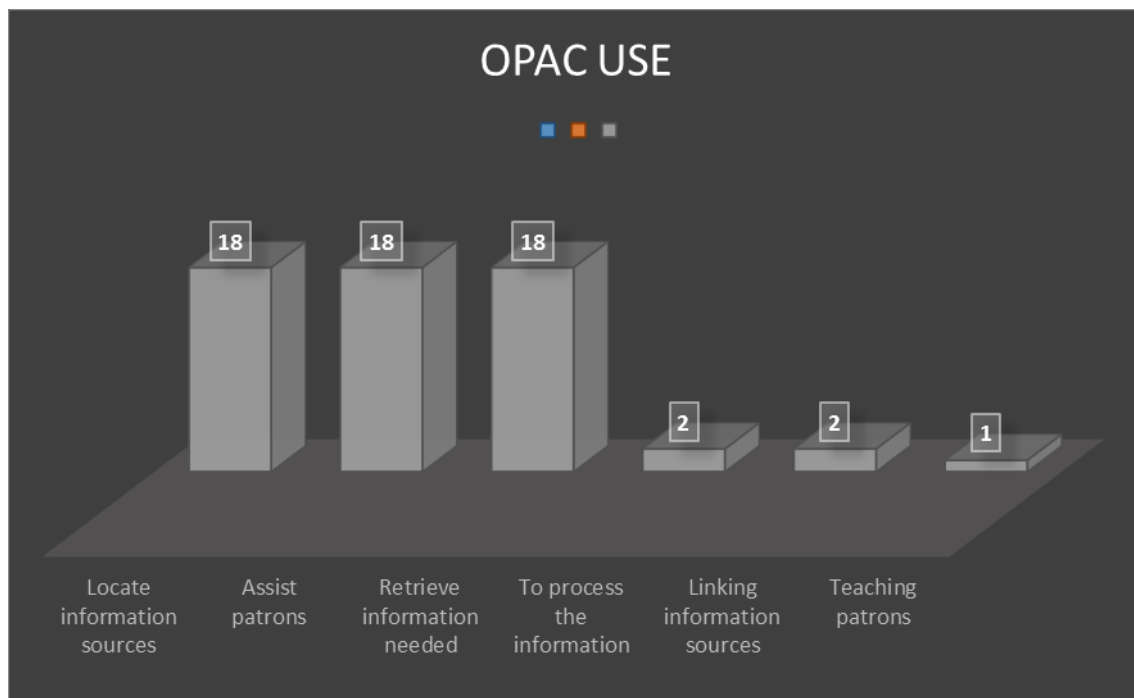
Figure 11: OPAC Use by Librarians (n=18)

The results also showed that the OPAC could be used for many activities; hence the information system used should complement it.

5.5.3   OPAC interface perceived ease of use

OPAC displays or interface should be compliant with the FRBR as enunciated by IFLA (1998). The users should be able to obtain the accurate sources using the OPAC. The participants were asked to explain the extent of their perceived ease of use of the CCTML OPAC user interface. The question was open and gave the respondents the opportunity to express themselves.

The participants had different views about the OPAC interface. Most respondents eight (44%) indicated that the OPAC user interface was not clear and user-friendly. On the other hand, seven (39%) indicated that it was easy to use although they indicated that their bandwidth was too slow at times and made it difficult to access it. These discrepancies may be due to individual information searching skills. Three respondents (17%) did not respond to the question. Those who indicated that the OPAC user interface was not user-friendly expressed their views as shown in table 9.

Table 9 : OPAC interface perceived ease of use (n=18)

Respondent	Response
Q6	*It seems borrowers learn through trial and error to use OPAC, but it is not widely used. Those unfamiliar with IT prefer to queue and get assistance from staff.*
Q3	*It is not easy at all to use our OPAC. If you miss the word you will not retrieve anything.*
Q4	*It is not easy to use OPAC because the record doesn't explain the different terms. Also, the jargon used on the record make searching difficult and entering the correct keyword. Again, patron may struggle as they are not always sure where to click.*
Q18	*The refining features are not clear.*
Q15	*It cannot create a shelf list for weeding again spelling mistakes give no retrieval for subjects and for any source.*
Q7	*I hate it, the stupid floating city banner on top of the screen covers up half the text. I had to search all over again.*
Q11	*If you miss a letter in your keyword, you don't get what you are looking for.*
Q1	*Training is needed.*

From the results in Table 9, the absence of the fuzzy search technique limits access. Therefore, training to use the OPAC is needed. The language used for accessing the OPAC was also a concern. The user interface of any system should be understandable because the user relies on the system to provide services without any human interactions.

5.5.4 Search techniques OPAC offers

To discover the effectiveness of the CCTML information system, the respondents were asked to indicate the search techniques the CCTML OPAC user interface offered. The options given were *basic* or *keyword search, Boolean search, Proximity search, Fuzzy search, Parentheses, Phrase search* and *Other*. Search techniques/ information retrieval techniques/ information retrieval queries address the issue of comparing a representation of a query with representation of texts for identifying, retrieving and ranking texts in a collection of texts that might be relevant to a given query (Croft, 1983). Search techniques help the information retrieval system to recall precise information according to and beyond the index term that the indexer or cataloguer used to store information. Croft and Parenty (1985) identify some of the types of the search techniques that are commonly used as keywords, Boolean operators, proximity search, fuzzy search, phrase search and others. Any information retrieval system should offer the search techniques to improve access. The participants indicated that the OPAC did not offer those search techniques, but Brocade did. Some of the participants who asked the researcher to clarify the question were trying to verify the search techniques from the system. The responses are indicated in Figure 12.
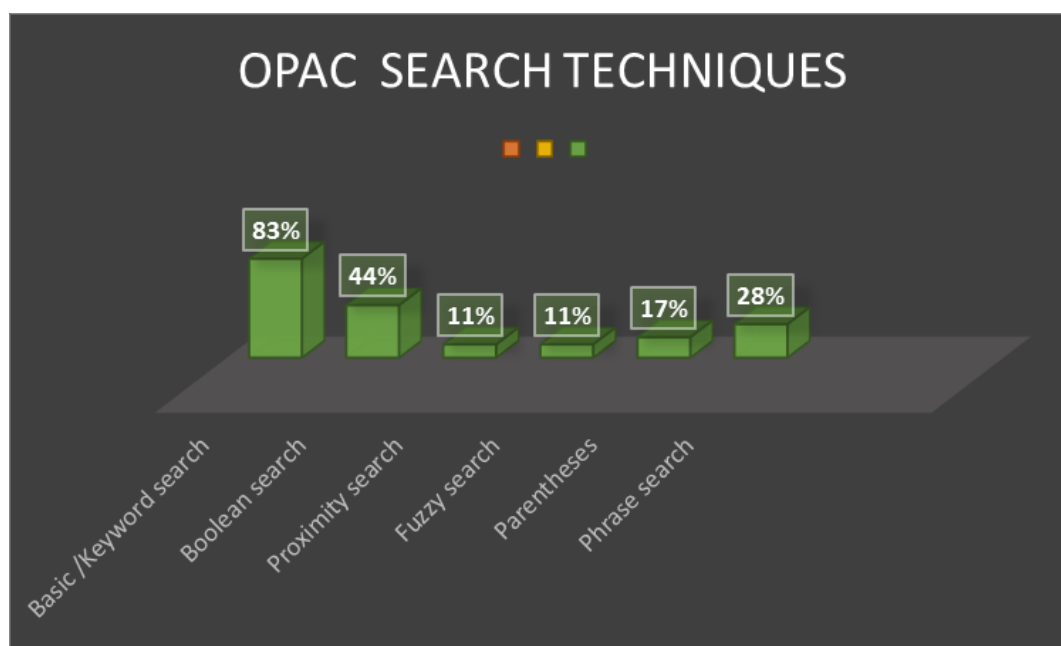
Figure 12: OPAC search techniques (n=18)

The results in Figure 12 showed that 83% of respondents indicated that the online catalogue offered basic/ keyword search technique, 44% indicated that it also offered Boolean search, 11% indicated that it offered proximity search, 11% indicated that it offered fuzzy search,

17% indicated that it offered parentheses search and 28% indicated that it offered phrase search techniques. However, 6% of the participants noted *I am afraid I am not familiar with the way OPAC is programmed and have heard of only couple of the terms listed here.* The findings reveal that participants were not familiar with the search techniques. Every librarian should know how to retrieve information using different strategies and techniques. The differences in findings may be due to the search queries librarians get from users. Eleven percent indicated that OPAC offered fuzzy search techniques, however the findings from senior librarians and other librarians indicated that the OPAC did not feature fuzzy search. This may be due to the fact that those participants did not understand what fuzzy search techniques were. Refresher training workshops are needed for the librarians since some of them may have graduated from LIS schools a long time ago. Ongoing training is crucial to perform library work effectively

5.5.5 OPAC search techniques librarians used

To explore the use of the OPAC search techniques, the respondents were asked to explain the extent to which they used advanced search strategies and techniques such as Boolean, proximity, fuzzy, parenthesis, phrase and others when searching the OPAC. Using the advanced search strategies could improve access to the information sources by gathering relevant keywords that are available on the summary, notes and contents of the information source. The question was open, and participants gave their opinions. Some participants (61%) indicated that they used basic searches such as title, author and series. They also expressed themselves as follows:

Q10: *The types of users we serve need basic information.*
Q1: *Advanced searches could be used when a record cannot be retrieved using basic search, but mostly we use basic search.*
Q9: *The system limits search to basic.*
Q7: *The OPAC is very limited, it doesn't give options to choose.*
Q2: *The OPAC has a 10-minute limit time on it which does not allow for prolonged search.*
Q6: *We mostly use the phrase search to help the patrons because it is the one that works better since our line is slow.*

Two participants (11%) indicated not applicable, whereas five (28%) indicated that they used techniques such as Boolean, limits and phrase search. The results suggested that some

participants were not aware of advanced search features while some were aware of them. The researcher is of the view that users' queries and needs could dictate the search capabilities of librarians. Again, this contradiction could be attributed to the fact that while some users used the advanced features, others did not use them or used more basic features with limited capabilities. However, the librarians could use advanced searches offered by OPAC to find more information for the patrons to demonstrate that the libraries could offer more than what they expected.

5.5.6 Entities and attributes

Entities and attributes as defined by the FRBR, the FRAD and the FRSAD models are basically the features of the catalogue or metadata that should be available in the records, based on the international cataloguing standards to improve access to information stored in libraries and other information centres. The participants were asked to indicate the entities and attributes their catalogue offered. That was done to estimate the accessibility of the information sources. The question was open to allow the respondents to include everything they thought relevant. The following were stated: *title, author, ISBN, edition, publication, physical description, picture of the book cover, Dewey number if nonfiction, series, subjects, bibliographic numbers and holding of libraries.* The results seemed to suggest that the catalogue records had some important features to enable access.

5.5.7 Absence of entities and attributes on the CCTML OPAC

The librarians were then asked to indicate the entities and attributes that the catalogue lacked. Those who answered the question were 13 (72%) and indicated: *summary, abstract, review, good subject index and picture of the book cover*. All 13 participants cited the summary, abstract and review as lacking. The summary is another important feature of the catalogue and it is represented by tag 520 in the MARC 21. The summary indicates what the book covers and will help the user to choose if he/ she wants to go to the shelf to read the book or not, or to go to the link in the case of e-sources. The respondents did not cite notes; however, they are the important attributes of the manifestation and the third objective of the catalogue, as indicated by Tillet (2004).

5.5.8 OPAC challenges

The participants were asked what challenges they experienced with the catalogue when searching the OPAC. Different views were provided, including not knowing what to do to get

accurate information, slow network, spelling errors, no records books, insufficient bibliographic records, misleading results and inconsistent records. The following were the exact quotations from questionnaires.

Q18: The *server is sometimes down.*
Q5: *Spelling needs to be 100 % correct for authors or title or else the results will not come up.*
Q3: *It gives you what it needs.*
Q7: *Slow network problems.*
Q10: *Not retrieving everything on a topic.*
Q17: *It is not user-friendly due to time limit.*
Q13: *System is often very slow; the catalogue is sometimes inconsistent you need to type the correct title with no spelling error.*
Q4: *With CCTML changing its website, librarians first have to figure out how to access OPAC to be able to educate the public.*
Q14: *Records that are not available but still available on line.*
Q12: *Insufficient bibliographic database.*
Q1: *We struggle to get information for other records due to spelling error*".

Moreover, other challenges included spelling errors that made retrieving information on the OPAC difficult, the low bandwidth, and records that showed on the system but were withdrawn from the library. Due to these challenges, some respondents opted to go to the shelves to check the sources rather than to use the OPAC, as they were also concerned about the inaccuracy of the records in the catalogue. The catalogue should be able to assist users to obtain information in the possible shortest time. The OPAC must be updated regularly to enable access. Besides, regular training in using the OPAC is needed for the librarians, especially when the cataloguing language changes.

5.5.9 Ameliorating challenges of the CCTML OPAC

To find the ways to ameliorate the OPAC challenges, the respondents were asked what they would add or change in the OPAC to make it effective. The participants said they would add the fuzzy search technique, use of simple language, increase of bandwidth, the interface, clean the system, upgrade the system, and add plurals and tutorials for patrons. The other verbatim responses were:

Q17**:** *"The OPAC should be able to search like Google"*.

Q18: *"the search via subject term is not good, not user friendly at all. It is not easy to retrieve information"*.

Q1: *Ability to search for ISBN and location marks which is not available now.*

Q6: *I would add plurals, and a tutorial for patrons.*

Q5: *Different search index.*

Q2: *Make it search by ISBN.*

Q15: *Ensure that all the records that are no longer available are removed from the OPAC.*

Q14: R*emove the prices online so that dubious patrons do not steal the books as they already have done in the pas*t.

Q12: *I would get rid of the advertising banner on the OPAC.*

Q3: *I would make provision for incorrect titles and spelling errors.*

Q9: *I would create a window which people are familiar with.*

Q11: *To be able to do a fuzzy search.*

Q4: *If you put in only a word or part of a title it must give you all the titles that you choose from.*

Q16: *E-book reader.*

Q10: *Friendly search buttons like spell check button or correct and predicts spelling.*

The results generally suggest among others; fuzzy search technique was quite important to respondents.

5.6   Findings from library assistants

The fourth category of participants for this study were the library assistants because they also used the catalogue to search information and use the call number created by the cataloguers as a shelving device. Out of the 47 questionnaires, 28 were returned; giving a response rate of 60%.

5.6.1   Activities performed on the catalogue

The researcher again wanted to find out from this group what they used the catalogue for since they were also helping with the daily activities of the library and service offering. They were given the options: *locate documents, assist patrons, and retrieve information, process documents* and *other*. Most respondents (24,86%) indicated that they used the catalogue to

assist patrons (19,68%), to retrieve information (10,36%), to locate documents and another (10,36%) used the catalogue to process documents. The findings are presented in Figure 13.
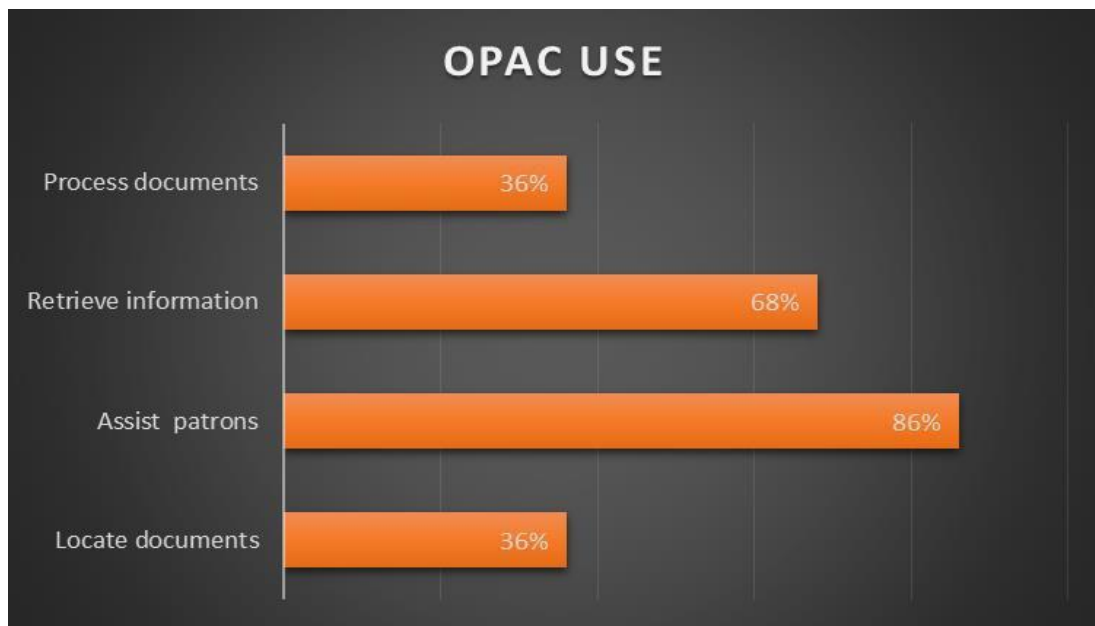
Figure 13: OPAC use by library assistants (n=28)

The results suggested that like the librarians, most participants mainly used the OPAC to assist patrons. Moreover, the library assistants were always at the circulation desk or the shelves, shelf reading and shelving books. They were the first people the patrons encounter when entering the library. In addition, 68% indicated that they used the OPAC to retrieve information. Thirty-six percent (36%) also indicated that they located and processed documents by issuing or returning information sources using the OPAC.

5.6.2 Usability of the catalogue records

The participants were also asked to rate the usability of the catalogue records since they used them to access information sources and help patrons. The findings indicated that 10 respondents (36%) rated the usability of the catalogue records to be fair, another 10 (36%) rated the records good, four (14%) rated them very good and four (14%) rated them excellent. The findings are presented in Figure 14.
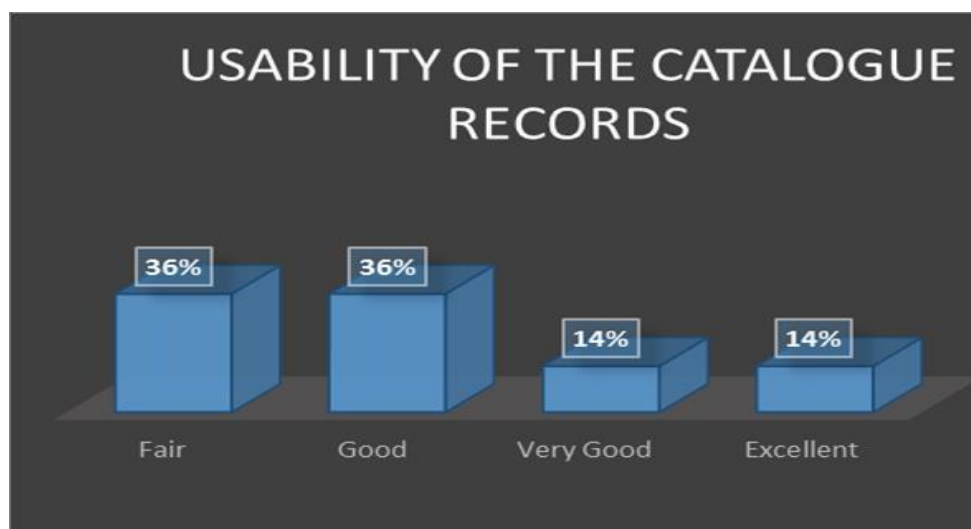
Figure 14: Usability of the catalogue records by library assistants (n=28)

The results revealed that the catalogue records were mainly useful and made it easy to locate information sources.

5.6.3   Frequent use of OPAC

Previous studies such as Monyela (2013) found that regular patrons had claimed that they knew where their books were in their library and could go to the correct shelf and pick the books without checking the availability and the location of the books and other information sources on the OPAC. The catalogue is a good starting point to locate where the information source is in the library and whether it is available or taken out of the library. Checking the OPAC first can help users to select the information source by its unique attributes such as the edition. The respondents were asked to indicate how often they searched the catalogue when helping users to locate information sources. By asking this question the researcher wanted to find out if the library assistants understood the importance of the catalogue since the assumption was that most of them did not hold a library qualification. The findings revealed that the majority of respondents eleven (39%) searched the OPAC very often when helping patrons, seven (25%) sometimes searched the catalogue when helping patrons, five (18%) rarely searched the catalogue when assisting users, four (14%) indicated that they always searched the catalogue when searching information, whereas one (4%) had never used the catalogue when helping patrons in the library. The results are presented in Figure 15.
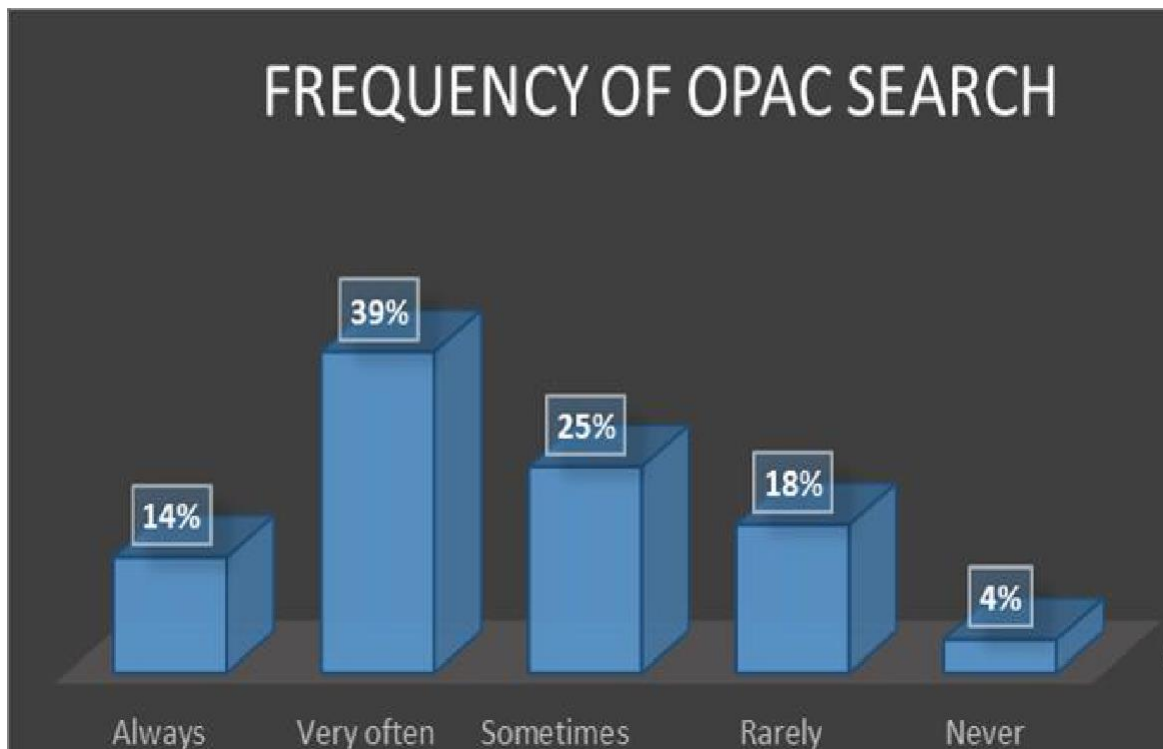
Figure 15: Frequency of OPAC search (n=28)

The results suggested that the majority of respondents did not always search the catalogue before going to locate books and other information sources on the shelves. The catalogue with its physical description attributes such as the number of pages, could help when looking for a book on the shelves such as, if the catalogue indicates 20 pages of the book, the user will check carefully on the shelf to avoid missing it. Besides, the summary of the information source that is available on the catalogue will also help the patron to decide if they want the information source or not. In addition, the catalogue will indicate if the information source is on reserve, reference, main open shelf, media section or any section of the library, and if it was out of the library or not. In the case where the information source is out of the library, the catalogue also indicates the return date. The library assistants should be made aware of the importance of searching the catalogue every time they help users to locate information sources.

5.6.4 Access points to retrieve information sources

Using the correct access points could help the patrons to retrieve the correct information sources in a short time. The other purpose of the catalogue is to save the user's time searching for the shelves. The respondents were therefore asked to indicate the access points they used to retrieve information sources. The options given were *author, title, subject*, *keyword* and

call number. The majority of respondents 26 (93%) indicated that they used the title, 21 (75%) indicated the author, nine (32%) keywords, whereas five (18%) indicated that they used the subjects for searching the catalogue. The results are presented in Figure 16.
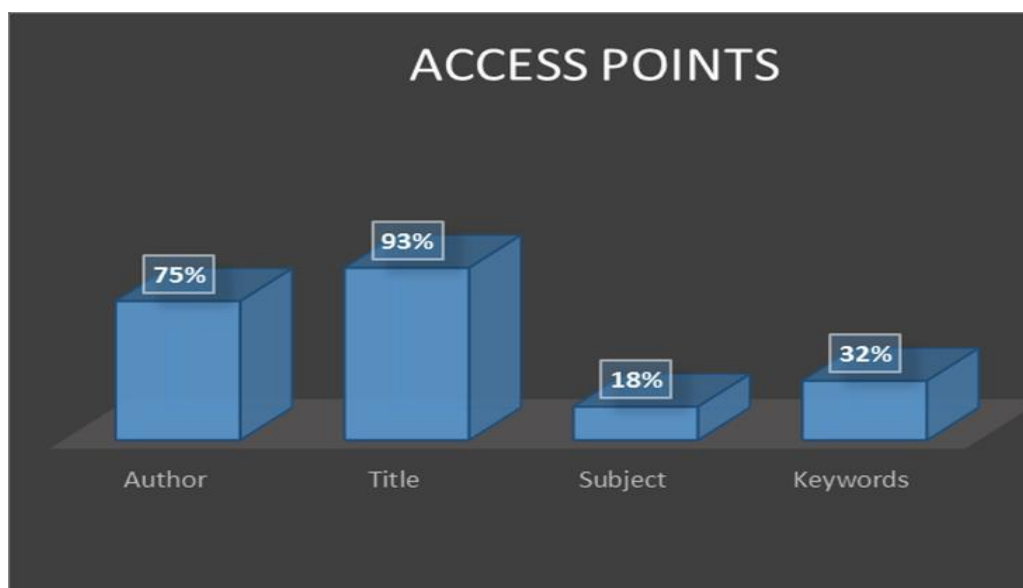
Figure 16: Access points (n=28)

The results revealed that the subject was not used by many participants to access information sources although it is the fair access point to use as the patrons may not know the title or author of the information source, but will know that they want the information about a term or subject, for example the patron may look for information on "Adoption". The keyword may be used as well in that case, but then too much irrelevant information will be retrieved. The subject would be the better option to use.as it would also have the cross references to improve retrieval.

5.6.5   Modifying the search

Every information system offers the different search interface and techniques to retrieve the indexed information. Different information sources are arranged and indexed with different terms, hence the participants were asked to explain how they modified their search queries when they did not retrieve the desired search results and were given the following options: *I change the access point*, *I ask my colleague for help*, *I ask the cataloguer*, *I give up* and *Other*. The findings indicated that most participants 13 (46%) indicated that they asked colleagues for help, 10 (36%) indicated that they changed the access point, four (14%) asked the

cataloguer, and three (11%) indicated that they checked the correct spelling from Google when their search did not retrieve results. The results are indicated in Figure 17.
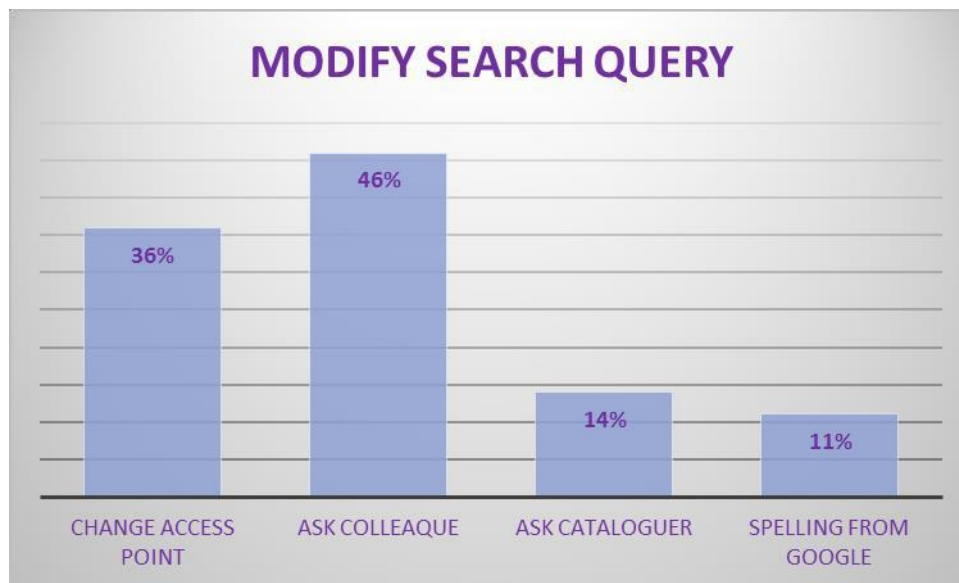
Figure 17: Modify search query (n=28)

Most participants indicated that they asked colleagues for help when they did not retrieve desired results. This result validates the senior librarians' claim that library assistants shadowed the librarians or experienced member of staff to learn how things are done. By changing the access point suggests the respondents knew how to search and retrieve information. By checking the spelling from google suggests the absence of the fuzzy search features.

5.6.6 Usability of the CCTML OPAC

To understand how the participants felt about the OPAC interface, the respondents were asked to rate the usability of the OPAC from poor to excellent. The findings indicated that most participants nine (32%) thought the OPAC user interface was fair, seven (25%) rated it good, five (18%) rated it poor, five (18%) rated it very good and two (7%) rated the OPAC as very good. The findings are indicated in Figure 18.
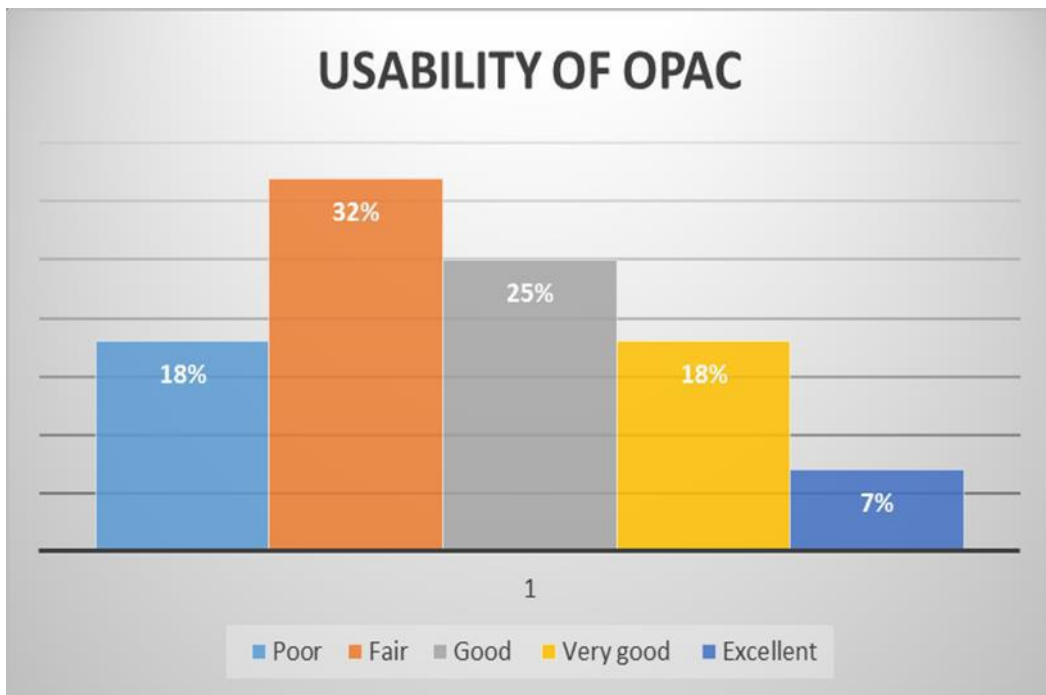
Figure 18: Usability of OPAC by library assistants (n=28)

The OPAC should be useful to help patrons to retrieve and locate information sources in the library. The purpose of any library catalogue is to save the patrons time by locating the accurate information sources they are looking for. The good catalogue should be accurate and should feature all the required entities and attributes of the information sources to enhance retrieval and usage.

5.6.7 Challenges of the OPAC

The participants were also asked about the challenges they encountered when searching the OPAC. The findings indicated that, like the librarians and senior librarians, the library assistants faced the problems of slow network, misleading results and absence of fuzzy search technique. Only seven participants (25%) indicated the challenges they encountered when they searched the OPAC, while 75% did not answer the question. The question was open ended to give participants the opportunity to express themselves. The disadvantage of the open-ended question is that sometimes participants do not want to spend time writing the response as they would choose from multiple options.

Verbatim responses on this question follow:

Q17: *Too much information to work through, unnecessary information attached to the records, frequently offline.*

Q12: *OPAC does not indicate if the book is available on the appropriate library.*

Q13: *It is slow, offline, words are not always picked up on the title if not sure of the title.*

Q14: *Correct spelling must be put on the titl*e *or you won't get results.*

Q28: *There are books on the system, but you can't find them on the shelf.*

Q21: *Typeface too small, offline most of the time.*

Q1: *Not user-friendly.*

5.6.8 OPAC training

The researcher wanted to find out if the respondents had received any training on how to use the OPAC since they were perceived as paraprofessionals. The question was also asked to validate the responses of the senior librarians. Eighteen respondents (64%) indicated that they had never attended any training, five (18%) indicated that they attended in-house training that showed them how to use the OPAC, four (14%) indicated that they attended departmental training on how to use the system and one (4%) indicated that they attended a training on how to add the periodicals on the system. The following are some of the verbatim responses:

Q26: *Not much to be honest.*

Q10: *Not really, in-house training, figuring out yourself.*

The findings are further presented in Table 10.

Table 10: OPAC training (n=28)

Responses	Respondents	Percentages
None	18	64 %
In-house training on how to use the OPAC	5	18 %
Department training on how to use the OPAC	4	14 %
Add item information of periodicals	1	4 %
Total	**28**	**100 %**

The results revealed that most respondents did not attend any training. These confirmed findings from senior librarians' interviews about the fact that training manuals that are placed on the desk were supposed to be used by patrons and staff members to learn how to use the OPAC. The other participants indicated that they attended in-house training, as confirmed by senior librarians. Departmental training was also used to help learn the system. Duration of training may also have an impact on the extent of learning how to use the system. The respondents were asked to indicate the duration the training took. Eight (29%) indicated that the training took two days and two (7 %) indicated that the training took about 10 hours. The results also confirmed the senior librarians' position that the training took one to three days. The period allocated for the training does not seem enough for a person who does not have an OPAC background to master the operation of the system.

5.6.9   Impact of training

The purpose of any training is to equip the trainees with skills. The respondents were asked how the training met their needs to efficiently offer the library services. The findings as quoted verbatim follow:

Q10: *I don't use OPAC a lot because it is not user friendly and it does not give you subject searches.*
Q6: *I learned by trial and error.*
Q23: I got a training manual that helped at times when one got stuck.
Q20: *Training did not meet my needs it was one-day training.*
Q2: *I still have a problem as the machine is always offline.*
Q18: *It met my needs because I got accompanying manual.*

The responses suggested that the trainings were not enough to equip the participants with the adequate skills to operate the system. The training programme should be planned and facilitated in a way that meets the trainees' needs.

5.7 Summary

This chapter presented data analysis of the findings from the four categories of participants namely: cataloguers, senior librarians, librarians and library assistants. The presentation of findings was based on themes derived from research questions that included international

cataloguing standards, cataloguing records, cataloguing skills, quality catalogue, cataloguing system, challenges of cataloguing and OPAC user interface. The major findings revealed that the information system used by the CCTML for cataloguing and retrieval did not support the international standards. The findings also revealed that the cataloguers did not use any authority work standards as they outsourced authority records from the OCLC. The findings also revealed that the cataloguers did not learn authority control from the LIS schools. Moreover, it was revealed that the cataloguers and senior librarians were not involved when the system was purchased and that the system used did not feature the fuzzy search technique. The absence of the technique could have an impact on both cataloguing and retrieval of information as the cataloguer could mistakenly transcribe the wrong spelling of the entry, which would lead to no retrieval. The findings also revealed lack of some attributes of the entities on the records as well as low quality of the records was. In addition, the OPAC user interface did not cater for complex searches and the training offered to library assistants was not adequate. The participants suggested proposals on how challenges of cataloguing and retrieval could be ameliorated. Chapter 6 will present findings from OPAC records while Chapter 7 will present the discussion of the findings.

Chapter Six

Analysis and Presentations of Findings: OPAC records

6.1 Introduction

This chapter presents an analysis of OPAC records. Three hundred and eighty-four (384) records were randomly selected from the City of Cape Town's Online Library Service via the portal coct.slims.gov.za. The samples of records were retrieved using the author as the access point. The author is used as the main entry and authorised access point for any information source, according to the cataloguing standards the AACR2 and the RDA (Gorman & Winkler, 1998; RDA, 2010). The catalogue record entry should be under the surname of the author. AACR2 (22.5A1) RDA (9.2) emphasises entry of the creator's name containing the surname to be transcribed or recorded under the surname when creating authorised access points to represent persons. The FRBR model emphasises that, for the user to find, identify and choose the information source, the catalogue needs to feature all the required attributes and entities. The FRAD model emphasises the correct and standardised access points. The researcher checked if the records met the requirements for bibliographic records by checking the availability and accuracy of the attributes as indicated by the FRBR, the FRAD and the FRSAD. The following attributes were considered as the checklist: *author, title, edition, year of publication, subjects, physical description, notes, alternative authors and item information* as these are the main attributes to help the information seeker to find, identify and choose the information sources required.

Chapman and Massey (2002) also considered the following checklist when developing a quality audit tool for University of Bath in the UK: author, title, statement of responsibility, edition, physical description, imprint, shelfmark and subjects. The checklist was based on ISBD areas to include all types of library materials. Furthermore, the checklist evaluation tool by Ajis and Manaf (2013) was applied in order to determine the availability, accuracy and compliance of the records with the cataloguing standards. The checklist used evaluation criteria (improper records, missing metadata and acceptable records). According to Ajis and Manaf (2013), improper records are the records that features absence of metadata, wrong punctuations, typographic errors, incomplete, inaccurate and non-compliance with the cataloguing standards. Acceptable records are records that are correctly recorded, comply with cataloguing rules and free of errors.

6.2   Findings

The findings were analysed using SPSS software and presented in tables using the following evaluation criteria: improper records, missing and acceptable records. The checklist was divided into separate evaluations, which cater for author, title, edition, year of publication, subjects, physical description, notes (contents, summary), alternative authors and item information.

6.2.1   Search index

The first window of the search index of the CCTLS OPAC user interface only allowed for the keyword search, it did not offer any options for other entries such as author, ISBN, subject, title and other search options. The keyword option could retrieve any word typed, and this could lead to information overload. Once the source was retrieved, the home window offered the search index containing title/ series, author, title keyword and subject headings, publisher, personal name, corporate name, geographic name and keywords search options. The system needed a trained user to access it efficiently.

6.2.2 Author entry

The researcher sought to verify whether all the catalogue records contained the author entries and were free of errors. The FRAD model ensures consistency in representing the creator's (author) name and asserts that the work should be associated with the name of the author/ creator. The author's name should be the basis for controlled access point. The findings indicated that all the 384 records searched featured the authors of those information sources. However, the majority of the records 238 (62%)) were entered under the first name of the author and not the surname, as required by the cataloguing standards. This anomaly would cause problems when filing the records in the authority file. One hundred and forty-six 146 (38%) records were correctly entered under the surname. The findings are presented in table 11.

Table 11: Author entry checklist (n=384)

Findings	Number of records	Percentage	Remarks
Improper authors name and incorrect	238	62 %	Entries under first name of the author, missing and wrong punctuations, typographic

			errors. The author's name is not assigned properly according to the cataloguing rules
Missing author Entry	0	0%	All records featured author/s
Acceptable records	146	38 %	Entries are recorded correctly under the surname of the author. Correct punctuations to precede to the name of the author. The dates associated with the names are also recorded.
Total	**384**	**100 %**	

According to Ajis and Manaf (2013), improper author name is the evaluation criteria, which identify wrong form of heading, wrong punctuation and wrong variation of headings for personal name. This involves rules in the AACR chapter 21, chapter 22 (heading for persons), chapter 23 (geographical names) and chapter 24 (heading for corporate bodies). (Gorman & Winkler, 1998) and the RDA sections 5 to 10 chapters 17 to -37 (RDA, 2010). Typographic errors contained in each record were also analysed. Acceptable records are records that comply with cataloguing rules and are free of errors. Table 11 reveals that the majority of the author access points did not comply with the cataloguing standards. In information retrieval, access points refer to the mechanism that enables a user to discover a target document (Chan & Hodgess, 2007:145). Therefore, it can be understood that errors in access points could harm the process of information retrieval. The cataloguers should verify the names of the authors on the authority file to maintain standardisation. This researcher also observed that some of those records were downloaded from the OCLC. This could explain assertions made earlier by the researcher that the catalogue records that cataloguers' copied from WorldCat were not of good quality and did not follow the minimum international cataloguing standards. These records were embedded in many libraries worldwide for the users to retrieve information. Figures 19 to 20 and appendices P, Q and Rare examples of some of the records entered under the first name of the author.

Save   Place a hold   Extra links   Save List   Home
                                                                     Help

Publication

Title	**F.W. de Klerk : the man in his time**
Author	Willem De Klerk, 1928-2009
Number	ISBN13 978-0-947464-36-3
	ISBN 0-947464-36-0
	Spine Mark : 320.968 DEK
	Spine Mark : 320.968 DE KLERK
Publication	Johannesburg : Ball, 1991
Physical description	185 p., ill.
	185p., ill. (some col.)
	185 p., ill. (some col.)
	185p., ill.
Note	Statement of responsibility: Willem de Klerk ; translated by Henri Snijders
	Statement of responsibility: translated (from the Afrikaans) by Henri Snijders
	Statement of responsibility: Willem de Klerk ; [translated by Henri Snijders]
	General: Afrikaanse titel: F. W. de Klerk : die man en sy tyd
	Statement of responsibility: translated by Henri Snijders
	General: some col.

Subject Headings

DDC	320.968
	968.065
Personal Names	F. W. De Klerk, 1936-
Subject Heading	Political reform ; South Africa
	DE KLERK, FREDERIK WILHELM, 1936 ; POLITICAL CAREER

Available in the following libraries

Entry under first name

CTL4-Athlone
Book - English adult non fiction - 320.968 DE KLE

Volume/Part	Copy	Lending status	Date until	Reservations
-	C02084351	Available	-	-

CTL5-Bellville
Book - English adult non fiction - 320.968 DEK

Volume/Part	Copy	Lending status	Date until	Reservations
-	36012000007156	Available	-	-

http://coct.slims.gov.za/submit.phtml?UDses=6328368%3A515948&UDstate=1&UD...   2017-04-15

Figure 19: Catalogue entry under the first name (n=384)

| Save | Place a hold | Extra links | | Save List | Search History | Back | Home |
| Back to index | | | | | | | Help |

Publication

Title	**Above us the sky**
Author	Milly Adams, *Entry under first name*
Number	ISBN13 978-0-7505-4285-2
	ISBN 0-7505-4285-3
	Spine Mark : ADA
Edition	Large print ed.
Publication	Long Preston, N. Yorks. : Magna Large Print Books, 2016
Note	Statement of responsibility: Milly Adams
	Target Audience: Large print

Subject Headings

Subject Heading	World War, 1939-1945 ; Great Britain ; Fiction
	Large type books

Available in the following libraries

CTL2-Mobile-Services

Book - English fiction large print - ADA

Volume/Part	Copy	Lending status	Date until	Reservations
-	OCT00009277434	Charged out	21.04.2017	-

Figure 20: Catalogue entry under the first name
(n=384)

155

The errors reflected above would hinder the sharing of skills and resources because the creator's names would be filed under the first letters of their names in the authority control file, contrary to the prescribed cataloguing standards. This error would also hinder the accessibility and collocation of the creator's works. The FRAD model emphasises that cataloguing rules should be observed when transcribing the controlled access point. The cataloguers should verify the names of the creators from the authority file and transcribe the correct form of the name and maintain consistency. The second principle of cataloguing as indicated by Hegna (2007) is to adhere to cataloguing international standards. Recording the correct form of the name of the author/ creator on the catalogue can help the patrons to collocate the works of that author when performing search strategies such as citation pearl growing where the searcher uses the surname of the author to find relevant searches and other information sources by the author.

6.2.3   Title entry

The researcher sought to verify if the catalogue records contained the title entries. The FRBR identifies the title as another attribute of the manifestation that could be used to retrieve the record. The findings revealed that all 384 (100%) records featured the titles of the information sources. The findings are presented in Table 12 below.

Table 12: Title entry checklist (n=384)

Findings	Number of records	Percentage	Remarks
Improper title Entry	0	0%	No improper title entries
Missing title Entry	0	0%	All records featured title
Acceptable records	384	100%	Correct spelling, no typographical errors. Proper punctuations and accentuation and diacritical marks such as (Ă/ÿ/ý) are present where required
Total	**384**	**100%**	

The title is a very important access point and can be used as a main entry in the case of the work produced under the editorial direction, according to the AACR2 and the RDA (Gorman & Winkler, 1998) and the RDA (2010). Moreover, "the title can be used as the main entry if responsibility is shared among more than three bodies and principal responsibility is not

attributed to any of them" (AACR2, rule 21.6C2), or if the personal authorship is unknown and the work does not emanate from a corporate body, or if the work is accepted as sacred scripture by a religious group (AACR2, rule 21.37). The title entries were recorded following the cataloguing standards AACR 1.1B1 "transcribe the title proper exactly as to wording, order and spelling, but not necessarily as to punctuation and capitalisation. Give accentuations and other diacritical marks that are present in the chief source of information". RDA chapters 1, 2 and 6 also affirm the above statement. For example, RDA 1.7.4 (transcribe diacritical marks such as accents as they appear on the source of information).

6.2.4   Edition statement

One of the objectives of the catalogue is evaluative objective. For the user to evaluate the source by its edition, the edition statement should be transcribed. Therefore, the researcher sought to find out if the catalogue records of the CCTML contained the edition statements to assist the users to choose the source by its edition. The findings revealed that only 109 (28%) featured the edition statement, whereas 275 (72%) did not have edition statement. The findings are presented in Table 13.

Table 13: Edition statement entry checklist (n=384)

Findings	Number of records	Percentage	Remarks
Improper records	0	0%	No wrong entry for edition
Missing edition Entry	275	72%	Edition entry not recorded
Acceptable records	109	28%	Edition statement recorded. AACR 1.2B1 followed
Total	**384**	**100%**	

The findings revealed that majority of the records sampled did not feature the edition statement. Perhaps because fiction books and the non-print sources such as CD's and DVDs may not feature edition. However, nonfiction books need to have edition statement since some books may feature edition. The cataloguers should refer to the cataloguing standards when describing the catalogue data. In cases where the information source lacks edition, AACR2 rule 1.2B4 advices that if an item lacks an edition statement but is known to contain significant changes from other editions, a suitable brief statement on the language and script of the title proper should be supplied and enclosed in square brackets.

6.2.5 Date of publication

For the patron to identify the source by its date of production, publication, distribution, manufacture, copyright notice and other dates and entry points should be available on the catalogue. For example, the patron who is looking for the latest information would typically use the latest published information source and the catalogue should have that information to help the patrons to identify the source. For that reason, the researcher sought to find out if the records featured the acceptable records containing year of publication of the information sources. The findings revealed that all 384 records (100%) featured the date of publication and the cataloguing standards were followed. The findings are presented in Table 14.

Table 14: Date of publication entry checklist (n=384)

Findings	Number of records	Percentage	Remarks
Improper records	0	0%	No improper date entry
Missing year of publication	0	0%	All records had date of publication
Acceptable records	384	100%	Rules for transcibing the date of publication were followed Date of publication transcribed Dates were recorded in western-style arabic numerals In the absence of date of publication, the copyright date was recorded
Total	**384**	**100%**	

The results from records analysed revealed that cataloguers understood the importance of transcribing the years of publication on the catalogue records as they adhered to international standards (AACR2 1.4F8; RDA chapter 2 (2.8.6.3)).

6.2.6 Physical description

The physical description of any information source is very important for retrieval from the shelf and online for electronic materials. The description of pages that the printed book has, helps to locate it from the shelf. The physical information checked would include the size of the book and its location based on such size. The extent of physical description information such as illustrations, maps, portraits, plates and pictures also help to evaluate the information source. Moreover, the description of the dimensions helps with the shelf location as the patron would know the size of the source when locating it. MARC 21 description tags 300, 336, 337 and 338 indicate the description of the information sources. The researcher sought to find out if the catalogue records contained the physical description and if they are accurately recorded. The findings revealed that the majority of records 309 (80%) featured pagination and 75 (20%) did not. Two hundred and nine records 209 (54%) contained the extent of physical description while 175 (46%) did not. However, some describing carriers were not featured, probably because the CCTML cataloguing system did not contain those MARC tags as the system had only the basic tags and again the cataloguers were not using the RDA during the time of the study. Besides, only 19 records (5%) featured dimensions with the rest 365 (95%) lacked dimensions. Furthermore, 75 records (20%) were missing pagination and other physical details. Findings are presented in Tables 15 to 17.

Table 15: Pagination checklist (n=384)

Findings	Number of records	Percentages	Remarks
Acceptable records	309	80 %	Pagination is present and recorded in Arabic numerals following AACR2 rules Correct punctuations were Recorded

			Correct abbreviations were used
Improper records missing pagination	75	20%	Pagination missing
Total	**384**	**100 %**	

Table 16: Extent of physical details checklist (n=384)

Acceptable records	209	54%	Extent of physical description present Correct punctuations preceding the physical descriptions Correct abbreviations as indicated in AACR2
Improper records Missing extent of physical description	175	46%	Extent of physical description missing
Total	**384**	**100**	

Table 17: Dimensions checklist (n=384)

Acceptable records	19	5%	Dimensions present Correct punctuation to precede the dimensions Correct abbreviations as indicated in AACR2
Improper records Missing dimensions	365	95 %	Dimensions missing
Total	**384**	**100%**	

Recording the dimensions and all physical details on the catalogue can also help the patron to locate the physical information source quickly. The following and appendices S, T, U,V and W are some of the records that did not feature the dimensions and other physical details.

Save | Place a hold | Extra links   Save List | Home
                                                      | Help

Publication

Title	**Alex Bag**
Author	Alex Bag, 1969- Heike Munder, 1969- [Editor] Gygax, Raphael [Editor]
Institution/Organisation	Migros Museum für Gegenwartskunst
Number	ISBN13 978-3-03764-220-7 ISBN 3-03764-220-3 Spine Mark : 709.73 BAG
Publication	Zurich : Migros Museum für Gegenwartskunst, c2011
Physical description	227 p., col. ill.

No dimensions (handwritten annotation)

Note	Statement of responsibility: [editors, Raphael Gygax, Heike Munder ; translation from German, Gerrit Jackson ; translations from English, Claudia Kotte] General: Catalog of an exhibition at the Migros Museum für Gegenwartskunst Zurich from May 28-Aug. 14, 2011 Language: Text in English and German

Subject Headings

DDC	793.73
Personal Names	Alex Bag, 1969-
Subject Heading	Video art ; Exhibitions

Available in the following libraries

CTL1-Central-Library
Book - English adult non fiction - 709.73 BAG

Volume/Part	Copy	Lending status	Date until	Reservations
ART LIBRARY	OCT00000389624	Available	-	-

Identification   c:ct:926190

Figure 21: Dimensions absent (n=384)

Save | Place a hold | Extra links

Save List | Home

Help

Publication

Title	**Architectural research methods**
Author	Groat, Linda N. Wang, David, , 1954-
Number	ISBN13 978-0-470-90855-6 [pbk.] ISBN 0-470-90855-6 [pbk.] Spine Mark : 720.072 GRO
Edition	2nd ed.
Publication	Hoboken, NJ : John Wiley & Sons, Ltd., 2013
Physical description	viii, 468 p. : ill.
Note	Statement of responsibility: Linda Groat and David Wang

No dimensions

Subject Headings

DDC	720.072
Subject Heading	Architecture ; Study and teaching Architecture ; Research

Available in the following libraries

CTL5-Bellville

Book - English adult non fiction - 720.072 GRO

Volume/Part	Copy	Lending status	Date until	Reservations
-	OCT00002767555	Bellville items in reference	21.12.2017	-

Identification   c:ct:994099

http://coct.slims.gov.za/submit.phtml?UDses=6681320%3A207261&UDstate=1&UD... 2017-08-12

Figure 22: Dimensions absent (n=384)

Save | Place a hold | Extra links   Save List | Home
                                                                 Help

Publication

Title	**Basic physics questions for GCSE : National Curriculum edition**
Author	Abrams, Bernard
Number	ISBN13 978-0-7487-1724-8 [pbk] ISBN 0-7487-1724-2 [pbk] Spine Mark : 530 ABR
Publication	Cheltenham : Stanley Thornes LTD, 1994
Physical description	iv, 199p., ill. *No dimensions*
Note	Statement of responsibility: Bernard Abrams Target Audience: Study collection
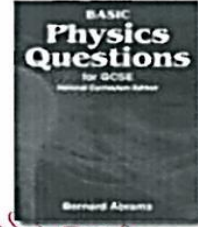
Available in the following libraries

CTL2-Ocean-View
Book - English adult non fiction - 530 ABR

Volume/Part	Copy	Lending status	Date until	Reservations
-	36031000020894	Available	-	-

Identification   c:ct:694542

Figure 23: Dimensions absent (n=384)

Save   Place a hold   Extra links   Save List   Home

Help

Publication

Title	**Clinical examination**
Author	Talley, Nicholas O'Connor, Simon
Number	ISBN13 978-0-632-05152-6 [pbk.] ISBN 0-632-05152-3 [pbk.] Spine Mark : 616.075 TAL
Publication	Oxford ; Blackwell Science, 2002
Note	Statement of responsibility: Nicholas Talley, Simon O'Connor

No Physical description (handwritten)

Subject Headings

DDC	616.075
Subject Heading	Physical diagnosis Medical history taking Physical examination ; Methods

Available in the following libraries

CTL5-Eikendal

Book - English adult non fiction - 616.075 TAL

Volume/Part	Copy	Lending status	Date until	Reservations
-	38162000028930	Available	-	-

Identification   c:ct:442946

Figure 24: Physical description absent (n=384)

6.2.7 Notes area

The notes area gives the patrons extra information about the information source such as the contents, summary, abstract, review, bibliography note, restriction on access note, scale note for graphic materials, citation/ reference notes, performer notes, target audience notes, geographic coverage note, supplement note, reproduction note, system details note, language note and other information that can help in selecting the information source. By reading the notes, the patron will be able to choose if the source is the one she/ he is looking for. The MARC21 offers the following tags, to name the few that should be used to transcribe the notes: 500 (General notes), 505 (Formatted content notes), 520 (Summary notes) and 521 (Target audience).

On the general notes area, the cataloguer should transcribe any information that did not have a specific field but is deemed important to assist in finding the information source. Formatted content notes should transcribe the contents of the information source. The summary indicates what the book is about. The system notes are used for the DVDs, CDs and any information sources that require the system to transfer information. The target audience note indicates if the information source is restricted to some audience or not. The researcher sought to find out if the catalogue records contained notes to assist patrons to evaluate and choose the information source. The notes also help to present information searched using the keywords on the user interface. The findings revealed that the majority of the records 340 (89%) contained the general notes, whereas only 44 (11%) did not contain the notes. However, the information on statement of responsibility was transcribed on the general notes field. This could be acceptable if such statement of responsibility did not fit to be recorded on the statement of responsibility area. The findings are depicted in Table 18.

Table 18: Notes area entry checklist (n=384)

Findings	Number of records	Percentage	Remarks
Improper records	340	89 %	General notes field recorded statement of responsibility AACR2 rules not followed
Missing general notes	44	11%	General notes absent

Proper records	0	0%	Field for general notes did not record proper general notes for the information sources
Total	**384**	**100 %**	

According to the MARC 21, the statement of responsibility should be recorded on the 245 tag, together with the title proper preceded by a diagonal slash and *delimiter c*. However, AACR2 allows the cataloguer to make notes on variant names of persons or bodies named in statement of responsibility. The following and appendix, X are some of the records that displayed the statement of responsibility on the note area not together with the title, as the standards emphasised. The information system used for cataloguing should allow the recording of the statement of responsibility alongside the title proper.

Save | Place a hold | Extra links   Save List | Search History | Back | Home
Back to index   Help

Publication

Title	**Architectural research methods**
Author	Groat, Linda N. Wang, David, , 1954-
Number	ISBN13 978-0-470-90855-6 [pbk.] ISBN 0-470-90855-6 [pbk.] Spine Mark : 720.072 GRO
Edition	2nd ed.
Publication	Hoboken, NJ : John Wiley & Sons, Ltd., 2013
Physical description	viii, 468 p. : ill.
Note	Statement of responsibility: Linda Groat and David Wang

Statement of responsibility on the notes field (handwritten annotation)

Subject Headings

| DDC | 720.072 |
| Subject Heading | Architecture ; Study and teaching
Architecture ; Research |

Available in the following libraries

No notes (handwritten annotation)

CTL5-Bellville
Book - English adult non fiction - 720.072 GRO

Volume/Part	Copy	Lending status	Date until	Reservations
-	OCT00002767555	Bellville items in reference	21.12.2017	-

| Identification | c:ct:994099 |

Figure 25: Statement of responsibility on the notes field (n=384)

| Save | Place a hold | Extra links | | Save List | Search History | Back | Home |
| Back to index | Back to Short List | | | | | | Help |

Publication

Title	**Over the rainbow**
Author	Paul Pickering, 1952-
Number	ISBN13 978-0-85720-591-9 [pbk.] Spine Mark : PIC
Publication	London : Simon & Schuster, 2012
Note	Statement of responsibility: Paul Pickering
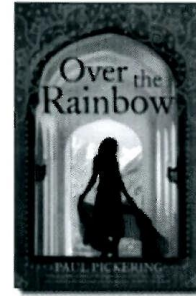
Statement of responsibility on the notes area/field
No notes

Available in the following libraries

CTL1-Central-Library				
Book - English adult fiction - WAG				
Volume/Part	**Copy**	**Lending status**	**Date until**	**Reservations**
-	OCT00000250191	Charged out	04.03.2017	-

Identification	c:ct:924497

Figure 26: Statement of responsibility on the notes field (n=384)

Publication

Title	**Without a trace**
Author	Talley, Marcia
Number	ISBN13 978-1-84751-145-4 [pbk.] Spine Mark : TAL
Publication	Great Britain : Severn House, 2009
Note	Statement of responsibility: Marcia Talley
Part of :	- A Hannah Ives Mystery

Responsibility under notes

Available in the following libraries

CTL5-Fisantekraal

Book - English adult fiction - TAL

Volume/Part	Copy	Lending status	Date until	Reservations
-	30015000132698	Available	-	-

Identification   c:ct:861896

Figure 27: Statement of responsibility on the notes field (n=384)

Publication

Title	**The Cape diaries of Lady Anne Barnard, 1799-1800. V.1, 1799**
Author	Anne Barnard, [Lady] Le Cordeur, Basil A. Lenta, Margaret Barnard, Anne Lindsay, Lady, 1750-1825 [Lady]
Number	ISBN13 978-0-9584112-5-7 ISBN 0-9584112-5-5 Spine Mark : 968.703 BAR Spine Mark : 968.7031 BAR
Publication	Cape Town : Van Riebeeck Society, 1999
Physical description	(378)p., ill. xxxv, 368 p., ill. (1 col.)
Note	Statement of responsibility: edited by Margaret Lenta and Basil le Cordeur *Responsibility under notes*
Part of :	29 - Van Riebeeck Society publications. Second series [Series]

Subject Headings

DDC	968.7031 968
Geographic Name	Cape of Good Hope (South Africa) ; History ; 1795-1872 Cape of Good Hope (South Africa) ; Description and travel ; History ; 1795-1872 Cape of Good Hope (South Africa) ; Social life and customs ; History ; 1795-1872
Personal Names	Barnard, Anne Lindsay, Lady, 1750-1825
Subject Heading	Women ; South Africa ; Biography South Africans ; Biography

Available in the following libraries

Figure 28: Statement of responsibility on the notes field (n=384)

171

6.2.8   Formatted content notes

The catalogue should record the contents of the information source to assist the patrons to choose or to reject the source. The contents indicate what to find in that information source and save the patron time browsing the shelf for the information source that he/ she does not need. The findings reveal that only 59 (15%) of the records contained the contents, whereas 325 (85%) did not have the contents. The findings are depicted in Table 19.

Table 19: Formatted contents entry checklist (n=384)

Findings	Number of records	Percentage	Remarks
Improper records	0	0%	No wrong entry for formatted content
Acceptable records	59	15%	Formatted contents recorded AACR2 1.7B18 followed
Missing contents	325	85%	Formatted contents not recorded
Total	**384**	**100%**	

From the findings, it was evident that the majority of the catalogue records did not contain the formatted content notes. By reading the contents, the patrons would be able to evaluate the information source and decide if it is suited for their needs. Exceptions could be given to fiction sources that did not contain the contents. The researcher therefore sought to find out if the records contained the contents. Below and appendix Y are some of the catalogue records that did not contain the contents.

Save	Place a hold	Extra links		Save List	Home
------	--------------	-------------		-----------	------
					Help

Publication

Title	**Katrin Thomas : exits : living fashion** 246-0 Portion of title: **Exits** 246-0 Portion of title: **Living fashion**
Author	Thomas, Katrin Nicol, Michelle Ude, Ike
Number	ISBN13 978-3-908161-76-9 ISBN 3-908161-76-2 Spine Mark : Q 779 THO
Publication	Zurich : Stemmle, 1999
Physical description	126 p., ill. (chiefly col.)
Note	Statement of responsibility: texts by Ike Ude and Michelle Nicol Target Audience: Carnegie Grant Target Audience: ART - PHOTOGRAPHY

No formatted Content notes [handwritten annotation]

Subject Headings

DDC	779
Personal Names	Thomas, Katrin
Subject Heading	Fashion photography Photography of women Photography, Artistic

Available in the following libraries

CTL1-Central-Library

Book - English adult non fiction - Q 779 THO

Volume/Part	Copy	Lending status	Date until	Reservations
-	36001000855060	Available	-	-

Identification   c:ct:477908

Figure 29: Contents absent (n=384)

Title	**Ezawokhokho**
Author	Xulu, Cedric
Number	ISBN13 978-0-636-03012-1 ISBN 0-636-03012-1 Spine Mark : 398.2 XUL
Edition	2nd, paperback
Publication	Cape Town : Maskew Miller Longman, 1997
Physical description	93p., ill.
Note	Statement of responsibility: C.L. Xulu & M.R. Ntuli Target Audience: Carnegie grant

Subject Headings   No Contents

Subject Heading	Zulu (African people) ; Folklore

Available in the following libraries

CTL1-Central-Library

Book - English adult non fiction - 398.2 XUL

Volume/Part	Copy	Lending status	Date until	Reservations
-	36001009040649	Catalogue Clean-up	11.11.2017	-

CTL4-Crossroads

Book - Xhosa adult non fiction - 398.2 XUL

Volume/Part	Copy	Lending status	Date until	Reservations
-	C50645452	Available	-	-

Identification	c:ct:718858

Figure 30: Contents absent (n=384)

| Save | Place a hold | Extra links | | Save List | Home |
| | | | | | Help |

Publication

Title	**Constructing Bangladesh : religion, ethnicity and language in an Islamic nation**
Author	Uddin, Sufia M.
Number	ISBN13 978-0-8078-3021-5 ISBN 0-8078-3021-6 Spine Mark : 954.92 UDD
Publication	Chapel Hill : University of North Carolina Press, c2006
Physical description	xvii, 224 p., ill., maps
Note	Statement of responsibility: Sufia M. Uddin

No Contents

Subject Headings

DDC	954.92
Geographic Name	Bangladesh ; History Bangladesh ; Civilization
Subject Heading	Islam and state ; Bangladesh ; History Group identity ; Bangladesh ; History Bengali language ; Social aspects Nationalism ; Bangladesh ; History

Available in the following libraries

Figure 31: Contents absent (n=384)

Publication

Title	**You look beautiful like that : the portrait photographs of Seydou Keita and Malick Sadibe**
Author	Lamuniere, Michelle
Number	ISBN13 978-0-300-09188-5 [pbk.] ISBN 0-300-09188-5 [pbk.] Spine Mark : Q 779.2 KEI
Publication	Cambridge, Mass. : Harvard University Art Museums, c2001
Physical description	116 p., chiefly ill.
Note	Statement of responsibility: Michelle Lamuniere

No Contents

Subject Headings

DDC	779.2
Personal Names	Seydou Keita, 1923- Malick Sidibe, 1936-
Subject Heading	Portraits (Photographs) ; Mali

Available in the following libraries

CTL1-Central-Library

Book - English adult non fiction - Q 779.2 KEI

Volume/Part	Copy	Lending status	Date until	Reservations
ART LIBRARY - AFRICAN COLLECTION	36001008121291	Available	-	-

Figure 32: Contents absent (n=384)

176

The contents are the attributes of the work and manifestation as identified by the FRBR and should be transcribed on the catalogue to enhance retrieval of information sources.

6.2.9 Summary, abstract and review of the information source

The summary/ abstract/ review of any information source describes an overview of the content of the work. It tells the reader what the work is all about by producing the synopsis of the work. It is very important to transcribe the summary, abstract and review of the source on the catalogue records to assist the patrons in selecting or rejecting the information source. From the catalogue, the user should know what the information source contains before browsing the shelves or the database (in case of the electronic resources). The summary, abstract, review also helps the cataloguer in subject analysis of the work. The researcher sought to know if the catalogue records contained the summaries of the information sources for which they were surrogates. The findings indicated that of the 384 records, only 49 (13

%) contained the summaries, whereas 335 (87 %) did not have the summaries of the information sources. The findings are illustrated in Table 20.

Table 20: Summary, abstract or review entry check list (n=384)

Findings	Number of records	Percentage	Remarks
Acceptable records	49	13%	Summary present AACR 1.7B17 followed
Improper records Missing summary/ abstract/review entry	335	87 %	Summary/abstract/review missing
Total	**384**	**100 %**	

The findings suggested that the majority of the catalogue records did not contain the summaries of the information sources. The libraries should add the summaries on the records to enhance retrieval. The following and appendix Z are some of the records that did not contain the summary of information sources.

Save | Place a hold | Extra links

Save List | Home
| Help

Publication

Title	**Christopher Columbus**
Author	John Stewart Collis, 1900-1984
Number	ISBN13 978-0-356-08441-1 ISBN 0-356-08441-8 Spine Mark : B COLUMBUS
Publication	London : Macdonald & Jane's, 1976
Physical description	208p., maps

No summary

Subject Headings

Personal Names	Christopher Columbus, 1451-1506

Available in the following libraries

CTL1-Central-Library

Book - English adult non fiction - B COLUMBUS

Volume/Part	Copy	Lending status	Date until	Reservations
-	36001008517779	Available	-	-

Identification   c:ct:706760

Figure 33: Summary of the information source absent (n=384)

Save | Place a hold | Extra links   Save List | Home
                                                                Help

Publication

Title	**Dick Francis Omnibus**
Author	Dick Francis, 1920-2010
Number	ISBN13 978-0-330-44667-9 [pbk.]
	ISBN 0-330-44667-3 [pbk]
	Spine Mark : FRA
Publication	London : Pan [Pan Books], 2006
Note	Formatted Contents: Break in -- Banker
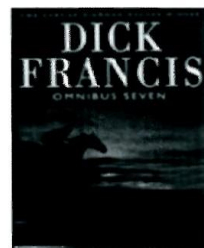
No Summary

Available in the following libraries

CTL5-Bothasig
Book - English adult fiction - FRA

Volume/Part	Copy	Lending status	Date until	Reservations
-	36021001660178	Available	-	-

CTL1-Milnerton
Book - English adult fiction - FRA

Volume/Part	Copy	Lending status	Date until	Reservations
-	36028001349462	Available	-	-

Identification   c:ct:823841

Figure 34: Summary of the information source absent (n=384)

Figure 35: Summary of the information source absent (n=384)

6.2.10 Subjects

Taylor and Miller (2006) assert that subject analysis is the process by which cataloguers and indexers attempt to provide meaningful subject access to information sources. The analysis process allows cataloguers and indexers to determine the subjects associated with a work and associated useful subject terms to the item, so it can be collocated by subject for retrieval. One of the objectives of the catalogue is to enable a person to find a book / information source of which the author, the title or the subject is known (identifying objective). The catalogue should contain the subjects to enable the users to find information sources by their subjects. Taylor and Miller (2006) state that patrons may use subject access as much as 59% of the time. IFLA (2010) emphasises that the ability to search for domains and subjects depends on the input of subject-oriented data in bibliographic records. The researcher sought to find out if the catalogue records contained the subjects of the information sources. The findings indicated that the majority of the sampled catalogue records, 289 (75%) had the subject headings, whereas 95 (25%) did not have the subject headings. The findings are presented in Table 21.

Table 21: Subjects entry check list (n=384)

Findings	Number of records	Percentage	Remarks
Improper records Missing subjects entry	95	25%	Subjects not recorded
Acceptable records	289	75%	Subjects recorded LCSH instructions were followed Controlled vocabulary was used The order of subdivisions were followed (topical, geographical, chronological, form)
Total	**384**	**100%**	

The findings suggested that the majority of the records contained the subjects. Furthermore, focus group discussion with cataloguers showed that the cataloguers used the LSCH for subject analysis and they understood how to assign the subject headings. The findings also suggested that the cataloguers valued the subjects on the catalogue records. However, some records did not contain the subject headings. All library materials should indicate the subjects on the catalogue records also for fiction sources. The LCSH uses the subject heading **Fiction** for collections and materials about fiction such as novels and stories. Fiction of particular national literature such as American uses **American fiction**, genres of fiction use **Fantasy fiction.** Names of places, personal and corporate names are used with the subdivision fiction to express the theme or subject content of collection of fictions. Examples: **Slavery**

$xFiction; **United States$xHistory$d1861-1865$xFiction**. Searching by subject is important for patrons who do not know the author, title or international standard number for the resource. The subject is also important, as it is the first step to classification. The cataloguer usually will assign the subject heading before allocating the classification notation. Below are some of the records that did not contain the subjects.

Save | Place a hold | Extra links   Save List | Home
                                                                Help

---

Publication

Title	**Dick Francis Omnibus**
Author	Dick Francis, 1920-2010
Number	ISBN13 978-0-330-44667-9 [pbk.]
	ISBN 0-330-44667-3 [pbk]
	Spine Mark : FRA
Publication	London : Pan [Pan Books], 2006
Note	Formatted Contents: Break in -- Banker

No Subjects

Available in the following libraries

CTL5-Bothasig
Book - English adult fiction - FRA

Volume/Part	Copy	Lending status	Date until	Reservations
-	36021001660178	Available	-	-

CTL1-Milnerton
Book - English adult fiction - FRA

Volume/Part	Copy	Lending status	Date until	Reservations
-	36028001349462	Available	-	-

Identification   c:ct:823841

Figure 36: Subjects absent (n=384)

Publication

Title	**Gershwin modern masterpieces**
Author	George Gershwin, 1898-1937 Henry Adolf, Mario Rapko Delorko,
Institution/Organisation	Philharmonia Slovnica
Number	023 [Orbis] Spine Mark : C 785.6621 GER CC C 023 [Orbis] Spine Mark : A
Publication	Germany : Orbis, 1993
Physical description	1 compact disc (60:02 min.), digital, stereo., 1 insert pamphlet
Note	Medium: sound recording Statement of responsibility: George Gershwin General: Classical collection Formatted Contents: Piano concerto in F -- An American in Paris -- Preludes for piano

No Subjects

Available in the following libraries

CTL5-Bothasig

Sound media - Music cd - A

Volume/Part	Copy	Lending status	Date until	Reservations
-	OCT00003959497	Available	-	-

Figure 37: Subjects absent (n=384)

Publication

Title	**Deceit / Clare Francis**
Author	Francis, Clare
Number	ISBN13 978-0-330-30673-7 [pbk]
	ISBN 0-330-30673-1 [pbk]
	Spine Mark : FRA
Publication	London : Pan Books, 1994
Physical description	504 p
Note	Statement of responsibility: Clare Francis

No Subjects

Available in the following libraries

CTL2-Masiphumelele-Satellite

Book - English adult fiction - FRA

Volume/Part	Copy	Lending status	Date until	Reservations
-	OCT00005443123	Available	-	-

CTL1-Milnerton

Book - English adult fiction - FRA

Figure 38: Subjects absent (n=384)

6.2.11 Added entries/ additional authors/ alternative authors

Alternative authors are other authors or creators of the work apart from the main author/ creator. The main author, according to the AACR2 and the RDA, is the author that is named first in the chief source of information (title and the verso page) by the way of layout in the information source in case of more than one author. AACR2 rule 21.6C1 indicates that "if responsibility is shared between two or three persons or bodies and principal responsibility is not attributed to any of them by wording or layout, the entry should be under the heading for the one named first and entries added under the headings for the other". RDA 6.27.1.3 also indicates that if principal responsibility for the work is not indicated, one should construct the authorised access point using the authorised access point representing the first-named person, family or corporate body. The MARC 21 indicates the coding of the fields by the tags. The tag for the main author is 100 in the case of the personal name, 110 for corporate name, 111 for meeting name and 130 for uniform title. The above-mentioned tags are not repeatable, meaning the catalogue record cannot have more than one main author/ creator which is represented by 1xx tags. The added entries or alternative authors, according to the MARC 21, are transcribed on tag 700 for personal name, 710 or corporate name, 711 for meeting name and 730 for uniform title. These tags are repeatable, meaning the catalogue record can have more than one (7XX) alternative authors/ added entries. In case the work was created by more than one person/ body, the first one named on the information source (manifestation) should be transcribed on tag 100 or 110 or 111 or 130. The other authors/ creators should be transcribed on the tags 700 or 710 or 711 as the added entries.

The alternative authors/ added entries are a more convenient element for identifying the source, even if the main author is unknown. This helps to retrieve the information source even in the case where the patron does not know the first author/ creator but does know the other authors/ creators responsible for the work. The researcher wanted to know if the records featured the alternative authors, accurately, following the cataloguing standards in the case where more than one creator was responsible for the work. The findings are presented in Table 22.

Table 22: Alternative authors entry checklist (n=384)

Findings	Number of records	Percentages	Remarks
Improper records	344	90	The alternative authors were recorded on the same field with the main author Cataloguing standards were not followed Entries recorded under the first name Missing punctuations
Missing alternative author Entry	0	0%	All alternative authors were recorded
Acceptable records	40	10	Created by one creator Did not need alternative author
Total	**384**	**100 %**	

The findings revealed that all the catalogue records of the information sources that were created by more than one author had added entries, although the researcher noticed that they were not transcribed on the alternative author field, but instead were indicated on the main entry field, tag 100, together with the main entry. In this case, the catalogue records repeated the tag 100 to allow additions for the alternative authors. According to the MARC encoding cataloguing standards field, 100 should not be repeated. Field 700 should be used to record the alternative authors. The main author/ creator should be given the necessary accreditations on the catalogue record as indicated by the standards and the alternative authors should be transcribed as alternative authors. Below are some of the records displaying all the authors on the main author entry tag 100.

Save | Place a hold | Extra links   Save List | Home
                                                                 Help

Publication

Title	**Alex Bag**
Author	Alex Bag, 1969- Heike Munder, 1969- [Editor] Gygax, Raphael [Editor]
Institution/Organisation	Migros Museum für Gegenwartskunst
Number	ISBN13 978-3-03764-220-7 ISBN 3-03764-220-3 Spine Mark : 709.73 BAG
Publication	Zurich : Migros Museum für Gegenwartskunst, c2011
Physical description	227 p., col. ill.
Note	Statement of responsibility: [editors, Raphael Gygax, Heike Munder ; translation from German, Gerrit Jackson ; translations from English, Claudia Kotte] General: Catalog of an exhibition at the Migros Museum für Gegenwartskunst Zurich from May 28-Aug. 14, 2011 Language: Text in English and German

Subject Headings

DDC	793.73
Personal Names	Alex Bag, 1969-
Subject Heading	Video art ; Exhibitions

Available in the following libraries

Item information Present

CTL1-Central-Library
Book - English adult non fiction - 709.73 BAG

Volume/Part	Copy	Lending status	Date until	Reservations
ART LIBRARY	OCT00000389624	Available	-	-

Identification	c:ct:926190

Figure 39: Alterative author on the same field with the main author (n=384)

| Save | Place a hold | Extra links | | Save List | Search History | Back | Home |
| Back to index | | | | | | | Help |

Publication

Title	**The lost generation? : a tracer survey of African secondary school leavers in the PWV area**
Author	Bennell, Paul
	Monyokolo, Mareka
Institution/Organisation	Witwatersrand, University. Education Policy Unit
Number	ISBN13 978-1-86838-037-4 [pbk.]
	ISBN 1-86838-037-8 [pbk.]
	Spine Mark : 371.2913 BEN
Publication	[Johannesburg] : Wits Univ., 1992
Physical description	vii, 35 p
Note	Statement of responsibility: Paul Bennell with Mareka Monyokolo
	Target Audience: Study collection

Subject Headings

DDC   371.2913

Available in the following libraries

CTL5-Elsies-River
Book - Study adult - 371.2913 BEN

Volume/Part	Copy	Lending status	Date until	Reservations
-	36180108449453	Charged out	14.11.2017	-

Identification   c:ct:491616

Alternative author appears on the same field with the main author

Figure 40: Alterative author on the same field with the main author (n=384)

Save   Place a hold   Extra links   Save List   Search History   Back   Home
Back to index   Help

Publication

Title	**Chinese civilization from the Ming revival to Chairman Mao**
Author	Yong, Yap Arthur Cotterell, 1942-
Number	ISBN13 978-0-297-77304-7 ISBN 0-297-77304-6 Spine Mark : 951 YON
Publication	London : Weidenfeld & Nicolson, 1977
Physical description	256 p., ill.
Note	Statement of responsibility: Yap Yong ; Arthur Cotterell

Subject Headings

DDC   951

Available in the following libraries

CTL3-Moses-Mabhida
Book - English adult non fiction - 951 YON

Volume/Part	Copy	Lending status	Date until	Reservations
-	38321000003778	Weeding	11.07.2012	-

CTL2-Muizenberg
Book - English adult non fiction - 951 YON

Volume/Part	Copy	Lending status	Date until	Reservations
-	36037000193284	Available	-	-

Identification   c:ct:514241

Alternative author appears on MARC tag 100 with the Main author

Figure 41: Alternative author on the same field with the main author (n=384)

Save | Place a hold | Extra links   Save List | Search History | Back | Home
Back to index   Help

Publication

Title	**South African national HIV prevalence, incidence and behaviour survey, 2012**
Author	Shisana, Olive Thomas Rehle, 1951- Simbayi, Leickness Chisamu, , 1957- Demetre Labadarios, Sean Jooste, Alicia Davids, Shandir Ramlagan, Ntombizodwa Mbelle, Khangelani Zuma, Van Zyl, Johan Dorina Onoya, Njeri Wabiri,
Institution/Organisation	Human Sciences Research Council United States. President's Emergency Plan for AIDS Relief, Centers for Disease Control and Prevention (U.S.)
Number	ISBN13 978-0-7969-2482-7 [pbk.] ISBN 0-7969-2482-1 [pbk.] ISBN13 978-0-7969-2483-4 [pdf] ISBN 0-7969-2483-X [pdf] 050 Library of Congress Call Number RA643.86.S6 [.S68 2014]
Physical description	xliii, 153 pages, illustrations are in colour, charts, 28 cm
Note	Statement of responsibility: [contributors, Olive Shisana, Thomas Rehle, Leickness Simbayi, Demetre Labadarios, Sean Jooste, Alicia Davids, Shandir Ramlagan, Ntombizodwa Mbelle, Khangelani Zuma, Johan van Zyl, Dorina Onoya and Njeri Wabiri] Bibliography: Includes bibliographical references (pages 133-141) General: "This report has been supported by the United States President's Emergency Plan for AIDS Relief (PEPFAR) through the Centers for Disease Control and Prevention ... "--Title page verso
E-info	URL
Identification	c:ct:1051424

Alternative author appears on the same field with the main author

http://coct.slims.gov.za/brocade/brocade.phtml?UDdesk=desktopct&UDses=6328466... 2017-04-15

Figure 42: Alternative author on the same field with the main author (n=384)

Alternative authors should not be on the same field as the main authors to enable patrons to trace the main creators when doing their searches and using the source. The researcher observed that during the time of the study, the CCTLS did not have the tag 700 on the MARC template that were programmed on the system. Moreover, some of these records were downloaded from the OCLC. If the system is not compatible with MARC fields, it becomes difficult to share the skills and records among cataloguers. Furthermore, it makes it difficult for the cataloguers to adhere to cataloguing standards. The absence of these entities on the records could hinder retrieval of the information sources.

6.2.12 Item/ Shelfmark information

The item information/ shelfmark as indicated by the FRBR model pertains to transactions such as circulation. The catalogue records should feature the item information to assist patrons to locate the section where the information source is kept in the library, it could be on the main open shelf, reserve, media or any section of the library. The item information will also indicate if the information source is on loan as well as the return date. In the case of the CCTML, the item information indicates the libraries where the physical information source is located. Therefore, it is important for patrons to consult the catalogue even if they knew the library has the information source. Some systems indicate if the information source is available in the library, on loan or reserved. Some also show the period of loan, thus saving time for the patron to browse through the shelves for the information source that is out of the library. The researcher therefore wanted to understand if the records contained the item information. The findings indicated that all 384 sampled records featured the item information. The findings are shown in Table 23.

Table 23 Item information/ shelfmark entry checklist (n=384)

Findings	Number of records	Percentages	Remarks
Acceptable records	384	100 %	Item entry/ shelfmark present Local rules consistently followed
Improper records	0	0 %	All records

			contained item entry
Missing item information Entry	0	0%	No missing item
Total	**384**	**100 %**	

Findings show that the cataloguers valued the importance of the item records and, consequently, transcribed the item in all the records. The system also indicated if the information source was on loan and the period of loan was also shown. In the case of the electronic materials, the catalogue featured the Uniform Resource Locator (URL) where the information source could be found. The cataloguers also indicated the branch libraries where the sources could be found. This result suggested the cataloguers were skilled and went further to provide this information as item information could not be downloaded from the OCLC. Below are some of the records that featured the item information.

Save	Place a hold	Extra links		Save List	Home
------	--------------	-------------		-----------	------
					Help

Publication

Title	**Alex Bag**
Author	Alex Bag, 1969- Heike Munder, 1969- [Editor] Gygax, Raphael [Editor]
Institution/Organisation	Migros Museum für Gegenwartskunst
Number	ISBN13 978-3-03764-220-7 ISBN 3-03764-220-3 Spine Mark : 709.73 BAG
Publication	Zurich : Migros Museum für Gegenwartskunst, c2011
Physical description	227 p., col. ill.
Note	Statement of responsibility: [editors, Raphael Gygax, Heike Munder ; translation from German, Gerrit Jackson ; translations from English, Claudia Kotte] General: Catalog of an exhibition at the Migros Museum für Gegenwartskunst Zurich from May 28-Aug. 14, 2011 Language: Text in English and German

Subject Headings

DDC	793.73
Personal Names	Alex Bag, 1969-
Subject Heading	Video art ; Exhibitions

Available in the following libraries

Item information Present

CTL1-Central-Library
Book - English adult non fiction - 709.73 BAG

Volume/Part	Copy	Lending status	Date until	Reservations
ART LIBRARY	OCT00000389624	Available	-	-

Identification	c:ct:926190

Figure 43: Item information present (n=384)

The item information above also indicates the branch libraries that hold the record.

6.3 Summary of OPAC records findings

This chapter dealt with the data analysis and presentations of findings from the analysis of OPAC records. The major findings indicated that most of the records did not contain certain attributes such as the summary of the information source, dimensions of the information source and contents, and some records contained wrong punctuations and cataloguing rules were not consistently followed. The findings also revealed that some information sources did not contain the proper form of the names of the creators/ authors as prescribed by the cataloguing standards. Furthermore, the findings revealed that the alternative authors were transcribed on the same tag as the main authors. The findings moreover revealed that the general notes area was used to transcribe the statement of responsibility. Through observation, the researcher through that some of the records were downloaded from the OCLC with their inherent errors. The findings also revealed that some records contained very little information. The findings are discussed in chapter 7 (Discussions of results).

CHAPTER SEVEN

DISCUSSION OF FINDINGS

7.1 Introduction

This chapter discusses the findings of the study as presented in chapters 5 and 6. Polit and Beck (2004) opine that discussion of findings is aimed at making sense of the findings and examining their implications. Discussions begin with an attempt to explain the research findings within the context of the theoretical framework and prior empirical knowledge. Blaxter et al. (2006) assert that when discussing data, researchers should add their own ideas to the collected data and compare those ideas with the views of others. The main aim of this chapter is to bring the findings into the fold of the existing literature regarding cataloguing practices from creation to use.

The study sought to investigate cataloguing practices from creation to use in Cape Town Metropolitan public libraries, Western Cape province, South Africa, with the view to gaining an understanding of the importance of cataloguing policies, cataloguing system and the use of standards in creating bibliographic data for the libraries. The following research questions were addressed:

1) What skills do the cataloguers of the Cape Town Metropolitan libraries possess?

2) To what extent do cataloguers in the Cape Town Metropolitan public libraries adhere to international standards when creating records in the online catalogue?

3) How are the catalogue records created on the system in the Cape Town Metropolitan used within and across the public libraries?

4) How are the new RDA standards applied in public libraries in the Cape Town Metropolitan to ensure they accommodate entities and attributes as described by the international cataloguing standards?

5) What records quality control measures are used in computerised cataloguing by public libraries in the Cape Town Metropolitan?

6) How effective is the computerised cataloguing system of the City of Cape Town Metropolitan public libraries in retrieving information sources?

7) What are the challenges experienced by public libraries in the Cape Town Metropolitan in computerised cataloguing?

The framework used in organising this chapter is informed by the research questions and broader issues around the research problem. The focus of the study is on cataloguing skills possessed by cataloguers, international standards used for cataloguing, cataloguing records, entities and attributes/ metadata available and absent on the records, catalogue quality control measures, cataloguing system used for cataloguing and retrieval, and challenges experienced in cataloguing and retrieval.

7.2 Cataloguing skills possessed by cataloguers

This section responds to focus group datasets. The findings indicated different skills required of a cataloguing librarian. These includes qualification in LIS, knowledge of cataloguing tools, flexibility to respond to changes on cataloguing standards, and computer skills. Hall-Ellis (2006) carried out a survey of 266 public, special and academic libraries in America and found that employers across all types of libraries required not only an accredited degree for new cataloguers, but also an understanding of cataloguing code (AACR), rule interpretation, classification, subject analysis, authority control and integrated library system operations. Whitmell (2006) carried out a survey of cataloguing skills in Canadian libraries and found that the skills required for a cataloguing librarian were leadership, managerial competencies and flexibility to respond to changes, communication and technology skills. Hider's (2006) Australian study reported that more than 70% of the libraries' skills needed for cataloguing included internet cataloguing, digital library development web authorising and designing.

Park and Camei (2009), in a study of cataloguers' job description in American libraries demonstrated, that knowledge of cataloguing and classification standards were most frequently required qualifications in job description. The activities expected for cataloguers were original cataloguing, authority control, copy cataloguing, descriptive and subject catalogues. In addition, the ability to use standardised cataloguing tools (AACR, MARC, LCC and LCSH) was equally stressed. The other knowledge requirements comprise knowledge of access point, editing knowledge and MARC codes. Chaudhry and Komathi (2002) carried out a study to review the requirements set by employers to select and recruit cataloguers in American libraries with a view to identifying the types of knowledge and skills for jobs related to cataloguing. Their study used job advertisements as they were also considered a good source of information about recruitment of different positions. Their findings revealed that knowledge of cataloguing tools and resources had been the most important requirements for cataloguing positions, while

IT skills appeared to be in high demand. In European countries, Manuel and Oppenheim (2007) found that the loss of cataloguing skills within the library and repository communities would have resulted from the practice of libraries outsourcing their cataloguing work by buying shelf-ready books. They concluded that such a "loss of key skills may have long-term implications" for libraries' ability to provide good quality metadata in the preservation of digital assets. In South Africa, Raju (2014) performed a study of knowledge and skills for the digital era academic library and used content analysis of job advertisements and semi-structured interviews. The purpose of her study was to ascertain the key knowledge and skills sets required for LIS professionals in general. Her findings indicated that technology associated with LIS applications in the digital era was a requirement knowledge/skill set. With regard to cataloguing, Tamma in Raju, (2014) observed that cataloguing and classification had much relevance for the World Wide Web. A more thorough knowledge of the major cataloguing tools and their working principles was required to allow a cataloguer to adopt and accommodate existing metadata schemes to use and possess the basic expertise to construct new schemes. Darries (2017) opines that cataloguing acquires skills to include application of standards to digital objects, and knowledge of MADS and Metadata Object Description Standards (MODS). The researcher established that cataloguing skills are fundamentals to current library practices.

7.3   Cataloguers training

This section responds to focus group datasets. The findings revealed that all cataloguers (100%) went through cataloguing training from the LIS schools. The training included descriptive cataloguing, subject analysis and classification. However, the participants were not convinced that they were taught authority control. They had attended the following on job training: cataloguing of metadata and e-resources presented by Knowledge Leadership Associates in 2013 for three days; Interested Group for Bibliographic Standards (IGBIS) workshop in 2013; RDA workshop in 2013 for two days and RDA practical short courses presented by the UCT Library and Information Studies Centre in 2016 for three days. Cloete et al. (2003) recognise that "when library graduates enter cataloguing posts, they need a refresher course in cataloguing conducted by the senior staff member of the department" or any experienced person. They also need in-service training to understand and master specific procedures at the library where they are employed. The researcher believes that these programmes

within the library environment can help the new cataloguers to be integrated into the workplace. In addition, experienced cataloguers can learn new skills and trends of cataloguing through similar programmes.

The studies of Nampeya (2009) and Mommoh and Saka (2016) also revealed that cataloguers were trained on the job. Similarly, Hosein and Bowen-Chang (2011) in a study of training cataloguing professionals at the University of West Indies, St Augustine, found that cataloguers also received MARC 21 cataloguing training, metadata for digital collections, metadata standards and application, OCLC connection and subject analysis. Their study suggested that there is a need for cataloguers to be involved in continuous training to keep abreast of new trends in the bibliographic environment. Given the financial constraints, Hosein and Bowen-Chang (2011) note that "cataloguers can capitalise on the availability of the numerous cataloguing outline courses and webinars offered globally through technological advancement". Kiorgaard (2010) carried out a survey of RDA training needs in Australia focusing on different types of libraries (schools, universities, colleges, polytechnic, and special, public, state and national). The participants in the study were library managers, library system support staff, and cataloguers' reference staff. The findings revealed that most library managers (63%), reference staff (36%) and library system staff needed training in why they needed to adopt the RDA. Cataloguers (75%) needed training on MARC 21 and changes from the AACR2 to the RDA. Concerning the methods of delivery of training, most cataloguers suggested online training to supplement face-to-face training.

Regarding the acceptable maximum training time, similar to the findings of this present study, the cataloguers indicated one to three full days. They also felt that library managers and library system support should be made aware of the changes of the catalogue standards to support cataloguers with training and improving the library system to accommodate those standards. Iwu and Mercy (2012) carried out a study on assessment of the training and retraining needs of Nigerian cataloguers. The study used 132 respondents comprising cataloguers from various libraries in Nigeria. The findings revealed that 77% of the respondents indicated that the on-the-job training was the highest form of training received after library schools. Their study also revealed that cataloguers needed the following training to function in the information age: metadata creation, computer applications (understanding more about how computers work), cataloguing African materials, organisation of web/digital resources, online cataloguing using the databases of other reputable libraries, cataloguing internet

resources and other electronic files, database construction and management, electronic archiving and conducting retrospective conversion/ migration. Bello and Mansor (2013) carried out a study on strengthening professional expertise: mentoring in knowledge transfer, the cataloguer's perspective in Nigerian university libraries. The study used 228 participants and the findings revealed that "mentoring as a tool for knowledge transfer influences cataloguers and their skill development". Their results indicated that mentoring in knowledge transfer has a moderate to strong correlation with skills development and it improved cataloguer's proficiency and overall development. Hosein and Bowen-Chang (2014) similarly carried out a study of map cataloguing training at the University of the West Indies, St. Augustine. The study used the team of cataloguers of the Alma Jordan Library and the University of West Indies. The findings revealed that training was done through research and practicals. The cataloguers were paired and assigned to research and present descriptive cataloguing rules on single-sheet map, multi-sheet map and map series for a two-day workshop.

The training focused on how to create the catalogue records for the maps using international cataloguing standards (AACR2, MARC, and LCC) and referring to the OCLC WorldCat existing map records. The researcher believes that the OCLC should only accept high-quality standardised catalogue records for sharing the skills. Danskin (2013) carried out a study of RDA implementation and application in British Library regarding the training of 227 staff members. The study findings indicated that training was the most intensive aspect of implementation of the RDA and developed different plans to meet the needs of different staff members. Processing staff, selectors, acquisition staff, copy cataloguers, finishers and shelf markers received job-focused training. Cataloguers' training comprised the FRBR, the RDA and authority control and included theory and practice. The modules were delivered in the morning and the team practiced what they had learnt in the afternoon. Training was supplemented by comprehensive review and revision of existing documentations.

Mason (2009) notes that training is an important element in the equation, and time should be spent on figuring out the most important points to cover. One solution offered by Smith (1994) is that training should incorporate a mentorship programme, like the one used at the cataloguing department of the University of Illinois at Urbana-Champaign Library. Smith (1994) further notes that the programme was the reason the library eliminates the cataloguing backlog when it was going through a period of staff cuts (Smith, 1994:3). Smith believes that

mentoring facilitates "the sharing and understanding of cataloguing policies, procedures, and functions among graduate students, and novice cataloguers". Inter (1989) also makes some interesting recommendations, including that training should be done by those who teach cataloguing; there should be a clarification of the AACR2 rules to help cataloguers better understand elaborations and exceptions (this could be done in a training manual, given to each cataloguer); punctuation should be emphasised; and the encoding of the MARC fields stressed (Inter, 1989:19-22). The CCTML should establish cataloguers' training polies that should guide them in how to offer training to cataloguers and who should offer it. Based on the findings and literature sourced on training and development of cataloguers, the researcher believes that there is no organisation that can survive without further training and capacity building of their staff members. The literature also affirms that knowledge acquired before entering the job is not adequate to function, hence the need for continuous training, especially in the area of cataloguing and classification being a core area in librarianship.

7.4   International standards used for cataloguing

This section responds to focus group and document analysis datasets. It was established from the focus group dataset that the cataloguers used the AACR2, the DDC and the LCSH. Other standards such as the MARC and authority control standards such as LC name authorities were not mentioned. It was also revealed that the RDA has not yet been adopted by the respondents. The findings from document analysis also confirmed that the RDA was not used when creating or adapting the catalogue records. For instance, General Material Designation (GMD) was still used on the catalogue records of the CCTML to indicate that the record is for an electronic resource. In the RDA, this element is being replaced by three MARC tags which are 336, 337 and 338 to supply information on the content, media and carrier, respectively. Moreover, MARC tag 260 was still used to denote publication field. In RDA tag 264 is used to include production, publication, distribution, manufacture and copyright notice. These findings revealed that the cataloguing standards were not fully followed when creating catalogue entries for access such as main headings for main and added entries.

The researcher also found that some of those records were copied from the OCLC with those faults. The researcher suggests that continuous development programmes and regular cataloguing trainings should be implemented, and frequent use of the cataloguing standards should be encouraged when creating the original catalogue and when modifying the copied record from the OCLC and other databases. Projects such as re-cataloguing should be

initiated and policies concerning adaptation of copy catalogue records should be established. Similarly, Lambert, Panchyshyn and McCutcheon (2013) and Danskin (2013) also state that "in the US and UK, public libraries were far from considering the RDA, due to costs and minimal resources for cataloguing". Dunsire (2007) states that the most immediate and obvious impact that the RDA will have on library systems is improved integration of metadata content rules and guidance with cataloguing components. The conceptual model the FRBR has been developed to overcome the drawbacks of current bibliographic data and library information systems (Mercun et al., 2013). Boston, Rajapatirana and Missingham (2005) emphasise the importance of considering appropriate screen labelling, terminology and layout that would assist users to anticipate, understand and fully exploit the delivery of the clustered FRBR results. Tillet (2012) states that the implementation of the RDA creates the need to develop information systems for the future to better serve the users.

Yang (2013) is of the view that library systems should be able to add, index, display, search and retrieve RDA fields, although not all the current LISs were readily made for this task. Luo, Zhao and Qi (2014) state that the RDA was a hot topic in the Chinese library community at the end of 2012. At that time, there were 3 076 public libraries of various sizes in China with financial problems to implement the RDA. However, their 2014 study revealed that there were some libraries such as the Shanghai public library that were always at the forefront in terms of internationalisation and had been making efforts to use the RDA since July 2013. By the end of October 2013, the library downloaded and uploaded RDA records from and to the OCLC through an OCLC connexion, although only western language resources and a small section of Chinese resources were catalogued using the RDA.

Cronin's (2011) study found that cataloguers at the University of Chicago in the US and in Europe used and favoured the RDA although they had difficulty to understand the rules of the RDA. Implementers of the RDA have also demonstrated "similar attitudes and frustrations when it comes to the differences and changes, especially pertaining to the new concepts and terminology". Behrens, Frodl and Polak-Bennemann (2014) carried out a study of the adoption of the RDA in the German-speaking countries and found that on 6 December 2001, the Committee for Library Standards passed a resolution in favour of changing from German to international cataloguing codes and formats such as the AACR and the MARC. A study was commissioned to work out the basic framework, identify the consequences and set the time frame for such a changeover. A great deal of importance was attached to the economic

aspects. The ongoing development of the cataloguing code in use at the time, Regeln für die alphabetische Katalogisierung (RAK), was then reduced before being abandoned entirely in 2003. Therefore, the Deutsche Nationalbibliothek (German National Library – known until May 2006 as "Die Deutsche Bibliothek") and its Office for Library Standards began to participate intensively in the development process of RDA at international level. Experts from the German-speaking countries helped review, comment on and present to the Joint Steering Committee (JSC) the part and full drafts of the RDA. In autumn 2011, the Committee for Library Standards recommended that its members prepare to implement the RDA in their institutions. The unanimous decision was then made in May 2012 to change to the new international RDA standard. Specific and concrete work orders were issued for the implementation project and extensive preparations made at organisational level. From the beginning, there was a definite desire and need to involve all institutions represented in the Committee for Library Standards. In preparation for the adoption of the RDA, institutions involved drafted a plan to guide them throughout the project. The following were created:

- **Policy decisions and preparation of the German RDA policy statements**

Policy statements regarding collaborative RDA cataloguing in the German-speaking countries were formulated and agreed upon.

- **Test phase for cataloguing**

After completion of the first phase of the complete cataloguing code run-through and the formulation of the policy statements, there was a phase for testing the agreements and a practical test for RDA-based cataloguing.

- **Authority data**

The Integrated Authority File transition rules were reviewed. Any missing rules were created and guidelines recorded for the training documents were adapted.

- **Implementation**

This covered technical implementation, including that of the local systems. Policy decisions regarding data format and structure.

- **Training materials and courses**

This included creating and testing training materials and carrying out training courses and information events.

The project's core task was to develop German RDA policy statements, to take the necessary steps for implementation and to identify areas where the existing systems and formats require adjustment. Numerous information events and workshops had been held, lectures given at specialist events, articles published, and information provided through web lists, social media and other relevant specialist channels on stages of the project as part of the public relations activities since the project began. The necessary staff training in cataloguing at the end of the project represented a major area of work. Staff training constituted the conclusion of the project and the transition to productive operation. Furthermore, Behrens et al, (2014) opine that the first implementation of the RDA should not merely represent the introduction of a new code, it should also take the ongoing developments in the information environment into consideration. These include Semantic Web compatibility, the incorporation of automatic processes in the cataloguing of data and the involvement of all partners in the information sphere such as vendors of the information system and other stakeholders (Behrens et al, 2014).

Cronin (2011) carried out a study of the process of managing full-scale RDA adoption at the University of Chicago, from testing to implementation, and found that University of Chicago addressed some of the major issues relating to the management of the implementation of the new cataloguing code, including managing training of staff, implications of the RDA on cataloguing policies and procedure, preparing the library system for RDA metadata, managing the integration of the RDA and the AACR2 records and their displays in the catalogue, and managing the impact on vendor authority control records and contract cataloguing. The process of testing the RDA provided an opportunity to apply the new code under relatively normal cataloguing conditions over a long period of time. Testing helped to identify areas where cataloguers saw improvements from the AACR2 and provided a mechanism to communicate concerns. Subsequently, implementation has allowed extending the learning curve of cataloguers.

Similarly, in a study Nampeya (2009) notes that the cataloguers used the DDC, the AACR2, the MARC and the LCC when creating the catalogue records. Bello and Mansor (2012) carried out a study of duties and job performance factors of cataloguers in Nigerian academic

libraries and found that, although the libraries still possessed the card catalogue system, 86% of the cataloguers performed technical duties such as original descriptive and subject cataloguing, determining appropriate guidelines in applying cataloguing rules as well as subject heading policies with the use of subject headings such as the LCSH, SEARS, MeSH, ARABIC, the AACR2 and the LCC to perform their catalogue duties. Ahonsi's (2014) study of Kenya and Nigeria revealed that in sub-Saharan Africa cataloguers faced challenges in gaining access to the necessary training and preparations in order to implement the RDA. Some of the challenges faced by Ahonsi's participants were inadequate technological skills, limited internet access, unstable internet, low internet bandwidth and unreliable electricity in libraries. These were the challenges that posed serious problems to the implementation of the RDA since the toolkit is published electronically.

In some African countries where the libraries have good access to internet, the high costs still put barriers on its usage (Sharma in Ahosi, 2014). Concerning the awareness and use of RDA rules, Ahosi's (2014) study revealed that 50% of respondents in Nigeria, Benue State, 75% in Kaduna State and 25% in Kenya had never heard of the RDA. Concerning libraries that used the RDA, both Benue and Kaduna States respondents did not use the RDA, whereas only 25% in Kenya used it. Regarding those planning to implement the RDA, 60% of respondents in Benue State indicated that they were not planning to implement it as well as 25% from Kaduna and 25% from Kenya. Ahosi's (2014) respondents were also asked if they had seen RDA records before and 50% of respondents from Benue State, 100% from Kaduna State and 25% from Kenya indicated that they had never seen the RDA records before. On the other hand, 90% from Benue State indicated that they had never read the RDA Toolkit online, 100% from Kaduna and 50% from Kenya had never read the RDA Toolkit online.

In their study of cataloguers' awareness and perception of RDA rules for cataloguing practices in some selected libraries in Bauchi State of Nigeria, Oni, Oshiotse and Abubakar (2018) found that cataloguers had little understanding and perception of the conceptual meaning of RDA rules. Participants agreed that there were problems militating against their perceptions and involvement in the RDA, which include lack of funding to pay for RDA subscription, lack of library automation and lack of understanding the concept and importance of RDA. Ifijeh, Segun-Adeniran and Igbinola (2018) state that libraries in developing countries did not implement the RDA, since the RDA could only be implemented in libraries that are automated and have e-resources as part of their collection. Some challenges

that were found were lack of funds for RDA Toolkit subscription, lack of training funds, lack of internet facilities, lack of computer literacy of cataloguers, lack of support from library management and challenges of local experts to do training. Oguntayo and Adeleke (2016) also note that local cataloguing workshops had merely created awareness of the RDA and simply outlined the features of the RDA rather than training cataloguers on how to actually create catalogue records using the RDA.

In 2008 in South Africa, the Bibliographic Services Programme at the National Library of South Africa (NLSA) was tasked with forming a professional committee to inform the South African cataloguing community about the RDA as replacement for AACR2. From 2009, the RDA lecture series started to alert and train cataloguers in the RDA. The implementation of the RDA was adopted by the NLSA and the University of South Africa (UNISA), among other libraries in South Africa (Ahonsi, 2014; Van Wyk & Nhlabati2014). The findings of this study concur with the above cited studies.

7.5   Catalogue records from creation to retrieval

This section responds to focus group, face-to-face interviews and questionnaire datasets. The cataloguers were asked to indicate the steps they followed when creating the catalogue records. The findings from the focus group discussion indicated that the participants performed both original and copy cataloguing. First, they used the ISBN search to check if the records were already available on the system. In case the records were available, the item information would be added. If not available, the record would be searched from the OCLC using the ISBN search; when found, the cataloguers downloaded the records and amended them to conform to their available MARC tags. In the case where the records could not be found on the OCLC, they created the new records on their local database. Findings also established that cataloguers opted to create original records for fiction materials. Concerning the creation of authority records, findings revealed that participants were always downloading authority records from the OCLC. Similarly, Marais (2004) states that creation of authority records in South Africa was still in its "infancy". Marais (2018) further states that by 2016, only six libraries in South Africa created few authority records. Xia and Liu (2018) on their part mention that many libraries download authority records from the Library of Congress Name authority file, the OCLC and Virtual International Authority File. These worldwide authority files contain a large number of individual and corporate bodies' authorities.

Findings from the library assistants' questionnaires indicated that the catalogue records were fair. However, questionnaires from librarians and interviews with senior librarians indicated that the catalogue records were good and fair in retrieving information sources. These discrepancies may be due to lack of retrieval skills of library assistants, since most of them did not receive library education. The findings also indicated that participants retrieved the catalogue through the OPAC. However, they stated that some records were not accurate and lacked some important attributes, resulting in it being difficult to retrieve information sources using those records. The findings suggested that catalogue records should have enough coherent information to enhance retrieval by all types of patrons. The practice of performing original and copy cataloguing was also found by Banjade (2016) in a study of Nepal universities' libraries. The study established that the practice was a growing pattern. Similarly, Mason (2009) notes that the libraries in developed countries have been doing copy cataloguing for years by using bibliographic utilities such as the OCLC. In developed countries, ready catalogues were provided by the publishers at the time of selling the books. The researcher is of the view that the introduction of online catalogues helped cataloguers to save time and make use of the copy catalogue records. This is also in line with the findings of Nwalo (2003) that copy cataloguing was of immense benefits to libraries and their users as it makes cataloguer records more readily available, saves costs and prevents duplication of efforts. Moreover, Rodman (2000) asserts that the availability of cataloguing copy in bibliographic utilities such as the OCLC or the Research Libraries Information Network (RLIN) has contributed to increasing the speed of processing information sources.

However, Taylor (1988) mentions that several problems could occur when using cataloguing copy. This includes errors in MARC coding, varying forms of entry, problems with punctuation, lack of local practices, typographical errors, insufficient call numbers, discrepancies that cause serious problems such as authority control issues and the separation/integration of series or conferences. For example, if a Canadian catalogue record could contain American Subject Headings rather than Canadian, the overall authority control problems could be an ongoing concern as those countries used different authority control standards. Additionally, there are many records in databases that have seen a variety of cataloguing practices and interpretations of rules that are no longer acceptable (Smith, 1994:8). It is important for libraries to issue policy statements that require cataloguers to use the latest copy available, especially if it is LC, to take advantage of its updating capability (Taylor, 1988).

Chandrakar and Arora (2010) in a study of copy cataloguing in India outlined the following procedures involved in copy cataloguing: search for the bibliographic record in the bibliographic database that allows copy cataloguing, if the record is available on the database, the cataloguer would download the record, add local information such as class number, barcode and local notes, and then validate the record and save it in their database. Their study also found that academic libraries in India used the OCLC, British Library's Integrated Catalogue, ready catalogue for publishers and WorldCat of the OCLC as their sources for copy catalogue. In Nigeria, Yusuf's (2009) study entitled "Management of change in cataloguing: A survey of practices in Covenant University and University of Lagos" found that since the introduction of ICT in libraries, there have been changes in cataloguing, which include the use of CIP records, copy cataloguing using records from reputable libraries, the presentation of the catalogue in the OPAC and the involvement of non-professionals in cataloguing at the University of Lagos.

Beall (2000) states that most records found on the OCLC were low-quality vendor records. The OCLC was never clear about why the decision was made to add so many low-quality records to their database because, for many years, the organisation has been quality conscious (Beall, 2000). Copy cataloguing, according to Lazarinis (2014), involves finding a matching existing catalogue record (bibliographic record) for an item that is being catalogued from the local database, network database or bibliographic utility, editing the record as necessary to follow the cataloguing rules and standards, and attaching the local holding information to the bibliographic record. Copy cataloguing workflow should consist of the following:

- The cataloguer should search the local database using the ISBN, author or title of the information source for matching catalogue records.
- If found, the cataloguer should add the item information and attach holding.
- If not found, the OCLC connexion should be searched.
- If found on the OCLC, the cataloguer should import the record to the local database and add holding.
- If not found, the cataloguer should create the new record on the OCLC or local database.

When copying the catalogue records from the OCLC, the following matching guidelines should be observed: All copied records must be an exact match for the item. If the information source in hand is not an exact match to a record in the shared catalogue or external cataloguing sources, a near match should not be brought in and altered to fit the description of the item in hand. The cataloguer should create the new catalogue record. Table 24 below shows some commonly used MARC tags that could be regarded as the guidelines for the matching tags when performing copy cataloguing (Evergreen Indiana Catalog List, 2012.

Table 24: MARC tags considered for copy cataloguing

Tags	Description
010	LC Control Number
020/022 (if present)	ISBN/ISSN
024 (if present)	Other standard identifier
028 (if present)	Publisher Number
100/110/111	Author (personal name / corporate name / meeting name
245	Title Statement
250	Edition Statement
260	Publication, Distribution,
300	Physical description
490 (if present)	Series Statement
500	General Note
504	Bibliography Note
505	Formatted Contents Note
511 (if present)	Participant or Performer
520	Summary
521	Target Audience Note
533	Reproduction Note
538	System Details Note
546	Language Note
600/ 610/ 611/ 650/ 651	Subject added entry (personal name/ corporate name/ meeting name/Topical

	term/Geographic name
700/710/711	Added entry (personal name/ corporate name/meeting name

(Source: Evergreen Indiana Catalog List, 2012)

More specifically, the following should apply when matching the copy catalogue record with the information source being catalogued (Evergreen Indiana Catalog List, 2012)

010 LC control number if present in the record.

020/022 ISBN or ISSN if present in the record and on the information source.

024 UPI number if present in the record and on the information source.

028 Publisher number if present in the record and on the information source.

245 $a must match (esp. for books); Note: for AV materials,

245 $b may match; matching information could be in a note.

245 $c may match; matching information could be in a note.

250 $a must match (exception: 1st ed. vs. no edition statement).

260 $a should match in most cases, but change of place within the same country between printings of the same edition and variation in choice of place for items with more than one place of publication is allowed. If more than one place of publication is involved, the first place on the information source should match the first place in the record.

260 $b should match in most cases, but change of publisher among parts of multipart items, variation in choice of publisher for an item having more than one publisher, and variation in choice of publisher when the publishers are part of the same organisation (e.g. Puffin vs. Penguin) is allowed.

260 $c must match unless the date is in brackets or with question marks.

300 $a must match, but there are slightly varying styles of entry for multiparts of ongoing publications (e.g., 300 4 v. vs. 6 v.); use best judgement or ask for help if not sure.

300 $b must match, but there may be slightly varying styles of entry.

300 $c must match for AV materials. For books, if the dimension varies by a few centimetres, and if that is the only difference, consider it a match.

490/8xxs $a must match if present, but tracing can differ. Be aware of nonstandard series statements.

511 Performers, narrators, presenters must be same for AV materials.

505 Contents must be same; but there may be partial or incomplete contents.

533 Reproduction note: Must match if present.

538 For audio-visual materials, formats must be the same. For electronic resources, system requirements should be the same.

546/041 Language note/code must be the same.

Kim (2003) opines that when the Cataloging In Publication (CIP) records are found on the OCLC, it should be edited accordingly. CIP records are created without published manifestation; therefore, bibliographic information in descriptive fields in a CIP record may not be accurate or present. There are two types of CIPs: one created by the DLC, the Library of Congress, and the other created by UKM, the British Library. Both the DLC and the UKM CIP records have an ―8‖ in the encoding level in the Fixed Field (FF hereafter) and leave a 263 (Projected Publication Date) field (263 0712) and an empty 300 field (e. g. 300 ## p. cm.). (Kim, 2003). The cataloguer should accurately edit the CIP records and refer to the information source that is being catalogued to create the correct information on the record. All the missing information on the record should be correctly transcribed to enhance retrieval and sharing of skills. In addition, the vendor catalogue records are created by the vendors without the use of the cataloguing standard (Kim, 2003).

When editing the vendor records, cataloguers should refer to the standards and create the correct forms of the access points and bibliographic description. Reynolds (2018) indicates that MARC edit, a metadata editing programme used primarily to create and manipulate MARC records, originally developed by Terry Reese in 1999, can help to edit the MARC records copied from the OCLC. The software can perform different functions such as updating an AACR record to the RDA, removing duplicates on the record, assigning probable classification notation and subject headings, validating MARC tags, and so on. Reynolds (2018) asserts that MARC edit can be downloaded for free from the internet at http://marcedit.reeset.net/downloads. The findings of this present study and the literature cited established that copy cataloguing of bibliographic and authority records could save time of the cataloguer and increase cataloguing output. However, the copied records should be carefully edited in order for them to conform to cataloguing standards and improve retrieval of information sources.

7.6 Availability of entities and attributes on the records

This section responds to librarians' questionnaires and document analysis datasets. It was established from the questionnaire that the following attributes and entities were depicted on the catalogue records: title, author, international standard number, edition, publication, physical description, picture of the book cover, call number, subjects, bibliographic number and holding of libraries. Moreover, the participants indicated the following entities as not always reflecting on the catalogue records: summary/abstract/review and proper subjects. Document analysis findings also indicated the presence of author, title, edition on some records, publication area, physical description, notes, subjects and item information. The following were absent: summary/abstract, some subject headings and the dimensions of the physical sources as well as the contents and notes. The FRBR, the FRAD and the FRSAD models emphasise the presence of all the entities and attributes of the catalogue in all catalogue records of information sources to improve access. Hegna (2007) states that the catalogue records that contain all the required metadata (entities and attributes) of the information sources allow full access of the information held by libraries and resource centres. Attributes such as dimension of the carrier are strongly emphasised by the FRBR as one attribute of the manifestation to improve access. Summary/abstract, review and notes are the attributes of the work and should be transcribed in the catalogue records (IFLA, 1998).

Petrucciani (2015:310) opines that "libraries are no longer competitive with other players that supply to the public extensive and popular information about new publication in commerce such as websites of publishers and booksellers, which provide table of contents and blurbs, samples and previews. People interested in this sort of information are expected to use Amazon or other commercial services or social platforms devoted to books and reading and not library catalogues", hence the importance of the notes area in the library catalogue. Calhoun et al. (2009) conducted a study for the OCLC entitled "Online catalogues" and found that users want catalogue records that contain a table of contents and summaries, among other features, to retrieve information sources. The findings and literature emphasizes the importance of recording metadata required for information retrieval.

7.7 Catalogue quality

This section responds to focus group, face-to-face interviews and document analysis datasets. The participants were asked to define the quality catalogue. Findings from focus group showed that, the quality catalogue should be accurate, usable, complete and all metadata

required for a search should be available to retrieve information. Similarly, findings from interviews indicated that the quality catalogue is the one that is accurate, accessible and contains the required metadata such as author, title, subject and more. Furthermore, findings indicated that the CCTML catalogue was of low quality since it could not retrieve the required information and participants would then opt to search the shelves without consulting the catalogue first. However, some participants thought that the catalogue was of good quality. These discrepancies in the findings may be due to the types of queries and information need. For deeper queries such as the content of the information source, the catalogue may not retrieve the needed information.

Findings from the document analysis revealed that some metadata were improperly recorded on the catalogue records without following the cataloguing standards or complying with it. For example, some author entries were recorded under the first names of authors, missing and wrong punctuations. Some records were missing paginations, extent of physical descriptions and dimensions. Statements of responsibility were recorded on the general notes field, some records were missing formatted contents, some were missing summary /abstract/ review and some were missing subject. Alternative authors were recorded along with the main entries. Similarly, Chapman and Massey (2002) in a study used a sample of 288 records at the University of Bath libraries' system and the findings indicated that 221 records were without pagination and other areas. Chapman and Massey (2002) assert that the quality catalogue should be accurate and error free to enhance retrieval. Morris (1993) opines that a quality catalogue should be aligned with accuracy of transcription, adherence to a set of instructions embodied in a descriptive cataloguing code, or a subject cataloguing manual, and completeness of each cataloguing record; but now, the definition could be expanded to include cost-effectiveness, timeliness and greater awareness of user skills and needs.

Thomas (1996) views quality cataloguing as strict adherence to the rules in which all sorts of faults are considered equally erroneous and unacceptable. The quality catalogue should be uniform, accurate, detailed and truly reflecting the cataloguing rules. Snow (2011), in her study of the perception of cataloguing quality among cataloguers in academic libraries in Texas, identified the following categories of quality catalogue: technical details of bibliographic record (accuracy, level of description, lack of typographical errors); adherence to standards (follow AACR2, correct use of MARC tags, adherence to local standards and use of controlled vocabulary); the cataloguing process/ work flow/ staff (processing time, amount of backlog,

staff training and continuing education, administrative support); impact on users/ accessibility (is record helpful/ useful, amount of access points, awareness of user needs/ skills and findability). The majority of her study respondents aligned quality catalogue with the above-mentioned categories. Majola (2018) indicates that at the UNISA library, the quality catalogue was regarded as the catalogue that is accurate, complete and comply with the cataloguing standards. The findings of the present study concurred with the literature that to create the quality catalogue, cataloguers should adhere to international standards and transcribe all the required metadata on the catalogue records in order to enhance retrieval of library sources.

7.8   Catalogue quality control measures

This section responds to focus group dataset. The respondents were asked to indicate the quality control mechanisms they used to ensure the quality of the catalogue records. Findings revealed that peer reviews or peer checking by asking a colleague to re-check the records was used as one of the mechanisms. In addition, queries from the librarians also helped to correct the faulty records that were already on the shelves in the different libraries. In contrast, Chapman and Massey (2002) report that University of Bath libraries used the assessment audit tool created by the United Kingdom Office for Library and Information Networking (UKOLN) and Essex for catalogue quality. Chapman and Massey (2002) carried out a pilot study at the University of Bath libraries in 2000 using the assessment tool to measure the quality of the catalogue records. The study concentrated on the accuracy of bibliographic records and the presence of unwanted data in the catalogue records. The study used two categories to identify errors in fields containing incorrect information and then checked the omitted fields on the records.

The areas of the records checked were: title, material description, statement of responsibility, authority headings, edition, physical description, imprint, series, classmark/ shelfmark, subject headings, genre/ category and location or branch. The checklist was based on ISBD areas. The FRBR, the FRAD and the FRSAD also emphasise the presence of these attributes in the catalogue records to facilitate easy retrieval. Notes fields were excluded in their study despite their substantial number of errors that they may contain. The study recommended that the libraries that applied MARC coding should use the additional checks of tags, indicators and subfields. Chapman and Massey's (2002) study found that the majority of sampled records were without pagination and other areas. They noted that the audit tool was

successful in evaluating the accuracy of the records. Paiste (2003) carried out a literature review of defining and achieving quality in cataloguing in academic libraries. The study concluded that quality catalogue should be customer focused. Paiste (2003:11) asserts that "Customer focus is the central tenet of total quality systems as customer satisfaction is the goal for every service provided. The customer, not the producer is the judge of quality." Libraries have a strong tradition of service.

By focusing on customer requirements, the library can preserve what has made it such a special institution – its service orientation. Cataloguing should aim to satisfy the needs of the users. Furthermore, Paiste (2003) opines that another mechanism for quality catalogue is building a culture of quality. Culture according to Paiste, is the particular combination of beliefs, ideas and assumptions held by the group. Workplace culture can be considered the way people do things at work. In a culture of quality, quality must become a valued characteristic of every operation and should be the basis for all decisions. An important aspect of a culture of quality is the ability to take the systems view. A system is a group of independent agents working together towards a common purpose. Technical services departments are systems such as libraries and the institutions to which they belong. Cataloguers need to be aware of how their efforts align with those of the library and the college or university or any other institution the library is attached to. They need to be aware of how their plans and activities may affect others. Management must communicate developments in other library areas that may have an impact on cataloguing. Cataloguers need to know the context in which they work in order to achieve maximum effectiveness (Paiste, 2003).

Moreover, Paiste (2003) opines that "accuracy alone does not comprise quality in cataloguing. It is essential that cataloguers maintain an awareness of the purpose of their activities. Processes need to be built with service goals in mind. They must involve effectiveness as well as efficiency. In order to maximise effectiveness, cataloguers should become familiar with patron needs and expectations. There should be a culture of measurement, evaluation and continuous improvement. This will result in excellence in library service and a dynamic work environment of continuous growth". In Nigeria, Yusuf (2009) revealed that a librarian was designated to constantly edit the catalogue for possible re-cataloguing as their quality control measures. Hill (2008:2) asserts that cataloguers need to examine the cataloguing process and focus on the "extent and content of individual records, extent and content of the database as a whole

and the effectiveness and accuracy of mechanisms to expose those records and database to the WWW as real measures of database quality". Martin and Mundle (2010) carried out a case study of the management and improvement of the quality of bibliographic records for a large e-book collection in a consortial setting in Illinois. They created a discussion list for the consortium and shared the improvement of the quality of records. The consortium agreed on collaboration with the vendors to improve records before receiving them as the most productive route to quality data in the catalogue. The findings of the present study established that the CCTML should establish policies on catalogue quality assurance.

7.9 Cataloguing system

This section covers focus group and face-to-face interview datasets. The participants were asked about their involvement in the acquisition of the system. The findings from the focus group indicated that the cataloguers were not involved when the system was purchased. It was further revealed that the system was not adapted to suit the cataloguing needs. Furthermore, the RDA could not be implemented on the present system. The findings from interviews revealed that only the technical team and the CCTML management were involved and were also offered training on how to use the system. However, some search strategies and techniques could not be performed on the system due to the limits the system presented. Danskin and Gryspeerdt (2014) found that in Europe and the UK, libraries that have not implemented the RDA were also concerned about the need to change the system.

Danskin's (2013) study of RDA implementation and application in British library revealed that the necessary adaptations to the system were made to fit in the RDA. In those libraries, the RDA environment was created in the Aleph library management system to test configuration changes and allow the expert groups to practice without affecting the production database. Templates and macros, including those used by staff in selection and acquisition teams were reviewed and updated. A similar study of cataloguing of Chinese language materials in the digital era: the cataloguing standards and practices in China, Taiwan and Hong Kong by Pong and Cheng (2006) recommended that in order to take the best advantage of the concepts of the FRBR and the FRAD, as well as to develop new standards for information access in the digital world, revision of current rules and redesign of the existing systems needed to be done to apply the FRBR and the FRAD models in cataloguing.

Dunsire (2007) notes that during the proposals of implementing a new cataloguing standard RDA, LMS vendors should also be informed of the RDA so that they could develop their cataloguing workflows input and amendment templates and context. In Malaysia as far as 1996, Teh and Wong's (1996) study found that when the country moved to library automation, certain steps were followed, and stakeholders were involved to test the system before final implementation. They made sure that the system had the application interfaces for creating a machine-readable catalogue and for information retrieval. The system was chosen because it had wide application as an indexing tool and its flexibility had extended to cataloguing, circulation and information retrieval. The software also allowed local customisation and development of user applications and interfaces. Some interfaces consisted of search strategies and techniques such as Boolean and Proximity searches to complement the information retrieval capability in the system. Pilot trials were also carried out to rectify any errors detected and weaknesses found in the system (Teh & Wong, 1996). Neelakandan, Duraisekar, Balasubramani and Srinivasa, Ragavans (2010) in a related study found that the School of Chemistry at Bharathisan University undertook some measures to establish if the system could carry out the daily activities of the library such as the charging and discharging functions of the circulation more effectively; providing various search options to know the availability of books in the library; and generating the list of books due by a particular member before the system could be implemented.

The findings of Neelakandan et al. (2010) revealed that Koha software was a useful package for the creation of a database and for information retrieval. Weight (2013) indicated that when Australia was preparing for the implementation of the RDA, the library cataloguing system was also upgraded. The upgrade included system configuration changes to support new MARC fields, changes to the record import service matching, and merging to give preference to RDA records over AACR2 records. On the other hand, Spiteri and Tarulli (2011) established that users found the catalogue hard to use as the system presented vague search techniques. The CCTML should have policies in place on how to acquire the library system that should effectively conform to the activities of all sections of the library. The findings of the study and literature sourced emphasise the importance of acquiring the relevant information system for online cataloguing.

7.10 OPAC retrieval

This section responds to face-to-face interviews and questionnaires datasets. The participants were asked about the usability of the CCTML OPAC. The findings from interviews indicated that the OPAC was useful. However, librarians' questionnaires revealed that the OPAC was neither clear nor user-friendly. On the other hand, questionnaires from library assistants indicated that the OPAC was fair. These discrepancies in findings may be due to the information skills possessed by the searcher and types of queries and information needs the participants have. Regarding the use of advanced searches such as Boolean operators, truncation and fuzzy searches, from interviews indicated that those features were only available on the Brocade system and it was password protected. The findings from librarians' questionnaires concurred with the interview findings. Furthermore, findings revealed that due to the patrons' information needs, complex searches were not mainly used. It was also revealed that fuzzy search strategies were not available on the OPAC. Moreover, findings from library assistants' questionnaires indicated that title search was mostly used to retrieve information.

A study done by Blecic, Bangalore, Dorsch, Henderson, Koenig, and Weller (1998) regarding using transactional log analysis to improve OPAC retrieval at the University of Illinois revealed that users experienced difficulties with using search engines. Some searches could not retrieve results due to incorrect spelling, wrong subject, unavailable materials, wrong title, initial articles such as *a, an, the,* included on the title search and unsuccessful search. Gupta (2018) asserts that integration of advanced search features on the OPAC enables library users to explore information according to latest means of navigation systems like faceted/ collaborative, recommendation, tag cloud and more. It enables an information- seeking process specially searching and browsing more intuitively and interactively. Awareness about these features would definitely create a new way of searching the library OPAC and library users would quickly get access and retrieve highly relevant documents with minimal effort. Ndumbaro (2017) states that title, author and subject terms were the most used access points at the University of Dar es Salam library. Some searches could not yield results due to spelling mistakes, use of wrong syntax, searching inappropriate search fields, unavailable materials and users' lack of LCSH knowledge. Ndumbaro (2017) suggests a redesigning of the OPAC interface to include more advanced features and expose users to evidence-based information literacy. The findings of the present study concurred with literature that OPAC features should be revised to meet the patrons' information needs.

7.11 OPAC training

This section responds to face-to-face interviews and questionnaires datasets. The participants were asked to indicate the OPAC training offered. Findings from interviews revealed that libraries had manuals on the use of the OPAC which staff were reading in order to learn how to use the OPAC. The staff were also learning through experience and by shadowing librarians. Moreover, it was revealed that staff were offered in-house training. Furthermore, the Department of Sports, Arts, Culture and Recreation offered training workshops that could run for a period of one to three days whenever there was a need. Findings from questionnaires concurred with interviews findings. It was revealed that staff attended training offered by the department on how to use the system as well as in-house training. However, it was revealed that the majority of library assistants did not attend any training. These discrepancies may be due to other commitments when the trainings were offered. It was further revealed that the participants did not benefit much from those trainings due to the duration of the training; however, they continued to use manuals in the library. Library staff and management should make training of staff a priority. Msagati (2016) in a study found that the majority of respondents did not attend training on the use of the OPAC. As a result, they lacked requisite searching skills. Thanuskodi (2012) also found that typical users of the OPAC did not have the range of knowledge and skills needed for effective search. Therefore, OPAC users need to be trained in order to ensure optimal use of the OPAC. Such efforts would help to pass on those skills to patrons. Kumar (2017) states that the majority of students showed poor knowledge of the OPAC. The study recommended that university libraries should ensure that students are adequately given training to make maximum use of the OPAC.

In a country such as South Africa, there is a need for a highly knowledgeable, skilled and competent workforce. Maphopha (2000) asserts that libraries and information centres with their service orientation depend on service providers to satisfy the user needs. Staff development and training are key tools in maintaining the operational effectiveness of the human resources. Nemalili's (2015) study assessed the effectiveness of the academic library OPAC at the University of Venda and found low OPAC-searching skills among users. The study recommended OPAC training to teach students effective strategies to access, locate and retrieve library collections. Nemalili (2015) suggests that the training should consider the changing of user behaviour and preferences about OPAC interface features, as compared to the internet Google search engines.

Based on the findings of the present study and the literature sourced, the researcher opines that library staff should attend OPAC training regularly, especially given that the first point in retrieving library resources is through the OPAC.

7.12 Challenges experienced in cataloguing and retrieval

This section responds to focus group, face-to-face interviews and questionnaires datasets. It was established from focus group discussion that cataloguers experienced some challenges with the use of cataloguing standards and description. For example, they had difficulties with transcribing publication area for the sources that had more than one publisher as well as building the DDC notations. Another challenge was assigning subject headings for foreign and non-roman languages sources. Findings from face-to-face interviews indicated system challenges such as lack of search options, recall and precision, spelling error, fuzzy search, slow internet. Other challenges were incomplete catalogue records embedded in the OPAC, duplication of the records, records that had spelling and typographic errors, different shelf notations for the same record, books that are on the system but had been weeded out. Similarly, findings from librarians' and library assistants' questionnaires indicated the challenges of slow internet, spelling errors, incomplete records, misleading results such as records existing on the system; yet they were weeded out and different shelf notations.

In Malaysia, a study done by Ismail and Roni (2011) found that the major challenges faced by cataloguers in cataloguing foreign languages such as Arabic books were due to the Arabic scripts themselves. It was difficult to vocalise Arabic words due to the different ways of reading the various types of calligraphy and typography. In addition, lengthy author's names, vocalisation of names, Arabisation of English names and many authors of a book were among the challenges faced by the cataloguers. Some of the integrated library systems could not adopt Arabic characters and another problem was the difficulty to determine the subject headings for Arabic books as the new Arabic terms were not available in the LCSH. Another study by Olson and Schlegl (2013) also revealed bias in subject access standards to other languages. The study opposed the notion of "one size fits all" subject access in the LCSH and notations in the classification schemes by the ALA 1998 annual conference. The study discovered the "omission from the DDC, the LCC and the UDC of African independent churches that embrace Christianity and African tradition, while rejecting foreign elements. Furthermore, classification of African languages and people in the ways they are grouped, poor

allocation of space to African cultures compared to European and North American cultures, and inappropriate mechanisms of division by languages resulted in Olson and Schlegl realising that these syndetic structures may fail to connect appropriate topics and that there are limitations in the construction of subject heading strings. The aforementioned may transfer the challenges of access to users on the OPAC". A study by Mutula and Tsvakai (2002) also state that the difficulties of diverse languages present great challenges for cataloguers, especially because the international cataloguing tools did not adequately meet the needs for cataloguing of African materials. The diversity of African languages and linguistic syntax makes the cataloguing of African materials difficult.

Another problem that faces cataloguers of African materials revealed by Mutula and Tsvakai (2002) was the parallel provision of names and subject headings, as African names and subjects were not covered by international cataloguing tools. The study recommended custom cataloguing and classification tools as well as specialised training for cataloguers to handle African materials in languages that have a unique number and script system to enhance the cataloguing and classification of such materials. Nampeya's (2009) study revealed that many respondents had challenges with the use of cataloguing tools and resources due to insufficient training. Iwu and Mercy's (2012) study identified the following challenges faced by cataloguers regarding training and continuing education: conference and workshops attendance was not affordable; no ICT infrastructure to practice what has been learnt; cataloguing workshops in Nigeria were usually theoretical as there were usually no practical training sessions and there was a lack of cataloguing training manuals. Nwosu (2014) found that a major challenge in Nigeria, like in other developing countries, was simultaneously to enhance the responsiveness of education and training systems to the changes in skill requirements, to improve access to training in skill requirements and to improve access to training and skills development.

Bello and Mansor's (2012) study revealed performing original descriptive and subject cataloguing for various materials in a variety of languages and subject fields according to universal standards with the use of relevant tools as one of the duties cataloguers were engaged in. DiPierro (2014) notes that the challenges of cataloguing foreign language sources were due to the lack of supporting standards in those languages, thus creating less uniformity, especially on the access points. Similar to the findings of the present study, Chukwuemeka, Oriogu, Ogbuiyi and Ogbuiyi (2015) found low speed access, erratic power supply, poor network

as well as lack of computer skills to be challenges faced by users in the automated library. A study by Kumar and Vohra (2011) found lack of knowledge of the OPAC, null retrieval due to lack of search options and slow speed, as indicated by respondents. The findings of the present study and the studies cited call for the urgent establishment of standards for non-roman languages.

7.13 Summary

This chapter offered an interpretation of the findings of the study in the light of the research questions underpinned by the FRBR, the FRAD and the FRSAD models as well as theoretical and empirical literature. The discussion was based on the following questions: "What are the skills possessed by cataloguers?", "To what extent do cataloguers in the Cape Town Metropolitan public libraries adhere to international standards when creating records in the online catalogue?", "How are the cataloguing records created on the system by cataloguers in the Cape Town Metropolitan used within and across the public libraries?", "How are the new RDA standards applied in public libraries in the Cape Town Metropolitan to ensure they accommodate entities and attributes as described by the international cataloguing standards?", "What records quality control measures are used in computerised cataloguing by public libraries in the Cape Town Metropolitan?", "How effective is the computerised cataloguing system of the City of Cape Town Metropolitan public libraries in retrieving information sources?", "What are the challenges experienced by public libraries in the Cape Town Metropolitan in computerised cataloguing?"

The study established that the cataloguers possessed cataloguing skills as they had obtained qualifications in librarianship and had completed cataloguing modules at the LIS schools prior to their graduation. They also attended on-the-job training workshops. Cataloguing standards were not fully implemented by participants when creating catalogue records. This was confirmed by the inconsistency of the records, for example some main entries (personal names) were recorded under the first names of the authors, while some were recorded under the surnames of the authors. In addition, the statement of responsibility was recorded on the notes area, not along with the title as the MARC and the AACR2 prescribe. AACR2 rule 2.7B6 only allows the cataloguer to make notes of statement of responsibility not "fit to be" recorded in the title and statement of responsibility area. Moreover, the added entry authors were recorded on the same tag as the main entry; this was done because the system did not contain tag 7xx for added entries. Some of the records were downloaded from the OCLC with errors.

The findings also revealed that the new cataloguing standard RDA was not yet used by participants and the information system used did not contain other MARC tags.

The study revealed that cataloguers performed original and copy cataloguing to make their records available for their users. Users of the catalogue who were library staff indicated that when retrieving the catalogue records, some were skeletal and some were not accurate as they could not access information sources using them. This was also confirmed by document analysis whereby records lacked some important attributes for access as emphasised by the FRBR, the FRAD and the FRSAD. Furthermore, the study revealed that peer review and queries from the libraries were regarded as the quality control measures of the records. Moreover, the findings indicated that cataloguers were not involved when the system was purchased, and the system was not modified to support more MARC tags to accommodate the RDA. Lastly, the study revealed that cataloguers experienced challenges when cataloguing non-roman sources, since the cataloguing standards did not incorporate them, as well as null retrieval due to lack of OPAC search options. In summary, to a large extent, the CCTLS did not support cataloguing activities and retrieval at the time of data collection. This prohibited full implementation of the cataloguing standards and full participation on WorldCat. Table 25 presents the summary of findings mapped to the theoretical models underpinning the study, attributes of the models and the research questions.

Table 25: Summary of findings mapped to the conceptual models, attributes and the research questions

Theoretical models	Key variables	Research questions	Summary of findings
FRBR FRAD FRSAD	Cataloguing standards	To what extent do cataloguers in Cape Town Metropolitan public libraries adhere to international standards when creating records in the online catalogue?	1. Cataloguing standards were not fully implemented by participants when creating catalogue records. 2. Inconsistency of the records from OPAC document analysis.

Theoretical models	Key variables	Research questions	Summary of findings
FRBR FRAD FRSAD	Catalogue records creation access and use	How are the cataloguing records created on the system by cataloguers in the Cape Town Metropolitan used within and across the public libraries?	1. Original and copy cataloguing from the OCLC. 2. Inaccurate and skeletal records from OPAC document analysis.
FRBR FRAD FRSAD	Catalogue metadata	How are the new RDA standards applied in public libraries in the Cape Town Metropolitan to ensure they accommodate entities and attributes as described by the international cataloguing standards?	1. The RDA was not yet used. 2. Some records lacked some important attributes for access as emphasised by the FRBR, the FRAD and the FRSAD.
FRBR FRAD FRSAD	Quality catalogue records	What records quality control measures are used in computerised cataloguing by public libraries in the Cape Town Metropolitan?	1. Peer review and queries from the libraries.
FRBR FRAD FRSAD	Cataloguing challenges	What are the challenges experienced by public libraries in the Cape Town Metropolitan in computerised cataloguing?	1. Challenges of cataloguing non-roman sources. 2. Efficient use of the international cataloguing standards.
FRBR	Cataloguers'	What skills do the	1. Cataloguers obtained

Theoretical models	Key variables	Research questions	Summary of findings
FRAD FRSAD	Skills	cataloguers of the Cape Town Metropolitan libraries possess?	qualifications in librarianship and had completed cataloguing modules at their LIS schools. 2. Cataloguers also attended on-the-job training.
FRBR FRAD FRSAD	Information system effectiveness	How effective is the computerised cataloguing system of the City of Cape Town Metropolitan public libraries in retrieving information sources?	Limited retrieval due to lack of OPAC search options.

CHAPTER EIGHT

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

❖ Introduction

The summary and concluding chapter of a thesis or dissertation according to Denscombe (2007) is aimed at drawing together the threads of the research to arrive at some general conclusion and to suggest some way forward to address the research problem. The purpose of this study was to investigate the cataloguing practices from creation to use in Cape Town Metropolitan public libraries in South Africa with the view of gaining a better understanding of the importance of cataloguing standards in creating bibliographic data for the libraries. The study was motivated by the researcher's experience in facilitating cataloguing workshops to librarians from public libraries of the Western and Eastern Cape provinces. During these workshops, low adherence to cataloguing standards became apparent. It was also observed during the workshops that catalogue records loaded in the bibliographic utilities for libraries to copy and use, were of very low bibliographic quality. The rest of this chapter is organised around the research questions and broader issues around research problem and covers: summary of findings, conclusions, recommendation and contribution of the study as well as further areas of research.

❖ Summary of the findings

The summary of findings covers cataloguing skills possessed by cataloguers; cataloguing training; international standards used for cataloguing, cataloguing records from creation to retrieval, entities and attributes available on the records, catalogue quality, cataloguing system used for cataloguing and retrieval and challenges experienced in cataloguing. The first research question sought to understand the skills cataloguers possessed that enabled them to create good quality catalogue records. Data were collected from cataloguers. The findings showed that cataloguers possessed all skills required for cataloguing such as the qualification in LIS, knowledge of cataloguing tools and computer skills. The findings further revealed that the cataloguers received cataloguing training from their LIS schools as well as on-the-job training (see chapter 5 sections 5.3.2.2 to 5.3.2.4). However, there were no continuous training programmes in place to increase their knowledge as the cataloguing standards change from time to time. The lack of these development programmes could hinder cataloguers to benchmark and adopt new standards as they are introduced. In addition, it was revealed that participants were taught all procedures of cataloguing except authority work. The lack of

authority control knowledge could present challenges of creating correct access points for the information sources. The findings on research question two, which sought to understand the extent to which cataloguers in Cape Town Metropolitan public libraries adhered to international standards when creating records in the online catalogue, revealed that the cataloguers used the AACR2, the DDC and the LCSH. However, they did not use the full edition of the DDC, thus hindering the sharing of skills due to incomplete notations. Moreover, other standards such as the MARC and authority control standards, including LC name authorities, were not mentioned. This could also contravene the idea of the FRAD that advocates for consistency in representing the creator's names. Furthermore, the findings indicated that cataloguers had not yet implemented the new cataloguing standard, the RDA. The findings on research question three, which sought to understand how the cataloguing records created on the system by cataloguers in the Cape Town Metropolitan were used within and across the public libraries, revealed that cataloguers performed copy cataloguing for the information sources that were already available on the system and the OCLC.

They downloaded the records and amended them to conform to their information system. Furthermore, the findings revealed that cataloguers performed original cataloguing for the records that were not available on the OCLC and for fiction materials. However, they created the records on their local databases. This could prevent them from sharing their skills with other cataloguers on the OCLC platform. This practice contravenes the idea of computerised catalogue that emphasises sharing of the records and skills. The findings from the senior librarians, librarians and library assistants indicated that some of the catalogue records were skeletal and difficult to retrieve information resources using them. The document analysis also found records that were skeletal and lacked some records entities to facilitate easy retrieval. This contravenes the principles of the FRBR. Research question five sought to establish what records quality control measures were used in computerised cataloguing by public libraries in the Cape Town Metropolitan. The question was addressed by empirical data collected from cataloguers. The findings indicated that the participants understood quality catalogue to refer to the catalogue records that are accurate and easy to use, including all the metadata that will help users find, identify, select and obtain information sources. Regarding quality control measures, the findings indicated that the peer review mechanism was used to re-check the records and identify problems. With regard to the cataloguing system used for cataloguing and retrieval, the findings revealed that the system did not have all MARC tags. In addition, the cataloguers were not involved when the system was purchased.

The respondents also indicated that they did not implement the RDA on their present system. Involving the cataloguers when the system was purchased could have prevented some challenges, as they would have identified some MARC tag problems and engaged with the system vendors at the beginning to modify the system. The senior librarians, librarians and library assistants were of the opinion that the system was fair, although it was indicated that some search strategies and techniques could not be performed on the system due to the limits the system presented. These problems could be modified if the feasibility study was carried out before the system was purchased and implemented. On the research question of the challenges experienced by public libraries in the Cape Town Metropolitan in computerised cataloguing, the findings revealed that cataloguers experienced some challenges with the use of the cataloguing standards and description, as well as assigning subject headings for non-roman sources. The findings from senior librarians, librarians and library assistants revealed the challenges of incomplete low-quality records, spelling errors, lack of advanced search options on the system, poor network and low speed of access. These challenges were not peculiar in this study as literature similarly identified them around the world.

❖ **Conclusions and recommendations**

The following section provides conclusions and recommendations based on the major findings of the study. The conclusions were drawn and recommendations made in the order in which the research questions were stated in chapter one. The overall findings revealed that cataloguers of the CCTML obtained relevant qualifications in LIS although there was lack of continuous development programmes. The conclusion drawn from this finding is that although the cataloguers had library qualifications, they needed continuous development and regular refresher courses as the majority of participants graduated more than ten years ago and the cataloguing standards have been changing since they graduated. Furthermore, they could not have been taught everything they needed about cataloguing, such as authority control because this was not taught then in library schools. The study findings also revealed that not all cataloguing standards were used by cataloguers of the CCTML. At the time of the study, for instance, the authority control standards, MARC bibliographic formats and standards, and the MARC 21 were not used. The DDC volume 1 was not used to add notations as envisaged by the schedules. These could cause different catalogue bibliographic encoding when other libraries copy their records. The purpose of using international standards is to create one record that can be shared by all libraries affiliated to the bibliographic utility to share skills, save time and improve international interlibrary communications.

Furthermore, the overall findings of the study established that cataloguers used ISBN to search for the records on the system before creating new ones. Cataloguers performed copy and original cataloguing; however, records were created on the local database not the OCLC. On the other hand, the records were deemed skeletal and did not accomplish the objectives of the catalogue to find, identify, select and obtain information sources. Findings from senior librarians, librarians, library assistants and OPAC records analysis indicated that not all the records contained all the attributes of the entities to facilitate easy retrieval. For instance, at the time of document review, most of the records did not contain dimensions, tables of contents, summery and other features. In addition, the records showed inconsistency of the access points. The correct tags and indicators were also not used for some features. Therefore, the cataloguing standards needed to be used in full to facilitate the catalogue entries needed for each record. The conclusion drawn from this finding is that there should be policies on adapting copy records from the OCLC. Again, the cataloguers should share their skills by uploading their original records on the OCLC and get recognition and credits for their work.

The findings revealed that the catalogues of the CCTML did not have the proper catalogue quality control mechanisms in place. The findings from the senior librarians revealed that the catalogue was of low quality since it could not always retrieve the required information and participants would sometimes search the shelves without consulting the catalogue. Findings from document analysis revealed that some metadata were improperly recorded on the catalogue records without following cataloguing standards. The conclusion drawn from these findings is that although the peer review was used to re-check the catalogue records, proper quality control mechanisms, guided by policies, were needed. The overall findings indicated that the cataloguing system used by the CCTML did not allow the full use of international standards when creating the records. In addition, the cataloguing system did not allow easy retrieval of records due to the lack of some search techniques. Furthermore, the cataloguers and senior librarians were not involved in acquiring the system. The cataloguers and other library staff should be involved when acquiring the system in order to alert vendors about the features they would like the system to have. The challenges experienced by cataloguers included the problems of cataloguing non-roman languages, especially because the international standards used in cataloguing did not cover those other languages to a large extent. In addition, the researcher established that the cataloguers experienced challenges with the usage of standards. Similarly, the senior librarians, librarians and library assistants also experienced challenges of incomplete low-quality records that limited retrieval of information sources, typographic errors

and misleading results. Although cataloguers used minimal cataloguing international standards following the ISBD, their cataloguing practices needed improvement. Several problems concerning cataloguing practices of the CCTML needed to be addressed, including but not limited to low utilisation of standards, cataloguing system not accommodating the full use of the standards such as the MARC, low quality of catalogue records, lack of some attributes and entities in the records, weakness of the quality control measures, lack of search techniques for retrieval on the system, absence of refresher courses of cataloguing and inadequate cataloguing staff. These problems limited the creation of good quality standardised and internationally recognised catalogue records. Furthermore, the study established that some of the low-quality records were downloaded from the OCLC. In these circumstances, there was a likelihood that quality control mechanisms of the OCLC were very weak. In view of this, the study made specific recommendations as presented below on how cataloguing could be improved to facilitate exchange of data in an efficient and effective way between the libraries, and also to improve international interlibrary communications and worldwide library search, as well as meeting the needs of users.

❖   **Recommendations**

Based on the findings of the study, the interpretation thereof and conclusion presented above, the researcher made the following recommendations covering: recommendations on training of cataloguers, recommendations on cataloguing standards, recommendations on library information systems, recommendations on catalogue quality control mechanisms and recommendation on re-cataloguing project.

❖ Continuous development programmes for catalogues are needed because the cataloguing standards are constantly changing, as revealed by the new editions of the DDC, the LCSH and now the RDA. Furthermore, there should be frequent cataloguing refresher courses to remind cataloguers of the utilisation of the international cataloguing standards that should include all procedures of cataloguing including authority control. The researcher is of the view that it is difficult to teach authority control at the LIS schools due to lack of authority control standards and good practicum components. Maphopha's (2000) study also revealed that authority control was not taught at LIS schools due to the lack of sources and practical spaces and suggested that it is better to teach authority control at the workplace

since it has more meaning when taught during practicals where cataloguers will have the opportunity to create the authority records on the "test" systems at their work place. Proper cataloguing cannot exist without standardised access points, and authority control is the mechanism by which cataloguers achieve the necessary degree of standardisation (Gorman, 2004).

❖ The cataloguers of the CCTML should consider sharing their in-house standards with other cataloguers through national conferences, international conferences and publications to allow other cataloguers to adopt them if they fit their sources, consider creating supplementary standards, and liaise with the ISBD review group to suggest if they can be adopted internationally.

❖ Moreover, CCTML cataloguers should consider using cataloguing standards consistently to allow consistency in their records and on the bibliographic utilities when they get the opportunities to upload and share their records on the OCLC. The proper use of standards will also allow easy access of the records, as they will have all the entities and attributes or metadata that support retrieval by patrons.

❖ CCTML libraries and any other institutions should consider a feasibility assessment and involve all the staff before purchasing the system. Hard-Castle (2008) identifies technical and operational feasibility among other areas of feasibility. Technical feasibility determines whether a proposed system can be implemented with available hardware, software and technical expertise. Operational feasibility determines whether the users will be able to operate the system and whether the vendor will be available to support when needed.

❖ It will also determine whether they are reachable, and whether they will be helpful when the cataloguer is stuck concerning the different time zones among different countries. Employee skills also determine whether the proposed system can function within the existing managerial and organisational framework and what changes the system should bring, who will manage them, how they will be incorporated into the existing organisational structure and how much change the organisation can handle (Hard-Castle, 2008). The vendors should also assist in modifying the system to accommodate MARC tags, as required by the standards. The cataloguers and other library staff should know and work with the vendors to amend the system to fit into the library and support all the activities.

❖ The Cape Town metropolitan libraries should heed Hard-Castle (2008) advice and ensure that the system fulfils the organisational requirements specified in system analysis and on how the system will solve the problem or help the organisation to take advantage of new

opportunities such as new cataloguing standards in the case of cataloguing. Two types of system design that could be considered are logical and physical design. Logical design describes the components of an information system and their relationship to each other, such as from cataloguing to retrieval. It also describes how the records would appear to users, how the data will look to the user (user interface of the OPAC search index) and the language and vocabulary (lexis) to be used. Physical design explains how data would be stored in the system following the standards and how the new system will support the new cataloguing standards.

❖ Furthermore, the Cape Town metropolitan libraries should liaise with other cataloguing agencies and consider policies of quality control that emphasise what should go into the system and what should not. Such policy should only allow standardised accurate records into the system. Furthermore, the CCTML should employ quality control cataloguers that could modify the records before they are used.

Given that, the current study found skeletal, non-standard and inaccurate catalogue records on the OPAC of the CCTML, which hinders access and retrieval of information sources. It is recommended that the cataloguers should consider re-cataloguing projects to enhance those records.

❖ The CCTML cataloguing section should consider drafting of the cataloguing policy that they will adhere to when creating the catalogue records. One of the best tools to manage cataloguing is to establish cataloguing policies that are implemented using written documentation, such as checklists. Inter and Weihs (2001) advise that a cataloguing unit should have a policy manual "containing a record of all of the decisions governing the bibliographic processing of materials". It should be available to all staff members and should be kept up to date through a defined process (Inter & Weihs, 2001). McCutcheon (2012) opines that a copy cataloguing policy manual should offer guidance on what sources of copy are acceptable, plus the kinds and amount of editing to do before exporting a record to one's local catalogue system.

❖ **Originality of the study**

The current study therefore attempted to investigate cataloguing from creation to use in Cape Town Metropolitan public libraries. This study was motivated by the fact that the catalogue is the beginning of the retrieval and access of information stored in the library (physical or digital). Reliable and accurate catalogue records can be trusted as evidence to access to

information worldwide. The literature reviewed revealed that cataloguing practices, cataloguing creation and use of public libraries in South Africa were never researched and no knowledge was generated from them (Purongo, 2014). Besides, existing cataloguing models have been generated in the developed countries. Studies such as the current one contribute to developing models and suggestions peculiar to developing countries by providing empirical evidence of specific challenges that such countries contend with. The current study is therefore significant in contributing to the scholarly research and literature on cataloguing in developing countries such as South Africa.

❖ **Suggested areas for further research**

The current study identified four areas for further study. The study investigated cataloguing practices from creation to use in the Cape Town metropolitan libraries, Western Cape South Africa, with a view to gaining better understanding of the importance of cataloguing standards in creating bibliographic data for the libraries. The study was limited to the CCTML because all the libraries were automated. However, there are provincial libraries in the Western Cape that equally create catalogue records for their libraries as well as other municipalities and provincial libraries in other provinces of South Africa. The current study recommends further studies to be extended to cover other provinces to determine their cataloguing practices and on the overall access of the catalogue records.

The current study revealed that most cataloguing models that exist in literature originated in developed countries such as the United States of America. The current study however used such models as a benchmark for implementing the creation and access of catalogue records in South African libraries. The study did not attempt to develop a model that is contextual to developing countries such as South Africa. Further study should be geared towards developing a model for cataloguing rooted in the developed world context. Thirdly, the study recommends a further study on policies of quality control mechanisms of catalogue records in libraries and the bibliographic utilities in South Africa. Lastly, the current study found skeletal, non-standard and inaccurate records in the world catalogue. Therefore, this study recommends further studies in the National Library to investigate the effectiveness of the Legal Deposit Act in creating the bibliographic control of South Africa.

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Appendix A

 CATALOGUERS FOCUS GROUP INTERVIEW

SECTION A: DEMOGRAPHIC BACKGROUND

1.1 What is your age?

1.2 What qualifications do you have?

1.3 Which institutions did you get your qualifications?

1.4 When did you get your qualifications?

1.5 How long have you been cataloguing?

SECTION B: CATALOGUING SKILLS

2. What are the skills required for a cataloguing librarian?

2.1 What skills do you possess?

SECTION C: CATALOGUERS TRAINING

3. Were you taught cataloguing and classification at your institution?

3.1 Which cataloguing procedures were you taught at your institution of higher learning?

4. Are there any formal on job cataloguing trainings you attended?

SECTION D: CATALOGUING STANDARDS

5. Which cataloguing standards do you use when creating the catalogue?

5.1 Please indicate if you have in-house standards and how they are used.

SECTION E: CATALOGUE RECORDS

6. Please explain how you create the catalogue records.

7. How do you carry out authority control?

8. How do you determine the subject of the work?

SECTION F: CATALOGUE QUALITY CONTROL

9. What quality control measures do you use to check the catalogue quality?

SECTION G: CATALOGUING SYSTEM

10. Please explain how the cataloguing was system purchased.

SECTION H: CHALLENGES OF CATALOGUING

11. What challenges do you experience in cataloguing if any?

Appendix B

SENIOR LIBRARIANS' FACE-TO-FACE INTERVIEW SCHEDULE

SECTION A: CATALOGUE RECORDS

1. Please explain how useful the City of Cape Town Metropolitan Libraries (CCTML) catalogue records are in accessing library resources.

SECTION B: CATALOGUE QUALITY

2. How would you define the quality catalogue?

3. What can you say about the quality of CCTML catalogue records?

SECTION C: EFFECTIVENESS OF OPAC

4. Please explain the usability of the CCTML OPAC.

5. Please describe how you use the complex searches on the OPAC.

6. Do you use the fuzzy search technique when searching the OPAC?

7. To what extent the CCTML OPAC's user interface features have influenced the use of the system to meet user's information needs?

8. To what extend were you involved when the cataloguing system was acquired?

9. What OPAC trainings do you offer to staff?

SECTION D: CHALLENGES OF THE CATALOGUE

10. What challenges do you experience regarding the catalogue?

LIBRARIANS' QUESTIONNAIRE

SECTION A: CATALOGUE RECORDS

1. How would you rate the usability of the catalogue records of the City of Cape Town

Metropolitan Libraries (CCTML) in retrieving information sources?

Poor	Fair	Good	Very good	Excellent

SECTION B: OPAC USE

2. What do you mainly use the OPAC for?

To locate information sources	To assist patrons	To retrieve information needed	To process information sources	Other (please specify)

3. Explain the extent of your perceived ease of use of the CCTML OPAC user

interface..

4. What search techniques does the CCTML OPAC user interface offer?

Basic/ Keyword search	Boolean search	Proximity search	Fuzzy search	Parenthesis/ Phrase search	Other (please specify)

5. Please explain the extent that you use advanced search techniques such as Boolean search,

proximity search, fuzzy search, parenthesis and others

…………………………………………………………………………………………….

SECTION C: ENTITIES AND ATTRIB UTES

6. What attributes/ elements does the catalogue feature?

………………………………………………………………………………………….

7. What attributes/ elements does the catalogue lacks?

………………………………………………………………………………………….

SECTION D: OPAC CHALLENGES

8. What challenges do you encounter when searching the OPAC?

…………………………………………………………………………………………………

9. Suppose you are required to modify the CCTML OPAC user interface, what would you add or change?

………………………………………………………………………………………….

Thank you for your participation

LIBRARY ASSISTANTS' QUESTIONNAIRE

SECTION A: CATALOGUE RECORDS

1. Please indicate what you use the catalogue for?

To locate documents	To assist patrons	To retrieve information needed	To process documents	Other (please specify)

2. How would you rate the usability of the City of Cape Town Metropolitan Libraries (CCTML) catalogue records in retrieving information sources?

Poor	Fair	Good	Very good	Excellent

SECTION B: OPAC USE

3. How often do you search the OPAC when helping users to retrieve the library materials?

Always	Very often	Sometimes	Rarely	Never

4. Which access points do you frequently use to retrieve information from the OPAC?

Author	Title	Subject	Key word	Call number

5. Please indicate how you modify your search queries when you did not retrieve the desired search results in the first instance

I change the access point	I ask my colleague for help	I ask the cataloguer	I give up	Other (please specify)

6. Please rate the usability of CCTML OPAC

Poor	Fair	Good	Very good	Excellent

SECTION C: OPAC CHALLENGES

7. What challenges have you encountered when searching the OPAC?..

SECTION D: OPAC TRAINING

8. What trainings, if any, have you attended on how to use the OPAC?
………………………………………………………………………………………

9. How long were the training/s?
……………………………………………………………………………………….

10. Explain how the training did or did not meet your OPAC needs
……………………………………………………………………………………….

Thank you for your participation

Appendix E

DOCUMENT ANALYSIS (OPAC RECORDS)

CATALOGUE ENTRIES CHECKLIST

- Author entry

- Title entry

- Edition Statement entry

- Date of publication entry

- Physical Description (Pagination, other physical details, dimensions) entry

- Notes Entries (general notes, contents, summary/abstract/review) entry

- Subjects entry

- Alternative Authors entry

- Item (call number and location) entry

Appendix F

DECLARATION OF CONSENT

PROJECT TITLE: CATALOGUING PRACTICES FROM CREATION TO USE: A STUDY OF CAPE TOWN METROPOLITAN PUBLIC LIBRARIES IN WESTERN CAPE PROVINCE, SOUTH AFRICA

RESEARCHER	**SUPERVISOR**
Full Name: Ms. Madireng Jane Monyela	Full Name of Supervisor: Professor Stephen Mutula
School: Social Sciences	School: Social Sciences
College: Humanities	College: Humanities
Campus: Pietermaritzburg	Campus: Pietermaritzburg
Proposed Qualification: PhD (Information Studies)	Contact Details: 033 260 5571
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HSSREC RESEARCH OFFICE

Full Name: Prem Mohun

HSS Research Office

Govan Bheki Building

Westville Campus

Contact: 0312604557

Email: mohunp@ukzn.ac.za

I, Madireng Jane Monyela, student number 215081797, am a PhD student at the Department of Information Studies, School of Social Sciences, University of KwaZulu-Natal. You are invited to participate in a research project entitled: Cataloguing Practices from creation to use: A study of Cape Town Metropolitan Libraries in Western Cape Province, South Africa. The aim of the study is to investigate the cataloguing practices and the use of the catalogue in Cape Town Metropolitan Public Libraries in South Africa. The objectives of the study are to ascertain the extent to which cataloguers in public libraries in the Cape Town Metropolitan adhere to international cataloguing standards and to investigate the effectiveness of the computerised cataloguing system of Cape Town Metropolitan public libraries.

Through your participation, I hope to understand your cataloguing practices with the view of deepening the understanding of the importance of cataloguing standards in creating bibliographic data for the libraries. I guarantee that your responses will not be identified with you personally. Your participation is voluntary and there is no penalty if you do not participate in the study. Please sign on the dotted line to show that you have read and understood the contents of this letter. The focus group discussions/ interviews/ questionnaire will take approximate 60 minutes.

DECLARARTION FOR CONSENT

I .... (full name) hereby confirm that I have read and understand the contents of this letter and the nature of the research project has been clearly defined prior to participating in this research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

Participant's signature……………………………………………………………………

Date   …………………………………………………………………….

Appendix G

INFORMED CONSENT FOR FOCUS GROUP

Dear participant

My name is Madireng Monyela. I am a PhD (Information Studies) candidate studying at the University of KwaZulu-Natal, Pietermaritzburg Campus. The title of my research is: "Cataloguing Practices from creation to use: A Cape Town Metropolitan Public Libraries in the Western Cape Province, South Africa". The aim of the study is to investigate the cataloguing practices and the use of the catalogue in Cape Town Metropolitan public libraries in South Africa. I am interested in interviewing you so as to share your experiences and observations on the subject matter.

Please note that:

- the information that you provide will be used for scholarly research only.
- your participation is entirely voluntary. You have a choice to participate, not to participate or stop participating in the research. You will not be penalised for taking such an action.
- your views in this focus group discussion will be presented anonymously. Neither your name nor identity will be disclosed in any form in the study.
- the focus group discussion will take about one hour (60 minutes).
- the records as well as other items associated with the focus group discussion will be held in a password-protected file accessible only to myself and my supervisor. After a period of five years, in line with the rules of the university, they will be disposed by shredding and burning.
- if you agree to participate, please sign the declaration attached to this statement (a separate sheet is provided for signatures).

I can be contacted at: School of Social Sciences, University of KwaZulu-Natal, Pietermaritzburg Campus, Scottsville. Email: **monyelam@ukzn.ac.za; Mobile 0795543583**
My supervisor is Professor S Mutula who is located at the School of Social Sciences, Pietermaritzburg Campus of the University of KwaZulu-Natal. Contact details: Email **mutulas@ukzn.ac.za. Phone number: 0332605571**

The College of Humanities Research Ethics Officer is Phumelele Ximba who is located at Humanities Research Ethics Office, University of KwaZulu-Natal. Contact details: Email: **ximbap@ukzn.ac.za Phone number +27312603587.**

Thank you for your contribution to this research.

DECLARATION

I……………………………………………… (full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire. I understand the intention of the research. I hereby agree to participate.

SIGNATURE OF PARTICIPANT   DATE

………………………………………   …………………………………

I……………………………………………………… (full name) hereby agree to the tape recording of my participation in this research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT   DATE

………………………………………   ………………………………….

Appendix H

INFORMED CONSENT FOR INTERVIEW

Dear participant

My name is Madireng Monyela. I am a PhD (Information Studies) candidate studying at the University of KwaZulu-Natal, Pietermaritzburg Campus. The title of my research is "Cataloguing from creation to use: A study of Cape Town Metropolitan public libraries in the Western Cape Province, South Africa". The aim of the study is to investigate the cataloguing practices and the use of the catalogue in Cape Town Metropolitan public libraries in South Africa. I am interested in interviewing you so as to share your experiences and observations on the subject matter.

Please note that:

• the information that you provide will be used for scholarly research only.

• your participation is entirely voluntary. You have a choice to participate, not to participate or stop participating in the research. You will not be penalised for taking such an action.

• your views in this interview will be presented anonymously. Neither your name nor identity will be disclosed in any form in the study.

• the focus interview will take about 30 minutes.

• the records as well as other items associated with the interview will be held in a password-protected file accessible only to myself and my supervisor. After a period of five years, in line with the rules of the university, they will be disposed by shredding and burning.

• if you agree to participate please sign the declaration attached to this statement (a separate sheet is provided for signatures).

I can be contacted at: School of Social Sciences, University of KwaZulu-Natal, Pietermaritzburg Campus, Scottsville. Email: **monyelam@ukzn.ac.za; Mobile 0795543583**
My supervisor is Professor S. Mutula who is located at the School of Social Sciences, Pietermaritzburg Campus of the University of KwaZulu-Natal. Contact details: Email **mutulas@ukzn.ac.za. Phone number: 0332605571.**

The College of Humanities Research Ethics Officer is Phumelele Ximba who is located at Humanities Research Ethics Office, University of KwaZulu-Natal. Contact details: Email: **ximbap@ukzn.ac.za Phone number +27312603587**.

Thank you for your contribution to this research.

DECLARATION

I……………………………………… (full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire. I understand the intention of the research. I hereby agree to participate.

SIGNATURE OF PARTICIPANT   DATE

……………………………………   ……………………………….

I .... (full name) hereby agree to the tape recording of my participation in this research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

……………………………………………………………………………………………

SIGNATURE OF PARTICIPANT   DATE

……………………………………   ……………………………….

Appendix I

INFORMED CONSENT QUESTIONNAIRES

Dear participant

My name is Madireng Monyela. I am a PhD (Information Studies) candidate studying at the University of KwaZulu-Natal, Pietermaritzburg Campus. The title of my research is "Cataloguing from creation to use: A study of Cape Town Metropolitan public libraries in the Western Cape Province, South Africa". The aim of the study is to investigate the cataloguing practices and the use of the catalogue in Cape Town Metropolitan public libraries in South Africa. I am interested in interviewing you so as to share your experiences and observations on the subject matter.

Please note that:

•   the information that you provide will be used for scholarly research only.

•   your participation is entirely voluntary. You have a choice to participate, not to participate or stop participating in the research. You will not be penalised for taking such an action.

•   your views and information you will provide in this questionnaire will be presented anonymously. Neither your name nor identity will be disclosed in any form in the study.

•   the questionnaire will take about 30 minutes to complete.

•   the records as well as other items associated with your responses will be held in a password-protected file accessible only to myself and my supervisor. After a period of five years, in line with the rules of the university, they will be disposed by shredding and burning.

•   if you agree to participate please sign the declaration attached to this statement (a separate sheet is provided for signatures)

I can be contacted at: School of Social Sciences, University of KwaZulu-Natal, Pietermaritzburg Campus, Scottsville. Email: **monyelam@ukzn.ac.za; Mobile 0795543583**
My supervisor is Professor S Mutula who is located at the School of Social Sciences, Pietermaritzburg Campus of the University of KwaZulu-Natal. Contact details: Email **mutulas@ukzn.ac.za. Phone number: 0332605571.**

The College of Humanities Research Ethics Officer is Phumelele Ximba who is located at Humanities Research Ethics Office, University of KwaZulu-Natal. Contact details: Email: **ximbap@ukzn.ac.za Phone number +27312603587**.

Thank you for your contribution to this research.

DECLARATION

I…………………………………………………………………… (full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire. I understand the intention of the research. I hereby agree to participate.

SIGNATURE OF PARTICIPANT   DATE

……………………………….   …………………………………

Appendix J

ETHICAL CLEARANCE: UKZN

UNIVERSITY OF ™
KWAZULU-NATAL

INYUVESI
YAKWAZULU-NATALI

21 November 2016

Ms Madireng Jane Monyela 215081797
School of Social Sciences
Pietermaritzburg Campus

Dear Ms Monyela

Protocol Reference Number: HSS/1942/016D
Project title: Cataloguing practices of Cape Town Metropolitan Public Libraries in Western Cape Province, South Africa

Full Approval – Expedited Application

In response to your application received 9 November 2016, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL.**

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

....
Dr Shenuka Singh (Chair)
Humanitities & Social Scinces Research Ethics Committee

/pm

286

Appendix K

Gatekeeper's letter   (City of Cape Town Cataloguing Section)

School of Social Sciences

Department of Library &

Information Studies

Private Bag X01

Scottsville

3209

Contact: 033 260 5571

3 May 2016

Head

Collection Development Services

Department: Library and Information Services

Directorate: Community Services

53 Berkley Road, Maitlab

City of Cape Town

8000

Dear Mrs Gaibie

RE: REQUEST LETTER FOR SCHOLARLY RESEARCH DATA COLLECTION

This letter serves to certify that Ms Madireng Jane Monyela is a registered student for the PhD Library and Information Studies programme at the University of KwaZulu-Natal, Pietermaritzburg campus. I am writing to you to request you to grant Ms Monyela permission to collect research data at the Collection Development Services, Cape Town Metropolitan Library Services. She wishes to study the cataloguing practices of Cape Town Metropolitan public libraries.

Should the permission be granted to her by you, she will be collecting data from October to December 2016. Specific dates will be liaised in due course.

The study will adhere to the general principles of research ethics as set by the University of KwaZulu-Natal and also comply with principles relating to access, power, harm, deception and confidentiality.

Your cooperation would be highly appreciated

Yours sincerely

…………………………………

Appendix L

Gate Keepers letter (City of Cape Town Municipality)

School of Social Sciences

Department of Library & Information

Studies

Private Bag X01

Scottsville

3209

Contacts : 033 260 5571

3 May 2016

Director

Library & Information Services

Department: Library and Information Services

Directorate: Community Services

53 Berkley Road, Maitlab

City of Cape Town

8000

Dear Mrs Steyn

RE: REQUEST LETTER FOR SCHOLARLY RESEARCH DATA COLLECTION

This serves to certify that Ms Madireng Jane Monyela is a registered student for the PhD Library and Information Studies programme at the University of KwaZulu-Natal, Pietermaritzburg campus. I am writing to you to request you to grant Ms Monyela permission to collect research data at the selected public libraries in the City of Cape Town Metropolitan Library Services. She wish to study the Cataloguing of Cape Town Metropolitan Public Libraries.

Should the permission be granted to her by you, she will be collecting data from October-December 2016. Specific dates will be liaised in due course

The study will adhere to the general principles of research ethics as set by the University of KwaZulu-Natal and also comply with principles relating to access, power, harm, deception and confidentiality.

Your cooperation would be highly appreciated

Yours sincerely

....

Appendix M

Permission to carry out a study in the CCTML Libraries and Cataloguing Section

CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

COMMUNITY SERVICES

Lokiwe Mtwazi
Executive Director: Community Services

T: 021 400 1211   F: 021 400 1269   M: 084 266 9495
E: lokiwe.mtwazi@capetown.gov.za

08 June 2016

Attention: Ms Madireng Jane Monyela

Dear Madireng

RE: REQUEST LETTER FOR SCHOLARLY RESEARCH DATA COLLECTION

This serves to confirm that you have been granted permission to collect scholarly research data at the Cataloguing Services as well as some libraries at the City of Cape Town Metropolitan Libraries, as requested in your letter dates 06 June 2016.

We wish you all the best in your studies.

Kind regards,

Lokiwe Mtwazi
Executive Director Community Services

Appendix N

Editor's letter

26 January 2018

TO WHOM IT MAY CONCERN

This is to confirm that the dissertation written by Madireng Jane Monyela, titled **'Cataloguing Practices of Cape Town Metropolitan Public Libraries in Western Cape Province, South Africa'** was copy edited for layout (including numbering, pagination, heading format, justification of figures and tables), grammar, spelling and punctuation by the undersigned. The document was subsequently proofread and a number of additional corrections were advised.

The undersigned takes no responsibility for corrections/amendments not carried out in the final copy submitted for examination purposes.

Mrs. Barbara L. Mutula-Kabange

Copy Editor, Proof reader
BEd (UBotswana), BSSc Hons Psychology,
MEd Educational Psychology (UKZN)

Appendix O

Editor's report

LETITIA GREENBERG

LANGUAGE SPECIALIST

Tel:	012 426 8292 (b)	31 Aland Road
Cellphone:	084 077 1580	Valhalla
Email:	letitia@agsa.co.za/lgletitia@gmail.com	0185
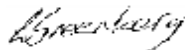
24 May 2019

To whom it may concern

With this letter, I confirm that I have language edited the dissertation entitled, *Cataloguing practices from creation to use: A study of Cape Town Metropolitan Public Libraries in Western Cape Province, South Africa*, written by Madireng Jane Monyela with student number 215081797.

With a relevant degree and honours degree, I am fully qualified to undertake such editing.

Yours faithfully

Letitia Greenberg

Appendix P

Save	Place a hold	Extra links		Save List	Home
					Help

Publication

Title	**F.W. de Klerk : the man in his time**
Author	Willem De Klerk, 1928-2009
Number	ISBN13 978-0-947464-36-3
	ISBN 0-947464-36-0
	Spine Mark : 320.968 DEK
	Spine Mark : 320.968 DE KLERK
Publication	Johannesburg : Ball, 1991
Physical description	185 p., ill.
	185p., ill. (some col.)
	185 p., ill. (some col.)
	185p., ill.
Note	Statement of responsibility: Willem de Klerk ; translated by Henri Snijders
	Statement of responsibility: translated (from the Afrikaans) by Henri Snijders
	Statement of responsibility: Willem de Klerk ; [translated by Henri Snijders]
	General: Afrikaanse titel: F. W. de Klerk : die man en sy tyd
	Statement of responsibility: translated by Henri Snijders
	General: some col.

F W DE KLERK

THE MAN IN HIS TIME

WILLEM DE KLERK

Subject Headings

DDC	320.968
	968.065
Personal Names	F. W. De Klerk, 1936-
Subject Heading	Political reform ; South Africa
	DE KLERK, FREDERIK WILHELM, 1936 ; POLITICAL CAREER

Available in the following libraries

Entry under First name

CTL4-Athlone

Book - English adult non fiction - 320.968 DE KLE

Volume/Part	Copy	Lending status	Date until	Reservations
-	C02084351	Available	-	-

CTL5-Bellville

Book - English adult non fiction - 320.968 DEK

Volume/Part	Copy	Lending status	Date until	Reservations
-	36012000007156	Available	-	-

Appendix Q

Save   Place a hold   Extra links   Save List   Search History   Back   Home

Back to index   Back to Short List   Help

Publication

Title   **Cézanne : life and work**
                 246-4 Cover title: **Cezanne**

Author   Nonhoff, Nicola
                 Paul Cezanne, 1839-1906   *Entry under first name*

Number   ISBN13 978-3-8290-2929-2 [pbk.]
                 ISBN 3-8290-2929-2 [pbk.]
                 Spine Mark : 759.4 CEZ

Publication   Cologne : Könemann, 1999

Physical description   95 p., ill. (chiefly col.)
                        95 p., ill. (chiefly col.), glossary

Note   Statement of responsibility: Nicola Nonhoff ;
                 [translated from German by Phil Greenhead]

Part of :   - Art in hand [Series]
                 - Art in focus [Series]

Subject Headings

DDC   759.4

Personal Names   Paul Cézanne, 1839-1906

Subject Heading Painters ; France ; Biography ; Biography
                 Painting, French
                 Painting, Modern ; France ; 19th century

Appendix R

| Save | Place a hold | Extra links | | Save List | Search History | Back | Home |
| Back to index | | | | | | | Help |

Publication

Title	**Above us the sky**
Author	Milly Adams, *Entry under first name*
Number	ISBN13 978-0-7505-4285-2 ISBN 0-7505-4285-3 Spine Mark : ADA
Edition	Large print ed.
Publication	Long Preston, N. Yorks. : Magna Large Print Books, 2016
Note	Statement of responsibility: Milly Adams Target Audience: Large print

Subject Headings

Subject Heading	World War, 1939-1945 ; Great Britain ; Fiction Large type books

Available in the following libraries

CTL2-Mobile-Services

Book - English fiction large print - ADA

Volume/Part	Copy	Lending status	Date until	Reservations
-	OCT00009277434	Charged out	21.04.2017	-

296

Appendix S

Publication

Title	**Chinese civilization from the Ming revival to Chairman Mao**
Author	Yong, Yap Arthur Cotterell, 1942-
Number	ISBN13 978-0-297-77304-7 ISBN 0-297-77304-6 Spine Mark : 951 YON
Publication	London : Weidenfeld & Nicolson, 1977
Physical description	256 p., ill. *No dimensions*
Note	Statement of responsibility: Yap Yong ; Arthur Cotterell
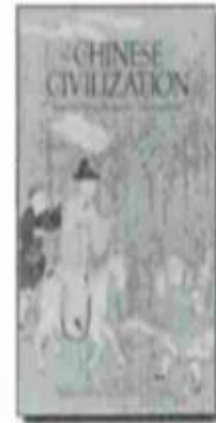
Subject Headings

DDC	951

Available in the following libraries

CTL3-Moses-Mabhida

Book - English adult non fiction - 951 YON

Volume/Part	Copy	Lending status	Date until	Reservations
-	38321000003778	Weeding	11.07.2012	-

CTL2-Mulzenberg

Book - English adult non fiction - 951 YON

Volume/Part	Copy	Lending status	Date until	Reservations

Appendix T

Publication

Title	**George Lilanga**
Author	George Lilanga, 1934-2005 Mascelloni, Enrico Sarenco, 1945-
Number	ISBN13 978-88-7624-493-3 [pbk.] ISBN 88-7624-493-X [pbk.] Spine Mark : RQ 709.678 LIL
Publication	Milan : Skira, 2005
Physical description	143 p., col. ill *No dimensions*
Note	Statement of responsibility: edited by Enrico Mascelloni, Sarenco General: Catalog of an exhibition held at the Fabbrica EOS, Milan, Italy, at the Franco Riccardo arti visive, Naples, Italy, and at the Studio Brescia arte contemporanea, Brescia, Italy, Dec. 1, 2005-Feb. 28, 2006 Target Audience: ART LIBRARY - AFRICAN COLLECTION

Subject Headings

DDC	709.678
Personal Names	George Lilanga, 1934-2005
Subject Heading	Artists ; Tanzania ; Exhibitions Art, Tanzanian ; Exhibitions Art, Black ; Tanzania ; Exhibitions

Appendix U

| Save | Place a hold | Extra links | | Save List | Search History | Back | Home |

| Back to index | | Help |

Publication

Title	**Contre-jour : q triptych after Pierre Bonnard**
Author	JOSIPOVCI, Gabriel Josipovici, Gabriel, , 1940-
Number	ISBN13 978-0-586-08681-0 ISBN 0-586-08681-1 Spine Mark : JOS
Edition	Paperback
Publication	London : Paladin, 1988
Note	General: First published by Carcanet in 1986

No pagination

Available in the following libraries

CTL1-Central-Library

Book - English adult fiction - JOS

Volume/Part	Copy	Lending status	Date until	Reservations
-	36001008438893	Available	-	-

CTL4-Delft-South

Book - English adult fiction - JOS

Appendix V

Save | Place a hold | Extra links   Save List | Home

Help

Publication

Title	**In close quarters**
Author	Irvin, Candace
Number	ISBN13 978-0-373-27148-1
	ISBN 0-373-27148-4
	Spine Mark : IRV
Edition	Paperback
Publication	Richmond, Surrey : Silhouette, 2002
Note	Target Audience: ROMANCE COLLECTION
	Statement of responsibility: Candace Irvin
Part of :	- Silhouette sensation [Series]

No Pagination

Available in the following libraries

CTL4-Bridgetown

Book - English adult fiction - IRV

Volume/Part	Copy	Lending status	Date until	Reservations
-	C51406063	Available	-	-

CTL5-Eikendal

Book - English adult fiction - IRV

Appendix W

| Save | Place a hold | Extra links | | Save List | Home |

| | | | | | Help |

Publication

| Title | **Hopeless Haines and the No-Hopers** |
| Author | Hodgson, Martin |
| Number | ISBN13 978-0-590-19090-9
ISBN 0-590-19090-3
Spine Mark : J HOD |
Edition	Paperback
Publication	London : Scholastic Children's, 1997
Part of :	- Hippo sport

No Pagination

Available in the following libraries

CTL2-Camps-Bay

Book - English juvenile fiction - J HOD

Volume/Part	Copy	Lending status	Date until	Reservations
-	C18157926	Catalogue Clean-up	16.02.2018	-

Appendix X

Publication

Title	**Drie dorpsjapies op die plaas : 'n prettige verhaaltjie**
Author	Sopko, Eugen Malan, Annarita
Number	ISBN13 978-0-624-01794-3 ISBN 0-624-01794-X Spine Mark : E SOP
Publication	Kaapstad : Tafelberg, 1982
Physical description	[, Ill.
Note	Statement of responsibility: geillustreer deur Eugen Sopko ; uit Duits vertaal deur Annarita Malan

Responsibility under note (handwritten annotation)

Available in the following libraries

CTL5-Bellville

Book - Afrikaans juvenile fiction - E SOP

Volume/Part	Copy	Lending status	Date until	Reservations
-	36180022924888	Available	-	-

CTL5-Brackenfell

Book - Afrikaans juvenile fiction - E SOP

Appendix Y

| Save | Place a hold | Extra links | | Save List | Home |
| | | | | | Help |

Publication

Title	**Clinical examination**
Author	Talley, Nicholas O'Connor, Simon
Number	ISBN13 978-0-632-05152-6 [pbk.] ISBN 0-632-05152-3 [pbk.] Spine Mark : 616.075 TAL
Publication	Oxford : Blackwell Science, 2002
Note	Statement of responsibility: Nicholas Talley, Simon O'Connor
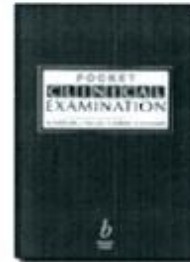
No Contents
No formatted content notes

Subject Headings

| DDC | 616.075 |
| Subject Heading | Physical diagnosis
Medical history taking
Physical examination ; Methods |

Available in the following libraries

CTL5-Eikendal

Book - English adult non fiction - 616.075 TAL

Volume/Part	Copy	Lending status	Date until	Reservations
-	38162000028930 Available		-	-

Identification　　　　c:ct:442946

Appendix Z

Save	Place a hold	Extra links		Save List	Home
					Help

Publication

Title	**Chinese civilization : from the Ming Revival to Chairman Mao**
Author	Cotterell, Yong Yap Cotterell, Arthur
Number	ISBN13 978-0-297-77304-7 ISBN 0-297-77304-6
Publication	London : Weidenfeld & Nicolson, c1977
Physical description	256 p., ill.
Note	Statement of responsibility: Yong Yap and Arthur Cotterell

No Summary

Subject Headings

DDC	951
Geographic Name	China ; Description and travel
Subject Heading	CIVILISATION ; CHINA ; CHINA

Available in the following libraries

CTL4-Bridgetown
Book - English adult non fiction - Q 951 COT

Volume/Part	Copy	Lending status	Date until	Reservations
-	C26464476	Catalogue Clean-up	13.02.2018	-

CTL2-Lansdowne
Book - English adult non fiction - Q 951 COT

Volume/Part	Copy	Lending status	Date until	Reservations
-	C14983896	Available	-	-

CTL2-Mowbray
Book - English adult non fiction - Q 951 COT

Volume/Part	Copy	Lending status	Date until	Reservations
-	C14866751	Weeded	11.08.2018	-

Identification	c:ct:107595