

**THE INFLUENCE OF WEB 2.0 TECHNOLOGIES ON THE
USE OF PUBLIC LIBRARIES IN MANGAUNG
METROPOLITAN MUNICIPALITY, SOUTH AFRICA**

by

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‘DECLARATION’

Student number: 37247751

I declare that “The influence of Web 2.0 technologies on the use of public libraries in Mangaung Metropolitan Municipality, South Africa” is my own work and all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Signature:

Date: 11 July 2016

Mrs Molaodi Margaret Matobako

DEDICATION

This study is dedicated to my late parents, Mr Ezekiel and Mrs Matshediso Seotlela, who made it possible for me to be who I am today. My lovely husband Mr Lucas Matobako, my beautiful children, Thato, Teboho and Mpho Matobako, made contributions to the success of this study. I will not forget my two grandchildren Hlalefo and Katleho and my siblings Mr Julian and Mr Richard Seotlela and their families.

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ABSTRACT

Recent innovations and advances in information and communication technologies (ICTs) have resulted into radical changes in the way information resources are provided, and have also brought about several options to handle a wide-range of information services effortlessly. Web 2.0 or social media is one of these innovations which expands the option in information services provision. Against this backdrop, this study intended to investigate the use of Web 2.0 technologies in the public libraries in the Mangaung Metropolitan Municipality in South Africa. The study was guided by mixed-methods of quantitative and qualitative approaches, because the approach enables the researcher to cover a wide variety of issues. The study adopted a sample survey research design to guide selection of subjects. Two data collection tools namely: a self-administered questionnaire were used for collecting data from 248 library users, while unstructured interview schedules were used to collect qualitative data from 16 library officials. The response rate for the survey of library users was 69%, a good rate for an unsolicited survey. The findings revealed that Mangaung Metropolitan Municipality libraries have ICT equipment with access to Web 2.0 technologies and that these technologies are also highly utilised. However, lack of training, low bandwidth, and short time allowed to access WIFI makes it difficult for the library users and staff to fully benefit from the web-based services offered by these libraries. Other factors include poor staff attitudes, technical problems, and challenges in marketing of online public access and catalogue, restrictions of social networking sites, non-linkage of the library OPAC to social media, geographical distances, and load shedding. The study concluded by recommending allocation of sufficient funds to cater for ICT trainings, free WIFI, uninterrupted power supply, increased bandwidth, amongst others which will enhance the quick and effective service that will meet the information needs of their users.

Key Terms: Web 2.0, social media, public libraries, Mangaung Metropolitan Municipality, ICTs,
South Africa

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LIST OF ABBREVIATIONS AND ACRONYMS

AJAX:	Asynchronous JavaScript
ARPANET:	Advanced Research Project Agency Network
BP Leinaeng:	Benjamin Pule Leinaeng
CD-ROMS:	Compact Disk Read Only Memories
CERN:	Centre for European Nuclear Research
DAC:	Department of Arts and Culture
DVD:	Digital Video Disc
EIFL:	Electronic Information for Libraries
HTML:	Hypertext Markup Language
ICTs:	Information and Communication Technologies
IDP:	Integrated Development Plan
IFLA:	International Federation of Libraries Association
IM:	Instant Messaging
IT:	Information Technology
LAB:	Library Associations of Bangladesh
LIASA:	Libraries and Information Association of South Africa
NLSA:	National Library of South Africa
OPAC:	Online Public Access Catalogue
PAIA:	Promotion of Access to Information Act
READ:	Rural Education and Develop
RSS:	Really Simple Syndicate

SDBIP:	Service Delivery Budget Integrated Plan
SPPS:	Statistical Package for the Social Science
UNESCO:	Educational, Scientific and Cultural Organization
UNISA:	University of South Africa
USA:	United States of America
WWW:	World Wide Web
XML:	Extensible Markup Language

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CHAPTER ONE

INTRODUCTION

1.0 Introduction

Recent innovations and advances in Information and Communication Technologies (ICTs) have resulted into radical changes in the way information resources are provided and brought about several options to handle a wide-range of information effortlessly (Thanuskodi 2011:203). One of the advancements of ICTs is the emergence of Web 2.0 as a second generation of web-based technology (Lihn 2008: 630). O'Reilly (2005:1) boosted the usefulness of Web 2.0 in a conference brainstorming session that was held on 5-7 of October 2004 in San Francisco. Web 2.0 which represents a collection of technologies and applications has demonstrated immense possibility in enriching interaction, communication and enabling collaboration in human society.

As centres for information dissemination, public libraries play crucial roles in promoting the culture of learning and reading in their communities. With the introduction of Web 2.0, the means and strategies for achieving the promotion of the culture of learning and reading have been expanded, and challenged in some circumstances. Therefore, public libraries are compelled to take another step at their Internet-based information services to ensure that users do not only collaborate and share information online in ways previously unavailable but that this process aligns properly with expected practices (Lihn 2008:630). This is exactly the case in Mangaung Metropolitan Municipality libraries, namely, Mangaung, Benjamin Pule (BP) Leinaeng, Trevor Barlow, Lourier Park, Botshabelo, Seloshesha, Fichardt Park and Bainsvlei.

The Margaung Metropolitan Municipality libraries, like most other libraries, support the development of reading and learning in the community. The use of Web 2.0 technologies in these libraries can be developed via existing library systems and involving social network sites, structuring outreach activities around the Web 2.0 applications, encouraging the users to utilize the innovation and development of staff (Maness 2006e). This is because the introduction of Web 2.0 applications has made information easily accessible such that it does not conform people to the library structure and the view of the users to increase the concept of information participation, (MacKellar 2008:279). Interestingly, Web 2.0 technologies in the libraries are imperative, but the understanding of how they work and their main principles must thoroughly be considered before the implementation (Merčun and Žumer 2011:15).

The impact of using Web 2.0 technologies in Margaung Metropolitan Municipality libraries, whether it is for connecting or training the end users, marketing library services, integration, or attracting new features into library websites and information systems might, not always yield the anticipated results because most public libraries are under resourced in the utilisation of the Web 2.0 technologies (Merčun and Žumer 2011:14). Both the technology and the human resources required to drive the new applications are not as adequate as would be expected. Therefore, a complete picture of the impact and use of applications of Web 2.0 technologies in libraries especially in the case of Margaung Metropolitan Municipality libraries is necessary not only for the users but also for the library managers (Lihn 2008: 631).

Margaung Metropolitan Municipality libraries were first subscribed to the Erudite system, which was an introduction to databases, library users were only able to borrow and return library material

physically, this was a means to show what was available on-shelf, what was reserved and what was booked out, meaning this could only be done within the premises. This system was introduced in 1989, and was succeeded by the Millennium Library System in 2007, that is currently still being used. Millennium Library System, on the contrary, is accessible to anyone with the Internet connection, from the comfort of their homes. Even though Millennium database is also restricted to only viewing what the library possesses in its collection. Recently, Marga Mangrove Metropolitan Municipality libraries have been introduced to Overdrive, which is an open access to what is inside the library. Overdrive allows library users to access books electronically, and return them without moving from their homes.

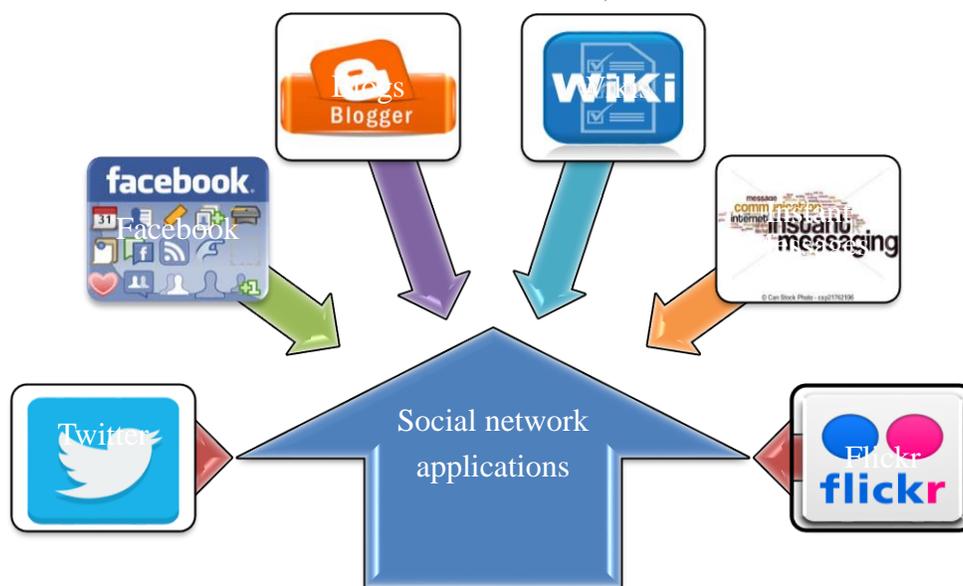
1.0.1 Conceptual setting

The role of ICTs in enabling libraries to meet their expectations cannot be overemphasised as ICTs are versatile, easy and increasingly cheap, among others. The United Nations Educational, Scientific and Cultural Organization (UNESCO) has recognised and emphasised the need for libraries to incorporate ICTs in library services. UNESCO has also emphasised that the public libraries should view ICTs as a great opportunity that could bring a positive change in the roles and responsibilities of service delivery (UNESCO 2000:12). Generally, ICTs utilization in public libraries have reached advanced stages, particularly in the developed world.

According to Research Information Network (2010: 5), Web 2.0 represents the second phase in the Web's development, therefore, it attracts library users who regard it as a set of new standard for user-centre design because it promotes user engagement, interaction, information, advanced knowledge sharing and collaboration (Merčun and Žumer 2011:14). Illustration in figure 1.1

shows that Web 2.0 concepts have been used to develop many web-based communities and applications amongst others; blogs, Flickr, Wikis, Instant Messages and RSS, etc. (Tripathi and Kamur 2010:195).

Figure 1.1: Some of social network applications that are used in the libraries (Tripathi and Kamur 2010:195)



The applications shown in Figure 1.1 create social networks, in which members of the network access and share information, collaborate with other users, filter content and interact socially (Tripathi and Kamur 2010:195). The library users make a library and its services come alive, because they ensure that all types of services are rendered and its collection development is used. Hence, Web 2.0 has propensity for increasing use of library resources. Internet web-based services offer advance effective and efficient ways of interacting with library users. It assists users to generate interpersonal connections based on common grounds (Chen, Chu and Xu 2012:1). Web 2.0 and associated social networks are not conceptually the same but has become largely accepted as operating interchangeably. Forward looking libraries are constantly investigating how emerging technologies that promote interaction and communication between users and staff may be effective and efficient, some changes that are major determinants in librarianship are the emerging

Information and Communications Technologies and the growing demand for closer collaboration between librarians and library users. Both library officials and library users can learn from each other and work together in understanding better the advances of Information and Communication Technologies in libraries.

In 1969, the United States funded a project that developed an Advanced Research Project Agency Network (ARPANET) which was a national computer network and that's when the Internet was launched which was regarded as all text without graphics, sound, video, animation or photos. The Web 1.0 was introduced in Switzerland at the Centre for European Nuclear Research (CERN) in 1991 with the purpose of providing a multimedia interface to resources available on the Internet. The second generation of Web evolved in 2001 and it was called Web 2.0 to support the activeness of content creation, collaboration and social interaction. It has changed the way the end user contributes content to the web (O'Leary, O'Leary and O'Leary 2015: 28).

Rouse (2015e) stated that Web 2.0 is the current online technology state that enhances a communication channel that is characterized by the user engagement, interactivity and community-based input as it compares to the early days of Web. Therefore, Web 2.0 operates differently from the traditional World Wide Web (WWW) known as Web 1.0 because it involves user participation to produce content; it also enables interaction, content-sharing and collaboration (Rouse 2015e). Stephens (2006e) described Web 2.0 further as "the next incarnation of the World Wide Web, where digital tools allow users to create, change, and publish dynamic content of all kinds". A key element of the Web 2.0 technology is that it allows people to create, share, collaborate & communicate. Asynchronous JavaScript (AJAX) and Extensible Markup Language

(XML) method enable Web 2.0 to process user requests with immediate effect by linking several programming tools to update content and online social interaction (Rouse 2015e).

The move to online social interaction through technology pointed out that users are forever carrying the digital devices and that gives the libraries a chance to point out their traditional way of rendering services. The libraries are witnessing the rapid change and transformation in information technology during the last two decades. Libraries are expanding and developing their traditional services based on information communication technology and community needs. The focus is on Web 2.0 which is trending and emerging as an advanced Web where user can be a consumer or producer of content design.

Stephens (2006e) emphasized that it is time for the libraries to focus on what computing technologies might provide to the varied library users and information services. The most important factor that raises a concern is whether the libraries are technologically ready to handle their users and provide them with Web 2.0 technologies that will satisfy and meet their needs. Most of libraries are already offering or attempting to offer Web 2.0 technologies like Mangaung Metropolitan Municipality libraries, but how libraries are participating in the online social interaction, demonstrate whether the Web 2.0 usage impact is negative or positive.

1.0.2 Contextual setting

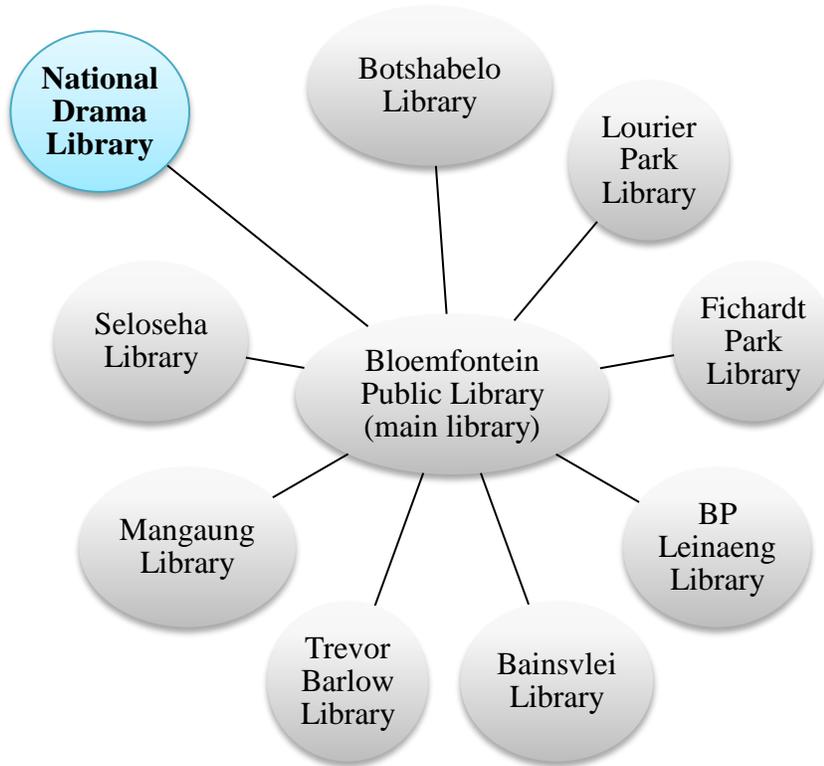
This exploratory study is carried out in Mangaung Metropolitan Municipality in Free State, South Africa. According to Mangaung Metropolitan Municipality Integrated Development Plan (IDP) Review (2011/12:3), the municipality has been in existence since the year 2000 with the

amalgamation of four transitional councils namely, Bloemfontein, Botshabelo, Thaba-Nchu and two Rural Councils. It was elevated from category B type local municipality to category A Metropolitan Municipality type after the local municipality elections of 2011. A category A municipality is regarded as “a region that has an urban area featuring of high population density, extensive development, multiple business districts, economic activities, linkages between its residential units, industrial areas, intense movement of goods, services and people” (Municipal Structures Act 117 of 1998: 8). Mangaung means “Place of Cheetahs”. It is also known as “City of Roses”. The municipality envisages “a city that will be striving to become a progressive municipality that is globally safe and attractive to live, work and invest in” (Mangaung Metropolitan Municipality Annual Report, 2013/14:7). Mangaung Metropolitan Municipality is divided into three regions: Bloemfontein, Thaba Nchu and Botshabelo. The population of the Mangaung Metropolitan Municipality was estimated to be 747,431 (Statistics South Africa Census 2012e).

The Constitution of the Republic of South Africa (1996), Chapter Six, and Schedule 5 Part A clearly stipulates functional areas of Exclusive Provincial Legislative competence. It indicates that libraries other than national libraries are within a functional area of provinces. However, the financial implications will compel provinces to have agreements with municipalities to run the functions of the libraries. Mangaung Metropolitan Municipality and Free State Department of Arts & Culture (Library and Achieve Services) had a service legal agreement that regulates the public libraries functional areas. In total, Mangaung Metropolitan Municipality have ten libraries including one National Drama Library.

Figure 1.2 is an illustration of libraries within the Mangaung Metropolitan Municipality:

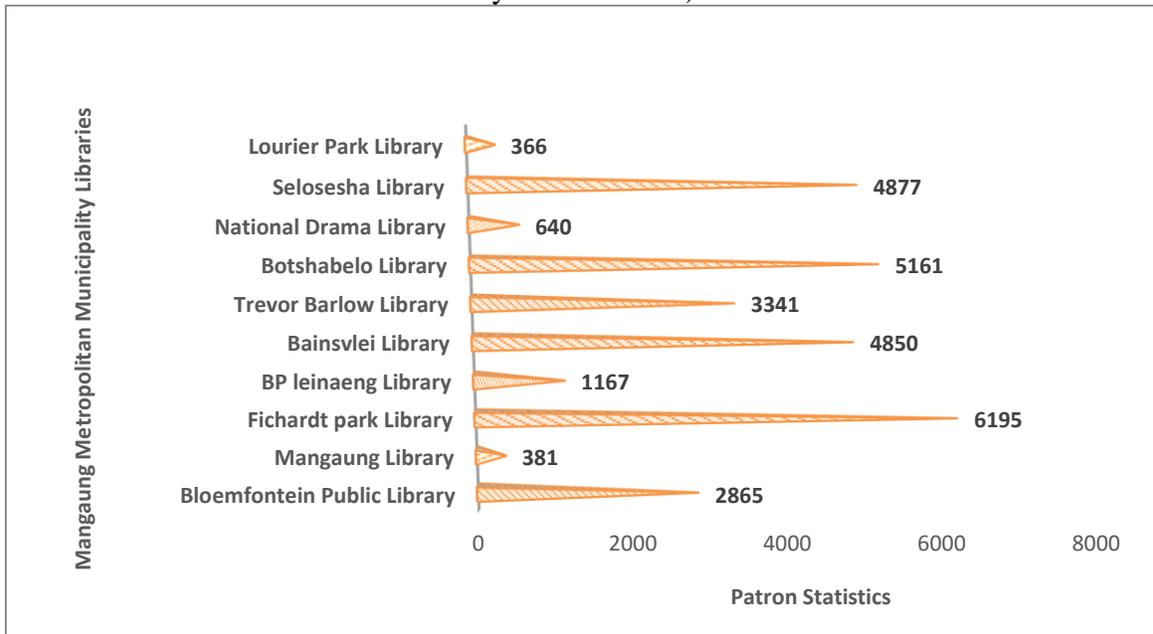
Figure 1.2: Mangaung Metropolitan Municipality libraries



Service Delivery Budget Integrated Plan (SDBIP) in the IDP Mangaung Metropolitan Municipality Annual Report (2013/14:63), states clearly that library has “to promote literacy in Mangaung communities by using the strategy of providing easy access to reading and information service to promote the culture of reading and learning”. Hence, these libraries are regarded as civic focal point and resource hub for the community of Mangaung Metropolitan Municipality through free access and computers with emphasis on skills transfer, development and growth. These libraries circulate about 34,320 items monthly with the patron statistics of 30,156 registered members as indicated by the statistics collected by Mangaung Library Services from the

Millennium Integrated Library System, for instance, figure 1.3 illustrate the example from March 2015 patron statistics.

Figure 1.3 Patron Statistics in March 2015 (Retrieved from Millennium Integrated Library System & Prolib)



The illustration in figure 1.3 clearly indicates imbalance of patron statistics in different libraries of Mangaung Metropolitan Municipality. Although Merčun and Žumer (2011:14) highlighted the fact that using Web 2.0 in the libraries do not always produce the desired factors, the libraries have to understudy their Web 2.0 technologies applications in order to extend their existing services.

There are 64 computers and 41 tablets installed from 2007 to date with access of Web 2.0 technologies in Mangaung, BP Leinaeng, Trevor Barlow, Lourier Park, Botshabelo, Selosesha, Fichardt Park and Bainsvlei libraries. The main purpose of the installation of ICT equipment in Mangaung Metropolitan Municipality libraries was to develop the community technologically, support the government programmes to eradicate socio economic issues, create easy online access,

to bridge the digital gap in the communities, to cover the geographical distances between the libraries, to promote the user and staff engagement, collaboration and interaction between users and libraries.

Another intention was to ensure that the users are able to use the ICT equipment independently at their own time using their own gadgets and also be able to conduct the research online, create emails, perform library online searches, read electronic books, online job hunting and interact with their friends, etc.

Out of these libraries, Mangaung public library was selected as one of the 27 pilot libraries in South Africa who benefited from Bill & Melinda Gates Global Libraries Foundation which is known locally as Mzansi Libraries Online Project. The Global Libraries Foundation has benefited more than thirty countries in transforming and upgrading library services at international level. In South Africa, the programme has been approved as a two years' pilot project 2014 until 2015 and it was hosted by the National Library of South Africa (NLSA), Libraries and Information Association of South Africa (LIASA) and the Department of Arts and Culture (DAC) (National Library of South Africa 2014e). The beneficiaries (twenty-seven pilot libraries) benefited computers, e-readers, games and tablets to advance the impact of the existing library services and community development. The Mangaung public library received 20 computers, 10 tablets and games from Mzansi Libraries Online Project to enhance and strengthen the lives of Mangaung community members and also to improve the library services.

Illustration in table 1.1 outlines the ICT equipment available in the Mangaung Metropolitan Municipality Libraries:

Table 1.1: Distribution of computers and tablets with Internet access at Mangaung Metropolitan Municipality libraries

Variables	Computers	Tablets
Mangaung Library	25	10
BP Leinaeng Library	6	5
Trevor Barlow Library	6	5
Lourier Park Library	4	4
Bainsvlei Library	4	5
Fichardt Park Library	4	5
Seloshesa Library	10	2
Botshabelo Library	5	5
Total	64	41
Mean	8	5.125
Standard deviation	6.7	2.1

1.1 The Research Problem

Mangaung Metropolitan Municipality libraries namely, Mangaung, BP Leinaeng, Trevor Barlow, Lourier Park, Botshabelo, Seloshesa, Fichardt Park and Bainsvlei have adopted Web 2.0 technologies to advance their services to their communities. Mangaung Metropolitan Municipality Annual Report of 2013/14 and Integrated Development Plan of 2011 document the plan, progress, opportunities and challenges of their Directorates, Sub-Directorates and Divisions including the Library Division but nothing has been reviewed or planned about the use of Web 2.0 technologies introduced in the Mangaung Metropolitan Municipality libraries. However, there is a lack of any empirical study documenting the outcomes of the exploration of Web 2.0 technologies and their potential and current usage in the Mangaung Metropolitan Municipality libraries. In short, the use of Web 2.0 technologies in the Mangaung Metropolitan Municipality libraries is increasing day by

day due to many factors. But for some other reasons, the use of Web 2.0 technologies is still not known in three regions, for instance, Bloemfontein, Botshabelo and Thaba Nchu due to factors such as geographical distance, digital gap, lack of marketing and advocacy, peri-semi urban area, unemployment, literacy, and so forth. This study aimed to investigate the usage that may contribute to improving the use of Web 2.0 technologies in the libraries.

1.1.1 The purpose of the study

The general purpose of this study was to investigate the usage of Web 2.0 technologies in the Mangaung Metropolitan Municipality public libraries namely, Mangaung, BP Leinaeng, Trevor Barlow, Lourier Park, Botshabelo, Selossha, Fichardt Park and Bainsvlei, in the Free State Province of South Africa.

1.1.2 Objectives and Research questions of the study

In order to investigate the use of Web 2.0 technologies in the Mangaung Metropolitan Municipality public libraries, Table 1.2 shows the specific objectives, research questions, methodology that were used during the data collection and gathering, data collection instruments and the population of this study:

Table 1.2 Research objectives, research questions, methodology, data collection and the population of study (Mamafha 2013: 8 – 9)

Objectives	Research Questions	Methodology	Data collection tools	Study Population
1. To examine the library users and the use of Web 2.0 technologies and other library service platforms	To what extent do the users of public libraries in Mangaung Metropolitan Municipality use Web 2.0 technologies and other library service platforms?	Survey	Questionnaire	Library users
2. To investigate if the library computers and the training skills of the library officials are adequate to meet the information need of the library users.	Are the library computers and training skills adequate to meet the users' information need?	Survey	Questionnaire Unstructured interviews	Library users Library officials
3. To identify the ICTs and Web 2.0 features available in the library	What are the ICTs and Web 2.0 features available in the library?	Survey	Questionnaire Unstructured interviews	Library users Library officials
4. To examine the benefits and challenges of access to Web 2.0 technologies by the users and recommend ways of deploying the technologies to meet users' needs	What are the benefits and challenges of access to Web 2.0 technologies by the library users in respect of utilization of library resources and meeting users' information need?	Survey	Questionnaire Unstructured interviews	Library users Library officials
5. To identify issues to be considered in installing Web 2.0 technologies	What are issues to be considered in installing Web 2.0 technologies?	Survey	Questionnaire Unstructured interviews	Library users Library officials

1.2 Scope of the study

The geographical area of this study was restricted to exploring usage of Web 2.0 technologies in public libraries in Mangaung Metropolitan Municipality. The study was only conducted in eight public libraries of Mangaung Metropolitan Municipality in the Free State Province of South Africa. The Bloemfontein Public Library which forms part of the Mangaung Metropolitan Municipality libraries was not involved in the study because it is currently undergoing renovations.

1.3 Significance of the study

The study intended to investigate Web 2.0 technologies usage in Mangaung Metropolitan Municipality public libraries, Free State Province, South Africa. Further, this study is an evaluation of how Web 2.0 features are currently being utilized in the Mangaung Metropolitan Municipality libraries to meet library user's needs. The study is beneficial to the eight public libraries in Mangaung Metropolitan Municipality because the information it provides could enhance librarians' knowledge on how to use Web 2.0 technologies effectively.

It will be expected that the findings of the study would raise the awareness about the scheduled computer training needs, relevant guidelines and types of Web 2.0 technologies, Web 2.0 features, and also provide advice on future equipment in the libraries. Since Free State Provincial Library and Achieve Services are financing the procurement of the ICT equipment in Mangaung Metropolitan Municipality libraries that have access to the Web 2.0 technologies, it is expected of them to receive a feedback about whether they are achieving their goals to reach more users, create user engagement, meet and satisfy the technological needs of the Mangaung Metropolitan Municipality community. The intent of this study was to provide a comprehensive examination of

the impact on the use of Web 2.0 technologies in the public libraries and also encourage other libraries in other municipalities to examine the value and influence of the Web 2.0 implementation.

Furthermore, this study will be beneficial to the end users of Web 2.0 technologies as well because it will provide them with an opportunity to value the different benefits and challenges based on the availability of the relevant ICTs and Web 2.0 features used within the libraries in Mangaung Metropolitan Municipality. Therefore, the study identified the issues to be considered during the introduction and implementation of Web 2.0 technologies in the public libraries.

1.4 Operational definition of terms

In this section, the researcher is trying to explain the meaning of the concepts and terms in the study.

1.4.1 Public Libraries

Shillinglaw and Thomas (1988:259) in their study explain public library as a local resource of information and documents which is accessible to the entire community. It enables ordinary people at little or no direct cost to the user, to gain access to materials from which they may gain knowledge, information, cultural experience, lifelong learning, awareness and entertainment (Shillinglaw and Thomas 1988:259). Whereas IFLA Publication 147 (2010:2) eloquently describe public libraries as providers of resources and services and offer a variety of literature to meet the needs of the community, hence, they are aiming to serve all citizens and communities. The efficiency and effectiveness of the public library as a tool of reading, research and learning is determined by the success of providing users with relevant and timely information that will meet their information needs.

1.4.2 Web 2.0

Merčun and Žumer (2011:14) defined Web 2.0 as a set of a new standards for user-centred design by creating more perceptive and inviting tools, demanding constant change, flexibility, and evaluation while promoting user engagement, sharing, collaboration, interaction and personalization.

1.5 Limitation of the study

Due to the nature of the study, the following limitations were identified:

- (i)** Limited time and budget
- (ii)** The literature review was predominantly based on international literature because very limited research is available on the exploration of the usage of Web 2.0 technologies in public libraries especially in South Africa.
- (iii)** The research was confined to the Mangaung Metropolitan Municipality libraries and the results were typical to the circumstances of the geographical scope. It is therefore not accepted as an overall reflection of the exploration on usage of Web 2.0 technologies in other libraries. Exploration of Web 2.0 technologies in libraries should, therefore, be exercised in the interpretation and utilization of the results and its findings cannot be generalised.
- (iv)** The focus of this study was confined to 264 respondents (248 library users and 16 library officials) within eight Mangaung Metropolitan Municipality libraries in the Free State Province of South Africa. The operational aspects of libraries were ignored for the purpose of this study.

The limitation of the study must be taken into consideration when the results and conclusions of this study are applied to the investigation on the usage of Web 2.0 technologies in libraries in a broad sense. The findings of this study can, therefore, not be generalised to libraries in Mangaung Metropolitan Municipality or in South Africa.

1.6 Ethical considerations

Since most research projects deal with human beings, it is important to understand and include ethical issues when conducting research (McMillan and Schumacher 2001: 258-259). The term ethics reflects moral principles that influence behaviour in human relations, conforming to a code of principles, the rules of conduct, the responsibility of the researcher and the standards of conduct of a given profession. Confidentiality, anonymity, violation of privacy, avoidance of harm to respondents and informed consent were respected and considered during the collection of data (De Vos 1993: 34). For the purpose of this study, the research adhered to the ethics guidelines as stipulated in the University of South Africa (UNISA).

1.7 Structure of the study

Table 1.3 shows the outline of chapters of the dissertation and provides a brief description of the contents of each.

Table 1.3: Outline of chapters

CHAPTER	CHAPTER DESCRIPTION
1: INTRODUCTION	Chapter 1: Introduction This chapter, provides the background to the study, conceptual setting, contextual setting, research problem, purpose of the study, objectives and research questions of the study, scope of the study, significance of the study, limitation of the study, ethical considerations and the structure of the dissertation.
2: LITERATURE REVIEW	Chapter 2: Literature review Literature review provides a review of what has already been done and investigated by existing scholarship in the field of the usage of Web 2.0 technologies in public libraries by library users and staff. According to Fink (2014:3), a research literature review is a systematic, explicit and reproducible method for identify, evaluating and synthesizing the existing body of completed and recorded work produced by researchers, scholars and practitioners.
3: RESEARCH METHODOLOGY	Chapter 3: Research methodology Research methodology provides a discussion of the research design, approach, study population, location, sampling and its size, data collection instruments, methods and procedures and interview. It also discusses the validity and reliability of the study, evaluation and ethical considerations.
4: DATA PRESENTATION, ANALYSIS AND INTERPRETATION	Chapter 4: Chapter four focuses on presenting, analysing, and interpreting data of the study.
5: SUMMARY OF MAJOR FINDINGS, CONCLUSIONS AND RECOMMENDATIONS	Chapter 5: Chapter five presents summary of major findings of the study, conclusions, recommendations and suggestions.
6. REFERENCES	List of literature referred to in the dissertation.
7. APPENDICES	List of documents attached to the study

1.8 Summary

In this chapter the researcher has provided the background on the exploration of the use of social web in Mangaung Metropolitan Municipality libraries. The researcher has also clarified the conceptual and contextual frameworks, problem statement, objectives and research questions, scope and delimitations, significance and justification of the study. The following chapter will present the literature review of previous studies on the exploration of social web usage in libraries that have similar contextual settings in order to compare the results to distinguish some similarities.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

In chapter one, the research problem, objectives and research questions relating to the exploration of the Web 2.0 technologies on the use of public libraries in Mangaung Metropolitan Municipality, South Africa were analytically introduced. In this chapter, the current issues related to the study are reviewed. The review was based on perception about public libraries; Web 2.0 technologies; social networks; Web 2.0 applications in the libraries; Web 2.0 technologies and other library services; Web 2.0 features that are available in the library; Web 2.0 skills offered in libraries; technical support provided by library officials to Web 2.0 technologies library users; issues in installing Web 2.0 technologies; benefits and challenges of accessing Web 2.0 technologies in libraries; types of ICTs available in libraries.

2.1 The meaning literature review

According to Mouton (2001:86), there are two ways of looking at the literature review. It can be looked at as a study on its own which is preferred to be called a literature study, or a first phase of an empirical study. Mouton (2001:86); De Vos, Strydom, Fouché and Delport (2011:109) further explained the literature review as one of the first steps in understanding the research. McMillan and Schumacher (2001:107) agree with De Vos, Strydom, Fouché and Delport (2011:109) by identifying the purposes of literature review in the following manner; (i) it defines and limits the research problem, (ii) it develops research hypothesis, (ii) it avoids repetition, (iv) it places study in perspective, (v) it selects promising methods, (vi) it relates outcomes to prior research, and (vii) it suggests further research.

However, De Vos (2001:65); Goddard and Meville (2001:19); Babbie (1989:100) revealed that a good literature review includes primary and secondary sources. They explain that the primary sources allow and prepare the researcher to review further sources that will be used and needed in order to complete the full study, whereas, the secondary sources are comprehensive and forms part of the research process itself, instead of being part of the research preparation.

While literature revealed that there has not been a previous study on the exploration of Web 2.0 technologies use in Margaung Metropolitan Municipality libraries, it was important to analysis literature related and relevant to the study which will provide necessary background information on the topic investigated. There are similar studies in contextual settings that emphasise the fact that there is an impact in the introduction and incorporation of Web 2.0 in the libraries.

According to Maness (2006e), it was imperative for libraries to adopt the first Web revolutionary even though it was only facilitated a one-way flow of information. However, since the introduction and incorporation of Web 2.0 services, the pattern of library and information services has changed drastically. The library services are no longer focusing more on providing controlled access of information but facilitate the information literacy and information transference to their users who are already in possession of Web 2.0 resources. However, the case study revealed further that it has not extensively been fully functional in the public libraries. Nevertheless, it was also discovered that Web 2.0 inspires the rapid change that engages the library user in the creation of new library virtual services and products.

2.2 Perception about Public Libraries

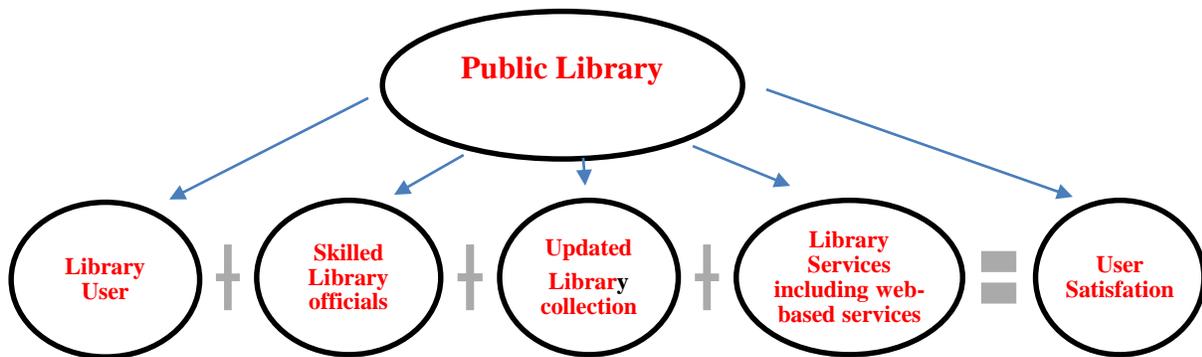
Traditionally public libraries have four categories of services: user education, dissemination of information, documents supply and answering enquiries. According to Whittaker (1993:76), the library serves audiences with varied information needs, and this constitutes the major challenge in performing their tasks successfully. To address this challenge, public libraries often need to understand the nature and complexity of the community they serve. In this regard, Whittaker (1993:76) further revealed that public libraries' role should build up the history of their communities, and thereby expressing in achieving knowing more about the communities they serve including their technological needs.

Public libraries irrespective of how small or under-resourced they may have potential to contribute to community empowerment and development. They are the supporting system to the important issues such as health, agriculture, employment and labour. However, public libraries are related with reference services and traditional book lending, rather than technology and innovation. Historically a library has been regarded as a complete activity in society which provides and serves the community information needs. Public library has been known as an organization that preserves records of totality of humanity's experiences and creations, while the functionality of it refers to contribution of the potential contributors of library resources preserved in libraries. Therefore, Shillinglaw and Thomas (1988: 24); Jaeger, Bertot, Kodama, Katz and DeCoster (2011e) studied that public libraries are a vast resource centres with a collection of books and other literary materials that supply the society with a particular kind of services.

Shillinglaw and Thomas (1988: 259) further explained public library as a local resource of information and documents which are accessible to the general public and enable ordinary people at little or no direct cost to gain access to services and materials from which they may gain knowledge, information, cultural experience, lifelong learning, awareness and entertainment.

However, figure 2.1 shows that even though these libraries preserve books and other literary materials, their role are not only to collect and preserve collection but to ensure that those materials are utilized effectively and efficiently in order to satisfy the needs of their users (Whittaker 1993: 3).

Figure: 2.1 Library-based user services in public library (Whittaker 1993: 3)



Shillinglaw and Thomas (1988: 267) further revealed in their study that public libraries existed in the ancient and literate civilizations. Dicks (2007e) also revealed that in South Africa, it was Lord Charles Somerset who found the first South African public library in Cape Town through tax gained from wine in 1818 with the aim of supporting education and youth. Since then, the library development and the process of emerging ICTs innovations continued.

It was therefore imperative that the South African public libraries including Mangaung Metropolitan Municipality libraries has to provide a high quality satisfactory services which is manageable, proactive and in line with the innovative changes that are influenced by the emergence of the information and communication technologies with Web 2.0 technologies especially social media. Political change and globalization also in the democratic South Africa influenced Mangaung Metropolitan Municipality libraries to offer a wide range of updated quick and easy online access to information because of the integration and connectivity existing between information and users. According to Whittaker (1993: 1), one of the main functions of a public library is to provide users with access to its information services and elements that impact relationship of the user to the library.

The technological development and change which has already been embarked upon in other public libraries, opened opportunities for all South Africans, hence, Mangaung Metropolitan Municipality libraries are also trying to embark on the same matter which will be the essential aspect to all Mangaung community. It is emphasized in The Library and Information Services Transformation Charter (2014: 54) that in 2010, South Africa which was having the first public library in 1818, had 1752 public libraries within 6 metropolitan municipalities that are affiliated to nine provinces. The Charter further revealed that by 2013, new 414 public libraries were funded and 244 were upgraded through the funding called Community Library Conditional Grant. Conditional Grant was deployed in 2007 to address the specific inequality of service delivery in South African public libraries by the national government (The Library and Information Services Transformation Charter: 2014: 54).

All eight selected libraries in Mangaung Metropolitan Municipality also benefited from the Conditional Grant because the money that procured the ICT equipment, network, software, broadband Internet and some collection development emanated from Community Library Conditional Grant.

In the Free State Province, the Conditional Grant project benefited 181 service points (libraries) with ICT infrastructures; the province is trying to bridge the long existing digital gap (Library and Information Services Transformation Charter 2014: 54). However, according to the survey conducted and commissioned by the Department of Arts and Culture in 2007, South African has about 34% of public libraries needed to meet the information needs of the entire 100% of South Africans (The Library and Information Services Transformation Charter 2014: 54).

IFLA Publication 147 (2010: 2) eloquently emphasised the fact that the primary purpose of public libraries is to provide resources and variety of services which are trying to meet their information users. IFLA Publication 147 (2010: 2) also stated that library as an organization, housed a collection of information resources with the specific purpose of obtaining, preserving and making available recorded knowledge.

Public libraries were forced to upgrade their information services due to the rapid electronic development and they were supposed to utilize the opportunity of advancing their electronic services through the use of Web 2.0 technologies (social media) in order to attract their users. The study further agrees on the point that public libraries must bridge the information gap, digital divide and also help to bring the users into the global dialogue. Hence, Mangaung Metropolitan

Municipality libraries needed to install the ICT equipment to bring the users into the global dialogue. They implemented Web 2.0 technologies in the peri-urban communities such as Thaba Nchu and Botshabelo to bridge the digital gap and to fit them into the global electronic village by making Internet-based services accessible to their users free of charge. The roles and purposes of all public libraries globally and locally including those in Mangaung Metropolitan Municipality, are in the following manner:

- (i) **Education** – Public libraries has to support educational system regardless is formal or non-formal. For instance, public libraries are “replacing” the school libraries because of their main clientele which are the school learners
- (ii) **Information** – The Constitution of the Republic of South Africa has prescribed Promotion of Access to Information Act No. 2 of 2000 (or PAIA; Act No. 2 of 2000) where everybody has the right to access information thus makes public library a local resource where information and knowledge has to be easily accessible and free
- (iii) **Personal development** – Public libraries has to assist users to be creative and to develop personally through information and knowledge sharing. Public libraries are also conducting skills development workshops, capacity building workshops and they support government programmes that are supporting the National Development Plan 2030. National Development Plan 2030 aims to eradicate poverty and decrease disparity by 2030 in South Africa
- (iv) **Children and youth** – Public libraries have to support Early Childhood Development and reading habits in the children out-of-school youth by providing programmes that will address their daily needs

(v) **Public libraries and cultural development** – Public libraries must develop diverse cultural programmes in the community by partnering with other stakeholders in the community in order to strengthen their social responsibilities, and

(vi) **The social responsibility of public library** – The public libraries has to serve as meeting places which can be utilized as public space of gatherings where the community can meet and discuss their social responsibilities.

In contrast, transformation of a new innovation whereby the information is supposed to be electronically accessible and easy, is very slow in Marga Mangrove Metropolitan Municipality libraries due to some of the challenges they are facing even though they are obliged by to comply with the roles and purposes of public libraries.

Marga Mangrove Metropolitan Municipality libraries like other public libraries are facing challenges due to shortage of staff, lack of qualified staff, geographical distance, political interference, rapid advancement of ICTs, limited budget allocation, easy accessibility and usability (Salma, Mostert and Mugwisi 2013:3). These public libraries that are faced with challenges including Marga Mangrove Metropolitan Municipality libraries need to consider ways to overcome some of their challenges by implementing new technological innovations that will assist in sharing and disseminating easy and accessible information and knowledge in their communities.

Literature revealed that Web 2.0 has opened opportunities in the library environment (The South African Libraries 20 Years Review (2014: 5); Merčun and Žumer (2011:13); Bradley (2007: 3). Indeed, it opened opportunities but Merčun and Žumer (2011: 13) are concerned that

implementation doesn't always bring the desired effect hence the study was trying to investigate Web 2.0 technologies usage in Mangaung Metropolitan Municipality libraries by their users.

Public libraries play a significant role in promoting literacy and inculcating the love of reading and learning; they also develop the general quality of life in their community and promote free access to resources and materials. Electronic Information for Libraries (EIFL) (2011e) further observes that public libraries in African countries namely, Kenya, Zimbabwe, Uganda, Ethiopia, Ghana and Tanzania are utilized by their communities and have a positive impact in the community development and promotion of information literacy. However, the study of EIFL (2011e) further revealed that most of these public libraries are still small with limited information resources and lack of ICT equipment. Their communities still believe in the traditional lending services rather than Internet-based services with the accessibility of Web 2.0 technologies.

According to Library and Information Services Transformation Charter (2014: 25) and The South African Libraries 20 Years Review (2014: 5), there are 1800 public and community libraries including 5 legal deposit libraries in South Africa. Some of these South African public libraries are equipped with Internet facilities, and many of them have access to Web 2.0 technologies. Since 2007, most libraries in the Free State Province including some of Mangaung Metropolitan Municipality libraries were equipped with ICTs from Community Library Conditional Grant providing them with the usage of Web 2.0 technologies (Library and Information Services Transformation Charter 2014: 25).

Mangaung Metropolitan Municipality libraries are trying to improve service delivery and enhancing effective and efficient development and technological innovation in the community,

hence, the study was intending to investigate how the use of Web 2.0 technologies impact those libraries.

2.3 Web 2.0 technologies

According to Bawden and Robinson (2009: 2), there is no clear definition of Web 2.0 because it encompasses various tools sites for information sharing, online social networking and communication. Whereas, Kaplan and Haenlein (2010: 3) defined the concept of Web 2.0 as first been used in 2004 as a tool to use World Wide Web (WWW) as a platform where all users collaborate and participate, and where content and applications are no longer published and created by individuals but all users.

Web 2.0 is a second generation of web-based applications and services where the user is responsible for the content creation and web-based communities such as social networking. According to Merčun and Žumer (2011: 13), Web 2.0 is a new standard technology which allows the user-centre design, flexible participation, user engagement, constant content change, information sharing, interaction, collaboration and online social. According to Rehman and Shafique (2011: 2), Web 2.0 is regarded as an attitude not a technology, and it is also defined as a social movement that its applications are community building and socially rich. Web 2.0 is a set of tools and trends that are used when using Internet and they are also socio-technological innovations that allow interaction, gathering and sharing of knowledge through practices and experience globally (Rehman and Shafique 2011: 2).

Despite the fact that Web 2.0 is a latest sensational concept that is changing the corporate world, research, governmental departments, the study indicate that Web 2.0 is creating a new way of

information sharing and collaboration which produce a social networking sites. However, the definition of Web 2.0 still remains unclear because even O'Reilly himself in 2005 described it as a set of principals instead of a standard (O'Reilly 2005: 1). Rouse (2006e) further explains that social networks have been there as long as civilizations and societies existed, but it is only now recognised recently because of the potential of the promotion to Internet website to connect the society easily through Web-based groups and is referred to as Web 2.0.

O'Reilly (2005: 1) further described the Web 2.0 as a simple set of technologies which enables users not only to read but to engage, participate and share information easily through social networking sites. Boyd and Ellison (2008: 211) define social networking websites as a web-based service that allow individuals to:

- (i) Create public profile within a bounded system
- (ii) Be able to express ideas clearly and effectively with other users with whom they share a connection, and
- (iii) View their list of connections that may differ from site to site.

According to Chua and Goh (2010: 204), Web 2.0 application contains mass participation, openness of data, user control of applications because is seen as set of ideas that are used in technologies. Merčun and Žumer (2011: 14) confirmed further that Web 2.0 is the artifice of plan of O'Reilly Media and MediaLive International companies that promoted a technology conference that was held on the 5 - 7 October 2004 in San Francisco. Rowe, Dew and Dew (2006e) further elaborated the fact that Web 2.0 technologies are based on multi-sensory communication which aims to promote the usage of the following online social network applications such as blogs, RSS, wikis, instant mailing, emailing, etc. and some of them can be useful in the library environment.

The Web 2.0 technologies are tools that assist social networks to increase and be effective. Dasgupta and Dasgupta (2009e) revealed and mentioned the most important components of Web 2.0 for social networks as, Folksonomy, Communities, File sharing/Podcasting, Blogging, Wikis, or Mashups, etc.

Web 2.0 changed the library user's outlook on the library activities and services. The concept of Web 2.0 has also developed into other disciplines and changed the library practices and service delivery. According to Maness (2006e); Merčun and Žumer (2011: 14), libraries are already moving into Web 2.0 but the move is slow. However, despite the fact that Web 2.0 services have been integrated within the library field, the challenges still remain. Merčun and Žumer (2011: 14) further elaborated on what Information Tomorrow (2007: 98) has pointed out, that the libraries have evolved and Web 2.0 has opened a wide range of possibilities for them. However, studies have shown that applying Web 2.0 technologies in libraries did not always bring out the desired outcome. Hence, Web 2.0 technologies usage within the libraries, regardless whether is for communication with users, marketing library services, the most important aspect is to understand how the Web 2.0 works and its values.

The public libraries are starting to compete with other services and have applied the technology to enhance their online services. The study was aiming to investigate whether the use of Web 2.0 technologies by public library users in comparison with other library services impact positively or negatively. Rehman and Shafique (2011e) confirmed that Web 2.0 attracted more users in public libraries, thus the researchers; scholars can utilise and access the information easily with these new trends of interactive technological applications. Maness (2006e) agrees with Rehman and Shafique

(2011e) that libraries start to acknowledge Web 2.0 applications and their benefits and the fact that users are engaged and participating in the development of library services.

Batt (1999e) confirms that there is nothing different about new technology Web 2.0, but the majority of literature studies written about Web 2.0 are accessible and mostly appears online, and generally are written by bloggers, ICT scholars and technologists. What is new is the rate in which Web 2.0 technological developments is speeding up, its core at the public libraries and the speed in which this new innovation spreads into the communities including the Marga Mangrove Metropolitan Municipality libraries. Mishra (2008e) augmented the confirmation of Batt (1999e) by emphasizing that Web 2.0 has become a collection of server-based solutions that has a provision of publishing platform by their users instead of using the old traditional one way of owning but not sharing, interacting, collaborating and communicating information with other users.

Batt (1999e) further revealed that when users are talking about new technologies which the libraries cannot afford to overlook, are simply meaning an electronic advancement which is Web 2.0. Batt (1999e) further explains that communication technology and information technology change the manner in which public libraries operate and offer service delivery, but the concern still remain unanswered, whether they can replace the existing services or not, or again satisfy the information needs of the users particularly of Marga Mangrove Metropolitan Municipality libraries.

2.4 Social networks

Social networks are regarded as old as human beings because they have been used and exist in place where human beings lived and shared interests. Therefore, social networks are linked to people, thus it comprises issues such as participation, interaction, collaboration, management, sharing knowledge and information. For this reason, there are several types of social networks in all areas and fields and each has its own interest, size, behaviour, purpose geographical spreads, etc. (Dasgupta and Dasgupta 2009e). Social networks associated with web-based or Web 2.0 applications and services in the last decade thus make users to be the main producers of information they share or create with their friends or connectors to the Internet. Hence, it requires a strict management because those activities involve humans and their behaviours and becomes a little complicated especially in the public libraries because their behaviour varied according to their different needs.

It is confirmed that social networks are developed and created for an individuals or groups who at the end are having a common interest. According to the study of Rouse (2006e) and Chua and Goh (2010: 204), social networking still remains the activity of integration, incorporation, communication, interaction and connections within the users hence it is becoming a centre of attraction in the public libraries.

Social networks are used as a helpful tool that provides an innovative way that assists libraries to interact with various users with their various behaviours at a local level. Libraries are using social network to connect with their users with a purpose of being part of the community they are serving. Another important aspect of libraries and social networks interaction is to market the library services and events in the community. However, Hoffman (2009: 93) and Barsky and Purdon

(2006: 65) explained that users' behaviour and attitude towards using the social network sites is mainly for personal interest not educational purpose. Chen, Chu and Xu (2012: 1) confirm that public library users not always use the social networks for the right reasons thus makes the usage of social networks unsuccessful and restricted in most public libraries.

There are also other ways of visualizing types of social networks. Dasgupta and Dasgupta (2009e) identified the following amongst others:

(i) Social Contact Networks

Glass and Glass, Beyeler and Min (2009e); Kazandjieva, Lee, Levis, Feldman and Jones (2010e) theorise the concept of a social contact network as society of specific ages who are placed and linked into a multiple group of a different types such as households, school classes, libraries, clubs, community, etc. Social contact networks are useful during the creation of specific groups of a certain age that will interact. Therefore, it can also be used to impose the behavioural rules within a specified group linked together and computer models can use Web 2.0 networks in the libraries to spread the information (Glass and Glass, Beyeler and Min (2009e); Kazandjieva, *et al.* (2010e). Despite the fact that Social contact networks are created for a specific group with the certain age group, and that they are useful to spread the information and knowledge, the user is still linked to a group which is linked to another group that is made of people and it is eventually forming a circle of friends or family members which can be a useful tool for marketing library services and activities. Examples of some well-known social contact networks that can be compatible in libraries to mention the few amongst others, are regarded as, Twitter, Facebook, Blogging, Wikis, Forums, etc.

(ii) Study Circles

Brenman and Brophy (2010: 414) define the origins of the study circles back to the Chautauqua movement in the USA (United States of America) in the nineteenth century. But according to study of Brenman and Brophy (2010: 414) again, the concept originated from the USA, it helped the Swedes who eventually developed the process and now the government subsidises it because they believed that it is only not educating people but developing them. However, the study circles re-emerged again in the USA in the late 1980s. Australia has recently created Australian Study Circles Networks which serve as a central resource for community members or group of people who want to discuss a certain topic or issue and take an effort action. Australian Study Circle Networks, for instance, are globally recognised and help to conduct enormous circles. Therefore, study circles can be useful in the library environment because learners especially the grade 12 or students can use the circle network as an advanced research opportunity gathering for their studies. It is further confirmed blogging and file sharing as some of the social circle components, for instance, College Tonight and Fledge. The study circle networks can be useful in the public libraries that are planning to organise advocacy work groups, library committees or friends of the library. The discussions concerning the developments of libraries, and how possible the libraries can be effective and efficient to their communities, and the library committee members can utilise the Web 2.0 technologies available in the library to create social circle networks.

(iii) Social Networks for specialist group

Social Networks for specialist groups are deliberately created for a specific group of field workers such as librarians, nurses, doctors, educators, etc. and they are on a public domain. A good example of Social Networks for specialist groups is LinkedIn because these field workers can interact about their career fields, advertise career opportunities and share skills, knowledge and information. It can be utilized at public libraries though Web 2.0 technologies.

(iv) Police and Military Networks

The Police and Military networks are confidential and private, only accessible to the mentioned security clusters due to security purposes. However, they do operate like social networks amongst a specialised group of police and militaries, they can be accessed free of charge at libraries via Web 2.0 technologies.

(v) Sporting Networks

Sporting networks are a useful network that is specifically created for linking different sporting fraternities. It provides a range of information related to sports, for instance, Athlinks. Sports people can use Web 2.0 technologies available at libraries to access sporting networks.

(vi) Mixed Networks

Mixed networks comprise various social networks that serve multiple types of social networks. It consists of a number of various types of social networks with subscription of users from almost all types of social networks. Therefore, it is considering to provide multiple varieties of social collaboration. Libraries can assist their users to access these mixed networks.

(vii) Social Networks for the inventors

There are people who invented and developed the idea of social network and they are known as social actors. These people are using amongst other social networks for inventors, Mashups centres and technical Forums for their interaction and collaborations. Library recently developed library Mashups which create content from more than one source in order to create a single entity to be displayed in graphical.

The Web 2.0 applications through the interaction of social networks have made the life of library officials easier in the sense that it provides easy online access to multiple users who have different

needs to be satisfied. Social networks enable interaction amongst users, because they can exchange information and ideas in virtual communities and networks.

Therefore, libraries need to take an advantage of this proactive communication; hence, the study wanted to investigate Web 2.0 usage in the Mangaung Metropolitan Municipality libraries.

2.5 Web 2.0 applications in libraries

Web 2.0 applications may provide an opportunity for libraries to bridge the geographical distances between them and the communities. Libraries have to be present on this cyberspace if they want to satisfy the needs of their techno-savvy users (Boyd and Ellison 2008:211). Mishra (2008e) confirms the augmented of Boyd and Ellison (2008:211) by arguing the fact that social networks assist library officials in easily sharing information with their users and other colleagues. Therefore, they can use it to perform three major activities such as, knowledge organization, knowledge distribution and information communication.

However, the study and opinions of Mishra (2008e) described the following Web 2.0 applications amongst others that can be useful in the library environment and categorized according to their major activities (Mishra 2008e):

a) Del.icio.us

Del.icio.us <http://www.delicious.com/> can be used as a bookmarking, used directory for library users and it can be used to search by tagging.

b) aNobii

aNobii <http://www.anobii.com> can be used to share suggestions and recommendation concerning the library such as, reminders, notices, warnings, etc.

c) Facebook

Facebook <http://www.facebook.com> is mostly used by the library users for interaction and sharing, libraries can use it for marketing and advocacy, influence friends and fans of libraries to know about libraries' services and activities, it connects library users and libraries.

d) MySpace

MySpace <http://www.myspace.com> is still one of the applications that are frequented by users for interaction and creating friendships.

e) Blog

Blog <https://www.blogger.com> is the information that can be easily spread and be accessible to many library users at the same time, they can post and comments about library services and activities can be posted on a published online dairy of library, Mungaung Metropolitan Municipality libraries' blog: ELAC DIVISION: mmmlis.blogspot.com/? It is a divisional blog

f) LinkedIn

LinkedIn <https://www.linkedin.com> is a professional application that can be used to assist users to request information from users (professionals).

g) Twitter

Twitter <https://www.twitter.com> is a microblogging application that will keep the users updated with the daily library activities. Library users can tweet, follow, or be followers.

h) Really Simple Syndicate Feeds (RSS Feeds)

Really Simple Syndicate Feeds (RSS Feeds) <https://www.rss.com/> assists users to bring the feeds and updates from other websites so that they can be able to compare the information, libraries can

upload their latest stories, updated activities, news, blogs, etc., Instant Messaging (IM) can also provide information to the library users, On-line reference services, it can use some of these web service providers amongst others, Google Talk, AOL, etc. It is used for interaction, communication, sharing and collaboration with other institutions, library users and officials, etc.

i) Wikis

Wikis <https://www.wikispaces.com/> can be used as on-line notice board in the libraries, promote social interaction within the library users and officials.

j) Flickr

Flickr <https://www.flickr.com/> is regarded as a home for all users who are interested in it. Libraries can organize, share information from workshops, trainings, sessions, etc. access, upload library activities' photos and be able to edit them from all kinds of devices available inside the library. It is used for information dissemination between library users and officials.

k) YouTube

YouTube <http://www.youtube.com/> is a different web site address that can be used to create and or download YouTube videos, and the users' device must support them (be compatible) but the challenge is that the users cannot control its audience. It is a video sharing website. It can be used as a library video and upload library tutorials and it assists in creation of webcast to promote the libraries.

l) Second life

Second life <https://www.secondlife.com/> is an online virtual world. Second life libraries can be created to assist the researchers who are sometimes struggling to get resources. Online classes can be presented via virtual libraries. However, it is one of the social network applications that are expensive and need some expertise.

The latest advances in Social network applications can be regarded as an opportunity to advance and add a high standard on the existing library services and their collection. It is used for information dissemination between library users and officials.

2.6 Web 2.0 technologies and other library services

The development of Web 2.0 technologies influenced the manner in which libraries used to function and render their services. The study conducted by Zickuhr, Purcell and Rainie (2013: 39-40) explain the information of library services in the digital services, and emphasized the fact that web-based services influenced how library users access information through an ordinary book on the book shelve in comparison with an electronic books (e-books) accessible on the library computer kiosks or from their gadgets at home. Therefore, it was revealed that the influence affected the library users reading behaviour amongst other activities towards the entire library services.

The study of Zickuhr, Purcell and Rainie (2013: 39-40) further indicated that libraries are migrating from their normal traditional services (lending and reference services) because of the rapid technological developments within their communities. Hence, libraries are offering conventional and web-based services such as; Online Public Access Catalogue (OPAC), Electronic – Lending through Overdrive application, Prolib and Millennium Integrated Library System, social media applications and free Internet access to satisfy the needs of their users.

However, public libraries are still maintaining their standard of providing traditional services for users who are still relying entirely on them. These type of users prefer and believe in visiting the

library to circulate the materials and in-house usage but not the electronic services. Therefore, it is important that public libraries should undertake serious measures in trying to keep a balance standard to avoid other services to overpowered Web 2.0 technologies related services. Hence, the study aimed at revealing how Web 2.0 technologies in comparison with other library services in Margaung Metropolitan Municipality libraries complemented each other.

2.7 Web 2.0 features available in libraries

Web 2.0 features provide and allow library users access to share information, contribute, post, search information, etc. Web 2.0 features are regarded as Internet-based services that comprise Really Simple Syndicate (RSS), IM (Instant Messaging), blogging sites, pod casting, social networking sites, wikis, 3D virtual world such as second life, Etc. (Tripathi and Kamur 2010:195). These tools have a significance and positive impact on society, because library users and staff can use them for personal and professional use. However, the study is confined to understand the useful features at a level of a library. Tripathi and Kamur (2010:195) and van Wyk (2011:8) further revealed that the use of Web 2.0 features is increasing at a high rate. Conversely, features such as RSS feeds, blog, IM, Flickr, YouTube, Facebook, etc., are used mostly in the libraries except wikis which is still needs a strong pick up because it is not commonly used like the others.

The Web 2.0 features can be utilised to market the outreach programmes and services in the libraries. The literature reviewed by Rehman and Shafique 2011: 2; Tripathi and Kamur (2010:195); van Wyk (2011:8) reveals that these features can assist the library and be used as a marketing tool that may support and also help the libraries to render their services and to offer their resources to their library users in a proactive way. Studies have highlighted the manner in

which Web 2.0 features can enhance library services. Tripathi and Kamur (2010:195) advocated the effect of Web 2.0 by libraries in order to serve the library users better and also to attract potential users.

Muneja and Abungu (2012e) revealed the importance of these features in the libraries and three of the main purposes which they identified are sharing, communication and promotion of service. In this regard, they further opined the challenges surrounding the implementations of these features in a library as much as they are enhancing the library services. The uses of Web 2.0 features in the library organization are there to respond to the type of different online services the community would want to have. It is therefore obvious that libraries have to embrace the use of Web 2.0 features in order to respond to the requests of their users. However, Muneja and Abungu (2012e) highlighted important factors that strengthen the fact that the application of Web 2.0 features in the library environment are demand-driven not technology driven as many users envisage. The study further revealed that it is imperative to engage the community, drawing up of needs analysis in order to identify the needs in the preparation of Web 2.0 services design and implementation of Web 2.0 features in the library for the library users. According to Tripathi and Kamur (2010: 195), the challenges in generic association when using Web 2.0 features in libraries are, lack of support from management, lack of support from Information Technology (IT) and lack of expertise and factors such as Internet connectivity, amongst others. Do Web 2.0 features at Mangaung Metropolitan Municipality libraries deliver expected benefits, and if not, are they willing to learn and investigate from other libraries already utilizing Web 2.0 features?

Hence, the study aimed to investigate if Mangaung Metropolitan Municipality libraries deliver expected benefits, or are willing to learn from other libraries that are already utilizing Web 2.0.

Despite the fact that there might be challenges with Web 2.0 features, they enable the direct and immediate online distribution and publication of user content (IFLA Publication 147 2010).

2.8 Web 2.0 skills offered in libraries

The study aimed to investigate Web 2.0 technologies on the use of the Marga Mangga Metropolitan Municipality libraries. Hence, the term “exploration of Web 2.0 technologies on the use of the public libraries” is used deliberately to reflect the broader scope of knowledge of the effectiveness and efficiency of the utilization and usage of Web 2.0 technologies to the users and libraries. The study examined whether the Web 2.0 technologies are utilized as well as ICT equipment function and operate generally. It also examined network effects, maintenance, sustainability, marketing and advocacy, users, management and library officials, training and development issues relate to the complete user satisfaction.

The library officials must have the professional skills in dealing with knowledge in the Web 2.0 technologies, and how to change and make library a tool for communication and lifelong training that will address a good dialogue and meet the users’ needs. Tripathi and Kamur (2010: 195) and Maness (2006e) pointed out the user survey that was conducted by ETH-Bibliothek at Zurich in 2010, the study revealed that library users are often not informed about the newly introduced services. Therefore, they are not aware and don’t have adequate skills in using them. The survey also indicated that library users don’t even have knowledge of some of the Web 2.0 features introduced within the library.

READ global (2015e) further revealed that through their experience in working with Global Libraries who are the beneficiaries of Bill and Melinda Gates Foundation, users with adequate

skills in using Web 2.0 technologies, benefited and it assisted them to meet their information needs and also developed and better their community lives. South Africa is one of the countries that benefited from the Bill and Melinda Gates Foundation (Global Libraries). Twenty-seven public libraries national (three public libraries from each province) were selected and participated in pilot project which is called Mzansi Libraries Online and Mangaung library from Mangaung Metropolitan Municipality libraries was one the beneficiaries who received ICT equipment from the foundation.

While reviewing the previous literatures, it was difficult to find more resources that studied views of library users' adequate skills specifically in using Web 2.0 since it was one of the objectives of the study. Libraries are changing from being traditional to being Web 2.0 innovative and also challenged by customer demands, easy access to resources and services to the public.

2.9 Technical support provided by library officials to Web 2.0 library users

The literature has to address the objective of the study by determining technical support and training provided by library officials to Web 2.0 library users. Therefore, the main concern was to find answers for questions such as:

- i. What are the opinions of users about the quality of technical support in respect of their use of Web 2.0 technologies?
- ii. What scheduled training programs are in place to assist the library officials and users?

It is not easy to expect officials to be excited about the new innovation without been properly trained and prepared. According to Bradley (2007: 196 – 198), all library officials must be willing

to accept and be ready to work with the ICT equipment before they can even attempt to use Web 2.0 technologies. It is important to start with marketing the new product extensively to the library officials, and indicate its benefits and how it is going to make their current job easy (Bradley 2007: 196). Beside library management team, another group of library officials that is also as important as library officials is IT technical support team, because they have to handle the implementation of the Web 2.0 technologies as pleasurable as possible. Therefore, it will be easy for library officials to provide technical support to library users.

Information Tomorrow (2007:4) and Bradley (2007: 197) agreed that a lack of support on the technical team can also jeopardize the effective results of having Web 2.0 technologies in the library. It is a fact that IT technical support team doesn't necessarily operate the Web 2.0 technologies, they are designed specifically for end-users (library officials and users). However, their support is needed especially when ICT equipment is faulty, trouble with network lines, service providers, etc. Therefore, trained and skilled officials can be able to provide adequate support in terms of the end-users when utilizing Web 2.0 technologies in libraries, therefore, the library users can be equipped and trained well.

Information Tomorrow (2007: 4) and Maness (2006e) further highlighted the fact that public library's users depend on the ICT equipment such as computers with Internet access for communication, collaboration, interaction, education, information search, etc. and they request immediate response or support when encountering problems. Therefore, they depend on equipped and trained library officials that will be in the position to assist them in knowing how to utilise this ITC equipment especially those that exist in the libraries (Information Tomorrow 2007: 4).

Aird, Battie, Rooney-Browne, McGettigan and Rowley (2015e), and Dasgupta and Dasgupta (2009e) agreed with Information Tomorrow (2007: 4) by revealing that libraries use Web 2.0 technologies to fulfil a range of objectives and they are focusing on promoting library resources and services to their users, hence, they are regarded as a platform for collaboration. According to Tripathi and Kamur (2010: 195), there are Web 2.0 features that can be used to offer technical support especially to library users in order to promote the service. Library Blog, RSS feeds, etc. can be created and be used as a platform to guide the users on how to use Web 2.0 technologies in a particular library.

Bradley (2007: 196) highlighted the importance of training all the beneficiaries of ICTs in the libraries. The Library and Information Services has to introduce the various kinds of training programmes that would cater for unskilled library officials. In such situations, the intervention of library officials through training can determine the benefits and challenges of access to Web 2.0 technologies by library users and recommendations of deploying the technologies to meet users' needs.

2.10 Benefits and challenges of accessing Web 2.0 technologies in libraries

It could be alleged that majority of literature outlined and discussed Web 2.0 and its applications. However, scholars concurred on different opinions about its importance whether socially or technically but they agree on the concept interaction. Therefore, a study of Bradley (2007: 196) outlined and identified the following as some of the key benefits of library users using Web 2.0 technologies in the library:

- (i) **Provides and promotes collaboration and integration across time and space:** Library officials and users see learning and reading as a more social process because it does not restrict anyone, users can collaborate with library officials.
- (ii) **A large number of people can use it easily:** Web 2.0 technologies are easy and flexible to use because they don't require thorough technical skills to operate them. Library services can be accessed anywhere not prohibited by library walls.
- (iii) **No cost effects are associated with most of the library services, they are freely accessible:** No cost effects are associated with Web 2.0 services at the libraries. Library users can access them free of charge especially when they are soft copy; costs are included only when hard copies are requested.
- (iv) **Information accessibility:** Provides information to users with a variety of choices and ready information. It favours users because it minimizes the struggle with an effort of accessing and retrieving information.
- (v) **Information relevance:** Relevance is an important aspect because it offers user relevant information which will definitely answer users' search goal. Web 2.0 technologies provide wide range of information resources that are available through web-based services and locate relevant information useful to the library users.
- (vi) **Users can view their opinions about library services and activities:** Libraries can create blogs, RSS feeds, Twitter, Facebook, etc. and users can be able to raise their opinions about library activities and services. Web 2.0 can be used as an online suggestion book.
- (vii) **Writing and technology skills:** Library users become more independent and competent in writing in the application of technologies. It assists the library users and

- library officials to know and investigate more about their world and background as they interact.
- (viii) **Geographical distance:** Most of libraries face the geographical distances between them and their users, but Web 2.0 technologies can bridge the gap because users and libraries can interact easily without library users visiting the library physically.
 - (ix) **It enables users to be creators of knowledge:** Offers great opportunity to create content rather than listening to the library officials only. It also gives users a responsibility to share knowledge to other users rather than being just a distributor, the users becomes facilitators and publisher of the knowledge and information.
 - (x) **Collection Development:** It supplements the existing library collection by answering immediate search that demand immediate attention. Library users can forward their information search straight to Web 2.0 applications and get an immediate respond that will meet their information needs.

The study of Merčun and Žumer (2011: 14) identified the following as some of the challenges of using Web 2.0 technologies in the library:

- (i) **Network effect:** The more the user of Web 2.0, the more networks becomes slow due to Internet traffic lines and less valuable. Possible and potential good service will not be achieved.
- (ii) **Uneasiness with openness:** Some users are still uncomfortable with the openness of Web 2.0. There is a lot of resistance especially with older library users. It makes them feel uncomfortable instead they rather prefer one-to-one reference interview with library officials.

- (iii) **Technical problems:** Out-dated ICT equipment and programs create a problem to users because they are not compatible with the advanced High Definition devices or gadgets. This factor frustrates the users and library officials because sometimes they don't normally get a quick response from the technical support team. It is not wise to introduce too many Web 2.0 technologies at the same time.
- (iv) **Time:** It takes time to know how to learn about the Web 2.0 technologies especially when you are not familiar with them
- (v) **Privacy:** The use of Web 2.0 technologies can be very risky because hackers can steal personal details online. Unfamiliar viruses can be used to destroy the devices and the following payloads can occur: Spam distribution, Data or information theft, Hijacking, Data destruction or corruption, online vandalism and jokes or virus distribution.

2.11 Information and Communication Technologies (ICTs) available in libraries

Generally, ICTs are regarded as combination of telecommunication and computer methods that enables new products and system to assist people daily, and they are leading in the corporate world. It is a term that is used for any communication device or application device. According to Statistics South Africa (2013: 8), ICTs is an important component that is regarded as national economy. There are also various types of ICT equipment available in public libraries and that type of library is regarded as been automated.

In Africa, some of public libraries have already introduced lot of ICT facilities to their users. Therefore, libraries have to follow the developed countries and adopt new innovations related to

the latest technology. Islam and Islam ((2007e) studies the availability of ICTs in Africa and Bangladesh continents. However, their study revealed the information related to the concept of ICTs in the libraries and the availability of them which affected the library services and library administration negatively and positively.

Siddike, Munshi and Sayeed (2011: 154) elaborated further by indicating that Library Associations of Bangladesh (LAB) must create awareness about current advanced development technologies amongst library officials and follow other countries that are already using the advanced technologies. However, several studies indicated that in Africa, the ICTs that are mostly available in the public libraries are as follows: radio, cellular phones, television, DVD, CD-ROMS, network hardware and software, satellite systems, Internet facilities, computers, portable voice computers for the visual impaired, reprography, photocopies, faxes and printers (Siddike, Munshi and Sayeed (2011: 154); Rouse (2006e). Krubu and Osawaru (2011e) stated that the development of ICTs in the African libraries has various types of technologies that can be used to support the rendering of services and it should be one of the influential aspects when deploying Web 2.0.

2.12 Issues to be considered in installing Web 2.0 technologies

Libraries can successfully use Web 2.0 technologies. Therefore, the origin of success depends on the acceptance of the disruptive characteristic of Web 2.0 technologies and the understanding of how to add value to it. Bradley (2007: 199) and McKinsey Quarterly (2009e) highlighted some of the following issues to be considered during the installation of Web 2.0 technologies:

The best services come from satisfied users: User participation plays a dominant role during the implementation and development of Web 2.0 technologies. Management can be one of the risk

factors because they can install the applications that will impact their working environment not preferred by library users.

Inclusive involvement of the library organisation: Senior management (decision-makers) most often doesn't involve other junior library officials during the discussions of the implementation of Web 2.0 technologies even though the project relies on bottom-up involvement. However, the senior management involvement plays a vital role because they will encourage the participation of the rest of the organisational support.

Know the target group: It is important for libraries to know who their targets are so that they can be able to cater for them. In order to render an effective and efficient service, an impact studies with needs analysis has to be conducted in the community. Impact assessment can create great benefits beyond expectations.

Evaluate and assess the existing services and other Web 2.0 services: Consider the current services and check if they can be better if they are replaced by Web 2.0 services. Check what impact it will bring to the current services, whether it will influence the increase of library users, develop the library users or decrease the number of library visit.

Information needs versus library users: Evaluate the current users' needs and compare it with needs that are influenced by Web 2.0 technologies, and check whether they satisfy and meet the users' needs. Improve the level and standard of service.

Use of social networking sites: The library has to check their library clubs, library committee, friends of libraries, etc., and try to use the social networking site for interaction and collaboration and see if they will not benefit them. Existing users can publish and post on created applications.

Market and advocate the new services: Marketing strategy has to be implemented in order to create programmes that will be done during the marketing. Know the importance of advocacy and decision makers to be influenced.

Encourage increased budget: Increased budget allocation will enable the new upgrading of the Web 2.0 technologies in the public libraries. Technology is moving at a fast rate and becomes outdated regularly. It is important to provide an impact evidence report that will indicate the influence the Web 2.0 had in the library.

Be tech-savvy and open minded: There are resources that are attracting at first glance but doesn't add value to the service and doesn't meet the information needs of the users.

There are many issues to be considered before the library can decide to introduce the Web 2.0 matters. However, Bradley (2007: 202) suggested that it is important to research the benefits and challenges of the Web 2.0 services before they can be implemented. Technological explosion is taking out the old traditional library services, therefore, Margaung Metropolitan Municipality libraries has to keep up with new technology trends if they don't want to lose users who are demanding the instant quality up to date services.

2.13 Summary

Literature reviewed demonstrated that the subject based on the exploration of social web on the use of public libraries has been an issue of many studies locally and briefly in some of the African countries. It is evident enough that the literature above proved that the exploration of Web 2.0 technologies has a positive impact when it comes to the development of users and enhancement of

the library web-based services and other library services but the concern still remains about the Marga Mangrove Metropolitan Municipality libraries.

The studies read also identified the types of Web 2.0 features and applications, which proved that they can be useful in the library environment, benefit, satisfy, and meet the information needs of the library users. However, the above literature, indicated that the implementation of Web 2.0 can affect the library services negatively due to lack of support from management, lack of training and skills to use the Web 2.0 technologies, lack of skilled library officials who will capacitate the users and also lack of enough ICTs, hence, these has been recognized as the gap in the study investigated. The next chapter will designate the research methodology of the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

The literature review focused on the significant issues that formed the basis of this study. This chapter explains the research methodology used to investigate the research question in this study which was aiming to investigate the usage of Web 2.0 technologies in Margaung Metropolitan Municipality public libraries. Therefore, the researcher documents how the research was conducted, and how best the results were presented, analysed and interpreted.

Babbie (1989: 75) revealed that the research methodology emphasizes on the specific tasks of the research process such as data collection or sampling. The research methodology for this study consisted of research design and approach, study population, sampling, data collection and analysis, operational definition of key terms and concepts, measurement of validity and reliability, structure of the dissertation, evaluation of the study, work plan as well as ethical issues. Below is the proposed method for addressing the questions raised in the study.

3.1 Research design

Bless and Higson-Smith (2000:63) stated that research design (i) firstly can be used as a guideline to collect, analyse and interpret the observed facts by the researcher and (ii) secondly it can be used to assess hypotheses or assumptions.

The study adopted two crucial research designs namely:

- (i) a descriptive research design was adopted because the flexibility of data collected was determined by the extent to which the 264 respondents interacted with the interviewer and the survey questionnaire. It aimed at presenting the exploration of the usage of Web 2.0 technologies on the use of the Mangaung Metropolitan Municipality libraries and also addressing the questions how, what and why in the study as required McMillan and Schumacher (2001:283); Goddard and Melville (2001:9); De Vos, *et. al.* (2011: 96). The descriptive survey described the behaviour, achievement, attitudes of the respondents because it didn't manipulate independent variables, and it addressed the research questions of this study (McMillan and Schumacher 2001:283), and
- (ii) a case study research design was also adopted because the experiences of library services' users and library officials were important in understanding the impact of the use of Web 2.0 technologies in Mangaung Metropolitan Municipality libraries. It also referred to the fact that the study is limited to a certain number of units of analysis, for instance, eight libraries in Mangaung Metropolitan Municipality and Web 2.0 technologies. The case study was used to focus on answering and addressing the how, what and why part in the research, for instance, the exploration of Web 2.0 technologies in Mangaung Metropolitan Municipality public libraries, boundaries between the perspective and phenomenon, and whether the researcher could not influence the behaviour of the respondents and cover the contextual conditions which were relevant to the study.

3.2 Research approach

This study aimed to investigate the usage of Web 2.0 technologies on the use of public libraries in Mangaung Metropolitan Municipality. The study is exploratory in nature; it was a useful method

due to the fact that the limited information was available and the researcher wished to have the flexibility to the future investigates areas of the study. The research study was exploratory in nature in order to understand the impact in Mangaung Metropolitan Municipality libraries after the introduction of Web 2.0 in order to provide a more ubiquitous and responsive library service for future purposes.

The project adopted both quantitative and qualitative approaches which are two methodological paradigms that vary extensively from each other. The quantitative approach was adopted because of the need to determine relations; therefore, it is depending on the natural-scientific method in human behaviour research. This approach demanded that the study be limited to what can be measured and observed objectively (Welman, Kruger and Mitchell 2005: 6). Qualitative approach was also adopted in the study to gain complimentary in-depth understanding of the opinions and views of the library officials who provide information services using Web 2.0 (De Vos et. al., 2011: 63). Qualitative and quantitative approaches can be used in a single study as mixed methods. Both quantitative data and qualitative data are collected in most evaluations and can be used interchangeably. However, to plan how these mixed methods will be combined is very significant. Therefore, integrating different ways of knowing an evaluation can be improved, and the strength of one type of data can be used to balance the limitations of another in a study. With qualitative approach, the researcher identified the socio-economic status, social norms and demographic profiles amongst others that interact or contribute to the subject of the study, while quantitative approach presented statistical results that were represented in the study (McMillan and Schumacher 2001: 14 – 16). Both approaches were adopted and utilized in order to obtain opinions

from the 264 respondents in the means of data collection instruments such as questionnaires and interviews.

3.3 Study population

Study population is the total number of persons suitable for the study. It is important that the study population must provide reliable information (McMillan and Schumacher (2001: 258 – 259); Welmar, Kruger and Mitchell 2005: 18). It was assumed that every citizen of Marga Mangrove Metropolitan Municipality was a potential user of the eight selected libraries; hence, it was right to assume that the population mimicked the entire library users in the municipality. It is also adequate to regard the whole users of the libraries as the population of the study, and the researcher enumerated them. The study population is 264 which comprises of 248 library users and 16 library officials who were selected from the eight Marga Mangrove Metropolitan Municipality libraries. Since there is no formal database for the library users who visited these libraries daily, a convenience sample, by means of a non-probability sampling technique was used to identify possible 264 respondents for this study. The 264 respondents were selected just because it was easy to recruit them for this study and proximity of the researcher. Therefore, each selected library received 31 questionnaires to be distributed to 31 respondents. It was an ideal to test the entire population. However, in the case of this study, the population was too large and it was going to be impossible to include every individual who is using or working in these selected libraries. To generate a data, 248 library users and 16 library officials within eight libraries in Marga Mangrove Metropolitan Municipality were contacted and included in the sample. These referrals were then contacted in person or telephonically to confirm that they are indeed willing to participate in the study. Two hundred and sixty-four respondents indicated their willingness to participate in the study.

3.4 Location of the study

The location of study, namely, Bloemfontein, Thaba-Nchu and Botshabelo within the Mangaung Metropolitan Municipality were selected using convenience method because it was proximity to the researcher. It was therefore cost effective, hence, non-probability sampling technique was adopted. The study covered only eight libraries in the Mangaung Metropolitan Municipality in the Free State Province in South Africa namely: Mangaung, BP Leinaeng, Trevor Barlow, Lourier Park, Fichardt Park, Botshabelo, Bainsvlei and Selosessa.

3.5 Sampling and Sampling size

Sampling is the process of using a small number of units of analysis of a study population as a representative of the entire population. The sampling method used in this study was the sampling of convenience. This is because the researcher is within the location where study is conducted; Bloemfontein, Thaba Nchu and Botshabelo. The researcher also showed that the study was of convenience, because the researcher distributed the questionnaires to respondents that were convenient to the particular libraries. This method of sampling is non-probability. Two hundred and sixty-four respondents were selected as a convenient experimental sample in which 248 library users and 16 library officials were selected from eight Mangaung Metropolitan Municipality libraries, in the Free State Province. The whole population was studied. Therefore, a descriptive statistic was used for the purpose of describing the relationships between variables. For example, descriptive statistics that were available in census data indicated gender and ethnic analysis, employment rates, age, Etc.

3.6 Data collection instruments

The questionnaire was used for collecting data from 248 library users, while unstructured interviews (non-directive) were used for 16 library officials from eight selected Marga Mangrove Metropolitan Municipality libraries. The researcher requested permission prior from the Manager: Marga Mangrove Libraries and Information Services to conduct interviews and to deliver the questionnaires for the study in all eight selected libraries and the permission was granted. The covering explanatory letter with the details of the aim of the study was then attached to the questionnaires requesting permission from the library users to complete the questionnaires (See **Appendix A**).

3.6.1 The Questionnaires

The choice of gathering data from the respondents was a questionnaire. The questionnaire was one of the research instruments used without direct personal contact with the 248 respondents unlike interviews. However, they consisted of printed set of questions aimed for the purpose of collecting data from the selected respondents in the study (Bless and Higson-Smith 2000:107-108). Each selected library received 31 questionnaires and they were distributed to 31 respondents. The researcher used questionnaires because they worked as a guide to the kind of questions to be asked which would attempt to answer the research objectives. Questionnaires are easier to analyse, and they provide clear instructions for the respondents. Questionnaire are known to the library officials and users. They are practical and information can be collected from a considerably large number of people in a short period of time.

The reasons why the researcher used questionnaire amongst others were the following:

- (i) The questionnaire guide asking questions which were trying to answer the research objectives
- (ii) Questionnaires provided clear instructions
- (iii) They were less expensive
- (iv) Questionnaires are the mostly used data collection instrument to gather data in a quantitative approach
- (v) Questionnaires expressed its outcomes and numbers

3.6.1.1 Structure of a Questionnaire

It is important that questions asked should be easy and clear so that the respondents can understand. According to Kumar (2005:126), questionnaire should be compiled in an accurate way that will not make respondent to elaborate or add question to them. Questionnaire should have an impact of accuracy of responses.

The researcher designed a questionnaire that included a range of scales in line with the study's purpose. The questionnaire deployed three different types of questions, namely, descriptive, comparative and relationship-based questions that tried to assist in answering the research questions (McMillan and Schumacher 2001:40). The main objectives of this study were taken into consideration when questions were formulated for the questionnaire. The researcher designed a clear questionnaire in order to obtain relevant data on exploring Web 2.0 technologies on the use of public libraries in Margaung Metropolitan Municipality. The questionnaire consisted of open-ended and closed-ended questions with sections A to F. The survey questions in this study were developed as a result of the analysis from the main objectives of the study (**See Appendix B for**

full questionnaire). The questionnaire was designed for 248 library users from eight selected Marga Mangrove Metropolitan Municipality libraries.

3.6.2 The Interview schedule

Unstructured interviews were used to gather data from 16 library officials of the eight sample libraries. Interviews were different than questionnaires because they provided respondents with an opportunity to express what they thought in their own words. Unstructured interviews are sometimes referred to as discovery interviews and are regarded as in-depth interviews in which questions are not predetermined but guide the conversation (De Vos *et. al.* (2011: 349).

The interview involved asking questions and gathering data from the respondents in a qualitative manner. Interview consists of different methods which include face-to-face group interviewing, focus group, telephonic and individual (one on one interviews) amongst others. Interview involves human interaction hence it involves social roles, raises certain expectation and specific norms (De Vos *et. al.* 2011: 341; Mouton 2001: 249; Goddard and Melville 2001: 49). De Vos *et. al.* (2011: 341) further confirmed that there is no method of interview that is superior to another; hence the researcher selected the effective method relevant to the study. It depended entirely on the researcher's skills because anyone can conduct an interview. The entire interview questions were developed tested and refined based on the main objectives with the emphasis of 16 library officials and social media, ICT skills, training and support. (**See Appendix C for full interview guide**).

3.7 Data collection methods and procedures

This section designates methods that were followed in gathering data for this study. The 248 questionnaires were hand-delivered at the eight participating public libraries, where each library received 31 questionnaires within the Marga Mangrove Metropolitan Municipality within a week. The questionnaire was accompanied by the covering letter that requested the respondents to participate voluntarily and also detailing the title, purpose and objectives of the study. There is a geographical distance; therefore, the researcher used transport to travel to participating libraries which was expensive since libraries are located far away from one another. The library officials from the participating libraries were requested to administer the questionnaires in the absence of the researcher by ensuring that they are randomly handing them out to the library users regardless of being registered or non-registered members. The library users were requested to complete the questionnaires within two weeks in November 2015 due to geographical distances and return them to their respective participating libraries. The time frame was necessary to ensure a high questionnaire response rate and also to avoid the delay of the study.

3.8 The Interviews

For the purpose of this study, the researcher used the telephonic interview to gather data from the 16 respondents (library officials) due to the geographical distances between the libraries. It would be difficult to travel from one library to another to interview 2 respondents in each library. It also was going to be expensive and time consuming. The permission to conduct an interview was requested from the respondents before it can be conducted and time frame (20 minutes) was an indicated duration of the interview.

The 16 respondents' (library officials) responses to questions were not restricted in any way; they were requested to comment on defined subjects that were trying to address the research questions. The respondents were free to expand on the topic and focus on important aspects that related to their experiences. However, they didn't test hypotheses (McMillan and Schumacher 2001:40; De Vos *et. al.* 2011: 349); Bless and Higson-Smith (2000:107-108). The following aspects were imperative during the preparation of unstructured interviews main questions, probe and follow-up questions (De Vos *et. al.* 2011: 349). The respondents' answers to the initial questions shaped the subsequent questions and the interviewer needed that to be able to listen attentively, talk, and think critically at the same time. Since the study consisted of library users, registered or non-registered, verification was applicable to these library users visiting libraries for various reasons, whereas 16 library officials were verified per their respective libraries (Bless and Higson-Smith 2000:108).

3.9 Validity and reliability

Validity and reliability are the important concepts that are used to capture the measurement properties of a questionnaire and survey in research. The researcher needed to consider the face and content validity of the questionnaire to find out if it actually measures and addresses the objective of the study. For validation purposes, the researcher submitted the draft data collection instruments for approval, and they were amended by the researcher's supervisor for content validity. According to Long and Johnson (2000:30), reliability is considered to be a measuring instrument that measures the elements that are designed to measure accuracy in the study. The researcher needed the reliability of a questionnaire, in order to find out if the same results will appear each time it is measured. The questionnaire had the same questions and some form of consistency for the respondents as far as data collection is concern. Both qualitative and qualitative

approaches were used to ensure validity and reliability of the study, as well as the use of interview guidance to follow the same form of questions, and for future research purposes if similar study can be conducted.

3.9.1 Pre-testing of research instruments

Pre-testing is the administration of the data collection with a small set of respondents from the population for full scale study (Kumar 2005:158). Therefore, the purpose of pre-testing was to identify problems with data collection instruments and find possible solutions. For the purpose of this study, pre-testing was needed to determine the effectiveness of the questionnaire in providing the validated, accurate, relevant and reliable answers to the study. A small number of 8 library users (respondents) and 4 library officials (respondents) were randomly selected from three participating libraries for pilot-testing the instruments in the full-scale study. The results of the pre-testing indicated that the questionnaire was well and clearly constructed. However, few amendments were made in relation to the wording of some questions. Furthermore, interview questions were also pre-tested with 4 selected library officials from three participating libraries, and their necessary corrections and suggestions were used to create a well-constructed reliable and validated data collection instrument for this study. Therefore, the researcher was able to construct a well less complicated and easy data collection instruments that were applicable for this study.

3.10 Permission and Ethical Considerations

A formal letter was sent to the Manager: Mangaung Libraries and Information Services to request a permission to conduct the survey in the Mangaung Metropolitan Municipality libraries. The cooperation of each participated library was secured before data collection was conducted. The

objects in this study were human beings. It was therefore important that the researcher observed ethics in conducting the study (Policy on Research Ethics 2013:10-17; McMillan and Schumacher 2001: 258-259).

To ensure the execution of this study, the researcher complied with the general ethics principles stipulated in (Policy on Research Ethics 2013:10-17). The principles clearly stipulate that the researcher must respect for and protect the rights and interests of the respondents' anonymity, dignity, privacy and confidentiality because the respondents should be treated as partners in research. Recruitment and participation in this study was voluntary and names of participants were not part of the data collected hence the researcher used the numbers and percentages to name the respondents. The 264 respondents were also informed about the (Policy on Research Ethics 2013:10-17). The consent was highly respected and acknowledged and was not re-identified after the study.

3.11 Evaluation of the research methodology

The process of research methodology for this study had its own challenges. Among other challenges encountered in undertaking this study was a geographical distance between the selected libraries within Mangaung Metropolitan Municipality. The researcher had to drive during working hours to hand-deliver the self-administered questionnaires to all eight selected Mangaung Metropolitan Municipality libraries. For instance, the libraries in Botshabelo and Thaba-Nchu were about 60 to 70 kilometres far away from where the researcher's works and physical resident. The researcher had anticipated that the response rate to the 248 distributed questionnaires would be much better than it turned out to be. Firstly, out of the 248 (100%) questionnaires distributed,

only 172 (69%) were completed and returned. Secondly, the response rate was a concern where a significant number of respondents either partially or entirely did not answer certain questions.

Despite the above challenge, this is an evaluation of both the quantitative and qualitative methods as part of the research methodology adopted in this study. The sources of data in the study included questionnaire for 248 library users and interview for 16 library officials. This methodology was preferred because it is most appropriate in situations where data to be collected is both in the form of numbers and words. Quantitative research approach was opted and used because it was relevant when collecting statistical information, whereas, qualitative research was used to answer questions such as why respondents are using the Web 2.0 technologies in eight Marga Mangrove Metropolitan Municipality libraries. The design of the study was in the form of a survey and literature review. Questionnaire was used as a data collection instrument, and it was appropriate for this study, considering the limited time that the researcher had to conduct the study. Interviewing 16 library officials as respondents would have been time consuming and expensive for the researcher, hence, telephonic interview schedules were conducted to collect data. The pre-testing indicated whether the data collection instruments used were validate, reliable and accurate to be used in an accurate study.

3.12 Summary

The purpose of this chapter was to describe the research methodology that will be used in the study. This chapter also explained the sample selection, procedure used in designing the instruments and data collection. Statistical Package for Social Science (SPSS) will be used to analyse the study. Chapter Four will analyse, presents and interpret the gathered data obtain from

the 264 respondents. Basically it means that all data gathered will be summarised for easy understanding and utilisation.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

The research methodology and approaches described in Chapter Three provided the basis for eliciting information from library users and library officials. In this chapter, data gained from 172 returned questionnaire which consists with 6 sections (**See Appendix B**) and the interview schedule consists with 10 questions (**See Appendix C**) for 16 library officials will be presented, analysed and interpreted in order to investigate the research question which aimed at exploring the usage of Web 2.0 technologies in Mangaung Metropolitan Municipality public libraries. All data gathered, was guided by the following objectives:

- I. To examine library users and the use of Web 2.0 technologies and other library service.
- II. To investigate if the library computers and the training skills of the library officials are adequate to meet the information need of the library users.
- III. To identify the ICTs and Web 2.0 applications and features available in the library.
- IV. To examine the perceived benefits and challenges of accessing Web 2.0 technologies in libraries.
- V. To identify issues to be considered in installing Web 2.0 technologies.

4.1 Presentation of findings

This section presents the results collected by means of a questionnaires and interviews.

4.1.1 User Questionnaire

The primary goal of this study as indicated in Chapter One was to investigate the usage of Web 2.0 technologies on the use of public libraries in Margaung Metropolitan Municipality. To this effect the questionnaires were self-administered and hand delivered to each of the 248 respondents at their selected libraries in November 2015. Out of 248 questionnaires administered, only 172 returned, providing a response rate of 69%. This response rate was pleasing given the data collection. To guard against non-response and low response, the researcher had to visits these selected libraries regularly as a reminder Branch Librarians to request the respondents to complete and return the questionnaire in time. Although the study did not receive a high response rate that was hoped for, 69% response rate is still considered adequate for the researcher to draw conclusions from, considering that 50% is regarded as an acceptable response rate in social research surveys (Neuman 2000: 268). Therefore, based on these arguments above, it is justified to draw conclusions from the respondent questionnaire returned.

4.1.2 Interview

Interview was one of the data collection instruments that was used to collect data for this study. Furthermore, these interviews were conducted to 16 library officials from eight selected libraries of Margaung Metropolitan Municipality in November 2015, before collecting the questionnaires for purposes of consistency. Two library officials were interviewed from each selected library.

4.2 Questionnaire and interview findings

This section presents the findings of the questionnaire administered to all 248 respondents (library users) and the interviews held with 16 respondents (library officials) from eight selected Mangaung Metropolitan Municipality libraries.

4.2.1 Descriptive statistics

A total of 248 library users and 16 library officials from eight libraries were surveyed. A total number of 172 (69%) library users returned their copies of the questionnaire. All the 16 library officials were successfully interviewed. Table 4.1 shows the return statistics for each library in the study. The table shows that the highest response rate was from Bainsvlei Library with 31 (18.0%) followed by Mangaung library with 28 (16.3%) and Selosesha library with 27 (15.7%).

Table 4.1: Return statistics from the libraries (N=172)

Locations	Distributed	Returned	%
Bainsvlei	31	31	18.0
Mangaung	31	28	16.3
Selosesha	31	27	15.7
Botshabelo	31	26	15.2
BP Leinaeng	31	24	13.9
Trevor Barlow	31	21	12.2
Lourier Park	31	9	5.2
Fichardt Park	31	6	3.5
Total	248	172	100
Mean	31	21.5	
Standard deviation	0	8.6	

Botshabelo library returned 26 (15.2%) of the questionnaires administered to them. Also BP Leinaeng Library 24 (13.9%), Trevor Barlow Library 21 (12.2%), Fichardt Park Library 6 (3.5) and Lourier Park Library 9 (5.2%) returned their copies of questionnaire as indicated.

4.2.2 Distribution of the respondents by libraries

Table 4.2 shows that out of eight libraries, 105 (61%) respondents were registered members while 67 (39%) were non-registered members.

Table 4.2: Registered and non-registered library users that participated in the study

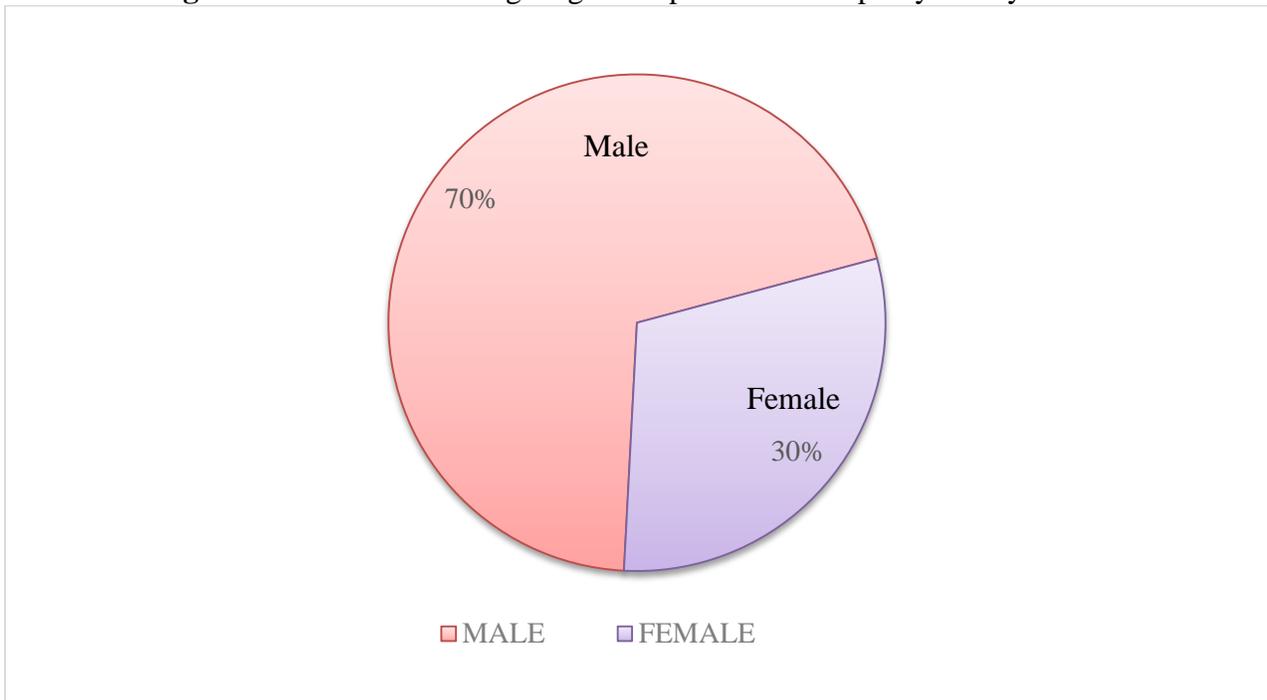
Variables	Number of Respondents			
	Registered members	%	Non registered Members	%
Bainsvlei	30	17	1	1
BP Leinaeng	9	5	13	8
Botshabelo	24	14	2	1
Fichardt Park	2	1	4	2
Lourier Park	5	3	4	2
Mangaung	10	6	20	12
Selossha	15	9	12	7
Trevor Barlow	10	6	11	6
Total	105	61	67	39
Mean	13.1245		8.375	
Standard Deviation	8.9		6.2	

4.2.3 Demographic characteristics of the respondents

In this section, the researcher wanted to find the characteristics of respondents, including their gender, age group, educational status, and race.

Regarding gender of respondents, it is clear that the demographic information in figure 4.1 shows that the majority of respondents were males who constituted 120 (70%) of the total respondents while females constituted 52 (30%).

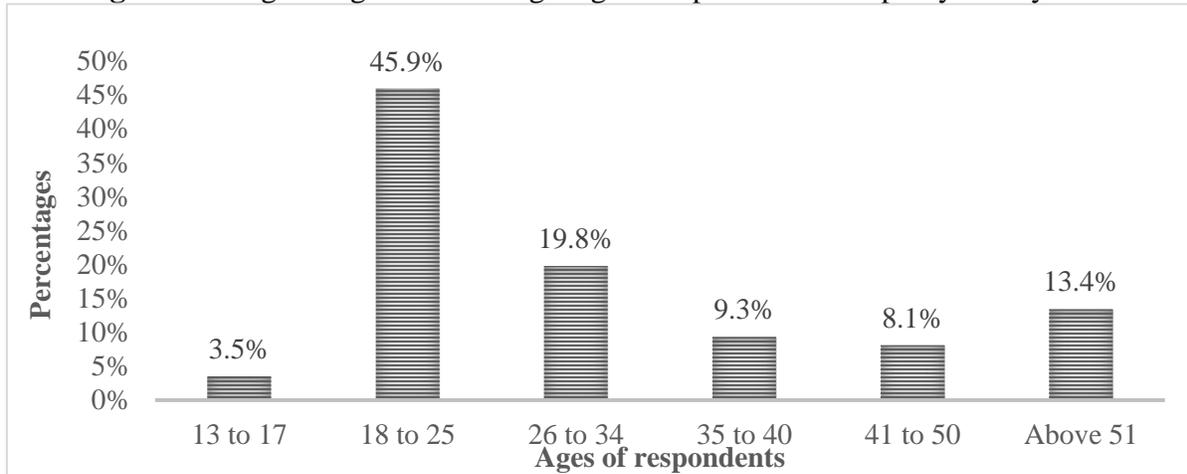
Figure 4.1: Gender of Mangaung Metropolitan Municipality library users



With regard to the age range of respondents, figure 4.2 shows that a high proportion 79 (45.9%) of respondents were between the age of 18 - 25 years, and 34 (19.8%) were aged 26 – 34 years, followed by 23 (13.4%) who were over 51 years.

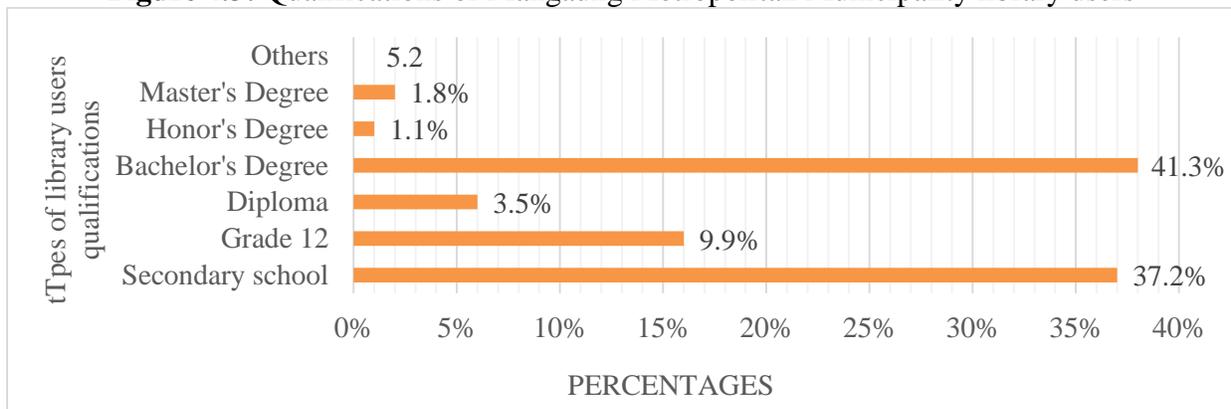
These were followed by 16 (9.3%) of the respondents who were between 35 - 40 years, and 14 (8.1%) were between 41 and 50 followed by the lowest age group between 13 – 17 years with 6 (3.5%).

Figure 4.2: Age categories of Mangaung Metropolitan Municipality library users



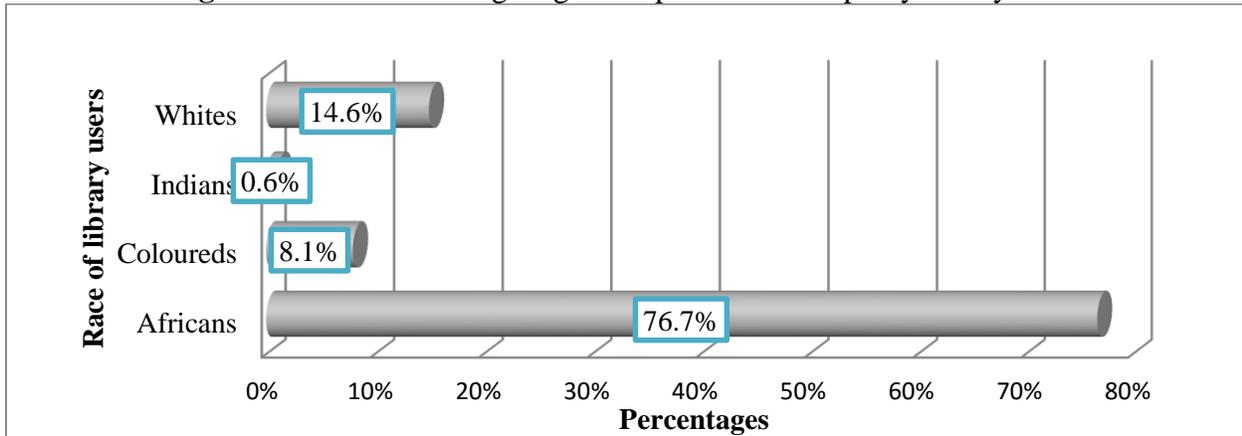
In looking at educational qualifications of the respondents, figure 4.3 shows that a high proportion 71 (41.3%) of respondents were holders of Bachelor’s degrees. They were followed by the secondary school level of education 64 (37.2%), Grade 12 17 (9.9%), and Diploma 6 (3.5%). Furthermore, Honour’s Degree holders were 2 (1.1%), while Master’s Degree was 3 (1.8%) followed by others who constituted 9 (5.2%).

Figure 4.3: Qualifications of Mangaung Metropolitan Municipality library users



In terms of race, figure 4.4 indicates that respondents of African descent were the highest with 132 (76.7%) while Whites were 25 (14.6%), Coloured 14 (8.1%) and only 1 (0.6%) Indian.

Figure 4.4: Race of Mangaung Metropolitan Municipality library users



4.2.4 Web 2.0 technologies and other library services platforms

This section compares other existing library services platforms that are delivered with Web 2.0 technologies.

4.2.4.1 How often do you borrow materials with your library card?

Table 4.3 below shows a high proportion 89 (52%) respondents who always or twice a month take out library materials on library cards, while 48 (28%) sometimes or every other month takes out library materials, followed by 35 (20%) respondents who almost (once a year or less) take out library materials on library card.

Table 4.3: Frequency of library materials borrowed on library card

Categories	Frequency	%
Always	89	52
Sometimes	48	28
Almost	35	20
TOTAL	172	100
Mean	57.3	
Standard Deviation	23	

4.2.4.2 Library users visiting Mangaung Metropolitan Municipality libraries

Table 4.4 summarises frequency of library users visiting the selected libraries. Table 4.4 shows that 86 (50%) of respondents always (twice a month) visited the libraries, followed by 64 (37%) who did the same only sometimes or every other month, and those who almost (once a year or less) visited the library were 22 (13%).

Table 4.4: Frequency of library users visiting the libraries

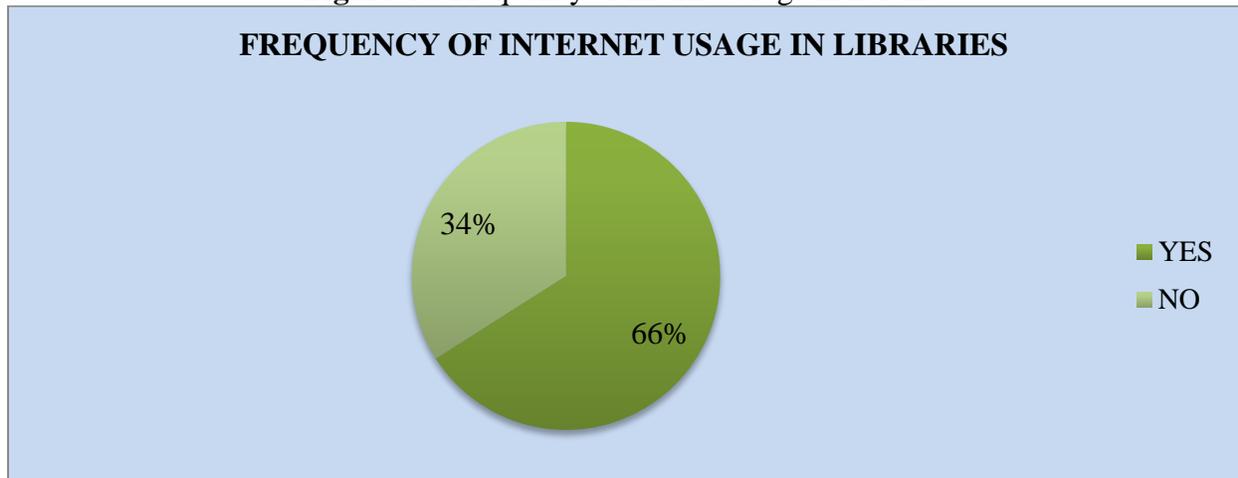
Categories	Frequency	%
Always	86	50
Sometimes	64	37
Almost	22	13
TOTAL	172	100
Mean	57.3	
Standard Deviation	26.5	

Therefore, in terms of visiting the Mangaung Metropolitan Municipality libraries, it is reasonably clear that respondents do utilize the facilities

4.2.4.3 Library users using Internet in libraries

Figure 4.5 shows that a large number 113 (66%) of respondents, indicated that they use Internet in general when they are at the libraries while only 59 (34%) indicated that they do not.

Figure 4.5 Frequency of Internet usage in libraries



4.2.4.4 Mangaung Libraries Online Catalogue

The respondents were given more than one of the following statements to choose from with the option of indicating either yes or no: I could imagine using my time to comment on books in the libraries online public access catalogue, customer participation would make the library online public access catalogue better, the libraries should create their social web services linked with their online public access catalogue, and in my opinion, the library does not need to offer social web services at all. Table 4.5 shows that a high proportion 137 (80%) of respondents, indicated that the library should create a social web services that are linked to their online public access catalogue while only 12 (7%) did not.

They were followed by 106 (62%) of respondents who indicated that customer participation would make the library online public access catalogue better, while 43 (%) did not.

Table 4.5: Mangaung Libraries Online Catalogue

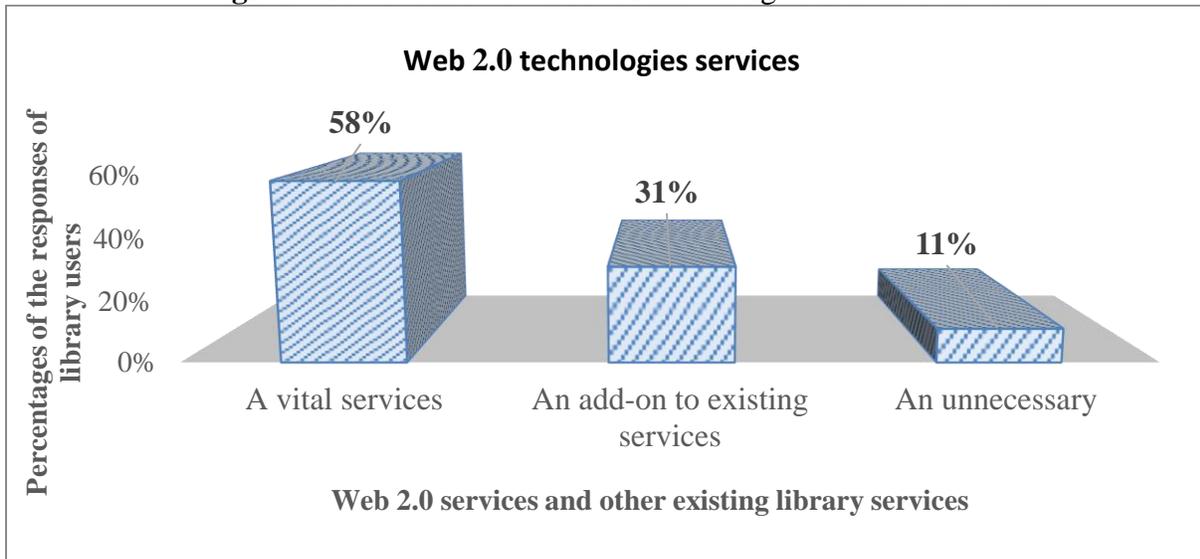
Statements	Yes	%	No	%
I could imagine using my time to comment on books in the Mangaung Libraries Online Catalogue	98	60	62	36
Customer participation	106	62	43	25
The libraries should create their social web services linked with their online public access for library users	137	80	12	7
In my opinion the library does not need to offer social web services at all.	23	13	121	70

Table 4.5 above shows that 98 (60%) of respondents imagine using their time to comment on books in the Mangaung library online public access catalogue, while 62 (36%) did not. Followed by few respondents 23 (13%) who indicated that the library does not need to offer social web services at all, while a high proportion of 121 (70%) of respondents, indicated that libraries should offer social web services.

4.2.5 Views of users on the use of Web 2.0 technologies and other library services

Figure 4.6 below summarizes the respondents' answers and shows 100 (58%) of respondents considering Web 2.0 technologies in comparison with other existing services as a vital while 53 (31%) said that it is an add-on to existing service followed by 19 (11%) who mentioned that it is an unnecessary service.

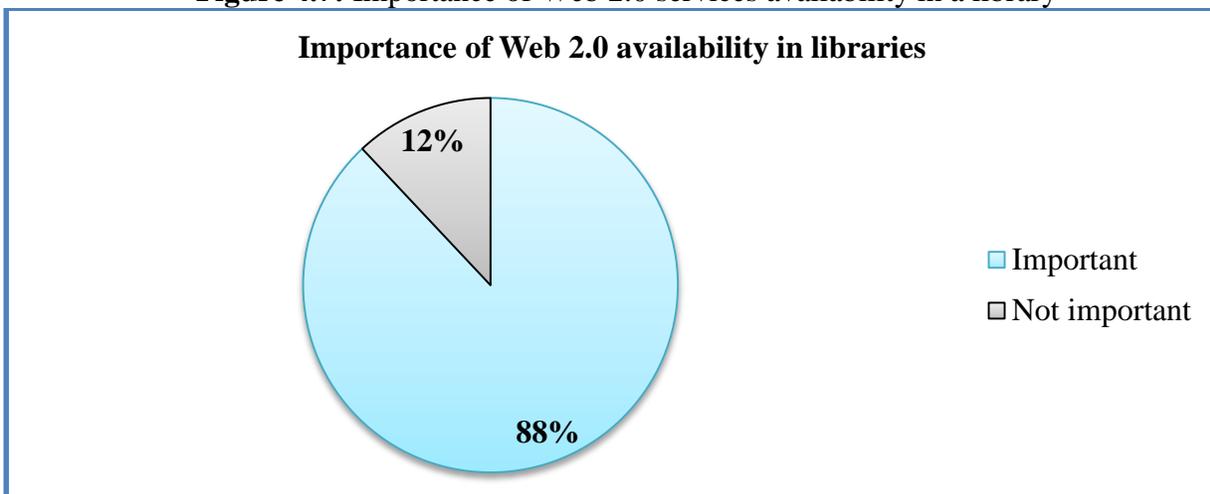
Figure 4.6: Reflection of Web 2.0 technologies and other services



4.2.5.1 The importance of Web 2.0 availability in a library

Figure 4.7, shows that majority of 152 (88%) respondents believe that the availability of Web 2.0 technologies is beneficial, while the rest of the 20 (12%) indicated that it is not beneficial.

Figure 4.7: Importance of Web 2.0 services availability in a library



The following are some of the quotations from the respondents who elaborated on why they regard the availability of Web 2.0 technologies as important or not important in the libraries:

Respondent 1: *“It allows me an opportunity to communicate with other users and the world around me; even though other services are blocked but it allows integration and collaboration with users (friends)”*.

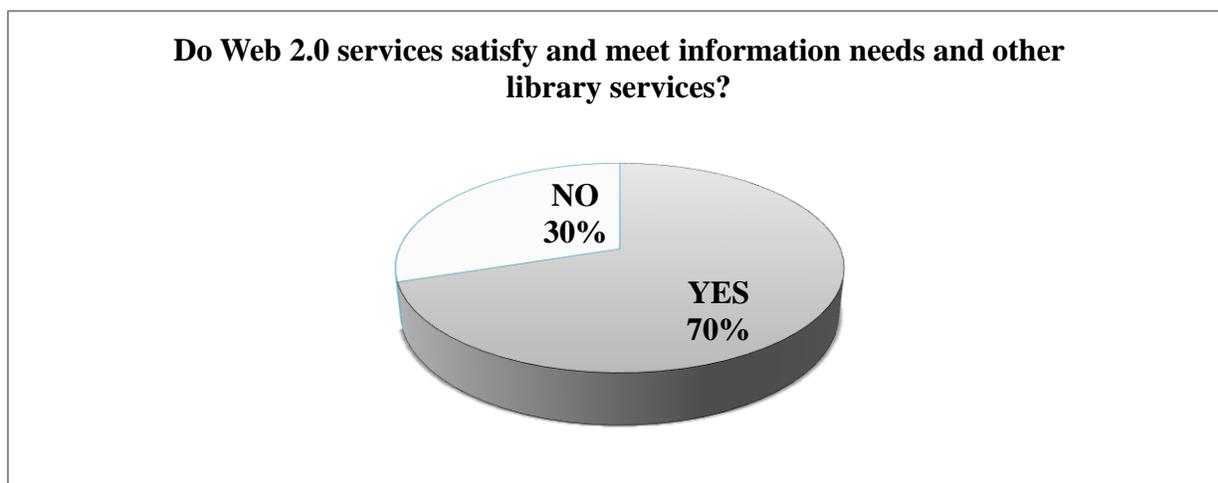
Respondent 2: *“I’m unemployed, the availability of Web 2.0 technologies in the library assisted me to create the email account and search job online, and I created my CV and printed it, thus it is easy for me to communicate with companies that I have applied for job”*.

Respondent 3: *“The Web 2.0 is important because I do my assignments, search information, type and print my work and make copies from the photocopy machine”*.

4.2.5.2 Do this Web 2.0 services satisfy and meet library users’ information needs and other library services?

Figure 4.8 shows that if compared to other library services, Web 2.0 services met the needs of a large number 121 (70%) of respondents while 51 (30%) respondents indicated that their information needs were not met.

Figure 4.8: Respondents views about Web 2.0 services and other library services



The following are some of the quotations selected from 121 (70%) respondents who emphasised the reasons why Web 2.0 services satisfy and meet their information needs in comparison with other library services:

Respondent 1: *“Web 2.0 services makes easy to look for a job, school and financial assistance online because the service is fast”.*

Respondent 2: *“It offers a vast amount of information without restrictions”.*

Respondent 3: *“It adds value to the existing services they offer us”.*

Respondent 4: *“Web 2.0 services are faster and user efficient” Internet is the way to get Information fast and it is easy to use and also important for daily use”.*

However, the 51 respondents or 30% disagree with others and said that Web 2.0 services do not satisfy and meet their information needs. The following are few quotations that were selected from others:

Respondent 1: *“Technology needs electricity and we are forever facing load shedding while other services can be accessed without electricity”.*

Respondent 2: *“Access to many sites are blocked at my library, so it does not satisfy and meet my urgent information needs”.*

Respondent 3: *“Computer programs are old and not user friendly so the Web 2.0 service are not fast and effective”.*

Respondent 5: *“I don’t know how to use computer and there are no computer trainings”.*

4.2.5.3 The impact of libraries

Table 4.6 shows that 164 (95%) of respondents agreed with the statement that libraries are important part of the community while 7 (4%) disagree and 1 (1%) didn’t have an opinion. This

was followed by 156 (81%) of respondents who indicated that they feel comfortable asking help at the library, and 9 (5%) disagree while 6 (4%) had no opinion. Table 4.6 also shows that 154 (90%) of respondents indicated that the library is a good place for skills development, literacy, or children programmes while 8 (5%) disagreed and 4 (2%) didn't have an opinion.

Table 4.6: Respondents' opinions about the impact of libraries

Statements	Agree	%	Disagree	%	No opinion	%
Libraries are important part of the community	164	95	7	4	1	1
I feel comfortable asking for help in the library	156	81	9	5	6	4
Libraries have books or audio visuals for people with disability	41	27	80	47	33	19
Libraries are mainly for well educated.	52	30	101	59	18	10
The library has collection (books) that interest me.	133	77	17	10	12	7
The library is a good place for skills development, literacy, or children programmes.	154	90	8	5	4	2

Forty-one or 27% of respondents agreed that library has a collection for people with disability, but 80 (47%) disagreed while 33 (19%) did not have any opinion. The 133 (77%) respondents agree that library collection interest them, but 17 (10%) disagreed while (12 (7%) of respondents had no opinion. They were followed by 52 (30%) of respondents who agreed that libraries are mainly for well educated, but a number of 101 (59%) disagreed while 18 (10%) had no opinion.

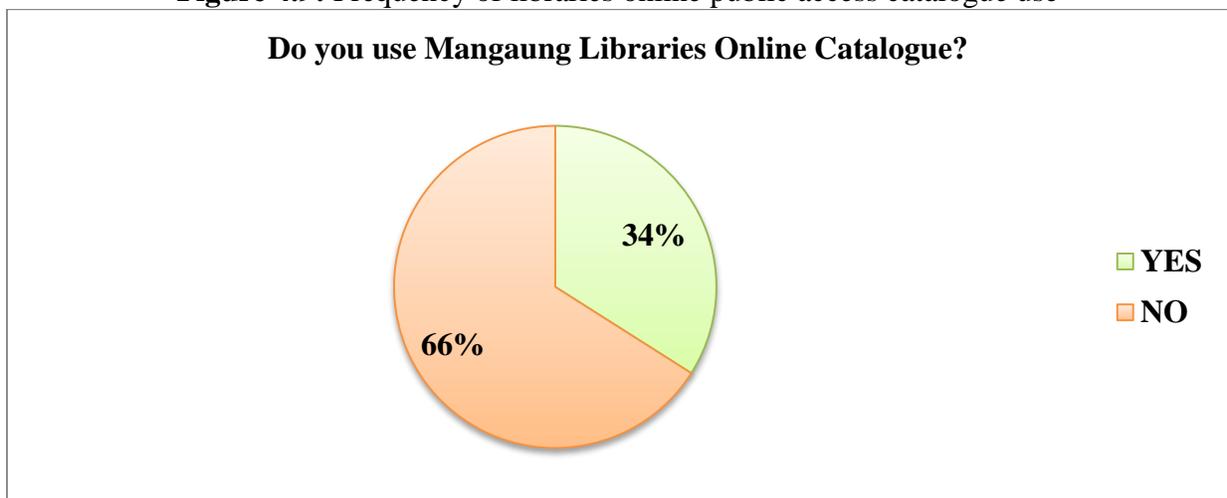
4.2.6 Views of library users on the adequacy of library computers and training skills of library officials

The researcher also wanted to know the views of library users on the adequacy of library computers and training skills of library. Library users are requested to explain whether levels of training skills and or library computers are at the good standard to meet their information needs.

4.2.6.1 Usage of Mangaung libraries online public access catalogue

Figure 4.9 shows a high proportion 114 (66%) of respondents indicating that they don't use library online public access catalogue while 58 (34%) use it.

Figure 4.9: Frequency of libraries online public access catalogue use



4.2.6.2 Levels of respondents' skills when using Mangaung libraries online public access catalogue

When asked to indicate whether they are able to find Mangaung libraries online public access catalogue, with the respondents having more than one option to choose from; I can do this, I cannot do this because I don't know and library does not have this service. Table 4.7 shows that a large number 71 (41%) of respondents indicated that they are able to find Mangaung libraries online public access catalogue while 17 (11%) cannot do it because they don't know and 33 (19%) indicated that library does not have the service. Table 4.7 also shows that 63 (37%) of respondents indicated that they can perform searches such as title, author, subject, shelf number, hold and comments, while 42 (24%) cannot do it because they don't know and 8 (%) indicated that the library does not have the service.

What is interesting is to note that none of the respondents indicated that they are able to find library online public access catalogue linked to social media and 30 (17%) cannot do this because they don't know while a large number 89 (52%) of respondents said that library does not have that service. Fifty-eight or 34% of respondents indicated that they are able to tell if an item is "on shelf" or "out" or "on hold (reserved)" while 51 (29%) cannot do this because they don't know and 8 (5%) of respondents indicated that the library does not have that service.

Table 4.7 shows that none of the respondents are able to renew library items using Mangaung libraries online public access catalogue and 55 (32%) cannot do this because they don't know while 57 (33%) indicated that the library does not have that service.

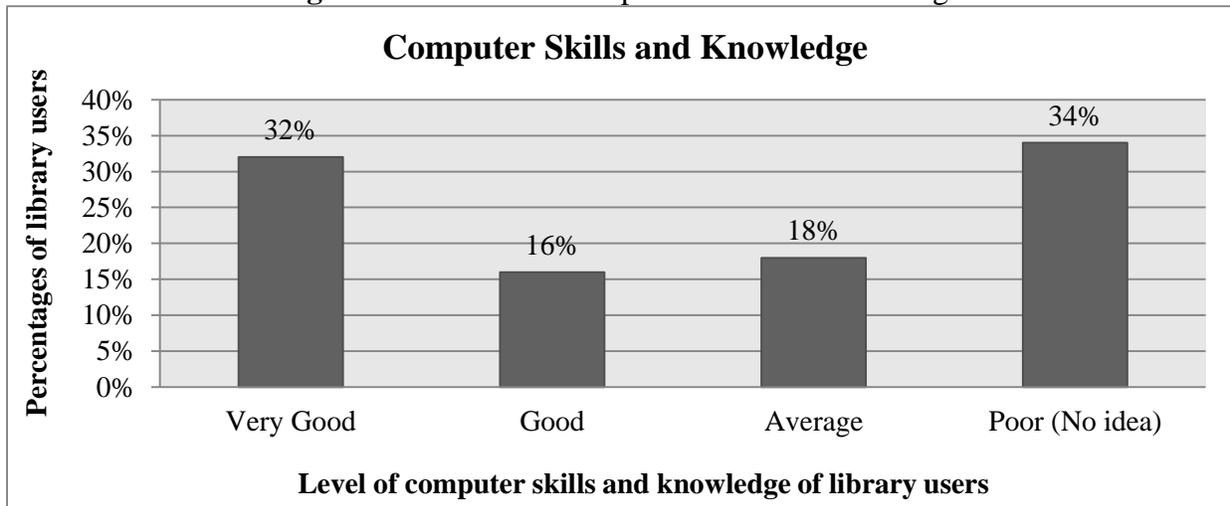
Table 4.7: Respondents' skills of using Mangaung libraries online public access catalogue

Statements	I can do this	%	I cannot do this because I don't know	%	Library does not have that service	%
Able to find online public access linked to social media	0	0	30	17	89	52
Able to find Mangaung libraries online public access catalogue	71	41	17	11	33	19
Can perform search: Title, Author, Subject, Shelf Number	63	37	42	42	8	5
Able to tell if an item is "on shelve" or "out"	58	34	51	29	8	5
Able to renew library items using Mangaung libraries online public access catalogue	0	0	55	32	57	33

4.2.6.3 Library users level of computer skills and knowledge

Figure 4.10 shows that 58 (34%) of respondents indicated that their level of computer skills and knowledge are very poor, while 55 (32%) of respondents are very good followed by 31 (18%) average and 28 (16%) of respondents are good.

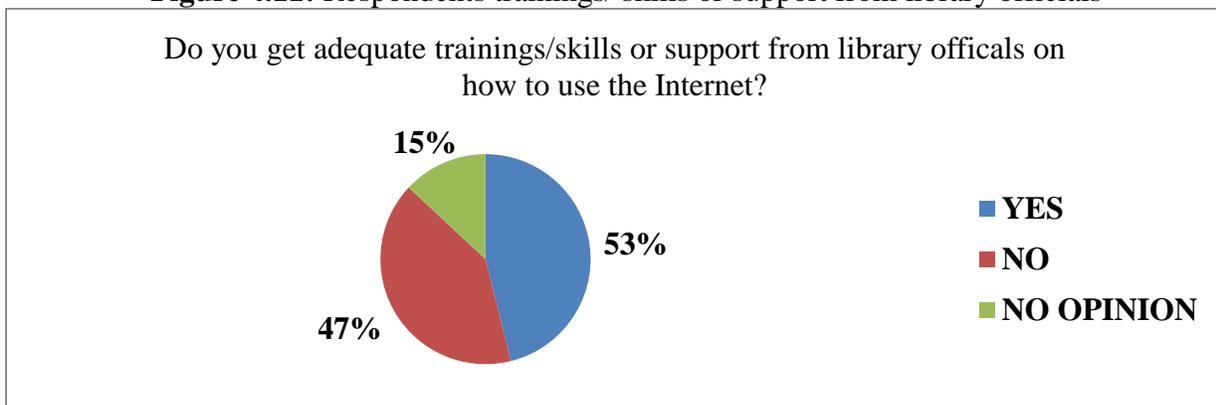
Figure 4.10: Level of computer skills and knowledge



4.2.6.4 Library users' trainings/ skills or support from library officials

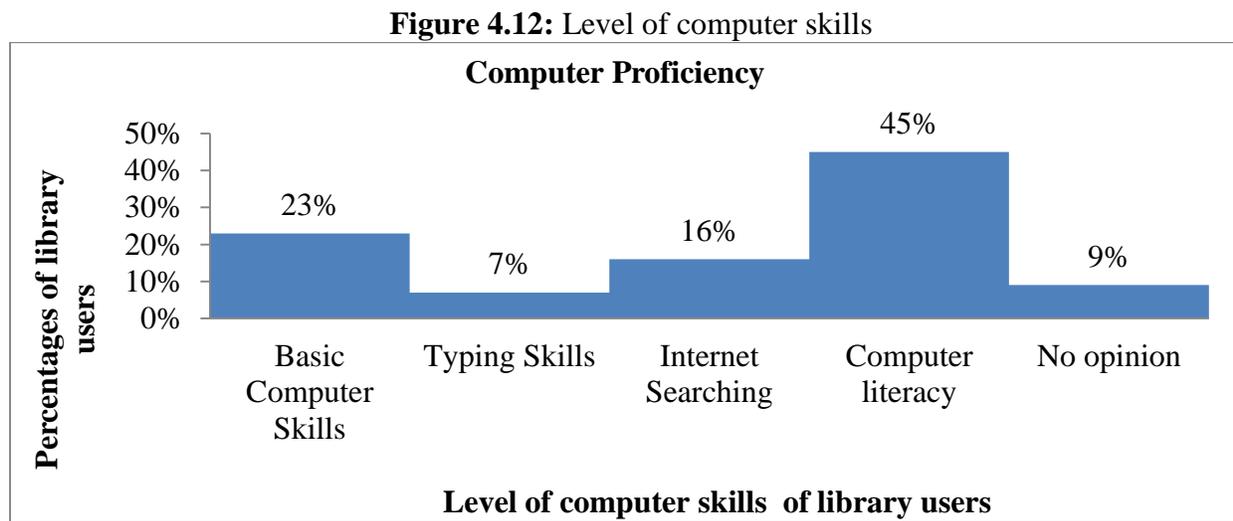
Figure 4.11 shows that 78 (53%) of respondents agreed that they did get adequate trainings/ skills or support from library officials on how to use Internet while 68 (47%) didn't get it followed by 26 (15%) of respondents who didn't have any opinion.

Figure 4.11: Respondents trainings/ skills or support from library officials



4.2.6.5 Library users' computer skills

Figure 4.12 shows that 41 (23%) of respondents have basic computer skills, while 12 (7%) have typing skills and 28 (16%) know how to use Internet followed by 13 (9%) of respondents who did not have any opinion.



4.2.6.6 Library users' ICTs training needs

Table 4.8 shows that 25 (14.54%) of respondents requested training of Microsoft offices for typing purposes, 53 (30.81%) basic computer skills, 51 (8.72%) how to use Internet, 7 (4.07%) how to create email account while 36 (20.93%) of respondents did not respond.

Table 4.8: Training needs requested by respondents

Respondents' ICTs training needs		
Training needs indicated	Freq	Percentages
Microsoft office	25	14.54
Internet search	51	29.65
How to create email account	7	4.07
Basic computer skills	53	30.81
Did not respond	36	20.93
TOTAL	172	100
MEAN \bar{x}	34.4	
STANDARD DEVIATION	17.11	

4.2.7 ICTs and Web 2.0 features

In this section, library users are requested to identify and name the ICTs and Web 2.0 features that are available and accessible in their libraries, and whom do they consult if they have technical problems when they utilize them.

4.2.7.1 ICTs available in libraries

Table 4.9 shows a large number 172 (100%) of respondents who indicated that Mangaung Metropolitan Municipality libraries have computers with free Internet access, followed by 148 (86%) who agreed that libraries have printers while 9 (5%) did not agree. Table 4.9 also shows that 172 (100%) of respondents indicated that the libraries do not have free Wi-Fi, while 172 (100%) indicated that libraries have photocopy machines, followed by 115 (67%) respondents who responded that libraries have public telephones but 31 (18%) disagreed. Hundred and three respondents or 60% indicated that libraries have scanners but they are not accessible to users, and 40 (23%) did not agree that scanners are available.

Table 4.9 shows that 106 (62%) of respondents indicated that libraries have tablets with free Internet access while 45 (26%) disagreed and 97 (56%) indicated that there are no fax machines, followed by 54 (31%) of respondents who also indicated that libraries do not have the laminating machines.

Table 4.9 below summaries the ICT equipment that are available in Mangaung Metropolitan Municipality:

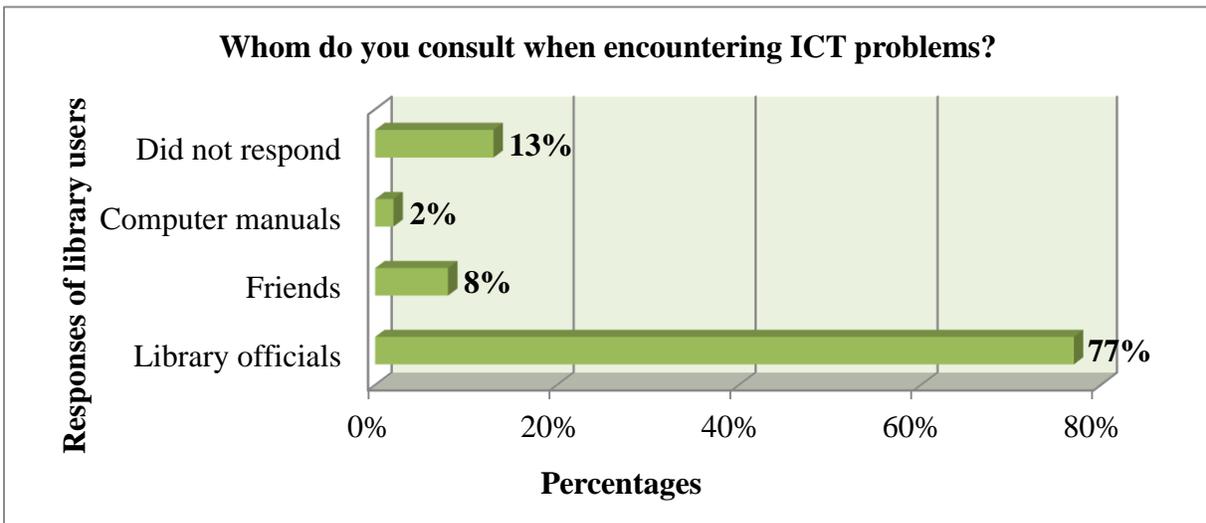
Table 4.9 ICTs available in libraries

ICT that are available in Mangaung Metropolitan Municipality libraries				
Equipment	Yes	%	No	%
Computers with free Internet access	172	100	0	0
Printer	148	86	9	5
Free Wi-Fi	0	0	172	100
Photocopy machine	151	88	0	0
Public telephone	115	67	31	18
Scanner	103	60	40	23
Tablets with free Internet access	106	62	45	26
Other (specify) Fax	0	0	97	56
Laminating machine for users	0	0	54	31

4.2.7.2 Whom do you consult when encountering ICTs problems?

Figure 4.13 shows that 132 (77%) of respondents consult the library officials when encountering ICTs problems while 14 (8%) consult their friends, 4 (2%) use computer manuals and 22 (13%) did not respond.

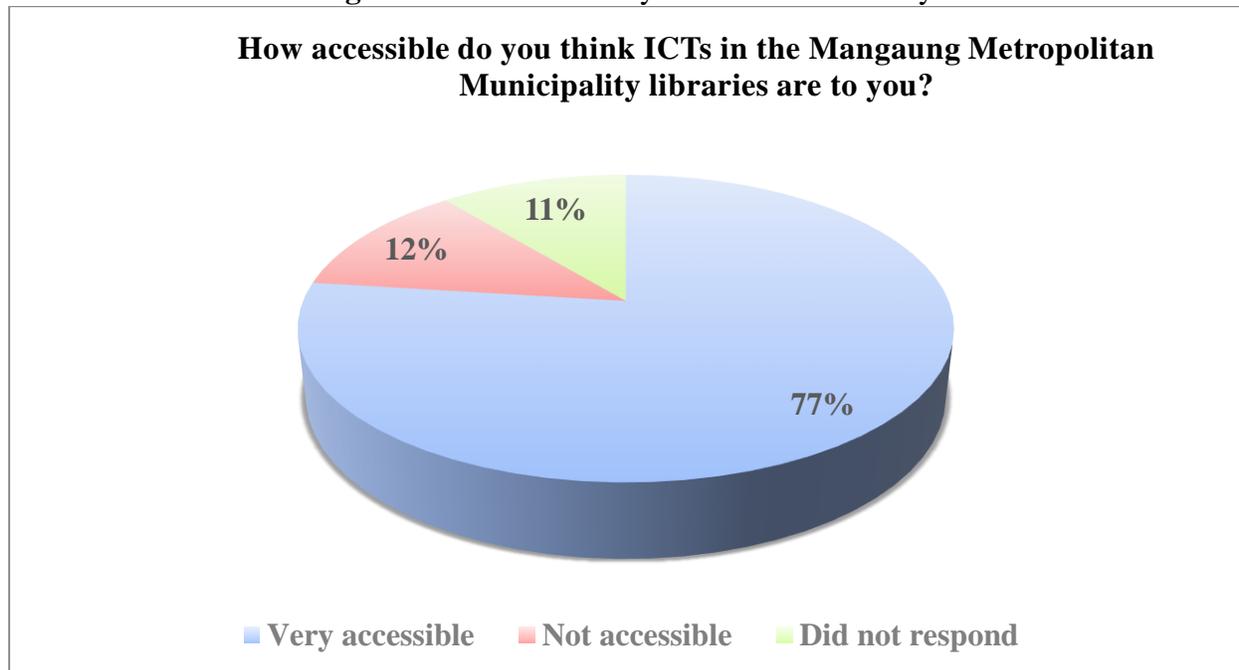
Figure 4.13: Whom do you consult when encountering ICTs problems?



4.2.7.3 Accessibility of ICTs in the library

Figure 4.14 shows that a large number 132 (77%) of respondents indicated that ICTs are very accessible and 21 (12%) said they are not accessible followed by 19 (11%) who did not answer the question.

Figure 4.14: Accessibility of ICTs in the library

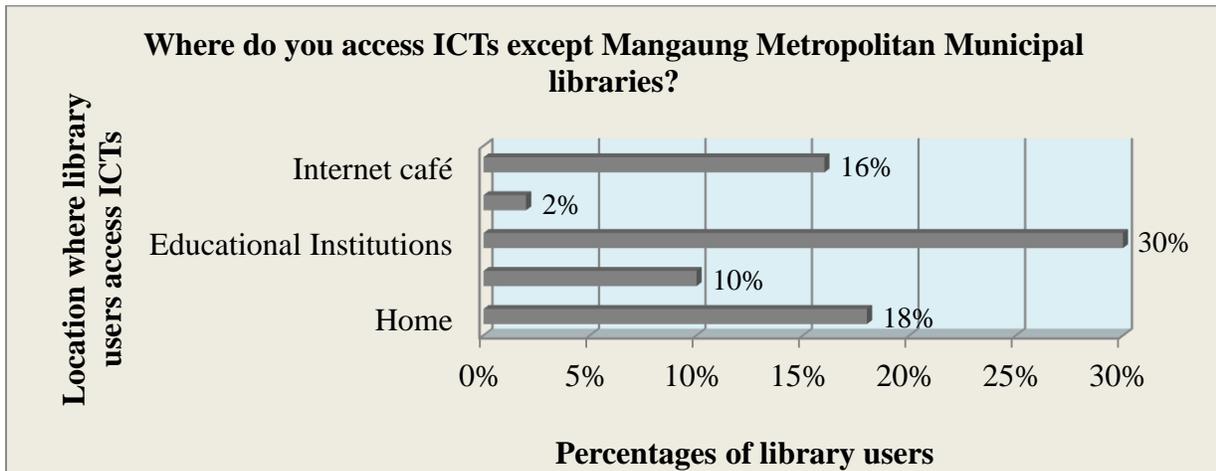


4.2.7.4 Accessibility of ICTs elsewhere except libraries

Respondents were asked whether they do have other places where they can access ICTs except Mungaung Metropolitan Municipality libraries.

Figure 4.15 shows that 31 (18%) of respondents indicated that they access ICT at home, 17 (10%) at work, 4 (2%) at cybercafés, and 52 (30%) at their educational institutions while 27 (16%) use Internet cafés.

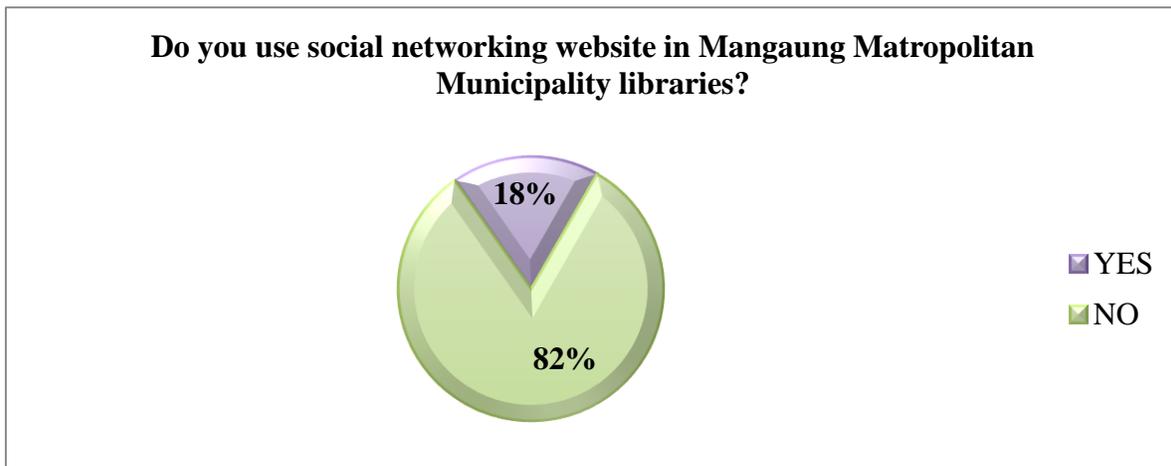
Figure 4.15: Accessibility of ICTs except at libraries



4.2.7.5 Usage of social networking website in libraries

Figure 4.16 below shows that a large number 141 (82%) of respondents indicated that they do not use social networking sites in the Mangaung Metropolitan Municipality libraries while 31 (18%) use them.

Figure 4.16: Social networking website in libraries



4.2.7.6 Other reasons for using ICT equipment in the library

Table 4.10 shows that 55 (32%) of respondents indicated that they are using ICTs for searching information, 10 (6%) online job hunting, 5 (3%) typing documents, 2 (1%) photocopying, 4 (2%) reading emails, followed by a large number 92 (53.5) of respondents who did not respond.

Table 4.10: Reasons for using ICT equipment in the library

If you are not using the social networking sites, how do you use ICT equipment in the library?		
Reasons	Freq	%
Information searching	22	12.8
Job hunting	10	5.8
Typing documents	5	2.9
Research	33	19.2
Reading e-books	4	2.3
Photocopying	2	1.2
Reading emails	4	2.3
Did not respond	92	53.5
TOTAL	172	100
Mean	21.5	
Standard Deviation	28.5	

4.2.8 What are the benefits and challenges of accessing Web 2.0 technologies in libraries?

Web 2.0 technologies are regarded as a useful service that can benefits library intensive, but the results indicate that it can be challenging as well.

4.2.8.1 Benefits of using Web 2.0 technologies in the library

I. Empowering themselves

One of the objectives of the study was to investigate the perceived benefits of accessing Web 2.0 technologies by the users, hence the results of this study revealed that 98 (57%) of respondents indicated that using Web 2.0 technologies in the libraries empower them technologically and it also enhances and strengthens the quality of their life style.

II. Information retrieval

A large number (149 (87%)) of respondents indicated that information plays an important role in their lives because it can be easily accessible and retrieved online. The learners and students mentioned that they are utilising Web 2.0 technologies as a research tool to easily retrieve information.

III. It provides an opportunity of skills and knowledge

The results of the study also revealed that 132 (77%) of respondents indicated that they have learnt new skills and gained knowledge by doing online job hunting, creating email accounts and creating curriculum vitae.

IV. Market business online

Thirty-two respondents or 19% indicated that through Web 2.0 technologies they are able to market their businesses online and the service supports and assists their small business to grow.

4.2.8.2 Challenges users encounter in using Web 2.0 technologies in libraries

I. Lack of data and low bandwidth

A large number (98 (60%)) of respondents indicated that lack of uncapped data and low bandwidth makes it difficult for them to use Web 2.0 technologies in some of the Mungaung Metropolitan Municipality libraries. Therefore, they indicated that it restricts them to use and access web-based services.

II. Lack of Internet search skills

Thirty-eight respondents or (22%) lamented the fact that lack of Internet search skills delays the process of using it effectively. The respondents recommended that libraries should start to schedule

trainings that will assist them in terms of capacitating them on how to search the Internet independently, and that will minimise the work load of library officials.

III. Load shedding

Load shedding is a serious challenge in South Africa. It was indicated as one of the challenges by 159 (92%) of respondents who said that it is preventing them to access Web 2.0 technologies in the libraries. Respondents recommended that library management must opt for generators machines as a back-up plan that will compliment electricity and enable web-based services to run smoothly during the load shedding period.

V. Lack of enough ICT equipment

The results of the study show that 151 (87.7%) of respondents indicated that lack of adequate ICT equipment in libraries is another challenge that presents accessibility of Web 2.0 technologies. The respondents recommended that during the library budget allocations, more ICT equipment must be procured in order to accommodate enough users.

VI. No idea about Web 2.0 features

Sixty-three respondents or (37%) indicated that they have no idea of what Web 2.0 features is all about. The respondents recommended that Mangaung Metropolitan Municipality libraries should work on their marketing strategies that will create awareness of their web-based services accordingly.

VII. Time allocated to the accessibility of web-based services

A large number (141 (82%)) of respondents identified time allocated to the usage Web 2.0 services as one of the challenges. The respondents indicated that one hour is allocated per user and it is not enough at all. They recommended that enough time must be allocated to the usage and accessibility of Web 2.0 services.

VIII. Library officials' attitude

The results of the study also indicated that library officials' attitude towards users of Web 2.0 was another challenge. A number (31 (18%)) of respondents reported that some of the library officials do not want to assist them when they are encountering problems with ICT equipment. The respondents recommended that management should enquire the reasons that cause the unfriendliness or negative attitude of their library officials and deal with the problem with immediate effect.

4.2.9 Issues to be considered in installing Web 2.0

The study aimed to investigate impact on usage of Web 2.0 technologies in the Mangaung Metropolitan Municipality libraries. In this section, the researcher aimed to find out levels of experience of users when it comes to using social media. The researcher wanted to discover the technological context within the Web 2.0 and state the social influence when it comes to utilizing these features in the libraries.

4.2.9.1 Levels of experience when using social media

Table 4.11 shows that a large number 83 (48%) of respondents indicated that they use Facebook, Twitter and LinkedIn, and 7 (4%) needed help followed by 22 (13%) who never used it. Table 4.11 also shows 52 (30%) of respondents who indicated that they use Wikis, 20 (12%) needed help and 32 (19%) never used it.

Table 4.11 shows 49 (28%) of respondents who indicated that they use blogs, 24 (14%) needed help from other people while 35 (20%) never used it. Forty-three respondents or 25% indicated that they use google docs and 27 (16%) needed help while 34 (20%) never use it.

Table 4.11: Respondents level of experience when using Web 2.0 services

Social Networks	I can use this by myself		I would need help using this		I have never used this	
	Respondents	%	Respondents	%	Respondents	%
Blogs	49	28	24	14	35	20
Wikis	52	30	20	12	32	19
Facebook, Twitter, LinkedIn	83	48	7	4	22	13
Google docs	43	25	27	16	34	20

4.2.9.2 Social influence

Table 4.12 shows a large number of 127 (74%) respondents who agreed with the fact that using Web 2.0 helps to do their research and tasks more quickly than any other library resources while 5 (3%) of respondents disagree and 10 (6%) were undecided. The 122 (71%) of respondents indicated that using Web 2.0 improves accessibility to information resources unavailable in their libraries but 6 (3%) disagree while 9 (5%) were undecided. The table also shows that 115 (67%) of respondents agreed that publishing or interacting in library web-based services enhances communication, improves creativity and visibility of online services rendered at their libraries and 7 (4%) disagree while 20 (12%) were undecided. A large number 115 (67%) of respondents agreed with the fact that interaction with Web 2.0 is clear and understandable, and 115 (67%) agreed

while 10 (6%) of respondents disagreed and 13 (8%) were undecided. Table 4.12 shows a large number 103 (60%) of respondents agreed with the fact that they receive guidance from officials or manuals available while 14 (8%) disagreed and 16 (9%) were undecided. Table 4.12 also shows that 109 (63%) of respondents find Web 2.0 technologies easy to use while 14 (8%) disagree and 11 (6%) undecided.

The results of the study on Table 4.12 indicated that 99 (58%) of respondents agreed that computers with free Internet access are available to use in the libraries while 21 (12%) disagree followed by 14 (8%) who were undecided.

Table 4.12: Social influence of respondents

Opinions	Agree		Disagree		Undecided	
	Freq	%	Freq	%	Freq	%
Using Web 2.0 helps to do my research task more quickly	127	74	5	3	10	6
Using Web 2.0 improves accessibility to information resources unavailable in libraries	122	71	6	3	9	5
Publishing or interacting in library web-based services whenever I am enhancing communication, improves creativity and visibility	115	67	7	4	20	12
My interaction with Web 2.0 is clear and understandable	115	67	10	6	13	8
I find Web 2.0 technologies easy to use	109	63	14	8	11	6
The resources necessary (computers, tablets, free Internet access) are available to me	99	58	21	12	14	8
Guidance from library officials/ manuals are available	103	60	14	8	16	9

4.2.9.3 Any other issues to be considered in installing Web 2.0 in libraries

(i) Trainings

The respondents were given an opportunity to identify any other issues that the libraries should consider in installing Web 2.0. A large number 90 (52%) of respondents recommended that scheduled trainings for users should be in place before libraries can even consider installing Web 2.0 technologies. The respondents indicated that these trainings will support the process of bridging the digital gap in their communities and assist them to access and use technology effectively.

(ii) Free Wi-Fi

A large number (121 (70%)) of respondents recommended the accessibility of free Wi-Fi when installing Web 2.0 technologies in libraries.

(iii) Marketing of web based services

Marketing also came out high as one of the issues that should be taken into considerations when libraries are installing Web 2.0 technologies. Twenty-five or 15% of respondents recommended that libraries should market their service extensively before Web 2.0 technologies can be installed, because it was identified that other respondents are not even aware that the Marga Mangrove Metropolitan Municipality libraries has Web 2.0 services.

(iv) Online public access linked to social media

A high proportion (111 (65%)) of respondents indicated that libraries are using online public access catalogue but it is not linked to their social media. The respondents recommended that libraries should consider installing programs that can allow linking of social media to online public access catalogue so that they can interact, share and comment.

(v) Equipment

It was recommended by 96 (56%) of respondents that advanced ICT equipment accessible to users be installed in order to enhance their lives as library users. The respondents also recommended that libraries should operate as information hub and a safe environment where users can access and utilize ICTs to their advantage at any time.

4.2.10 Interview with Mangaung Metropolitan Municipality libraries staff

As stated in chapter three, 2 library officials from each eight selected libraries were interviewed telephonically to further investigate the hypothesis “exploring the usage of Web 2.0 technologies on the use of public libraries in Mangaung Metropolitan Municipality, South Africa”. The telephonic interview method was decided because it was convenient for both interviewer and interviewee. The geographical distance between the libraries and limited funds were other factors that influence the researcher to conduct interviews through telephone. The responses were recorded (written down) during the interview in order to support the validity of information. The researcher asked ten questions which were open-ended and closed-ended to gather information from the library officials.

4.2.10.1 Demographic background

Sixteen respondents were asked to provide their demographic profiles in order to provide a clear indication of their background. The information recorded revealed that male respondents were 5 (31.25), while females were 11 (68.75%). The above groups were subdivided into age categories, which also revealed that library officials between 19 to 29 years were 6 (37.5%), whereas 30 to 40 years were 5 (31.25%), followed by 5 (31.25%) respondents who are above 41 years. The result

of the study, revealed that library assistants (respondents) dominated with 8 (50%), and senior library assistants were 2 (12.50%), while 2 (12.50%) were assistant librarians, and 2 (12.50%) librarians followed by 2 (12.50%) coordinators. It was important for the researcher to ask job positions of the respondents because there are different levels of positions in the work place and that influenced different opinions. The researcher also asked the service of library officials worked in their specific libraries. The results of the study indicated that those who worked at the library for less than a year were 2 (12.50%), and 1 to 5 years were on the majority side with (6 (37.50%)), 6 to 10 years were 5 (31.25%), while 11 to 15 years were 1 (6.25%) followed by 2 (12.50%) respondents who are 16 years and older. In terms of their qualification status, 9 (56%) respondents hold Grade 12 certificates, while 4 (25%) have diplomas, followed by 3 (19%) with Bachelors' Degree.

4.2.10.2 Level of library officials' ICTs experience

The respondents were asked to indicate their level of experience based on the following facts typing, scanning documents, Internet searching, printing a document and using tablets. All 16 (100%) of the respondents indicated that they had a very good experience of typing, scanning documents, Internet searching, and printing a document, while 2 (12.5%) of respondents cannot use tablets. The respondents were also asked to indicate number of years that they were introduced to Web 2.0 technologies, 14 (87.5%) of respondents indicated that it was more than 5 years while 2 (12.50%) were still trying to learn. When it comes to experience on social media at their personal level, the results indicated that 15 (93.75%) of respondents were more familiar with Web 2.0 technologies such as Facebook, LinkedIn, Twitter, WhatsApp, YouTube, Blogs, and Millennium computer system, etc. while 2 (12.50) % of respondents had no interest in Web 2.0 technologies.

4.2.10.3 ICTs in Margaung Metropolitan Municipality libraries

All libraries under Margaung Metropolitan Municipality have ICT equipment. The results of the study revealed that 16 (100%) of respondents agreed that their libraries have ICT equipment such as computers with free Internet access, multipurpose photocopy machines, tablets with free Internet access and public telephone. The 16 (100%) respondents indicated that ICT equipment was distributed accordingly to all the libraries.

Table 4.13 shows types and number of ICT available in the selected libraries:

Table 4.13: ICTs available in Margaung Metropolitan Municipality libraries

Names of libraries	Available ICT equipment
Bainsvlei	4 Computers with free Internet access, 5 tablets, 2 multipurpose photocopy machines, telephone, DVDs, CDs
B P Leinaeng	6 Computers with free Internet access, 5 tablets, 2 multipurpose photocopy machines, telephone, DVDs, CDs, television, music system
Botshabelo	5 Computers with free Internet access, 5 tablets, 2 multipurpose photocopy machines, telephone, DVDs, CDs
Fichardt Park	4 Computers with free Internet access, 5 tablets, 2 multipurpose photocopy machines, telephone, DVDs, CDs
Lourier Park	4 Computers with free Internet access, 4 tablets, 2 multipurpose photocopy machines, telephone, DVDs, CDs, television
Margaung	25 Computers with free Internet access, 10 tablets, 2 multipurpose photocopy machines, telephone, DVDs, CDs, online games
Selossha	10 Computers with free Internet access, 2 tablets, 1 photocopy machine, telephone, DVDs, CDs
Trevor Barlow	6 Computers with free Internet access, 5 tablets, 2 multipurpose photocopy machines, telephone, DVDs, CDs

4.2.10.4 Library officials and social media in the library

The respondents were asked to indicate the social media that are accessible and those that they use in their libraries. The findings of the study revealed 13 (81.25%) of respondents indicated that they use emails more often, while 16 (100%) use Millennium library system daily, 11 (68.75%) use the

Intranet, 4 of respondents (25%) Facebook followed by 100% who are using Mangaung online public access catalogue. The study also revealed that 9 (56%) of the library officials uses Wikipedia to search for information.

4.2.10.5 Benefits of using Web 2.0 in the library

The respondents who answered this question positively were the younger generation. The study revealed that 11 (68.75%) of young library assistants answered this question. The findings of the study indicated that technology is their focal point in the library services. They were concerned that public libraries are far behind when competing with other libraries such as academic and special libraries as far as technology is concerned. Web 2.0 benefit the public libraries because it addresses the technological needs of their users. The respondents further elaborated that their public libraries are losing their users because of lack of advanced ICTs like their counterparts. Other respondents revealed that the Web 2.0 makes their job easier and accessible. Respondents indicated that the introduction of Web 2.0 features within their libraries, increased communication, engagement and interaction with end users, it promoted library services with no cost attached, it enhanced networking between libraries, governmental departments and other stakeholders. In contrast with the benefit of using Web 2.0, 5 (31.25%) respondents didn't want to respond to the question whereas 8 (50%) indicated that they benefited while 4 (25%) of respondents were indecisive. The respondents were asked to explain whether the Web 2.0 has influence the flow of information resources from their libraries, 8 (50%) of respondents, revealed that Web 2.0 has influence the flow of resources because users can substitute the existing resources with online resources while 7 (43.75%) of respondents explained that Web 2.0 is a waste of time and it will not facilitate the easy flow of information and replace the resources.

4.2.10.6 Challenges when using Web 2.0 technologies in the libraries

Ten or (62.50%) respondents indicated that data takes only one or two weeks in a month and is finished, and then it becomes difficult for the users to access Web 2.0 services. Load shedding was another challenge that the 16 (100%) respondents indicated because web-based services cannot be functional without electricity. They recommended that library management must procure generators or install computer programs that will operate offline during load shedding. Restrictions from using social media, was another challenge that was indicated by 14 (87.50%) of the respondents. A large number (14 (87.50%)) of respondents also indicated that libraries cannot interact, communicate, and market their outreach programmes and services effectively or share information with their users because most of the social networks are blocked. It was indicated that lack of trainings led the staff to be negative towards their users or work; hence, service delivery will be affected. A high proportion (11(68.75%)) of respondents explained that library management must not restrict the usage of Web 2.0 services. Surprisingly, 6 (37.5 %) of respondents stated that introducing Web 2.0 services in the library is a serious challenge because some of the younger generations are addicted to Web 2.0 services and that affects service delivery. The researcher revealed that generation gap also contributed to this question; hence, the older generation were not interested with the introduction of Web 2.0 technologies.

4.2.10.7 ICT problems

A large number 16 (100%) of respondents indicated that whenever they experience ICTs problems, they immediately report them to their immediate supervisors who will then contact IT specialists at IT Department. The study also revealed that IT Department is very supportive when it comes to technical support in general. However, the only challenge that disturbs the effectiveness of IT

quick support is the geographical distance between the department and libraries. The respondents indicated that the library management also created manuals that assist their employees whenever they encounter problems during the usage of Millennium library system. The respondents were asked to agree or disagree whether there is an increased use of Web 2.0 in their libraries. 12 (75%) of respondents agreed that there is an increased use of Web 2.0 which influenced technological development in their community.

4.2.10.8 Training skills

The library officials were asked if they do get adequate Web 2.0 or in-service training. A high proportion 9 (56.25%) of respondents explained that they don't get necessary trainings as far as Web 2.0 services are concerned, while 5 (31.25%) of respondents disagree with the others and mentioned that they did get trainings. The 5 (31.25%) of respondents indicated that they received computer basic skills and Internet training. The respondents further indicated that training schedules must be planned in advanced to accommodate the newly employed staff and also to encourage the old employees.

Table 4.14 shows a summary of large number (9(56.25%)) of respondents who indicated that they would like the following trainings:

Table 4.14: Training needs of respondents

Trainings skills requested	Frequency	%
Microsoft office (advanced)	20	74
Internet searching	21	78
Typing documents	15	56
How to create email account	11	41
How to create social media account	19	70

4.2.10.9 Issues to be considered in installing Web 2.0

The respondents indicated that uncapped data should be installed so that users can access the Web 2.0 services without disturbance. They also mentioned the fact that free Wi-Fi should be installed to attract new and old library users. The respondents emphasised the fact that libraries must compete with other organisations where Wi-Fi is easily accessible without been secured. Printing facilities must be available so that the users can be able to type and print their documents. The respondents also recommend that library officials must be equipped with advance ICT equipment that will make service delivery easy. Marketing of Web 2.0 services has to be done in advanced before the services can be implemented in the libraries.

4.2.10.10 Comments

The respondents indicated that the library management must allow the library officials to access social networks in order to promote and market online library services. It is clear that Web 2.0 technologies are available. However, there are still factors that are restricting them to function effectively and efficiently in order to satisfy and meet the technological needs of the users.

4.3 Summary

In this chapter, data from library users' questionnaires and library officials' interviews were analysed, presented and interpreted. Data analysis methods, study results and a discussion of the findings have been presented. Findings from this study have been found to be consistent. In addition, the impact of various demographic data on usage of Web 2.0 technologies in the public libraries has been investigated. Data findings were described as correlations to the study variables

and presented as turbulence. In the next chapter, summary of major findings, conclusions and recommendations to this study will be presented.

CHAPTER FIVE

SUMMARY OF MAJOR FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

In the previous chapter, the data collected was presented, analysed and interpreted. This chapter provides a summary of the findings as well as the conclusions and recommendations arising from the study. The study was conducted at Mangaung Metropolitan Municipality with the purpose of exploring Web 2.0 technologies on the use of public libraries. The study addressed the following research questions:

- a. To what extent do the users of public libraries in Mangaung Metropolitan Municipality use Web 2.0 technologies and other library services?
- b. What are the ICTs and Web 2.0 features available in the library?
- c. What are the views of the users on the adequacy of computer and training skills of library officials?
- d. What are the benefits and challenges of access to Web 2.0?
- e. What are issues to be considered in installing Web 2.0 to meet the needs of users?

5.1 Summary of the findings

The rapid advancement of ICTs has resulted to radical changes in the means of information services within public libraries including the introduction of Web 2.0 technologies and the availability of a variety of ICTs in the eight Mangaung Metropolitan Municipality libraries for use by their users. For instance, IFLA Publication 147 (2010: 2) eloquently emphasised the fact that the primary purpose of public libraries is to provide resources and variety of services which are

trying to meet their information users. In short, the extent to which the use of Web 2.0 technologies in the eight Marga Mangrove Metropolitan Municipality libraries are used is still not known. The researcher, therefore, investigate the usage that may contribute to improving the use of Web 2.0 technologies in these libraries. The summary of the findings is presented, based on the objectives of the study.

5.1.1 Perception about public libraries

In this study, it was discovered that most public libraries are mainly focusing on disseminating information to their library users instead of understanding the nature and complexity of the community they serve. Furthermore, the study also revealed that public libraries regardless small and under-resourced are capable of having the potential to contribute towards community empowerment and development if they can understand their nature and complexity. Data collected by means of interview revealed that Marga Mangrove Metropolitan Municipality public libraries upgraded their information services due to the rapid electronic development and they were supposed to utilize the opportunity of advancing their electronic services through the use of Web 2.0 technologies (social media) in order to attract their users. The majority of respondents through questionnaires thought that public libraries are important part of the community of Marga Mangrove Metropolitan Municipality. The research therefore concludes that, in line with the literature, it is imperative that the Marga Mangrove Metropolitan Municipality public libraries should provide a high quality satisfactory services which is manageable, proactive and in line with the innovative changes that are influenced by the emergence of the ICTs with Web 2.0 technologies which will meet the information needs of their users.

5.1.2 Web 2.0 technologies and other library service platforms

The study sought to find out the comparison between Web 2.0 technologies and other library services within Mangaung Metropolitan Municipality public libraries. In this regards, the data gathered through the questionnaires and interviews revealed that the majority of respondents utilised Web 2.0 technologies for various reasons, however, the minority of respondents use other library services not Web 2.0 technologies. Literature revealed that Web 2.0 technologies changed the library user's behaviour and the way of seeing library services because it developed into other disciplines and changed the library practices and service delivery completely. Therefore, the study concludes that the usage of Web 2.0 technologies as compared to other library services is still considered important and enhances service delivery.

5.1.3 Web 2.0 features in libraries

According to the results, all respondents were of the view that Mangaung Metropolitan Municipality public libraries have ICTs with Web 2.0 features that meet their information needs. The data gathered through the questionnaires and interviews revealed that Mangaung Metropolitan Municipality public libraries have ICTs such as online games gadgets, televisions, tablets and computers with Internet access, CDs, DVDs, laminators, scanners, photocopiers and printers. While the minority of respondents through questionnaires thought that other Web 2.0 features are not easily accessible. Additionally, majority of respondents indicated that they consult library officials or ITC technical staff when encountering ICTs problems. The study revealed contradictory response from data gathered through questionnaires that other respondents access Web 2.0 features elsewhere not in the Mangaung Metropolitan Municipality public libraries. This research therefore concludes that in line with other public libraries that have adopted the use of

ICTs with Web 2.0 features around the globe, a range of user-based ICTs (listed above) are available in Margaung Metropolitan Municipality public libraries for use by members of the public in order to meet their regular needs.

5.1.4 Technical support, trainings and skills provided by library officials to Web 2.0 library users

The findings of the study gathered through questionnaires revealed that majority of respondents have knowledge and skills of how to use Web 2.0 in Margaung Metropolitan Municipality public libraries, despite the fact that there are no Web 2.0 training programmes in some libraries. The study revealed that training is provided on an ad-hoc basis. Furthermore, the study revealed that the lack of technical support, trainings and skills in some respondents is a worrying factor for Margaung Metropolitan Municipality public libraries as most of the information in libraries today is available electronically, meaning that only those with Web 2.0 knowledge and skills will benefit from them in the future. This study concludes that Margaung Metropolitan Municipality public libraries have to empower their users by making Web 2.0 trainings a priority to all users so that they could acquire knowledge and skills of how to use them successfully.

5.1.5 Benefits and challenges of accessing Web 2.0 technologies in libraries

The study was based on the fact that the researcher intended to investigate Web 2.0 technologies on the use of Margaung Metropolitan Municipality public libraries. The data gathered through questionnaires and interviews, indicated that challenges experienced by respondents might deny them the opportunity to access the complete benefits offered by Web 2.0 in Margaung Metropolitan Municipality public libraries. Additionally, the study revealed that majority of the

respondents indicated the following amongst others as the benefits of accessing Web 2.0 in Marga Mangrove Metropolitan Municipality public libraries; self-empowerment, knowledge of how to retrieve online information, skills and knowledge, marketing business online, Etc. Moreover, the results of the study revealed that a number of respondents encounter challenges that discourage them for accessing and using Web 2.0 in Marga Mangrove Metropolitan Municipality public libraries, and they identified as; lack of enough data, low bandwidth, lack of Internet search skills, load shedding, no idea about Web 2.0, library staff attitude, time allocation and lack of enough ICT equipment.

5.1.6 Issues to be considered in installing Web 2.0 in libraries

The literature review indicated that even though using Web 2.0 technologies in libraries, is becoming one of the important services, there will always be an equal balance between dissatisfied and enthusiastic. Therefore, the success will depend on the understanding of how to add value to Web 2.0 technologies. According to data gathered through questionnaires and interviews, the majority of respondents were of the view that there are issues that need to be considered in installing Web 2.0 in libraries. The findings of the study revealed that the following issues were indicated by majority of respondents; level of experience, social influence, trainings, free Wi-Fi, marketing of web based services, online public access linked to social media and more ICT equipment.

5.2 Conclusions

The objective of the study was to investigate social web on the use of public libraries in Marga Mangrove Metropolitan Municipality. The study concludes that regardless of the challenges, the respondents'

benefits from accessing free web-based-services in Margaung Metropolitan Municipality libraries, and thus influences a positive impact on the use of Web 2.0 technologies and meets the users' needs in comparison with other library services. Despite the fact that these libraries do not offer a structured training, the study concludes that most of the respondents can use and have knowledge of the ICT equipment while others still rely on the library officials for assistance. The study indicated that the issues that the respondents highlighted should be taken into consideration because they will assist Margaung Metropolitan Municipality libraries to improve and offer Web 2.0 technologies that will meet and satisfy the needs of their users, and be used by other libraries who are intending to deploy Web 2.0 technologies in future.

5.3 Recommendations

The objective of the study was to investigate Web 2.0 technologies on the use of public libraries in Margaung Metropolitan Municipality. The recommendations below are based on the findings of the study and the literature reviewed.

- i. An increased Internet bandwidth should be considered in order to prevent library users to wait for long when they are utilising ICT equipment, and this will assist more library users to access ICT equipment as well.
- ii. It has been noted that not all of the library users even other library officials know what the web-based-services are. Therefore, library management should have proper marketing strategies in place to promote the web-based services internally and to their communities. The service will be active and produce positive results if the library officials are aware of them and know how to use them for the benefits of their library users. From the findings, the researcher can assume that marketing is an important tool that library management can

use to advertise and promote their services at large in order to reach more users in their respective libraries.

- iii. Library management should ensure that there are sufficient funds made available during their budget allocations to procure ICT equipment that will be enough to cater for more library users and also be able to sustain their life span because technology becomes outdated very fast. Though there are some measures in place to provide libraries with more computers and tablets, this is insufficient since the data is still a problem because it is not uncapped. Library and Archive Services under Free State Department of Sport, Arts, Culture and Recreation is also supporting the Mangaung Metropolitan Municipality libraries by providing computers and tablets with Internet access and other materials through the Service Legal Agreement signed between two entities. This should be seriously considered, because one of the findings from this study is that many library users indicated that libraries even though they have computers and tablets are not enough to cater for their information needs.
- iv. Library management should also embed the use of social media but put in place procedures to be followed by library users and library officials in order to control misuse of them. The findings indicated that all social media are restricted but library users and library officials are expected to participate in the Web 2.0 features, and also library officials has to market their libraries activities on social media. Technological advancement forced libraries to connect with their users who are already using Web 2.0 features to advance their lives. The only way to satisfy and meet the rapid advancement of ICT, libraries has to interact, communicate, collaborate and connect with their users online.

- v. Library management should introduce structured trainings for their users and internal trainings for their library officials who will then be in the position to assist and train the library users continuously. Trainings will strengthen the capacity of users who will be able to use Web 2.0 technologies independently without assistance of library officials.
- vi. The time allocated for library users should be extended from 1 to 2 hours to give them sufficient time to access enough information that will satisfy and meet their information needs.
- vii. Library management should opt for uncapped data that will last for the entire month. Uncapped data is cheaper because it has fixed payment even if more users can access it at the same time, and it will save libraries' budget. More library users requested free Wi-Fi. Free Wi-Fi will attract more usage of ICT equipment and increase in-house users at Mangaung Metropolitan Municipality libraries because most of the governmental departmental buildings have free Wi-Fi that is accessible by their users.
- viii. Load shedding is becoming a major factor in South Africa. Therefore, library management should consider having generators that will be used during power failures or programs that can be used offline so that their services can still be accessible without being interrupted during power failures.
- ix. The Mangaung Metropolitan Municipality libraries should always be available on the Web 2.0 platforms, as this will contribute to effective usability and reliability of the web-based services to their library users. The library officials should make it a point that they always promote their services and strive to meet the needs of their various library users, and that will influence positive attitude when using Web 2.0 technologies in their libraries which will compliment other existing library service and library resources.

5.4 Suggestion for further research

There are a variety of themes that originated from the study which may require further attention in the field of Web 2.0 technologies in public libraries which could not be covered in this study due to limited time of study. These themes could be interesting topics for future research and are indicated below:

- (i)** Can Margaung Metropolitan Municipality public libraries keep up with technological changes?
- (ii)** How Margaung Metropolitan Municipality public libraries thrive and survive in business today with Web 2.0?
- (iii)** Margaung Metropolitan Municipality Public Libraries creating the third path: Web 2.0

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APPENDICES

APPENDIX A: A letter of approval to study Masters' Degree in Information Science



11 November 2013

Department of Information Science
Master's and Doctoral Degree
UNISA
0003

Master's Degree in Information Science in 2014
Re: Molaodi Margaret Matobako (37247751)

Dear Sir/ Madam

I am writing to you with regards to Mrs Molaodi Margaret Matobako (Student Number – 37247751), who has requested that I write a letter of recommendation on her behalf. Mrs Matobako and I discussed her decision to pursue Master's Degree in Information Science at UNISA in 2014 and I fully support her decision and strong desire to take her dedication and skill to the next level.

I have worked with Mrs Matobako for over 14 years, specifically, as the Manager: Libraries and Information Services Division. Her duties as a Coordinator include overseeing the management of the branch libraries to ensure that different categories of library patrons get access to information; and to develop marketing strategies to market education, library and information services to the community so that awareness is created about the services provided.

Over the time that I have known Mrs Matobako, she has consistently performed her duties with competence and often goes the extra mile, doing more than expected. I have trusted her enough to appoint her twice as the Acting Manager: Libraries and Information Services Division in my absence.

I assure you that Mrs Molaodi Margaret Matobako will complete the Master's Degree exceedingly well. She sets the highest standards for herself and does not rest until she accomplishes all that she sets out to do. I recommend Mrs Molaodi Margaret Matobako most highly and without reservation

If there is any clarity or information needed please contact me as her Manager.

Sincerely

NL Mnyanda
MANAGER: LIS

APPENDIX B: Survey questionnaire for library users

Dear respondents

My name is Molaodi Margaret Matobako and I am conducting a Masters' Degree research in Information Science at the University of South Africa. I am carrying out a study of "*The influence of Web 2.0 technologies on the use of public libraries in Mangaung Metropolitan Municipality, South Africa*". The aim of this study is to investigate the usage of social web in public libraries services of Mangaung Metropolitan Municipality namely, Mangaung, BP Leinaeng, Trevor Barlow, Lourier Park, Botshabelo, Seloshesha, Fichardt Park and Bainsvlei. The findings of the study will be solely used to assist the public libraries who are intending to deploy Web 2.0 technologies to better off their web based services. The application for conducting research involving the respondents at their different libraries has been submitted to the Mangaung Library Services Manager and the permission was granted. I kindly request your participation in this survey. The information you provide will be used only for this research purposes. You are, however, under no obligation to complete the survey and it is voluntary, and can withdraw from participating in the study at any time. Also note that you will remain anonymous and the survey will not take more than 20 minutes of your time. If you have any questions concerning the questionnaire, please contact Molaodi Margaret Matobako at 060 5041 436 or margaret.matobako@gmail.com .

Thank you in advance for your willingness to participate in the study.

**THE INFLUENCE OF WEB 2.0 TECHNOLOGIES ON THE USE OF PUBLIC
LIBRARIES IN MANGAUNG METROPOLITAN MUNICIPALITY, SOUTH AFRICA**

(Instruction: Mark with an X next to an appropriate answer)

SECTION A: Demographic Background

1. Are you a registered user of Mangaung Metropolitan Municipality Libraries?

1.1 Yes [] No []

1.2 If yes, in which of the following libraries are you a member?

Botshabelo [] Bloemfontein Public Library []

Mangaung [] Benjamin Pule Leinaeng [] Bainsvlei []

Trevor Barlow [] Fichardt Park [] Thaba Nchu []

2. Your gender? [] Male [] Female

3. Age

Between 13 and 17 [] Between 18 and 25 [] Between 26 and 34 []

Between 35 and 40 [] Between 41 and 51 [] Above 51

4. Educational status:

Secondary School [] Diploma Bachelor's degree [] Master's degree []

Other (please state): _____

5. Race:

[] African [] Coloured [] White [] Indian Other, please specify: _____

SECTION B: Web 2.0 technologies and other library services platforms.

6. How often do you borrow materials with your library card?

Always

Sometimes

Almost

7. How often do you visit the library?

Always

Often

Almost

8. Do you use the Internet when visiting the library?

Yes

No

9. What do you think about using Mangaung Libraries Online Catalogue? (Indicate Yes or No with X)

	Yes	No
I could imagine using my time to comment on books in the Mangaung Libraries Online Catalogue		
Customer participation		
The libraries should create their social web services linked with their online public access for library users		
In my opinion the library does not need to offer social Web services at all		

10. Views of users on the use of Web 2.0 technologies and other library services

11. How important to you are the Web 2.0 technologies availability in your library?

Important If no or yes, please indicate why:

Not important [] If no or yes, please indicate why

12. Which of these statements reflect your views on Web 2.0 technologies and other existing library services?

13. Do Web 2.0 services satisfy and meet your information needs and other library services?

Yes []

No []

14. If no or yes, please indicate why?

15. The impact of libraries. Read the following statements: (Mark with X)

	Agree	Disagree	No Opinion
Libraries are an important part of the community.			
I feel comfortable asking for help in the library.			
Libraries have books and audio visuals for people with disability			
Libraries are mainly for well-educated.			
The library has collection (books) that interest me			
The library is a good place for a skills development programmes, literacy programmes, or children's programmes.			

SECTION C: Views of the library users on the adequacy of library computers and training skills of library officials

16. Do you use Mangaung Libraries Online Catalogue?

Yes []

No []

17. Levels of respondents' skills when using Mangaung libraries online public access catalogue:
(Mark X as many as applicable)

	I can do this	I cannot do this because I don't how	Library does not have that service
Able to find online public access linked to social media			
Able to find Mangaung libraries Online public access catalogue			
Can perform search: Title, Author, Subject, Shelf Number			
Able to tell if an item is "on shelve" or "out"			
Able to renew library items using Mangaung libraries online public access catalogue			

18. How would you describe your level of computer skills or knowledge?

Very good [] Good [] Average [] Poor (No idea) []

19. Do you get adequate trainings/skills or support from library officials on how to use the Internet?

Yes []

No []

20. Which of the following computer skills do you have? (Mark X as many as applicable)

	Yes	No
Basic computer skills		
Typing skills		
Internet searching		
Computer literacy		
No opinion		

21. What ICTs training needs do you request?

SECTION D: ICTs and Web 2.0 features

22. Which of the following ICTs are available in your library? (Mark X as many as applicable)

	Yes	No
Computers with free Internet access		
Printer		
Free Wi-Fi		
Photocopier machine		
Public telephone		
Scanner		
Tablets with free Internet access		
Other (specify) Fax and Laminating machine for users		

23. Whom do you consult when encountering ICTs problems? (Mark X as many as applicable)

	Yes	No
Computer manuals		
Friends		
Library officials		
Did not respond		

24. How accessible do you think ICT equipment in the library is to you?

Very accessible []

Not accessible []

Did not respond []

25. Do you have access to ICT equipment elsewhere except in your library, please indicate location? (Mark as many as applicable)

Internet cafés [] Educational institution [] Home []

Cybercafés [] Work []

26. Do you use social networking websites in the library?

Yes []

No []

27. If you are not using the social networking sites, what are your reasons for using ICT equipment in the library? Specify

SECTION E: What are benefits and challenges of accessing Web 2.0 technologies in libraries?

28. What are the benefits of using Web 2.0 technologies in the library?

29. What are the challenges you encounter in using Web 2.0 technologies in the library?

SECTION F: Issues to be taken into consideration in installing Web 2.0

30. Level of experience when using these Web 2.0 technologies? (Mark X as many as applicable)

Social Networks	I can use this by myself	I would need help using this	I have never used this
Blogs			
Wiki			
Facebook, LinkedIn, Twitter			
Google docs			

31. Social influence: (Mark with X)

	Agree	Disagree	Undecided
Using Web 2.0 helps to do my research task more quickly			

Using Web 2.0 improves accessibility to information resources unavailable in libraries			
Publishing or interacting in library web based services whenever I am enhancing communication, improves creativity and visibility			
My interaction with Web 2.0 is clear and understandable			
I find Web 2.0 technologies easy to use			
The resources necessary (computers, tablets, free Internet access) are available to me			
Guidance from library officials/manuals are available to me to use the Internet effectively for access to Web 2.0 technologies			

32. Any other issues to be taken into consideration in installing Web 2.0

Thanks for your participation.

APPENDIX C: Library officials Interview Guide

THE INFLUENCE OF WEB 2.0 TECHNOLOGIES ON THE USE OF PUBLIC LIBRARIES IN MANGAUNG METROPOLITAN MUNICIPALITY, SOUTH AFRICA

1. Briefly indicate your demographic background (library, gender, age, designation, years at work and qualifications)
2. What is your level of ICTs experience?
3. What types of ICTs are available in your library?
4. Which social media are accessible and that you use in your library?
5. What are benefits of using Web 2.0 in your library?
6. What challenges do you experience when using Web 2.0 technologies in your library, and in your view how can they be improved?
7. When encountering ICTs problems whom do you contact?
8. Do you get adequate ICTs training skills or in-service training? If no, what training needs do you want to receive?
9. What issues you think should be considered in installing Web 2.0 in your library?
- 10 Do you have any comments?