The role of the public library towards a knowledge economy of Namibia

by

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DECLARATION

I, Selma Iilonga, declare that the content of this thesis is my original work. Thoughts taken from other sources are all cited and quoted, and have been fully acknowledged under the list of references. I also declare that the copy submitted for the electronic plagiarism check is identical to the printed version, and that this work has not been submitted to any other university examination board. Finally, no content of this dissertation has been published as of yet.

Selma Iilonga March 2019

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ABSTRACT

Access to knowledge and information is found to be the cornerstone in the road to knowledge economy transformation whereby the utilization of knowledge is the key engine of economic growth, where knowledge is acquired, created, disseminated and used effectively to enhance economic and social development. This means that the more people acquire knowledge, the more they will begin producing new products or improving systems and existing products, thus adding value to local products and improving the GDP of the country, as well as improving their social livelihood. Therefore, the primary role public libraries have is being the knowledge hubs, to make provision of higher quality knowledge and to make information accessible to the public to equally contribute to all NDPs towards achieving the Namibia Vision 2030 for a knowledge economy.

This research study discusses "The contribution of the Public Library services towards a knowledge economy transformation readiness which is envisaged by the Namibia Vision 2030. In achieving that, the study has investigated the state of the Namibia legislative and policy framework reflections of access to knowledge and information as provided by libraries. The study further examines the availability and accessibility of knowledge and information resources, including ICT infrastructure at public libraries in remote rural areas. Moreover, it discusses the types of education and training programmes conducted by public libraries in ensuring that users have the necessary information and retrieval searching competencies and skills for accessing and navigating available information infrastructural resources. Finally, it explores innovation systems, technologically and non-technologically initiated by librarians for library services enhancement, and how library users have tapped into the growing stock of knowledge and information, and adapted them to local needs for economic and social development.

The study has employed the four pillars of the World Bank Knowledge Economy Framework, namely an economic and institutional regime; information, knowledge and ICT infrastructure; education and training, and an innovation system as the lenses through which to investigate the research questions understudied.

The research study has been informed by the post-positivist paradigm that uses a mixed methods approach with a convergent mixed methods design for collection of both quantitative and qualitative data by means of survey questionnaires, semi-structured interviews from users and librarians at public libraries in the Ohangwena and Omusati regions, and a document contents analysis of Namibia's legislation and policy framework. Data were analysed separately by the two databases, namely SPSS for quantitative and Atlas.ti for qualitative data.

The literature review has revealed that African public libraries are stocked with irrelevant foreign knowledge and information that are not used by the local populations. These sources have disadvantaged people from accessing higher quality knowledge and information required for a successful knowledge-driven economy for prosperity. The reason is reportedly the poor implementation and some countries, absence of library policy legislative frameworks that reflect access to knowledge and information at national level, and this further leads to poor performance of citizens to contribute to the knowledge economy for sustainable development.

The study has found Namibia to have strong and well-crafted legislative and policy frameworks reflecting access to knowledge and information as key engines to a knowledge economy. The available frameworks and policies are implemented poorly in remote rural areas where the study has been conducted in comparison to public libraries located in urban areas. Evidence has revealed that the most accessed information resources at public libraries are local books, textbooks, local newspapers, information resources available from government ministries such as government employment application forms, pamphlets and leaflets distributed by the Ministries of Health and Agriculture, trade and industry entrepreneurial information, and application forms for businesses.

Provision of those resources are, however, found to be minimal in some public libraries due to lack of institutional collaboration and expertise, as well as budget constraints. Other services include access to electronic global knowledge resources (in-house access) and indigenous knowledge resources. The study presents that access to ICT, particularly computers and wi-fi at public libraries, has attracted the majority of people, as they are provided with free training to gain computer literacy and skills for information searching.

The research has discovered that public libraries in remote rural areas are perceived as innovation systems for development, as access to them were only available to the elite community in urban areas before independence.

Based on these findings, public library services, although only a few per region, have transformed the communities through the provision of learning and study spaces, community learning engagement, meetings and workshop spaces for farmers, business community information-sharing, as well as access to higher quality renewed knowledge and information resources that have contributed positively to users' economic and social development in terms of health, education, agriculture, business, entrepreneurships and employment. These innovative improvements are set as evidence based on public library contributions to Namibia's knowledge economy.

Finally, the study highlights its contribution to research and the LIS practice. It also presents recommendations with strategies model of how Namibia Public Libraries can advanced the quest for the knowledge economy as envisaged by the NDP5, Vision 2030, and the UN Post 2030 Agenda for Sustainable Development, and recommendations for future research.

Keywords: Public libraries, knowledge economy, education and training, legislation and policy frameworks, knowledge and information resources, ICT infrastructure, indigenous knowledge, remote rural areas, Namibia

DEDICATION

To Mom and Dad for fighting for the independent Namibia. Your struggle for liberation has not been in vain. I am proud to be your daughter.

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ACRONYMS

ACRL	Association of College and Research Libraries
AGORA	Access to Global Online Research on Agriculture Programme
AIDS	Acquired Immune Deficiency Syndrome
AORE	Online Access to Research in the Environment
APEC	Asia-Pacific Economic Corporation
ARDI	Research for Development and Innovation
CINA	Community Information Need Analysis
CD	Compact Disk
CIRT	Center for Innovation in Research and Teaching
CLS	Community Library Services
CV	Curriculum Vitae
EBLIDA	European Bureau of Library Associations
E-government	Electronic Government Services
Email	Electronic Mail
ERIC	Educational Resources Information Center
ETSIP	Education and Training Sector Improvement Programme
FAO	Food and Agricultural Organisation
HIV	Human Immune Deficiency Virus
HINARI	Health InterNetwork Access to Research Initiative
IBM	International Business Machines
ICCPR	International Covenant on Civil and Political Rights
ICT	Information and Communications Technology
IFLA	International Federation of Library Associations and Institutions

ILMS	Integrated Library Management System
IK	Indigenous Knowledge
IKS	Indigenous Knowledge System
INA	Information Need Analysis
IP	Intellectual Property
K4D	Knowledge for Development
KAM	Knowledge Assessment Methodology
KE	Knowledge Economy
L2B	Library to Business
LIASA	Library and Information Association of South Africa
MBC	BioMed Central
MCA	Millennium Challenge Account
MMR	Mixed Methods Research
MOEAC	Ministry of Education, Arts and Culture
NAMCOL	Namibia College of Open Learning
GDP	Gross Domestic Product
NIDA	Network Information and Digital Access
NLAS	Namibia Library and Archives Service
NLM	National Libraries of Medicine
NN/LM	National Network of Libraries of Medicine
OA	Open Access
OAD	Open Access Databases
ODLIS	Online Dictionary of Library and Information Science
OECD	Organisation for Economic Co-Operation and Development

OPAC	Online Public Access Catalogue
PLOS	Public Libraries of Science
SDGS	Sustainable Development Goals
SME	Small and Medium Enterprises
SPSS	Statistical Package for the Social Sciences
SWA	South-West Africa
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
USA	United States of America
WHO	World Health Organisation
WIPO	World Intellectual Property Organisation
WSIS	World Summit on the Information Society
WWW	Worldwide Web

CHAPTER 1

BACKGROUND OF THE RESEARCH STUDY

1.1 Introduction

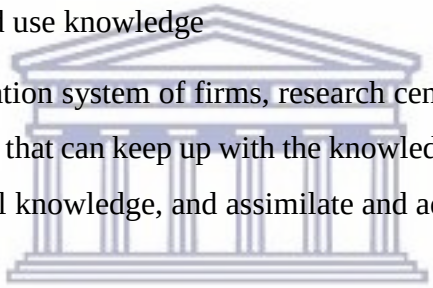
A knowledge economy is described as an economy that utilises knowledge as the key engine of economic growth where knowledge is acquired, created, disseminated and used effectively to enhance economic and social development (World Bank, 2007). Davenport and Prusak (1998: 5) define knowledge as "a fluid mix of framed experiences, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms". Information is defined by the Stevenson (2010: 730) as "facts or knowledge provided or learned as a result of research or study / what is conveyed or represented by a particular sequence of symbols, impulses".

Knowledge has become real capital and a source of treasure that libraries need to embrace in enabling a global knowledge economy and society through transformation (World Bank, 1998). In the study by Hedstrom and King (2006), on the epistemic infrastructure in the rise of the knowledge economy, state that knowledge is acquired through libraries, botanical gardens, the zoo, aquaria, museums and laboratories. Their view is supported by Mchombu (2012), Mchombu and Cadbury (2006), Mchombu and Mchombu (2014), Kargbo (2011) and Radijeng (2013) by asserting that libraries collect, organise and disseminate information that society accesses and uses to inform themselves on various issues of life in order to improve their education, health, economic and social advancement. As thus, high-quality libraries and information services guarantee access to information and knowledge, which are essential pillars of sustainable development for a knowledge economy (Bradley, 2015). The criticality of access to information, as prerequisite for development programmes across all sectors and levels to empower people to exercise their political and socio-economic right all be it economically active, to learn new skills and to hold their government to account, is recognised by the United Nations (UN) Post-2030 Agenda on Sustainable Development Goals (SDGs) (International Federation of Library Associations and Institutions [IFLA], 2015). These goals are critical to the successful realisation of a knowledge economy as envisaged by the Namibia Narrative Vision 2030 (Namibia. Office of the President, 2004). This study aims at

investigating the contribution of the public library towards enhancing Namibia's knowledge economy.

The four pillars of the World Bank's (1998) Knowledge Economy Framework will be used in framing the research study. The theory postulates that, for any country to fully participate as a knowledge economy, it must fulfil all four pillars, namely:

> (1) An economic incentive and institutional regime that provides good economic policies and institutions that permit efficient mobilisation and allocation of resources, and stimulates creativity and incentives for the efficient creation, dissemination and use of existing knowledge
>
> (2) A modern and adequate information infrastructure that can facilitate the effective communication, dissemination and processing of information and knowledge
>
> (3) Educated and skilled workers who can continuously upgrade and adapt their skills to efficiently create and use knowledge
>
> (4) An effective innovation system of firms, research centres, universities, consultants and other organisations that can keep up with the knowledge revolution and tap into the growing stock of global knowledge, and assimilate and adapt it to local needs.



These knowledge economy pillars are covered by the Namibia Narrative Vision 2030 that document outlines strategy goals for Namibia to improve the quality of life of Namibians to the level of people of developed countries, and for Namibia to transform into a knowledge-based economy by the year 2030 (Namibia. Office of the President, 2004).

The Namibia third National Development Plan, volume 1 (NDP3), has provided the definition of innovation as "the process through which social and economic value is extracted from knowledge through the creation, acquisition, diffusion and transformation of knowledge to produce new or significantly improved processes and products. As a result, as more Namibians acquire knowledge, they will begin to produce new products or improve systems and existing products, thus adding value to local products and improving GDP of the country" (Republic of Namibia, 2008).

1.2 Background to Namibia and its economy in brief

Namibia, formerly called South West Africa (SWA), gained its independence on 21 March 1990 after a long and bitter war under the South African apartheid regime (Akawa, 2014). The Republic of Namibia is a vast, sparsely populated country situated along the south Atlantic coast of Africa. The country shares borders with Angola, Botswana, South Africa, Zambia and Zimbabwe. The country is divided into 14 regions: the Zambezi, Kavango East, Kavango West, Kunene, Omusati, Ohangwena, Oshana and Oshikoto regions in the north; the Omaheke, Otjozondjupa, Erongo and Khomas regions in the central areas, and the Hardap and Kharas regions in the south (Namibia Statistics Agency, 2017a). It is geographically located in West Southern Africa, bordering the South Atlantic Ocean between Angola and South Africa. Namibia's geographical area is 824 292km² (318 260 sq. mi.). The climate is very dry savannah (Udogu, 2012).

Namibia's population is estimated at 2,324,388 (National Statistics Agency, 2017a). Namibia's spoken languages comprise of Oshiwambo 49.7%, Nama/Damara 11.0%, Kavango 10.4%, Herero 9.2%, Zambezi 4.9%, Afrikaans 9.4%, English 2.3%, Other Language not specified 1.0%, San 0.7%, German 0.6%, Other African Languages 0.5%, Tswana 0.3% (Namibia Statistics Agency, 2017b).

Namibia was colonised by the Germans and later, South Africa occupied the German colony of Südwestafrika during World War I and administered it as a mandate until after World War II when it invaded the territory (Katzao, Callaghan, Mbumba, Paternann, van Staden, and Tait, 2001). The colonial regime mentally and psychologically oppressed and tortured the Namibian people; consequently, it hindered the process of development of the country and its people equally.

Namibia unemployment is rated at 34.0% as indicated in the 2015/2016 Labour Force Survey, and it was found to be high in the rural areas 39.2%) compared to urban areas 30.3% (Namibia Statistics Agency, 2017a). The World Bank (2018) reported that Namibia is rich in natural mineral resources which have made it an upper-middle-income country. However, this has not much contributed to poverty reduction and employment which resulted from extreme socio-economic inequalities (World Bank, 2018). Income disparity in Namibia is also identified in the study by Mchombu and Mchombu (2014) that found an economic inequality between rural and urban areas which is cited as the main dividing factor in rural versus urban migration,

leading to the growth of informal settlements and shanty townships (Mchombu and Mchombu, 2014). Higher unemployment was partly resulted on Namibia economy heavily relied on the mining sector which does not demand a large amount of unskilled labours. Hence the majority of Namibia are unskilled or lack advanced education, resulting for them to rely on subsistence agriculture for their livelihood. The substandard education level affected their socioeconomic development lacking innovation to modernise farming or agriculture techniques and infrastructural development. The statue does not only affect people's livelihood, but also declined agricultural contribution to Namibia GDP in addition to drought and declines in global market prices and other factors (Republic of Namibia, 2017).

The fifth Namibia Development Plan NDP5, further stated that the Namibian economy focus on the following sectors: Enterprise Development and Manufacturing sector, agriculture and food security, rural economic development, blue economy, fishery, mining, tourism, and Research and Innovation (Republic of Namibia, 2017). Mining generates about one-fifth of the gross domestic product and is the biggest portion of income in foreign currency, due to the higher diamond and uranium production (World Bank, 2018).

Although Namibia has inherited a good physical infrastructure, market economy, rich natural resources and a strong public administration from the previous administration. NDP5 document reported that Namibia has been experiencing many developmental challenges that are not yet addressed by the previous NDPs (1. 2. 3, and 4). As thus, NDP5 goals include improvement of education system quality, including adult and training opportunities, for more Namibia to obtain a living wage ((Republic of Namibia, 2017).

1.3 Rationale / Motivation

The history of library and information services in Namibia was determined during the era of South African rule during which, according to Wayne and Donald (1994), the largest libraries were controlled by the directorate of white education. The public library service was established in 1965 by the administration of whites' department and access to the library was only granted to a selected minority group until 1985 when the library began to offer services to all races.

Namibia obtained its independence from the South African regime in 1990 from which a strong infrastructure of library and information services was built. Different types of libraries were

built across the country to take the library to the Namibian people. The legislation for the Republic of Namibia's Library and Information Services, Act No. 4, which was enacted in 2000, established the framework under which libraries operate today. All Namibian public libraries fall under the umbrella body of the National Library and Archives Service (NLAS) Directorate that was established under the Ministry of Education (Namibia. Ministry of Education, 2015).

There are currently 66 community/public libraries across the 14 regions of Namibia with three (3) university libraries and several special libraries (Namibia. Ministry of Education, 2015). The 66 public libraries include the three state of the art regional libraries built with the assistance of the Millennium Challenges Account (MCA) in three different regions, namely the Ohangwena Regional Library, the Omaheke Regional Library and the Oshana Regional Library. Each regional library houses 70 public-access computers, free internet access, thousands of books, an integrated library management system (ILMS), a 150-person hall with video-conferencing facilities and a mobile library unit (IREX,2014).

The information and knowledge resources with information, communications and technology (ICT) facilities were provided to Namibian society to have access to information and knowledge critical to its economic growth intent on leading Namibian people to become lifelong learners and to participate in the knowledge economy effectively for greater sustainable economic and social development. Such communities are prerequisites in a global knowledge economy (IREX, 2014; World Bank, 2003).

At the official inauguration of the Ohangwena Regional Library, Dr Hifikepunye Pohamba, the second President of the Republic of Namibia, made the statement that the South African apartheid regime had deliberately put Namibian people in the dark for a long time by denying them access to information and knowledge (Pohamba, 2014). The president's speech made it clear that the situation has changed and that the availability of libraries facilitating access to information and knowledge is evident of the change after independence, since the country is focusing on promoting the creation of a knowledge-based economy. The statement has, however, improved in contrast to the Namibia Vision 2030 document that states the following:

> *Namibia's libraries are poorly equipped to play their vital role in the Age of Information. Very few offer internet access. None had any media other than*

> *reading materials available (no videos, CDs DVDs etc.) and only a very few limited number of periodicals. There is also a lack of qualified librarians* (Namibia. Office of the President, 2004:77).

The effective dissemination of quality library services is essential in meeting the needs of the communities. Hence, the report by Network Information and Digital Access (NIDA) (2011), a consultancy body that conducted research and reviewed the previous policy framework for Namibia's Libraries and Allied Information for Self-Reliance and Development, which was published in 1997, found an information gap between the rural and urban areas of Namibia. The information gap was caused by a combination of poverty, uneven infrastructure and lack of access to libraries with low rates of the various literacies such as information, digital and media literacy, and lack of materials written in the multiple indigenous languages used by Namibian communities. The framework report supported the Namibia Vision 2030 statement about the lack of qualified librarians and inadequate numbers of both professional and other library staff to deliver effective library services. These challenges constrained the library and information profession from making an effective contribution to a knowledge-based economy. Resultantly, the progress of Namibia towards a knowledge economy has brought the idea of conducting this study in investigating the contribution of public library services towards Namibia's knowledge economy.

1.4 Problem statement

According to the World Bank (2016), Namibia is classified as an upper middle-income country as measured by the gross domestic product (GDP) despite the country having higher numbers of people living in poverty (Mchombu and Mchombu, 2014; NIDA, 2011). In the knowledge economy assessment, Namibia is ranked at number 89 in the world, while being fifth (5th) in Africa with Mauritius, South Africa, Tunisia and Botswana before it (World Bank, 2012). In addition, an empirical Namibian study by Mchombu (2012) and another study conducted with public libraries in Africa by Elbert, Fuegi and Lipekaite (2012) found that public libraries were still providing traditional services of lending books and facilitating study. Findings demonstrated that only few users used public library information resources for economic growth in issues such as financial, health, agriculture, trade and industry, and entrepreneurships. They further indicated that those innovation services in public libraries were

driven by librarians who were found to be lacking in competencies to effectively render such services for developing a knowledge economy.

It is, therefore, these literature findings and the World Bank rankings and classifications that have triggered the aim of this study in investigating the role of public library services towards a knowledge economy for Namibia, since, in a knowledge economy, people should have the necessary skills and abilities to acquire, create, disseminate and use knowledge effectively to enhance economic development (World Bank, 1998). The research problem of the study, therefore, is to investigate the role of public library services contributing towards a knowledge economy for Namibia. The study will be aided by the research questions as outlined in the next section.

1.5 Research questions of the study

The study aims to contribute to the body of knowledge by postulating that, for the people to have access to knowledge and information that will enable them to improve their economic growth, there must be policy and legislative frameworks in place to regulate the business process. The business process includes acquiring and making various relevant public library resources and services available to the communities to access. As such, the communities need to be equipped with different skills and competencies since these particular services are new to them (see chapter 2 of this study). Once they have acquired these skills and competencies, they are then able to confidently utilise the available library services constructively for economic growth. In this regard, the question remains whether there are policy and legislative frameworks in place. Are there relevant knowledge and information resources available to the communities? Are the communities aware of them? Do they know how to access them? Is having access to public library knowledge and information resources improving their economic and social development, and if so, how?

Therefore, the study aims to answer the following research questions which are aligned with the four pillars of the World Bank's knowledge economy framework:

1.5.1 Pillar 1: Economic and institutional regime

How do Namibia's legislative framework, national development plan and policies reflect access to knowledge and information as provided by information services such as libraries?

1.5.1.1 What are Namibia's policies and legislation frameworks that reflect access to information and knowledge as provided by public libraries?

1.5.1.2 How are the identified national policies and legislative framework implemented in ensuring the efficient mobilisation and allocation of resources? Do they support the sustainability of quality library services for the efficient acquisition, creation, dissemination and use of knowledge for the communities' economic and social development?

1.5.1.3 What policies and strategic guidelines are in place in public libraries guiding the overall operation for the execution and implementation of policies as part of progress towards a Namibian knowledge economy?

1.5.2 Pillar 2: Information and knowledge resources services and ICTs infrastructure

This particular pillar is subdivided into two parts, A and B.

A) Information and knowledge

1) What knowledge and information resources and services are available to and accessible by the user communities?
2) What are the community information needs, and how do libraries ensure that knowledge and information resources meet the needs of their users?
3) What is the process of acquisition of both print and electronic knowledge and information resources, and where are they acquired?
4) How are public library users accessing knowledge and information resources services? How do the users search for and find information in public libraries?
5) What outreach services do public libraries have when reaching out to the user communities that live great distances away from the public libraries?

B) ICT infrastructure

1) What ICT infrastructure is available in public libraries?
2) How are ICTs facilities in public libraries used by librarians in facilitating the communication, dissemination and processing of information and knowledge resources?

3) How are ICTs facilities in public libraries accessed by library users for knowledge acquisition, dissemination, creation and utilisation?

1.5.3 Pillar 3: Education and training

How do public library services contribute to education of both users and librarians to ensure that they have the competencies and skills for the knowledge economy?

1.5.3.1 What educational programmes and activities do public libraries offer to users to have the ability to acquire, create, disseminate and use knowledge?

1.5.3.2 What educational programmes and activities do public libraries offer to librarians to have competencies relevant in delivering quality library services and to have the ability to acquire, create, disseminate and use knowledge?

1.5.3.3 What collaboration and partnership agreements with other institutions, government and the private sector do public libraries have in providing quality services to users, and how do they work?

1.5.4 Pillar 4: Public library innovation system

One would ask what public library innovation systems are in place to deliver quality library services to users to enable them to tap into the growing stock of global knowledge, and to assimilate and adapt it to local needs for economic and social development.

1.5.4.1 What ICT innovation systems are available in public libraries? What benefits do these systems hold for the libraries and their user communities?

1.5.4.2 What is a non-ICT innovation system or process adopted by public libraries?

1.5.4.3 How do users apply the information and knowledge gained from utilising the public libraries' resources, services and ICT facilities, or what benefits do users gain from accessing information and knowledge from public libraries that enable them to improve their economic and social development?

1.6 Research design and methodology

Research design is the planning programme to guide the researcher in collecting, analysing and interpreting the observed facts (Bless and Higson-Smith, 1995). This study has adopted a mixed methods design which involves combining or integrating qualitative and quantitative research

methods (Creswell, 2014). More details on the design and methodology that this study has undertaken are contained in chapter 4 of this thesis.

1.7 Significance of the study

The study is of significance to the library sector and the country at large, as it is one of its kind in Namibia. The study was conducted empirically on the impact public library services have on the economic and social development toward a knowledge economy. The study is in support of realising the Namibia Vision 2030 to become a knowledge-based economy. It is also in support of the UN Post-2030 Sustainable Development Goal 16 (10) of ensuring public access to information and to protect fundamental freedom in accordance with national legislation and international agreements.

1.8 Scope and limitations of the study

The study will be conducted in Namibia, specifically in two different geographical locations of the northern region of Ohangwena and the Omusati region of the fourteen (14) regions of Namibia. In addition, piloting the study is also of vital importance which informs the design of the actual study. The study could not include all regions of Namibia due to the timeframe for completing the doctoral programme as required by the University of the Western Cape. Other limitations include lack of finances and human resources needed to conduct this large-scale study.

1.9 Ethical statement

The researcher has taken the research ethics policy of the University of the Western Cape for conducting research into consideration. Research consent will be obtained from the directorate of the Namibia Library and Archives Service under the Ministry of Education. Consent will also be needed from all participants. Participants have the right to withdraw from the study at any time and no names was mentioned; i.e., anonymity were guaranteed. Information provided by participants were treated as confidential. Voice tape recordings that was used for semi-structured interviews were deleted after transcriptions have been finalised. All participants were free to ask questions and raise any concerns they have about the study.

1.10 Definitions of terms used in this study

Knowledge economy

The study has adopted the World Bank Knowledge Economy definition that is based on an economy that utilises knowledge as the key engine of economic growth where knowledge is acquired, created, disseminated and used effectively to enhance economic and social development. In addition, the author also finds the definition by Organisation for Economic Co-Operation and Development (OECD) (2005:7) of a knowledge-based economy as fit for this study where it is defined as "an expression coined to describe trends in advanced economies towards greater dependence on knowledge, information and high skill levels, and the increasing need for ready access to all of these by the business and public sectors".

Information literacy

It is the ability of people knowing how to identify information and knowledge needs, to search for and to gather information, to assess and evaluate the information collected, and to create information and knowledge effectively in achieving personal, social, economic, occupational and educational goals (UNESCO, 2009).

Information needs

This entails a gap in a person's knowledge that, when experienced at the conscious level as a question, gives rise to a search for an answer. If the need is urgent, the search may be pursued with diligence until the desire is fulfilled (Reitz, 2004).

Institutional regime

According to the Information for All Programmes document (UNESCO, 2009), this aspect encompasses the legal and regulatory frameworks and strategic policies enabling the environment for the knowledge economy, emphasising access to knowledge and information for all. This regime will strengthen:

- Competition, entrepreneurship, firm restructuring, intellectual property, emergence of new markets in products and services, and openness to trade and foreign investment, so as to permit individuals and organisations to respond to changing opportunities and demands in flexible and innovative ways;
- Financial systems, including capital markets so that capital can flow to the most innovative and competitive sectors and firms;
- Enabling greater labour market flexibility so that innovative firms can attract the workers they need, and to permit restructuring of less competitive firms and sectors;

- Creating an effective and financially sustainable social safety net to help workers make these transitions;
- Enabling and encouraging the growth of small and medium enterprises, the source of much innovation and job creation;
- Building effective and accountable government capacity to implement these policies in an efficient and fair manner, and rooting out corruption at all levels of government.

Knowledge and information resources

Print and electronic sources of information and knowledge are available and accessible at or through the public library. These sources are aimed at supporting the decision-making needs of the community in achieving its personal, social, economic, occupational and educational goals.

ICT infrastructure

The public library's information communications and technology-based facilities are aimed at facilitating the overall management and operation of the library in providing high-quality services of accessibility, retrieval and dissemination of knowledge and information in and through a technology-based environment. In a nutshell, this is a public library environment that facilitates the communication, dissemination and processing of information and knowledge.

Education and training

Public libraries make educational and training programmes available to both the communities and the librarians who work there to ensure that they have the competencies and skills necessary for the knowledge economy.

Library innovation system and services

Public libraries innovation systems and services are delivered from the adoption of ICT infrastructure and service stakeholders to deliver quality library services to users to enable them to tap into the growing stock of global knowledge, and to assimilate and adapt it as innovation to local needs for economic and social development.

1.11 Outline of the thesis

The thesis is comprised of six chapters summarised briefly as follows:

1.11.1 Chapter 1: Background of the study

This chapter provides a background to the research study by briefly describing the main topics proposed to be discussed throughout in the study. The chapter introduces the research and provides a brief background to Namibia and its economy. The rationale of the study is followed for understanding the motivation for the research. The research problem statement in this chapter provides the main issues driving the study. The next aspect is the research questions derived from the objectives and these are organised in accordance with the World Bank Knowledge Economy (KE) Framework. A brief summary of the research design and methodology procedure is also included in this chapter. The full discussion of the methodology will be done in chapter 4. This chapter also clarifies the significance of the research study as well as explains the scope and limitations of the study. To ensure that the author adheres to the research ethical principles, this chapter offers an ethical statement, and then concludes by highlighting the meaning of some key terms used in the research study.

1.11.2 Chapter 2: Roles of public library services towards a knowledge economy

This chapter provides a review of literature related to the discourse of the role of public library services towards a knowledge economy. The review provided is based on the research questions of this particular study. The purpose is to report findings of other scholars that are related or similar to this study, and to create meaningful debates that will shape this study.

1.11.3 Chapter 3: Discussion of the World Bank Knowledge Economy Framework

This chapter stages the theoretical framework underpinning this research study. The knowledge economy framework developed by the World Bank is discussed, and its relevance to the study is presented.

1.11.4 Chapter 4: Research design and methodology

This chapter presents the process of how the research study is to be undertaken. It explains all the steps to be followed from the beginning to the end.

1.11.5 Chapter 5: Presentation and interpretation of findings

This chapter presents the data analysis and a discussion thereof through an interpretation of the findings of the study.

1.11.6 Chapter 6: Conclusion and recommendations

This chapter provides the conclusion and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Building a successful knowledge-driven economy for prosperity for all, as asserted by Blair (2002), requires people to come with innovative ideas and intelligence that create higher value-added products and better quality services as the information age is extended to all. The public library key role is to provide equity of access to knowledge and information collected from all sources of humankind to the communities regardless of their ability for affordability (McMenemy, 2009). By doing so, a public library is highly trusted as the best institution for knowledge and information providers of all subject areas (Flaherty, 2013).

An institution or a knowledge hub that, if used well, contributes to every decision-making process that involves the consideration of different ideas, based on the relevant information and recorded experience that can be found in many public library collections. Access to this rich information and knowledge enables citizens to contribute to economic activities and add value to the country's economy in areas such as education, knowledge economy, tourism, employment, health and social inclusion (PricewaterhouseCoopers, 2008). Such an ingenious knowledge hub is of paramount importance in the modern economy of the 21st century, an economy that has made knowledge not only an essential commodity to planning and development but also a cross-cutting commodity that adds meaning to all separate segments deemed necessary for development (Carlaw, Oxley, Walker, Thorns, and Nuth, 2012). However, proven evidence-based studies are needed to demonstrate the role of public libraries services toward a knowledge economy from previous scholars' literature.

The understanding of the term *knowledge economy* varies from author to author, starting with Clayton and Hepworth (2006) who coined their definition of *knowledge economy* as an economy that encourages its organisation and people to acquire, create, disseminate and use codified and tacit knowledge more effectively for greater economic and social development. In 2004, Powell and Snellman (p. 199) defined a knowledge economy as "production and service based on knowledge intensive activities that contribute to an accelerated pace of technical and scientific advancement, as its key component greatly relied on intellectual capabilities, more than on physical inputs or natural resources".

This study has chosen the definition of the World Bank of knowledge economy, which is described as an economy that utilises knowledge and information as the key engines of economic growth, where knowledge is acquired, created, disseminated and used effectively to enhance economic development (World Bank, 1998). A further relevant definition is by the Organisation for Economic Co-operation and Development (OECD, 1997) with the fancy term *knowledge-based economy*, an economy directly based on the production, distribution and use of knowledge and information.

The definitions above, though discovered by different authors, have one thing in common, which is the benefit of knowledge and information to social and economic development and growth. The research study has used information and knowledge interchangeably where knowledge is regarded as information and vice versa.

The chapter, therefore, provides a critical review of literature on the discourse of the role of public library services in contributing to a knowledge economy. The review is organised by means of themes related to the main research questions of the study, as discussed in chapter one, section 1.5, and it is also done based on not only currency but more on relevancy to the themes and the study purpose, as per Atkins and Wallace (2012). Themes have been borrowed from the theoretical framework of the study that will be discussed in chapter three.

2.2 Access to knowledge and information reflection in national policies and legislative frameworks

2.2.1 Library policies and the legislative framework

Policies are theories and rules or plans of action that formulate values of organisation and they are implemented by set procedures that practically outline how tasks and projects are to be implemented. Policies provide a framework of expectations of overall operation of the organisation and its outcomes, benefiting both the organisation and its stakeholders (Fitsimmons, 2011; Priestley, 2012). Library policies and plans of action are adopted by governments, and differ from library legislation, which lays down statutory. Policies are followed by manuals of procedures with guidelines on how policies are to be implemented and what must be done to support the policies (Azubuike, 2007; Priestley, 2012). Libraries and information services are established and created by national and international legislative frameworks that govern their operations (Lajeunesse and Sene, 2004).

Vitiello (2000) and Ocholla (1991) argue that legislative frameworks should regulate the governing of library and information service institutions:

- Create necessary different library types and agencies, service levels and performance indicators.
- Guarantee the establishment of a library network on a statutory basis.
- Ensure a stable financial support system for the sustainability of libraries and information services, and cooperation between central and local government.
- Set up library authorities, which are responsible for the staffing, administration and management of libraries.
- Ensure permanent, uniform, efficient expanding and coordinating library services.
- Regulate the provision of accessibility of information and knowledge for all, as well as free services to all users, irrespective of their qualifications and ages,
- Ensure quality education and training of library staff.

In a different context, Vitiello (2000) proposed that the establishment of library and information consortia be addressed by legislative frameworks in order to reinforce the weight of users in collection negotiations as to make available information through collective agreement licensing and establishment of collective bargaining bodies.

2.2.2 Library and access to knowledge and information within national policies and legislation

The United Nations Development Programme (UNDP) (2003) document reports that poor and vulnerable groups mostly lack information for their social and economic development such as basic rights and entitlements, public services, health, education, work opportunities and public expenditure budgets. In addition, the UNDP further indicates that disadvantaged people also lack visibility and a voice to enable them to define and influence policy priorities and to gain access to resources. That is unfortunately the case, even with the provision of Article 19 of both the UN Declaration on Human Rights and the International Covenant on Civil and Political Rights (ICCPR) that regulate access to information and freedom of expression as international human rights norms.

The enforcement of access to information and knowledge is more successful in countries with strong policy legislative frameworks in place (Azubuike, 2007). To further understand the need

for policy legislative frameworks in gaining access to information and knowledge through libraries, Priestley (2012) and Azubuike (2007) assert that policies are developed from the legislative frameworks in order to outline technical guidelines on the operation of different libraries, their information infrastructure, their services to be offered and the proposed profile of personnel for different positions. As thus, it includes financial instruments for the sustainable development of all libraries in guaranteeing access to knowledge and information for all.

In the same vein, McClure (1996) indicates that policy framework guidelines establish how knowledge and information are to be acquired, managed and organised; then how to facilitate retrieval and access to knowledge and information by the public. Radijeng's study (2013) reveals how libraries have contributed to the achievement of the Botswana Vision 2016. An educated, informed nation envisions that government will put in place a system of quality education, addressing the needs of the country in a dynamic global environment, including an effective information technology system. Radijeng (2013) further establishes that, apart from the common library services of collecting, organising and disseminating information for socioeconomic development, the library impact in the achievement of the Botswana Vision 2016 cuts across all pillars. This is done by means of empowering the communities with the ability to access knowledge and information in order to attain all individual aspects of the economy.

At international level, the Association of College and Research Libraries (ACRL), (2016) argues that users need appropriate skills to access relevant information to satisfy their information needs and become independent lifelong learners when they are information literate. It is, therefore, imperative for government to establish policy instruments related to education and information literacy for citizens (McClure, 1996). The relevancy of information literacy for educating citizens is recognised by most legislative frameworks.

In the United States of America, the Information Infrastructure Act of 1993 proposes an information literacy programme to train teachers, students, librarians, state officials and local government personnel in the use of computer networks and the internet (McClure, 1996). The proposal is supported by Becker, Crandall, Coward, Sears, Carlee, Hasbargen, and Ball (2012) who affirm that the National Broadband Plan of the United States of America recognises the role of libraries and other community organisations in providing training and access to high-speed internet.

In Singapore, Sabaratnam and Ong (2013) reveal the implementation of a library network strategic plan policy that proclaims the role of libraries as to not only provide information resources, but to also equip the citizens with skills to harness information and encourage knowledge-sharing through:

- reading, learning and information literacy, which enrich the reading habit and strengthen information literacy skills of Singaporean citizens;
- a next generation library plan that strengthens the role of libraries as community spaces for provision of access to knowledge for all, knowledge-sharing and community engagement;
- excellence in Singaporean and regional content that ensure reliable collection of Singaporean content and engage Singaporeans in discovering, using and appreciating their Singaporean published heritage;
- Digital libraries that make a diverse range of digital content and services easily accessible on the preferred devices and spaces of their users.

In Europe, various policies on access to knowledge and information have been formulated in the successive Council of Europe's Public Access and Freedom of Expression in Networked Information: Guidelines for a European Cultural Policy (Council of Europe, 2005). The guidelines set basic principles regarding public access to electronic network information. One of the principles is for libraries to provide the public with material written in their own local language, relating to their culture. The European Commission Green Paper (2008) acknowledges the role of libraries in the information society, while the Council of Europe's EBLIDA guidelines outline libraries' activities contributing to effective provision of access to knowledge and information for all (Vitiello, 2000).

The absence of library and other related national policy legislative frameworks that reflect the access to knowledge and information can affect the intended beneficiaries negatively; as a result, they will suffer a knowledge gap. An obstacle based on a lack of having the knowledge or technical know-how, which enhances the capacity to act accordingly leads to poor performance of citizens to contribute to the knowledge economy (Azubuike, 2007). This lack of access to knowledge and information, is mostly found to be an obstacle to development in Africa, could be solved by the inclusion of access to knowledge and information in national

legislative frameworks and national development plans aimed at educating citizens to be given the tools and resources to reduce their inequalities while fostering economic empowerment. (Alemayehu, 2014).

2.2.3 Public libraries and access to knowledge and information within international policy agencies

The previous section has discussed access to knowledge and information in different countries contained in policies and legal legislative frameworks. This section focuses on access to information and knowledge within the international policies and legislative frameworks.

According to the UNESCO Public Library Manifesto (1994), public libraries are identified as local hubs of information, making all kinds of knowledge and information readily available to their user communities. Public library services are provided on the basis of equal access for all regardless of age, race, sex, religion, nationality, language and social status. After many years the manifesto has now received recognition from the United Nations (UN) Post-sustainable Development Goals (SDGs), adopted in September 2015. These goals have to end poverty, protect the planet and ensure prosperity for all (United Nations, 2015). The UN SDGs, Article 16:10, ensures public access to information and protects fundamental freedom in accordance with national and international agreements (United Nations, 2015).

The adoption of the SDGs followed UNESCO's decision to reach out beyond an information society towards a society, which focuses on freedom of expression, quality education for all, universal access to information and knowledge, and respect for cultural and linguistic diversity. These decisions have been made at the World Summit on the Information Society (WSIS) (UNESCO, 2009). International policies have argued for adaptation and integration of the goals into national policies as recognition of access to information and knowledge for all. According to UNESCO (2009: 7), inclusion of the following has been stipulated:

- "Information literacy empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal, social, occupational and educational goals."
- All people have access to "information services", including the media, ICTs and in whatever other form they present themselves.
- Public and community libraries, archives and information centres are

accessible to all.

- Qualified information professionals should staff libraries and archives.
- Information resources relevant to local communities should be accessible, available and affordable.
- Digital access (computers, internet) should be available in all community libraries.
- Mobile phones should be used for information creation and access.
- People should be trained to acquire computer literacy (ICT skills) and media literacy at libraries.
- Facilities for storing and preserving information, whether in analogue or digital format, should be available in all communities.
- School libraries (learning resources) should be accessible to all children.
- Online libraries and archives should be accessible to all on the internet.
- Online search tools should be available to all, including multilingual searching opportunities.
- Open access should be available to scientific and educational information and resources.
- New literacies (information, computer and media) should be incorporated into education curricula.

In that context, national policy and legislative frameworks need to address such issues in accordance to improve the development of the country, thus enabling the community to have the capability to acquire, create, disseminate and utilise knowledge for the economic growth required for a knowledge economy (World Bank, 1998).

The depiction of national and international policies and frameworks does not guarantee their implementation. This is indeed confirmed in a study by Ocholla (1991), in which it is asserted that library and information legislation are in place in Kenya, but their successful implementation has not been fully effective. However, Vitiello (2000) claims that library infrastructure is good in some countries despite their operating without library legislative frameworks; however, that does not apply to all countries. Good national policy legislation strictly prescribes the performance objectives set for all libraries. Regulatory provisions for implementation are left to the initiative of third parties such as local authorities, associations and libraries themselves (Vitiello, 2000).

The successful implementation of international and national policies and legislative frameworks on access to knowledge and information for all includes the assurance that public libraries, as local centres of knowledge, will be allocated adequate financial resources, enabling the achievement of its key role of acquiring or collecting, organising and disseminating all kinds of knowledge and information so as to make it available to all communities (Saur, 2001). It is, therefore, imperative for libraries to examine the community within which they operate or which are proposed to be established in order to understand the information of the respective communities' needs through thorough analysis. This exercise aims at providing library services matching the needs of the different communities (Saur, 2001).

Given the formulation of policy of legislative framework on access to information and knowledge, the implementation includes the establishment of public library service infrastructure. The next section, therefore, discusses knowledge and information resources as well as the ICT infrastructure of public libraries.

2.3 Public library knowledge and information resources and ICT infrastructure

The library is an essential component of a nation's information infrastructure as an independent institution. It is embedded in the information infrastructure of universities, communities, governments and corporations, providing the most effective, efficient and appropriate information services to its user community (Borgman, 2003).

Infrastructure is defined differently by different authors. The definition given by the Online Free Oxford Dictionary (n.d.) is the most suited to fit the context of this study. The definition states that infrastructure is the "underlying base or foundation especially for an organization or system" or it comprises "basic facilities, services, and installations needed for the functioning of a community or society".

Information and knowledge is the basic foundation needed for the effective functioning of any community in a knowledge economy. Borgman (2000) envisions the global information infrastructure as that governments, businesses, communities and individuals cooperate to link the world's telecommunication and computer networks into a vast castellation capable of carrying digital and analogue signals in support of every conceivable information and communication application. Borgman's prediction includes the collection of networks that will

promote an information society that benefits all through peace, empowerment and access to information for education, business, the social good of all, more productive labour through technology-enriched work environments and finally, a stronger economy through open competition in global markets that will lead to economic equity (Borgman, 2000).

In continuation, Borgman (2000) claims that global information infrastructure increases the focus of information resources on online access. The assumption indicates that print publication publishing will phase out to be transformed into electronic publishing and access, which will affect libraries that rely on printed material, although they will still remain gatekeepers of information for their communities. Borgman was published 16 years ago and like many other researchers, he failed to consider the developing countries' level of knowledge infrastructural resources development.

Davis (2015) remarks on the heavy promotion of the application of ICTs in Africa in catching up with the rest of the world. Hence, Africa is still struggling with basic literacy skills in many communities.

The knowledge, information and ICT infrastructure components are subdivided into two sections, namely public library knowledge and information resources and services, and ICT infrastructure.

2.3.1 Public library knowledge and information resource services

Public libraries are declared as communities' knowledge hub by the UNESCO Public Library Manifesto (1994) in providing information and knowledge to all people of all ages. The implementation of policy legislation frameworks enables libraries to effectively acquire resources targeting the information needs for social and economic development of different communities through strategies set to provide the public with equal access to knowledge and information in meeting these needs.

Some of the communities' information needs are identified by Mchombu and Cadbury (2006). They state that access to knowledge is the developmental key to improving the situation in communities. These needs refer to sanitation and hygiene, clean drinking water, appropriate technologies, environmental management and the sustainable use of natural resources, health-related issues, income generation and food production.

The study done by Saur (2001), however, emphasises that public libraries sufficiently acquire information and knowledge resources in a variety of formats to meet the needs and interests of the local community, reflecting the culture of the local community and society.

2.3.1.1 Communities' information and knowledge needs

The implementation of policy legislation frameworks enables libraries to effectively acquire resources targeting the community's information needs. Strategies will be followed to provide the public with equal access to knowledge and information, while meeting their information needs for social and economic development.

According to the Online Free Oxford Dictionary (n.d.), a need is "a condition or situation in which something must be supplied in order for a certain condition to be maintained or a desired state to be achieved". The definition of a library fraternity need refers to the information requirements of the community (Westbrook, 2001). Therefore, an information need in the context of the library and information profession is a value judgement that a particular client group, service provider or facility has regarding an information-related problem, which requires a solution in order to fulfil a necessary, useful and defensible purpose (Dorner, Gorman and Calvert, 2015).

2.3.1.2 Community information and knowledge needs and gap analysis/assessment

The provision of relevant information meeting the needs of the community is determined by the community information needs analysis (CINA). This is a structured, planned and formal process that identifies the information requirements of the people within the jurisdiction of the library (Westbrook, 2001). The process is referred to by some authors, including Dorner, Gorman and Calvert (2015). Information Needs Analysis (INA) is the process where libraries define, obtain and apply information to determine the solutions that are useful or necessary in serving that defensible purpose for a particular user group, information service, system or facility. Briefly, it is a process of identifying and resolving an information-related contextual problem experienced by users.

The practice of conducting the community information needs analysis (CINA or INA) is evident in Iilonga (2015). In case of a public library, an information needs analysis is conducted with community members who are served by the particular public library (Iilonga, 2015).

2.3.1.3 Different types of community information and knowledge needs

In understanding the theory behind human needs, Dorner et al. (2015) assert that community information needs can be viewed in relation to the theory of hierarchy of needs by Maslow (1954). He theorises that human beings are motivated by their needs and basic physical and emotional needs must be satisfied first for the next tier of needs to be fulfilled.

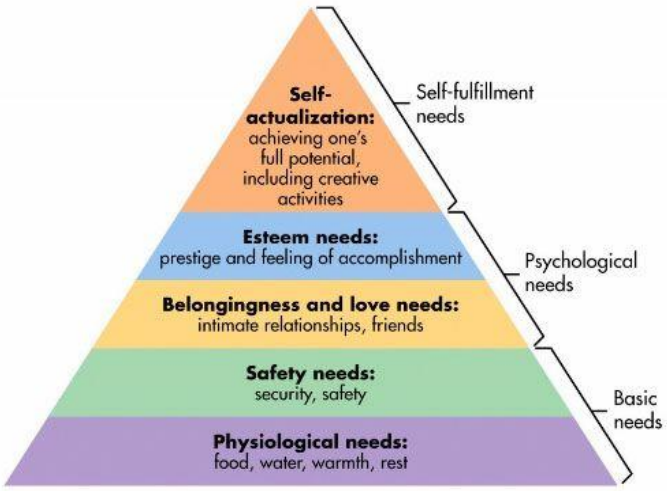


Figure 1: Maslow's hierarchy of needs (adopted from McLeod, 2016)

In summary, Maslow states that needs are hierarchical in nature and achieving one level gives rise to the next level of needs. He classifies his needs theory as follows (Maslow, 1954):

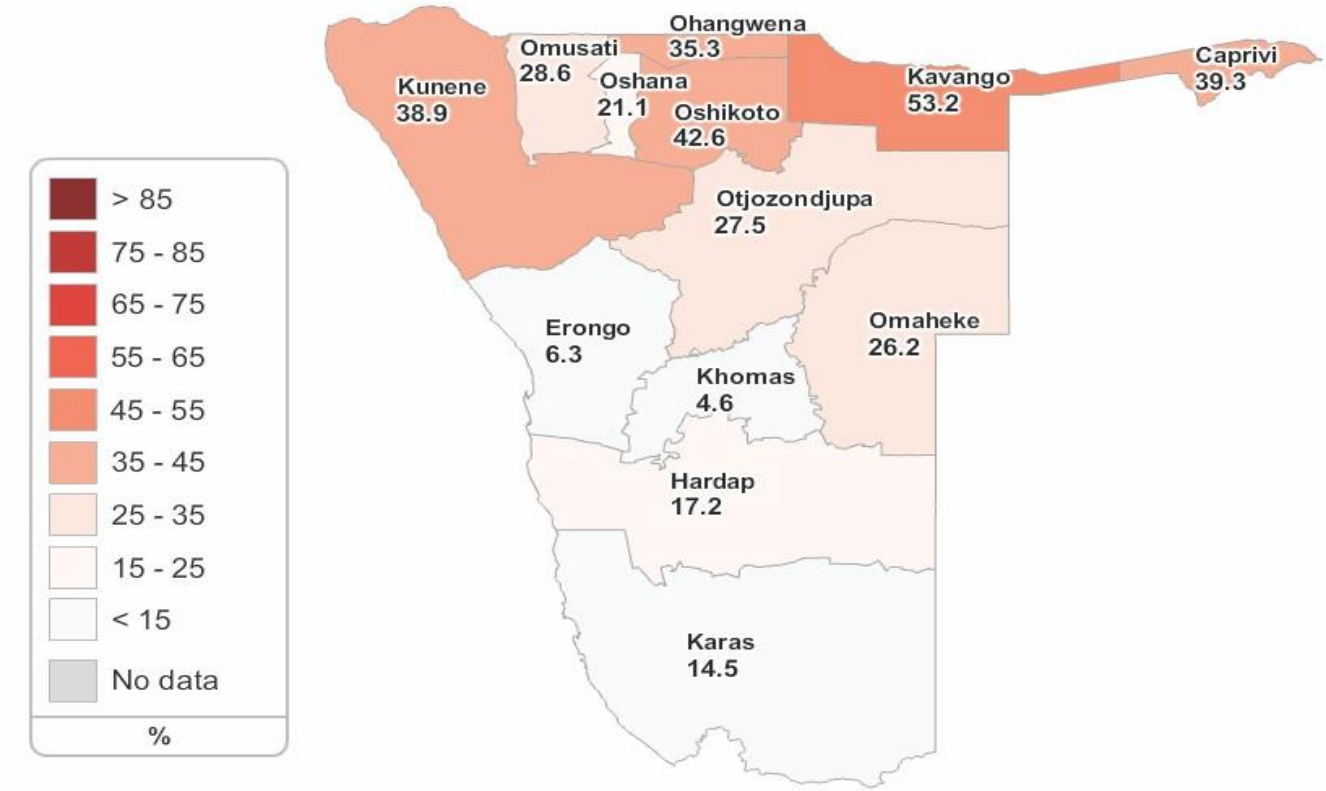
1. Physiological and biological needs as being air, food, drink, shelter, warmth, sex and sleep.
2. Safety needs are protection from the elements, security, order, law, stability and freedom from fear.
3. Love and belongingness needs include friendship, intimacy, affection and love from work groups, family, friends and in romantic relationships.
4. Esteem needs comprise achievement, mastery, independence, status, dominance, prestige, self-respect and respect from others. Esteem needs take two forms: (a) a need for strength, achievement, mastery and competence; and (b) a need for reputation, status, recognition and appreciation. Fulfilment of these needs leads to a sense of self-confidence, worth and value.

5. Self-actualisation needs entail realising one's personal potential, self-fulfilment, seeking personal growth and peak experiences.

Maslow's basic physiological and self-fulfilment needs are all part of community needs that are satisfied by having rightful information and knowledge. Case and Given (2016) claim that people need information for learning or understanding, which forms part of the self-fulfilment needs in Maslow's theory. However, learning or understanding cannot be achieved without fulfilling the physical and physiological necessities for daily life such as food, shelter, clothing, money and love.

Basing the Namibian situation on Maslow's hierarchical needs theory in relation to the knowledge economy, according to the Republic of Namibia's National Planning Commission report (2015), more than half of Namibia's population are classified as poor with a high incidence of poverty, especially in rural areas that depend on subsistence farming for survival. The poverty rate is illustrated in the map below:

Map 1: Regions of Namibia – Headcount poverty rate, 2011 (upper-bound poverty line) (adopted from the Republic of Namibia's National Planning Commission Report, 2015)



The poverty rate of Namibia confirms that Maslow's basic needs in his hierarchy have not yet been met by most of the population groups which should be met first before a need for acquisition of information and knowledge arises. In contrary, the study by Mchombu (2014) conducted in Namibia's Khomas region has found that 30% of the participants indicated that the information and knowledge have helped them to get basic necessities such as food, clothes, soap, school uniforms and blankets. This finding indeed adds two new variables to Maslow's physiological needs, namely information and knowledge.

In expansion of community information needs in practice, Mchombu (2012) conducted a study with library users of the Greenwell Matongo public library in Windhoek, Namibia, that found that adults expressed the need for the public library to provide business classes, computer classes, driving school classes and cinema or video shows on farming. Similarly, Jiyane and Mostert (2008) identified some business information needs for female entrepreneurs to empower them in contributing to economic development. These needs were how to obtain finances to grow the businesses, places to obtain products at the lowest prices, business advice, where to obtain permission to sell their products, how to expand their businesses to become more profitable, how to attract tourists and shops to buy their products, training on operating the products such as phones if a problem occurred with it, where to obtain raw products to enable them to produce their own products, the correct pricing of products so that they are not too cheap or too expensive, how to form networks with people selling the same products, training on how to keep the products fresh for longer periods, training in financial matters to learn to save money for future expansion and how to build a decent business.

Public libraries should be able to stock information on various subjects and provide services in meeting the identified needs in order for the people to freely develop themselves and the country economically. Case and Given (2016), in support of this demand, have found that people have many needs and they need relevant information and knowledge to satisfy their needs. Among the information needs identified by Case and Given (2016) not covered by Jiyane and Mostert (2008) and Mchombu and Cadbury (2006) are information needs in making a decision to buy a product (business information needs), in healing a patient (health information needs), in betting on race horses (entertainment information needs), in finding legal assistance (legal information needs), in acquiring national news updates and reading newspapers (current news), in satisfying educational information needs, on how to acquire job

skills and employment, and regarding agriculture (Ahmed, 2010; Case and Given, 2016; Elbert, Fuegi and Lipeikaite, 2012).

Drawing from Case and Given's (2016) identification of people's information needs, it is clear that even though they have indicated that not all human needs are satisfied by means of providing relevant information, their contribution has demonstrated that human beings indeed need information for socioeconomic development. Moreover, some communities have expressed the need for ICT training in using computers, for effective internet information searching and relevant electronic literature search training (Rutland and Smith 2010; Taylor et al., 2012).

2.3.1.4 Public library collection development

The preceding section has discussed and identified different community information needs. Collection development, based on the Online Dictionary of Library and Information Science (ODLIS) by Reitz (2004), is the process of planning and building a useful and balanced collection of library materials over a period of years, based on an ongoing assessment of the information needs of the library's clientele, analysis of usage statistics, and demographic projections, normally constrained by budgetary limitations. Collection development includes the formulation of selection criteria, planning for resource sharing, and replacement of lost and damaged items, as well as routine selection and deselection decisions. Large libraries and library systems may use an approval plan or blanket order plan to develop their collections. In small- and medium-sized libraries, collection development responsibilities are normally shared by all the librarians, based on their interests and subject specialisations, usually under the overall guidance of a written collection development policy.

In satisfying the information needs of the community, the library uses the results of the community information needs analysis (CINA) to provide high quality access to knowledge and information resources, based on the collection development policy and the availability of funding. Sabaratnam and Ong (2013) confirm that collection development is done to establish a rich knowledge base in support of community information needs as explored in the previous section. These needs are met through the process of knowledge and information acquisition, as discussed below.

2.3.1.5 Acquisition and collection of different knowledge and information resources for public libraries

Every public library acquires information and knowledge based on the demands of the target community as per information needs analyses and assessments conducted. The identified specific information needs are then categorised into different subject themes for sources of information and knowledge when acquiring materials in various formats from different vendors, as listed below.

Table 1: Public library information resources (Saur, 2001; Yi, 2015)

Library resource	Resource format
Fiction and non-fiction for adults, young adults and children	Books, both hard and soft cover
Reference works	Pamphlets and ephemera
Electronic databases	Newspapers and periodicals, including cuttings files
Periodicals	Digital information through the internet
Local, regional and national newspapers	Online databases
Community information	CD-ROM databases
Government and local government information	Software programs
Business information	Microforms
Local history resources	Tapes and compact discs (CDs)
Genealogical resources	Digital versatile discs (DVDs)
Indigenous knowledge	Video cassettes
Local language resources	Laser discs
Foreign language resources	Large print materials
Minority language resources	Braille materials
Music scores	Audiobooks
Games	Electronic books
Toys and puzzles	Posters
Brochures	Local content information
Journals, Serials	Open-access databases

The table includes almost all materials of public library collections. The section below briefly explains some types of information resources that benefit the community socially and economically. These information resources are kept for referencing, consulting or borrowing and are accessible by the public (Arendt and Fife, 2015). The purpose is to facilitate access to local and community information, e-governance, primary and general health information, educational opportunities, cultural awareness and understanding of transforming communities into informed and educated citizens. These information resources also foster social cohesion in society through lifelong learning (Satgoor, 2015).

- **Electronic databases**

Public libraries acquire information in electronic format through their subscription to databases, which consist of published journals, magazines, reports, documents, newspapers, books, image collections and more. Most electronic databases are accessible through the internet, except those that are acquired in DVD or CD-ROM format to be used in the library or to be downloaded on users' devices (McMenemy, 2009). The acquisition is either done as individual library subscriber or in collaboration with other local libraries in the form of consortium. This offers opportunities to gain large discounts by collectively using specific suppliers. The consortium negotiates licences for databases at an affordable price (McMenemy, 2009).

The following list is a combination of electronic database subscriptions of the Brooklyn Public Library (2016) and the Vaughan Public Libraries (2016). Their electronic databases include but are not limited to the following:

- ABI Inform Research: A collection of indexes to newspapers (including *The Wall Street Journal*) and other periodicals covering business and economics, education and general subjects.
- Academic OneFile: Provides peer-reviewed, full-text articles from the world's leading journals and reference sources. It covers subjects such as the physical sciences, technology, medicine, the social sciences, the arts, theology, literature and other subjects. Coverage is from 1980 to current.
- Academic Search Premier: Full-text articles from academic journals covering all major areas of study including the social sciences and humanities, education, computer

sciences, engineering, physics, chemistry, language and linguistics, arts and literature, medical sciences, ethnic studies and more.

- Ancestry.com: Genealogical research for billions of records from countries all over the world. Get access to census data, military and birth records, directories, the social security index and passenger lists. Now it includes important New York State family history records. Available at public computers at all Brooklyn Public Library locations.
- Audiobook Cloud: An online audiobook library collection of streaming audiobooks for children and adults. Listen online.
- Books in print: A comprehensive database of English language books, videos and audiocassettes currently in print or distribution. List details needed to order items for purchase, e.g. ISBN numbers.
- Business Source Premier: Contains complete articles from thousands of business journals, market research and industry reports for hundreds of industries, as well as international economic reports.
- Chapter-A-Day**:** Join the online business books clubs and start reading books in your email. Each day the library sends you a 5-minute portion of a book. By the end of the week, users have read 2-3 chapters. Those who want to finish a book, go to the library to pick up a copy. Every week a new book is featured. Library users need to sign up to participate in the book club reading service provided by Chapter-A-Day.com
- Consumer reports: Provides access to current consumer report information.
- Coursera: An education platform that partners with top universities and organisations worldwide to offer courses online for anyone to take for free.
- E-books on Ebscohost Collection: Search, read and download eBooks in different subject areas, including business, career, classic literature, etc.
- Encyclopedia of Life: Provides comprehensive, multilingual information for every species on Earth. It gathers, generates and shares knowledge in an open, freely accessible and trusted digital resource. It includes articles, images and tools for further education.
- Educational Resources Information Center (ERIC): Online digital library of education research and information.
- Gale Virtual Reference Library: Provides access to specialised reference sources that used to be only available in libraries. EBooks available in this collection are the Gale Encyclopedia of Cancer, the Gale Encyclopedia of Genetic Disorders, the Gale Encyclopedia of Medicine, the Gale Encyclopedia of Nursing and Allied Health,

scholarships, fellowships and loans (22nd edition) and non-fiction literature classics for students.

- Hoopla: One can borrow free digital videos with one's library card and gain access to Hoopla titles available for instant streaming or temporary download. Watch on your smartphone, tablet or computer.
- JSTOR: Offers researchers the ability to retrieve high-resolution scanned images of journal issues and pages as they have been originally designed, printed and illustrated. The journals archived in JSTOR span many disciplines.
- Kids InfoBits: An exciting database designed especially for students in kindergarten through grade five. Complete with an engaging, developmentally appropriate graphic interface, premier reference content and the best magazines for elementary school students.
- MasterFILE Premier: Full-text articles covering a broad range of subjects, including general reference, business, education, health, general science and multicultural issues.
- NoveList K-8 Plus: An electronic resource that contains materials for all kindergarten through grade eight. It includes picture books, children's chapter books and young adult titles. Allows young readers and teachers to search titles by favourite author name, title, series name and theme or topic. Also provides lists of award-winning and recommended books. Includes thematic units for teachers.
- OneClickdigital: An all-new, easy-to-use website and platform for you to download audiobooks.
- OverDrive: Check out and download e-books and e-audiobooks using your library card.
- PressReader: Instant access to 4 000 newspapers from 100 countries in 60 languages. The newspapers appear in their original format and original languages. Newspapers are often available before they hit the newsstands in their respective countries. PressReader features archived issues up to two weeks, a magnifying lens/zoom option, bookmarks and full-text searches. Newspapers are organised by country and language, and in alphabetical order.
- Professional Development Collection: Articles and abstracts from academic journals for professional educators.
- Project Muse: Comprehensive full-text access to indexed and peer-reviewed humanities and social sciences journals. Sole source of complete versions of titles from many of the world's leading university presses and scholarly societies.

- ScienceFlix: Covers major science areas like earth science, space, life sciences, the human body, physics and engineering with general overviews and articles for deeper understanding. It includes videos, project ideas, experiments, quizzes and information about careers in science. It complements the Next Generation Science Standards.
    - TrueFlix: Read and listen to e-books and watch videos online based on titles from the TrueFlix non-fiction book series. Also look up project ideas, extra information and lesson plans for teachers and others.
    - Teen Health and Wellness: A health database specifically for teens, providing curricular support and self-help on topics including diseases, drugs and alcohol, nutrition, mental and emotional health, family life, sexuality and more.
- Universal Class: Offers the highest quality online courses for patrons interested in the lifelong pursuit of knowledge for either personal or professional reasons''.

- **Government and local government information and Knowledge sources**

Government's information resources are a wealth of information produced by government ministries, agencies and offices that is useful to citizens. Government information is available in two formats:

- Government print publications: The information and data are published and gathered at all levels of government, be it local, state, national or international. It is made widely available through established networks of libraries at which the government deposits copies of its documents (Smith, 2011). Libraries in the network receive government publications free of charge to provide space for the collection and personnel to assist the public in using the materials.
- E-government information and knowledge: In addition to print government information, Smith (2011) further states that more access to government information from all levels of government is also available on the World Wide Web. Public libraries provide public access to the computer equipment, software and search assistance necessary to find government information on the Web (Smith, 2011). The Namibian study by Uutoni, Yule and Nengomasha (2011) found a potential for public libraries to provide and promote e-governance, but faced with the challenges of technological diffusion, human and financial resources to effectively deliver the service. In Canada and the USA, public libraries supplement their small physical collections and facilities with free electronic resources as a way of extending library services beyond the normal operating hours. The initiative also supports e-government services and gives access to

other free resources like e-books, local or regional archival projects, business resources, government resources, financial sources, directories, legal resources, entertainment, test preparation materials, literature and language, and maps. The resources web pages are prime access points, which libraries add to connect users who do not have computers at home to use at the library (Hill and Bossaller, 2013).

- **Indigenous knowledge**

Warren and Mundial (1991) define indigenous knowledge (IK) as local knowledge that is unique to a given culture or society, and knowledge that is in contrast with the international knowledge system generated by universities, research institutions and private firms. IK is seen as the basis knowledge that is applied in areas of agriculture, health care, food preparation, education, natural resource management for local level decision-making and a host of other activities in rural communities. IK is valued for sustainable development, medical research, government and civil society (Dim and Mole, 2015). IK is stored in people's memories and activities, and expressed in stories, songs, folklore, proverbs, dances, myths, cultural values, beliefs, rituals, community laws, plant species, animals and plants. The knowledge is shared and communicated orally and through culture (Kargbo, 2005). In addition, IK includes (Dlamini, 2005):

- Information on trees and plants that grow well together
- Health healers tests of new plant medicines
- Human resources, which include local organisations such as kinship groups, councils of elders or groups
- Education, which includes traditional instruction methods, apprenticeships and learning through observation
- Agriculture, which includes animal husbandry and ethnic veterinary medicine
- Food fermentation
- Practices and technologies that include seed treatment and storage methods
- Tools such as equipment for planning and harvesting
- Cooking pots
- Arts and crafts that include handcrafts such as mat-making

The Namibian study by Chinsembu and Cheikhyoussef (2016) discovered that there was ample information on Namibia's indigenous knowledge, but such knowledge needed to be documented. Their research focused on indigenous knowledge regarding medicinal plants for

treating HIV/Aids-related symptoms as well as for diseases like malaria, cancer and other microbial infections in humans and livestock. It included indigenous foods, indigenous knowledge used to cope with human versus wildlife conflicts and floods, climate change, management of natural resources, as well as adolescent customary and initiation ceremonies (Chinsembu and Cheikhyoussef, 2016).

In support of research conducted by Dim and Mole (2015), the Namibian Library and Archives Service (NLAS) developed a national indigenous knowledge preservation project that started in March 2015 and ended in September 2015 after realising that there was a shortage in indigenous knowledge at public libraries. The project recorded 16 videos on the Ovawambo tribe's indigenous foods, drinks and utensils. These videos were uploaded on the newly designed website concentrating on Namibia indigenous knowledge.

The captured DVDs are in the process of being distributed to all public libraries across the 14 regions of Namibia. The project is continuing to record and capture indigenous knowledge on intercultural activities of the Ovahimba/Herero and Damara/Nama tribes of Namibia. It will then continue in other tribes until the entire Namibian body of indigenous knowledge has been recorded and captured for preservation (Ministry of Education Arts and Culture, 2016). This project strengthens Kargbo's (2005) study that enforced the responsibility on public libraries for the collection, organisation, preservation and dissemination of indigenous knowledge systems (IKSs) for management and preservation.

As a result, IK is benefiting users by strengthening community involvement and participation in local knowledge through:

- Serving as focal point for community activities and ensuring a sense of belonging among members
- Providing information about indigenous knowledge systems for the socioeconomic development and improvement of communities
- Providing information for communities to be able to acquire skills and knowledge confidently to participate in IKS
- Providing knowledge and information for research and development purposes

Dim and Mole (2015) indicate that is not easy accessing IK, although it is important for economic purposes. It is, therefore, vital to repackage IK by putting together information

gathered from different sources and organising it into meaningful ways that make sense for the purpose of easy understanding and usability.

The World Bank has discovered that many developing countries hold unique intellectual property (IP) content that is increasingly recognised as a valuable asset in industrialised and developed countries alike (World Bank, 2007). As such, this preservation of indigenous knowledge is imperative, as it provides input in many modern industries such as pharmaceuticals, cosmetics, agriculture, food additives, industrial enzymes, biopesticides and personal care. Its importance may not be realised in developing countries, but most of the value added in such cases is appropriated by firms in industrialised countries whose advanced scientific and technological capabilities make appropriation possible without the prior informed consent of the holders of that knowledge (World Bank, 2007).

- **Foreign language resources**

The word *foreign* is defined by the online Merriam-Webster Dictionary as "coming from or belonging to a different place or country". The second meaning entails "relating to or dealing with other nations". In this context, it means library information resources such as books, journals, encyclopaedias acquired from different countries and dealing with other nations. The synthesised definition with linkage to information resources is affirmed by Kont (2015), namely that foreign knowledge is the knowledge which has been acquired orally or through cultural activities from other countries, and domestic knowledge is the knowledge acquired orally or through cultural activities from within the country.

The Pakistani study by Haq and Ahmad (2012) has found that local libraries depend on the United Kingdom and America as major book publishing industries, since the local ones are poorly developed. The development of global information resource networks has allowed contents published in foreign information resources to be responsive to the needs of communities as research is part of worldwide collections that are interconnected, coordinated and interdependent for all geographical distributed users (Case and Jakubs, 2000).

- **Open-access databases**

Open-access databases (OADs) are digital, online, free of charge and free of most copyright and licensing restrictions. There are two primary vehicles for delivering OADs to research articles, namely OA journals ("gold OA") and OA repositories ("green OA"). The main

difference between them is that OA journals conduct peer reviews and OA repositories do not. Some OA journal publishers are non-profit organisations (e.g., Public Library of Science or PLoS) and some are profit-bearing organisations (e.g., BioMed Central or BMC) (Suber, 2015).

Another open-access database is a collection of Research4Life either acquired through normal purchasing, subscriptions, open access, donations and so on with coverage on the Research in Health Programme (Hinari), research in agriculture (AGORA), research in the environment (OARE) and research for development and innovation (ARDI) based on recent, high-quality and relevant scientific knowledge. Research4Life is a public-private partnership of the World Health Organisation (WHO), the Food and Agricultural Organisation (FAO), the United Nations Environmental Programme (UNEP), the World Intellectual Property Organisation (WIPO), the Cornell University, Yale University, the International Association of Scientific, Technical and Medical Publishers, and up to 185 international scientific publishers.

Their goals are to deliver knowledge to the world's poorest countries and to reduce the knowledge gap between high-income countries and low- and middle-income countries by providing affordable access to critical scientific research (Research4Life, 2016).

2.3.1.7 Accessibility and usability of public library knowledge and information resources by the community

Availability of information and knowledge in libraries does not always guarantee accessibility and usability by users, as it depends on its relevance to the particular community. The terms *access* and *accessibility* are defined differently by different authors. Among all, the definition by the Online Business Dictionary (n.d.) is found to be more suitable for the purpose of this study. It defined accessibility as the extent to which a service is obtainable by a user at the time is needed, and it is within reach by users from other location. Hence, UsabilityNet (n.d.) website has described usability as the means of making products and systems easier to be used in accordance with user needs and requirements. Usability is about:

- Effectiveness – users should be able to complete tasks or achieve goals when using the resources.
- Efficiency – the information resource or source must be available.
- Satisfaction – the information resource or source must be easy to be used and understandable.

Having said that, knowledge and information resources should be both accessible and usable to benefit all users so as to enable them to contribute to a country's knowledge economy. Public libraries being local gateways to knowledge, as per IFLA/UNESCO Manifesto (2001), need to be promoted in communities so as to fully achieve their goals of providing information and knowledge resources and services in a variety of media to meet the needs of individuals and groups for education, information and personal development, including recreation and leisure. IFLA/UNESCO further emphasises that public libraries provide access to a wide range of knowledge, ideas and opinions for the development and maintenance of a democratic society (IFLA/UNESCO, 2001).

A study conducted in Namibia by Ignatow et al. (2012) has found the three libraries located in the poor townships in Windhoek, namely Greenwell Matongo, Maxuilili and Rossing Foundation, to be all stocked with some fiction materials, including books by Namibian local authors and South African authors. These are mostly meant for educational purposes. However, those library collections are poorly stocked in comparison with the Windhoek Public Library that is located in the city centre, which has a large fiction collection to support education. Nevertheless, according to their study, all Namibian public libraries provide access to business resources and information about job opportunities that are generally listed in the newspapers and made available to the public.

Mchombu's (2012) study, which had also been conducted at the public library in Greenwell Matongo in Namibia, found to be heavily used by young people for educational purposes of studying, internet searches, reading, photocopying and borrowing of books. Though earlier Namibian studies have indicated the availability of business information, among others, in public libraries. Mchombu (2012) further revealed that the library would be more essential to the community if it increased the service to provide business classes, computer classes, driving schools and cinema/video shows on farming, based on practical skills.

These findings show that Namibia public library services have improved, compared to the study findings by Chiware and Dick (2008). They state that public library networks in Namibia have not been used successfully to provide access to business information, including other developing countries as compared to developed countries whereby public libraries provide ready access to directories and a range of business information sources.

In South Africa, according to Blaine (2016), Monde Kula, the organiser of the Culture Book Fair in Khayelitsha, Cape Town, remarked that local libraries in Africa are perceived as white elephants due to them holding materials not meeting the needs of their communities, as they are dominated by white writers and local communities did not have access to these books. Nassimbeni and Tendwa's (2008) study conducted at the Cape Town City Public Library presented a different view on accessibility and usage of public library resources by revealing that public library users access Bibles, magazines, fiction, cookery books, business-related books and books that help with daily challenges such as health issues and social grants, and school textbooks.

Satgoor (2015) states that the differing findings in the same countries depend on the location of the library, as generally many South Africans still do not have access to information, which is aimed at improving their socioeconomic development. The situation is a result of a digital divide that has suppressed the functional and cognitive development of the majority of South Africans.

The position of Uganda is not different from South African study findings. Gould and Gomez's (2010) study has established that underserved library communities have the ability to access information, but the information is not useful to them, since it is usually written in a foreign language like English and consequently, the information is not relevant to the particular community. As the result, public libraries suffer from a lack of books and they are mostly overloaded with irrelevant content that does not meet the needs of the community.

In a different study, Dent (2007) asserts that rural public libraries in Uganda have contributed to local economic development through provision of access to information intended at improving the community and human development in areas related to health and wellbeing, financial stability and education, arguing for the establishment of more rural public libraries for the purpose of improving living conditions of areas affected by poverty and slow economic development.

The Nigerian study by Ugwoke (2013) also shares the same sentiment whereby farmers demand information on agriculture to be available in hardcopy and audio-visual formats in local languages that they clearly understand. To overcome the language barrier issue in Nigeria, Ugwoke (2013) provides solutions whereby librarians, in collaboration with agriculture

extension officers, translate information into local languages for farmers to understand the messages that benefit their farming system, such as taking care of farm animals.

In comparing public library services towards the knowledge economy of developing countries, which include Namibia, with those in the developed world, public library services in developed countries are more advanced in KE. This is evident from the Singaporean public library system that has access to over three million e-books and nine million books, journals and other materials (Sabaratnam and Ong, 2013). In America, 6 569 public libraries have access to e-books, digital audio material and video material that can be downloaded on users' personal devices (Rosu and Storey, 2016).

The empirical results correspond to some of the earlier identified information and knowledge needs of users. This is affirmed by Sabaratnam and Ong (2013) that 21st century users' information needs demand acquisition of e-resources to substitute the print collection where resources can be accessed anytime anywhere, while freeing up space to create more areas for discussion and interactive learning.

A study conducted in Canada and the USA by Hill and Bossaller (2013) has found that public library users access free resources like e-book projects, local or regional archival projects, business resources and government resource web pages. In addition, users access government tax forms from the public libraries together with genealogy information, employment resources, medical/health website resources such as the Internet Public Library and MedlinePlus, local/regional information and educational sources. However, although users demand and prefer e-resource services from the public library, Taylor, Jaeger, McDermott, Kodama, and Bertot, (2012) have found that users also find it difficult to access digital collections (e-resources) due to a lack of skills to use new technologies.

The situation is different in Africa where access to knowledge is heavily reliant on imported books, the majority of which are research and university textbooks as well as vocational training books. Books are not always available locally and those that are available, are so expensive that the majority of people cannot afford to buy them. Therefore, their only means of accessing information in these books is through public libraries for free or at low charge (Krolak, 2006). Perhaps with the advancement of ICTs, provision of access to electronic resources at public libraries will improve the availability of all types of information that will result in the socioeconomic development of the community.

2.3.2 ICT infrastructure in public libraries for a knowledge economy

The previous section has discussed the library information and knowledge resources along with their accessibility and usability by community members. This section focuses on the information and communication technology infrastructure of a public library.

The World Bank (1998) has affirmed that a country to be declared a knowledge economy should have a dynamic information infrastructure that facilitates the communication, dissemination and processing of information and knowledge, among others. It also further states that people in the knowledge economy should have the skills to effectively use the said information and knowledge infrastructure constructively.

Advanced ICTs drive the economic and social activities of a country, including the acquisition, creation, dissemination and use of knowledge. Hence, making the supply of and access to knowledge to overcome geographical boundaries for knowledge-sharing, locally and internationally, for the purposes of economic and social development (Chen and Dahlman, 2004). In the 21st century, which is characterised as the age of information explosion, the prosperity of the internet and the World Wide Web (www) has become an information super highway that speeds up information exchange and information-sharing. Subsequently, the internet platforms from the computer technologies, network technologies, telecommunication technologies and Web technologies have provided global libraries with innovative approaches toward the enhancement and integration of information resources and services (Yang and Li, 2016).

Traditional library functions are enhanced by ICTs, offering opportunities to provide value-added information services and access to a variety of digitally based information and knowledge resources that are enhanced to reach a new generation of users (Mchombu and Beukes-Amis, 2015). This has been done through automation of library services for the implementation of efficient and effective cooperation and resource-sharing networks. As thus, developing and introducing of library-integrated management information systems, institutional repositories of digital local content and digital libraries, and the initiation of ICT-based capacity building programmes for library staff and information literacy programmes for library users (Chisenga, 2006). The innovation led libraries to provide their computers, internet-based facilities, as well as equipment such as photocopiers, printers, mobile phones,

scanners, laminators, DVDs, CDs, CD-ROMs and faxes in improving services to user communities of the public libraries (Mamafha, Ngulube and Ndwandwe 2016; Nwabueze and Ibeh, 2013).

Many of the changes brought about by the adoption of ICTs in libraries have made librarians change the way they conduct business by developing different methods of meeting the new demands of diverse public library users. They have subsequently developed public library websites and created information services to provide virtual references through social networking tools to reach users directly. Public libraries have also designed computer laboratories for instructing users on the use of ICTs (Gilton, 2016).

In the case of indigenous knowledge, ICTs enable the repackaging of information by integrating texts and graphics into oral formats by using tape recorders to capture presumed fading memories of traditional knowledge in rural areas in order to create podcasts of recorded oral history and songs. ICTs tools, in partnership with IK expertise, are able to document and digitise IK in the 21st century so as to preserve it for posterity and transmit it for efficient and effective dissemination globally (Dim and Mole, 2015).

Although public libraries embrace the diffusion of ICTs for improved quality service delivery that has resulted in well-utilised libraries, a study by Uutoni, Yule and Nengomasha (2011) has found that Namibian public libraries have the potential to provide and promote e-governance but people are challenged by the use of technology along with a shortage of skilled library professionals and financial resources for effective deployment of ICT to public libraries.

Similar cases are found in South African public libraries Mamafha, Ngulube and Ndwandwe (2016) and Nwabueze and Ibeh (2013) have identified various barriers to ICTs in public libraries that include poor ICT facilities, access time limits, an insufficient number of ICT facilities and restrictive library policies that affect the utilisation of ICT applications optimally. The studies have further revealed that the lack of ICT knowledge and skills demoralise users to utilise the facilities, which have prevented them from benefiting socially and economically.

While Namibian public libraries deal with a shortage of ICTs human resources, studies by Uutoni, Yule and Nengomasha (2011) and Nwabueze and Ibeh (2013) have established that Nigerian public librarians possess the skills to integrate ICT to a high extent. However, they

have also found poor funding, a lack of ICT policy, indifferent attitudes towards library management, a lack of a training culture and general inadequacy in relevant infrastructure.

Nevertheless, public libraries are entry points to free access to ICTs, including the internet, for the people who may not have computers or internet access in their homes or at work to access commercial and governmental services, health, education, business and entrepreneurship, agriculture and farming, employment as well as income and financial knowledge and information resources (Spacey, Cooke, Muir, and Creaser, (2014). Furthermore, the development of ICTs has made libraries more visible through portals and websites, purchased repositories for local research publications, as well as automation to Web-based integrated library management systems to expand and facilitate access to knowledge and information (Bradley, 2016; Evans and Savard, 2008; Lor and Britz, 2010; Satgoor, 2015). This is also evident in Botswana, as deploying technology in Botswana's public libraries is changing people's perceptions about libraries, especially about their perceived value. With ICTs, people with low literacy skills are given the opportunity to learn by using technology (Maswabi, Sethate, Sebusang, and Taolo, 2011).

The development, however, requires an information and knowledge society to obtain well-developed, maintained and affordable ICT infrastructure for social economic activities if Africa is to catch up with developed countries such as the USA where nearly all public libraries provide free public internet access (98.7% overall) (Lor and Britz, 2007). Furthermore, 71.4% of public libraries in Africa are reported to be the only providers of free access to internet services in their communities (Mandel, Bishop, McClure, Bertot, and Jaeger, 2010).

In Australian public libraries, the development of digital technologies poses challenges that have yet to be explored fully. While the library sector believes that digital technologies bring change to all aspects of library operations, it is not enough to focus on the technologies alone, as understanding of the nature of the environment in which they operate is changing, especially the ways in which both the ecology and economy of information are evolving (Waller and McShame, 2008). This argument is relevant, especially in times of financial constraints hindering the delivery of quality library services and the technologies application in rural remote public libraries.

While others praised the development of ICT in public libraries, including their challenges, Zimbabwean public libraries were faced with funding challenges resulting from the devaluation of the Zimbabwean dollar against all other global currencies between 2007 and 2008. This situation seriously affected public libraries' collection development and it forced libraries to rely on Book Aid International and other book donations. The introduction of library subscription fees for users for service sustenance also drove away patrons, as they could not afford it (Chisita, 2011).

The literature review of in this chapter provides evidence of best practices on how ICT development at public libraries has changed the way public libraries do business in disseminating services for the purpose of socioeconomic development for a knowledge economy. It appears from the discussion that African public libraries are faced with many different ICT challenges. These challenges, however, are not found in public libraries in developed nations which include the implications of historic under-investment in capital assets and service modernisation, fewer users and a general decline in book-borrowing. These challenges result from the rapid growth of the internet economy, which consequently, has led to the significant take-up of e-readers and e-books. It has also played a part in enticing more wealthy communities away from libraries in recent years (Naylor, 2014).

2.4 Public library education and training programmes for a knowledge economy

Traditionally, public library users have been discovering how to access information by moving around library shelves until they find the information they are looking for, or they consult reference librarians for individual assistance. The need for library user education has not been initiated until the 1960s when library instruction became a reality. In 1971, the library coined bibliographic instruction, which gave birth to different generic methods of user education. This instruction included library orientation and instruction, bibliographic instruction and information literacy. The objective was to advocate library instruction as a means for developing competent library and information access skills, along with their use, as a part of lifelong learning (Johnson, Sproles, and Detmering, 2011).

The definition of *knowledge economy* chosen for this study requires people to have the ability or skills to acquire, create, disseminate and use knowledge effectively for economic growth. As discussed in chapter one, the indicators for the education and training pillars are adult literacy, secondary enrolment and tertiary enrolment (Chen and Dahlman, 2005). This section

covers the contribution of public libraries to educating and training in terms of different literacies education required for a knowledge economy.

The year 1990 was proclaimed International Literacy Year by UNESCO and was aimed at establishing education for all and developing a framework for action to meet basic learning needs (Haggis, 1991). In that regard, basic education was an essential requirement that would enhance people's capacity to learn so that they could develop their need to acquire, create, disseminate and use information and knowledge effectively for social and economic development. Krolak's (2006) study on the role of libraries in the creation of literate environments affirms that libraries worldwide play a major role in education through bridging the information gap by providing access to knowledge resources and ICTs.

2.4.1 Public library education and training services and programmes

In the 21st century, public library users need a high level of literacy to effectively benefit from library information resources. Literacy is a process of acquiring the basic cognitive skills of writing, reading and numeracy. Literacy also refers to the broader mastering of information to work within the knowledge and information society (Organisation for the Economic Co-operation and Development or OECD, 1997).

Even though basic literacy is important, Behrens (1990) states that the skills of being able to read and write alone will not enable an individual to cope effectively with the economic, political, social and cultural dimensions of globalisation. If one considers literacy in the sense that it relates to an information society, people who are presently regarded as being literate are possibly not literate on a level which will enable them to function in such an evolved society.

Therefore, acquiring high-level literacy skills is key to unlocking the benefits of globalisation that enable individuals to access information and develop a high level of thinking for contribution to socioeconomic development in a knowledge economy (St Clair, Tett and Maclachlan, 2010). This view supports the UNESCO (2006) report on the education for all global monitoring. The report has indicated that various literacy skills and competencies enable access to knowledge and information. The report identifies these as technological literacy, health literacy, media literacy and visual literacy, of which all fall under the umbrella of information literacy.

Krolak's (2006) study on the role of libraries in the creation of literate environments affirms that libraries worldwide play a major role in education through bridging the information gap by providing access to knowledge resources and ICTs. Haq and Ahmad (2012), in their study on knowledge economy from a Pakistani perspective, stress that increasing public libraries will enhance access to foreign and local books, as well as access to universal education to everyone.

Modern technologies have brought new ways of learning in a global environment. Access to both global and domestic knowledge has provided modern technological innovation in support of learning, teaching and research. To provide access to the high volume of print and electronic knowledge and information. Librarians therefore have to take up the new role of educating users with information retrieval skills on different forms of knowledge tools. Libraries offer various forms of marketing and literacies training such as basic adult literacy, language classes, basic computer and internet skills, job searching and government online services, use of public and private sector e-services, information literacy and digital literacy, including Web 2.0 and Library 3.0 (Asselin and Doiron, 2016; Balina, 2014; Evans and Savard, 2008; Ghosh and Ghosh, 2009; Haq and Ahmad, 2012; Iilonga, 2015; Krolak, 2006).

Furthermore, it has been discovered that public library training has made significant contributions to train users so that their newly acquired skills may contribute to their finding employment and establishing stronger connections with family members through e-mails (Julien and Hoffman, 2008).

Positive effects of training provided by public libraries are appreciated by learners' parents who experience an improvement in information literacy and IT skills in their children, as they have become more exposed to reading material when searching for information and no longer being limited to textbooks only (Chu, Tse and Chow, 2011). However, even with the provision of information literacy or education, as it is referred to by others, there are still users who lack relevant skills to use the library effectively (Julien and Hoffman, 2008).

Public library technological advancement and their changing role have increased the need for further training of librarians to effectively deliver quality library services to users. Kemal Ataman (2009) recommends an increase in technological content in training of information professionals. The study conducted by Julien and Genuis (2011) established that librarians working in public libraries did not attend teaching courses but they had received information

in-service training. Some librarians attended workshops, seminars or conferences that completely prepared them for library educational training or instruction. As a result, librarians viewed teaching or instruction as part of their duty or expectations. Julien and Genuis (2011) indicated that public librarians' need further skills and competencies of teaching information literacy that they could acquire from reading professional research literature and attend courses for teaching pedagogy skills. This is supported by Leilei and Jinmin (2012) with an argument that it is crucial for librarians to upgrade their skills and knowledge of information system management and the use of modern technologies to effectively educate users on knowledge economy competency tools.

Although basic literacy is essential for the knowledge economy, it is found to be still lacking in Africa; hence, the education of public library users is found to focus more on ICT training (Davis, 2015). Resultantly his study urges Africa to address basic literacy skills before advancing to applications of ICT.

In addition, the World Bank (2007) presents that institutions need to build partnerships with one another for the successful transformation to a knowledge economy. The World Bank points out that collaboration is vital to the transformation into a knowledge economy among a wide range of partners, locally and internationally, in developing skilled human capital. The need for collaboration in libraries is evident in Ullah's (2016) study whereby universities, research and development institutes or academies, library associations and some business organisations participated in promoting the skills of librarians in Pakistan. In addition, collaboration in best practice is practised at the American district of Columbia, the National Library of Medicine and the Kellogg Foundation, the NLM and the NN/LM, supporting public libraries' improvement of the public's access to health information through provision of grants to provide computers, internet access or health information materials to their patrons. The NN/LM network library provides staff training, including in the use of MedlinePlus and other NLM information services, and advice about handling health questions (Whitney, Keselman and Humphreys, 2017).

The collaboration contributes to the improvement of public librarians' capabilities to provide consumer health information as a response to consumer demand and the availability of consumer health information training. This has resulted in the implementation of health information outreach programmes that employ variations of the train-the-trainer approach by partnering with community-based organisations. The trainer model outreach programmes in

training community members increase libraries' reach exponentially, as community members teach their peers who then go on to teach others (Whitney, Keselman and Humphreys, 2017).

2.5 Public library innovation system, service provision and the impact on users

According to Hvidt (2014), the first industrialist was a Great-Britain who developed through invention; then the Germans, Japanese, Russians and Americans further developed through innovation. Following these inventors, development in all other countries is based on imitating the developed countries by importing technologies, the know-how and manpower already available elsewhere in order to increase the level of local knowledge through tapping into foreign knowledge to adapt and create new knowledge in relation to local needs. By definition, therefore, the capability of being innovative is referred to as the ability to utilise skills and knowledge to successfully digest, master and improve existing systems, and to create new ones (Intan-Soraya and Chew, 2010).

Innovation elements include new knowledge and new development, scientific inventiveness, technology, markets, enterprises, competitiveness and entrepreneurialism. Library and information services can tap into these components so as to provide and facilitate access to knowledge and create awareness of knowledge and information in order to achieve the elements of the innovation system (Bullen, Fahey and Kenway, 2006).

Empowerment can focus on creating awareness of small-scale enterprise information when they apply for credit, as well as production diversity, among other community information needs, alternatives to becoming a community-driven knowledge economy with capacity, skills and competency to acquire knowledge in order to contribute to the governance of their community (Kargbo, 2011; Ahmed, 2010).

Innovating is having the ability to tap into the growing stock of global knowledge and information, to assimilate and adapt it to local needs, and to create new knowledge to improve the current status quo of socioeconomic development (World Bank, 2012).

This study explores the way in which public libraries, as organisations, and users have adapted and assimilated knowledge and information resources to tap into the local needs for socioeconomic development. Furthermore, the public library staff is researched in terms of the ability to apply ICT innovation systems in improving communication, as well as the

dissemination and processing of information and knowledge to the communities, as required for the knowledge economy.

2.5.1 Public library technological innovation benefits

According to Schmidt and Rammer (2007), the concept of technological innovation is typically associated with the development or application of new technologies. In South Africa, public library innovation includes the KwaZulu-Natal Provincial Library Service access to free public internet and ICT training that is conducted by more than 60 unemployed youth who are trained as cyber-cadets in libraries across the province. These cyber-cadets provide training and assistance to members of the community in accessing the library to use computers and the internet (National Library of South Africa, 2014).

Further to technological innovation at public libraries indicated in the study conducted by Madhusudhan and Singh (2016) is the development of the Integrated Library Management System (ILMS), an automated package of library services and resources that manages several functions of any library such as circulation, acquisitions, cataloguing, serials, interlibrary loans, reports, statistics and administration, making it easy to search and locate library resources. The most used ILMS in public libraries is open source which include but are not limited to KOHA, NewGenLib, Libsys and Virtua (Madhusudhan and Singh, 2016).

According to Adeleke (2017), the automation to LMS is limited in public libraries in South-West Nigeria where the majority of library patrons and librarians have been skilful in the use of ICT. The challenge of limitation, however, is due to inadequate ICT infrastructure and the absence of technical skills, negative attitudes towards automation, absence of senior management support, use of inappropriate library software and technophobia. In India, a study by Babu and Krishnamurthy (2013) postulates that many public libraries have adapted Koha as an ILMS and the Delhi public library was the first in India to put Koha 3.0 into production.

In addition to the innovation of LMS, the invention of modern ICT development further included the intellectual communication information repository services, subscriptions to international e-books and e-journals as well as open-access journal provision as part of major innovations that shape modern libraries (Hedstrom and King, 2006; Tripathi, 2010). In addition, the invention of open access has led some government funding agencies to urge authors of government-funded research to publish in open-access journals in order to promote

access to public investment (Hedstrom and King, 2006). Subsequently, some public libraries have seized the opportunity of technological advancement to integrate both print and digital electronic databases in their collections through subscriptions and open-access electronic resources (Brooklyn Public Libraries, 2016; City of Cape Town Library, 2016; Vaughan Public Libraries, 2016).

In America, the hybrid library of print and electronic public library services innovation benefits both library staff and users, whereby librarians are trained to use MedlinePlus, PubMed and TOXNET health databases in order to provide training to users so that they improve health literacy skills and find health information that they can trust on the internet (Radick, 2015).

Other innovations to note in the public library environment are the development and use of social media such as Twitter and Facebook in promoting public library events and services to communities. These are aimed at building relationships with users by trusting them to become content creators, and for including library outreach activities. The platform also increases the visibility of public libraries in awareness creation (Abdullah, Chu, Rajagopal, Tung, and Kwong-Man, 2015; Smeaton and Davis, 2014).

Sawaya, Maswabi, Taolo, Andrade, Moreno-Grez, Pacheco, Paberza, Vigante, Kurutyte, Rutkauskiene, and Jeżowska (2011) have established that opportunities for accessing ICT at public libraries enable users to gain technology skills, which then result in users improving their businesses, becoming better educated and accessing government services. In Latvia, public library users admit that accessing the internet in libraries has helped them to access the labour market and to search for jobs (Balina, 2014). In terms of librarian's application for ICT for innovation, public libraries have developed online portals that are linked to repositories of government ministries by communicating services to their users. This is evident in Serbia where the AgroLib online market enables farmers to share information about farming methods and to market their products (Fairbairn and Lipeikaite, 2014). ICT innovation in public libraries has improved information flow and knowledge-sharing by strengthening vital links between farmers and essential support agencies like local and international research institutes, government ministries, weather stations, agricultural extension workers and markets (Elbert, Fuegi and Lipeikaite, 2012).

A study conducted in the USA by Cervone (2010) urges librarians to investigate effective innovation systems from commercial organisations to see where the technology is going and what others are doing to apply lessons learned from the commercial sector to the library because the expectations of users are being set in the commercial sector; not in the libraries. Cervone (2010) states that Facebook, Twitter and iPhone applications are driving the wants and needs of library patrons; not the Online Public Access Catalogue (OPAC). Davis (2015) argues that librarians are no longer prioritising encyclopaedias or indexes when conducting information searches. They are in fact using Google and Yahoo search engines.

Prior to that, in South Africa, public libraries are urged to innovate through outreach services by using popular technology such as cell phones (Sturges, 2010) whereas in America, the free public library in Philadelphia reaches out to the community by partnering with the airport authority to open a virtual library at the Philadelphia international airport. The aim is for travellers to access the nearly 1 200 author podcasts, e-books and other digital content of the free library by logging on to the airport's library (Garmer, 2014).

Second is an innovation project by the New York public library and Chicago public library. These libraries have launched programmes "that provide take-home internet access (Wi-Fi 'hotspots') and digital training for residents in neighbourhoods where digital access is low" (Garmer, 2014: 16).

The third advancement is taking place at the Omaha public library in Omaha, Nebraska that has initiated "new partnerships with the business community and regional software companies and technology businesses looking for workers with software and design skills to be trained at the public library to establish workforce development initiatives in areas of these much-needed skills" (Garmer, 2014: 28).

The same practice is applied at the Laramie County public library in Wyoming. Here a Library to Business (L2B) Centre connects entrepreneurs with local and regional economic development agencies to create a business network and learn new skills, such as social media marketing. The services rendered by the Dream Lab at the Washington D.C. public library differs in that it facilitates knowledge exchange between community members by providing free co-working space to individuals and small organisations. In turn, they offer regular public

programming services related to information technology and digital literacy (American Library Association, 2016a).

The next section discusses the non-technological innovation benefited from accessing public library services.

2.5.2 Public libraries' non-technological innovation benefit to user communities

Non-technological innovation, as per Schmidt and Rammer (2007), is innovation of development derived from services which are not of a technological or technical nature. This discussion focuses on how public libraries have positively impacted the lives of the communities in a non-technological sense.

In South Africa, Nassimbeni and Tandwa (2008) and Barron, Williams, Bajjaly, Arns, and Wilson (2005) have found that public libraries contribute to lifelong learning and provide business information to business people that has contributed to their successful entrepreneurship. The public services further developed and introduced four mobile library trucks and trolley services established in 20 rural areas in KwaZulu-Natal. These vehicles have been purchased to increase access to services, including the establishment of a new regional library depot (Library and Information Association of South Africa [LIASA], 2015). In Mpumalanga, the provincial library services have procured three mobile buses, while four container libraries have also been established to increase access to library services for the knowledge economy of South Africa (Library and Information Association of South Africa [LIASA], 2015).

Elbert, Fuegi and Lipeikaite (2012) have conducted a study in six countries in Africa (Kenya, Ghana, Ethiopia, Tanzania, Uganda and Zimbabwe) and found that public libraries in remote areas, in collaboration with local agricultural agencies and government ministries, have improved the flow of agricultural information and knowledge-sharing among the communities' information needs regarding farming on crucial topics like plant pests and animal diseases, weather patterns, environmental sustainability, farming practices, consumer needs and market prices (Elbert, Fuegi and Lipeikaite, 2012).

In respect to health benefits, public library users indicate that health literacy programmes enable them to find good information on medical issues that affect them, including

hypertension, diabetes, heart disease, breast cancer, prostate cancer, strokes, mental illness, amputations, kidney disease, teen pregnancy, sexually transmitted diseases, diet and exercise (Radick, 2015).

In Europe, particularly in Finland, Norway and the Netherlands, Vakkari, Aabø, Audunson, Huysmans, and Oomes, (2014) have discovered that public library users benefit from self-education regarding reading, work, business and everyday activities where health is also included. A study carried out by PricewaterhouseCoopers (2008) has revealed that public libraries contribute to economic activities and add value to the economy, particularly in support of learning and training that contribute to economic development. Similarly, libraries promote physical activities and health awareness, which, in turn, improve wellbeing in Northern Ireland. Consequently, it has led to cost savings in health expenditure.

In America, public libraries contribute to the personal wellbeing and finances of their users whereby libraries provide resources and training on personal finances and make access to information about healthcare and insurance possible. Two-thirds of public libraries in America help people identify health insurance resources (American Library Association, 2016a). In addition, the Wilkes county in North Carolina has organised a six-week workshop for community members, focusing on chronic disease self-management in partnership with the local health department (American Library Association, 2016a). The same library has a circulation service, which includes circulating microscopes, science kits, educational board games, software, curriculum materials and catalogues (American Library Association, 2016a).

Furthermore, in America, a study by Garmer (2014) has reported that public libraries can help to accelerate workforce development and learning opportunities by providing a connection between industry and education which is indeed collaboration. Therefore, a public library is in a good position to connect community members to the training and career development resources that local employers need through partnering "with local businesses, chambers of commerce and community colleges to provide access to curricula and resources, in order to maintain a highly skilled yet highly flexible workforce" (Garmer, 2014: 50). Still on innovation through collaboration, in New York City, the Department of Small Business Services has "established one of its Workforce 1 career centers at the Brooklyn Central Library [that] prepares and connects city residents to job opportunities in the city, with

emphasis on both job skills needed by local employers and soft skills such as interviewing" (Garmer, 2014: 28).

Similarly, the library professionals at the Gail Borden Public Library District in Illinois provide resources to users to improve their job skills, obtain certification, prepare for vocational tests and explore new careers. The library has also co-sponsored the Manufacture Your Future event with the Elgin Chamber of Commerce in which local manufacturers have networked and answered questions related to products and careers in manufacturing (American Library Association, 2016a).

2.6 Chapter summary

In conclusion, literature finds that accessing knowledge and information at and through public libraries is highly trusted in enabling the public to contribute to economic activities and add value to the country's economy in areas such as education, tourism, employment, health and social inclusion. The chapter has outlined the level of development of public libraries in different countries pertaining to knowledge economy. It is, therefore, evident from the literature that public libraries in developing countries still lag behind in achieving a knowledge economy as stipulated by the World Bank KE pillars. Based on literature, developed countries have adequate infrastructure that drives the knowledge economy effectively. This is also evident in urban public libraries in a few developing countries that demonstrate advancement in comparison to other developing countries. Literature has identified that most studies have been only conducted in public libraries in urban areas, which also gives a clear picture that national policy implementation is mostly taking place in urban areas. The finding from the literature is the aspect that has contributed to the uniqueness of this particular study. It has taken a different direction by researching the highly populated communities with perceived poor infrastructural resources. This has, in turn, unearthed how the researched public library services with no or limited infrastructure in place contribute to the envisaged globalisation of a knowledge economy.

CHAPTER THREE

THEORETICAL FRAMEWORK

3.1 Introduction

Given (2008: 871) defines theoretical frameworks as "any empirical or quasi-empirical theory of social and/or psychological processes at a variety of levels (e.g., grand, mid-range, and explanatory) that can be applied to the understanding of phenomena". Creswell (2014: 68) postulates that a mixed-methods study uses theory deductively for quantitative theory testing and validity, and inductively for qualitative theory and pattern. The theory chosen should provide a description as to how it will inform the quantitative and qualitative components of mixed methods of the study, thereby explaining major relationships of variables in the study and discussing studies related to the particular study that has used these. This will enable the researcher to review how the theory has informed the findings and the results during data presentation, and to compare the use of the study in other studies (Creswell, 2014).

There are a number of theoretical frameworks developed for the information society, knowledge society, knowledge economy, as these are used interchangeably as claimed by Amoah (2014). Among these frameworks are the four pillars of the information and knowledge society (Britz, Lor, Coetzee, and Bester, 2006) with four dimension pillars, namely Information Communication Technology (ICT) and connectivity; usable contents; infrastructure and deliverability, and human intellectual capability. The Asia-Pacific Economic Cooperation (APEC, 2001) has also developed a knowledge-based economy framework based on four dimensions, namely an innovation system; human resources development; ICT infrastructure, and business environment.

Furthermore, Brockmann and Roztocki (2017) have developed the Six Pillars of Knowledge Economy Framework that consists of innovation capability, leadership, human capital, IT resources, financial resources and innovation climate. The framework focuses on marketable knowledge outputs and points to the most crucial components in the process of creating these knowledge outputs. The six pillars of knowledge economy framework suggested by Brockmann and Roztocki (2017) differ from the World Bank's (1998; 2007) KE framework which emphasises knowledge as the critical element for economic performance at country level. Brockmann and Roztocki (2017) postulate that economic strength depends not only on creating knowledge, but also on selling knowledge outputs with commercial value.

Unlike Brockmann and Roztocki's (2017) KE framework, this study focuses on the view that access to knowledge is the engine to any knowledge economy whereby access to knowledge is regulated in national legislative and policy frameworks, is made available to people so they may be taught how to access information and knowledge and so they may acquire the relevant skills and competence to utilise this new information and knowledge effectively for their economic and social development. This is what innovation is all about (World Bank, 1998; 2007).

The purpose of this study, as discussed in chapter one, was to investigate the roles of public library services towards a knowledge economy of Namibia, looking at the four main research questions derived from the World Bank KE framework, which are discussed in detail in this chapter. This particular study is framed by the Knowledge Economy (KE) theoretical framework developed by the World Bank (1998), which is based on four pillars:

- An economic and institutional regime (policy and legislative framework
- Information/knowledge and ICT infrastructure resources
- Education and training
- Innovation system

The World Bank KE theoretical framework is chosen based on its pillars, relationships and converging with the study's research questions as discussed in chapter one and outlined below:

- How do Namibia's legislative frameworks, national development plans and policies reflect access to knowledge and information, as provided by information services such as libraries and their implementation?
- What public libraries information and knowledge, and ICTs infrastructural resources and services are available for effective facilitation of the communication, dissemination and processing of knowledge, and how are they accessible for the knowledge economy?
- How do public library services contribute to education and training of both users and librarians to ensure that they have the competencies and skills for the knowledge economy?
- What public library innovation systems are in place to deliver quality library services to users and enable them to tap into the growing stock of global knowledge, and to assimilate and adapt it to local needs for economic and social development?

In addition, the World Bank KE framework was also chosen for its focuses on competencies or abilities of people to acquire, create, disseminate and use knowledge effectively in order to participate in a knowledge economy, which should be fulfilled by the four pillars. The four pillars provide a broader exploration of public libraries services and facilities, and their benefits to the communities in contributing to a knowledge economy.

Other KE frameworks outlined in the introduction to this chapter are not discussed further, but rather identified to note that the particular theoretical framework chosen for this study is not the only one available. The other identified framework pillars are equally important but they are not chosen for this study due to the fact that this study specifically addresses the study research questions.

The four dimensions (innovation system, human resources development and ICT infrastructure and business environment) of the Asia-Pacific Economic Cooperation's (APEC, 2001) knowledge-based economy framework are similar to the World Bank KE framework. APEC only manages to twist the institutional regimes into a business environment with a little difference in its focus on business enterprises. However, it still includes the economic and legal policies of government in support of enterprise and innovation.

The four pillars of a KE framework by Britz et al. (2006) (ICT and connectivity, usable content, infrastructure and deliverability, and human intellectual capability), do not include the legislative and policy framework parts. Its focus, however, is more on ensuring that a knowledge economy region or country should invest in human capital more, and develop its information infrastructure to accommodate the new economic landscape as well as invest in ICT to successfully achieve or become a knowledge economy (Britz et al., 2006). Except for the legislative and policy framework pillar, the other pillars could have been chosen for this study but their direction is not exactly in line with the research questions asked in this study.

3.2 World Bank Knowledge Economy Framework

As discussed in chapter one, the World Bank (1998) proclaims that a knowledge economy (KE) relies on knowledge as the key engine of economic growth. It is an economy in which knowledge is acquired, created, disseminated and applied to enhance economic development. Thus, the framework was developed by the World Bank's Knowledge for Development (K4D)

programme for the knowledge revolution and innovation-related policies that enable development of strategies that are built on four pillars as identified above and discussed in detail below.

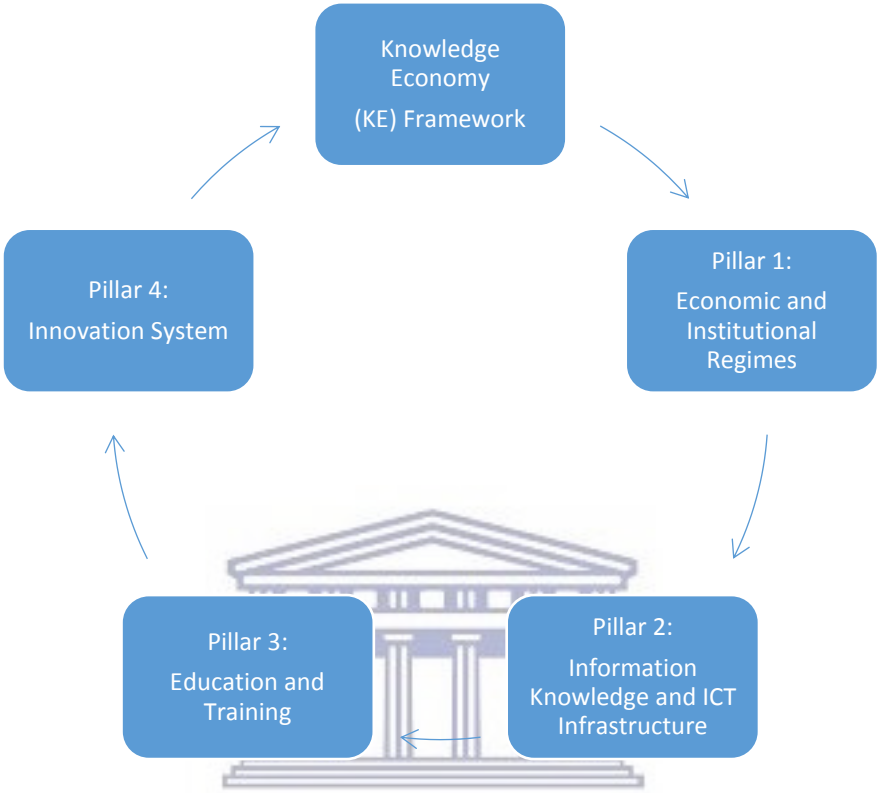


Figure 2: World Bank Knowledge Economy (KE) Framework Pillars (World Bank, 1998)

3.2.1 Pillar 1: Economic and institutional regimes

The first pillar of the framework is an economic and institutional regime that provides good economic policy legislative frameworks and institutions. These frameworks and institutions permit efficient mobilisation and allocation of resources, and stimulate creativity and incentives for the efficient creation, dissemination and use of existing knowledge. The application of the framework to this study is based on the theory that universal and national access to knowledge and information for economic growth provision should be regulated by national policies and legislative frameworks, which enable strategies for the effective and successful establishment of public libraries, their functions and operation in facilitating access to information and knowledge for all.

3.2.2 Pillar 2: Information/Knowledge and ICT infrastructure

According to the World Bank (1998), a knowledge economy should have a dynamic information and knowledge infrastructure, which facilitates the communication, dissemination and processing of information and knowledge. Information and communication technologies (ICTs), including telephone, television and radio networks, are recognised as essential infrastructure of the global, knowledge-based economies for the 21st century that are able to promote and increase ready access to information and knowledge (World Bank, 1998).

All countries transforming to a knowledge economy should have ICT-related policies, which cover telecommunications regulation as well as the investments needed to build and exploit ICTs throughout the economy and society through various e-applications. Examples are e-government, e-business and e-learning. Low-income countries should focus first on the basic ICT infrastructure before promoting advanced technologies and applications (World Bank, 2007).

This study has modified this information and knowledge infrastructure pillar into two components, namely the information and knowledge resource services, and the ICTs infrastructure. The purpose of modification was to accommodate the element of information and knowledge resources and services to be clearly spelled out, although it is part of information infrastructure.

Under those circumstances, in this study, pillar 2, therefore, includes an infrastructural ecosystem of public libraries' various information and knowledge resources in print and electronic formats; the internet platforms from the computer technologies, network broadband technologies, telecommunication technologies, web technologies, and any modern ICTs necessary for the acquisition, creation, dissemination and utilisation of knowledge. This pillar has provided global public libraries with innovative approaches toward the enhancement and integration of resources and services. Resultantly, the application of this pillar to this study is based on the theory that universal and national access to knowledge and information for economic growth provision should be regulated by international and national policies as well as legislative frameworks which enable strategies for the effective and successful establishment of public libraries, their functions and operation as platforms for accessing knowledge and information for economic and social development (World Bank, 2007).

3.2.3 Pillar 3: Education and training

The World Bank (2007) argues that, in a knowledge economy, the labour force should be composed of educated and skilled workers who are able to continuously upgrade and adapt their skills to create and use knowledge efficiently. Education and training systems encompass primary and secondary education, vocational training, higher education and lifelong learning (World Bank, 2007).

The KE framework postulates that a well-educated and skilled population is essential to the effective creation, acquisition, dissemination and utilisation of relevant knowledge (World Bank, 2007). People's basic education is necessary, but not adequate, to have capacity to acquire, create, disseminate and use knowledge effectively to improve social and economic growth. As such, people should have different forms of literacy skills to effectively participate in the knowledge economy (Amoah 2014; World Bank, 2007).

The World Bank further puts emphasis on the importance of lifelong learning for the current context of the knowledge revolution, which requires constant adaptation of knowledge and know-how. The literacy skills are basic reading and writing literacy; information literacy; computer literacy; digital literacy; media literacy; health literacy; agricultural literacy; business literacy; financial literacy, numeracy skills, and legal literacy, among others.

Although all pillars of the KE framework are of similar importance in building a knowledge economy, the education and training pillar is based more on changing and empowering individuals to be successful and sustainable in a knowledge economy. Public libraries, as the knowledge hubs of communities, are committed to quality education and training to the public to equip them with information searching competencies and skills required to access knowledge and information provided in pillar 2, and to be confident in utilising all services and facilities provided by the libraries. The same applies to the public libraries' human resources to have the necessary skills and competencies to deliver quality services to the knowledge economy.

3.2.4 Pillar 4: Innovation system

The final pillar of the World Bank's KE framework is an **effective innovation system.** According to the World Bank (2007), an effective innovation system refers to the network of research centres, universities, think tanks, consultants, private enterprises and community

groups that are necessary to tap into the growing stock of global knowledge to assimilate and adapt it to local needs to create new knowledge.

The framework further stresses that much of the knowledge and technology that encourage innovation originate from foreign sources such as imports of equipment and other goods, as well as licensing agreements of access to global information and knowledge databases. However, foreign sources are indeed needed in developing countries, but being heavily reliant on imports must not be allowed to downgrade a country's unique indigenous knowledge assets of traditional knowledge (World Bank, 2007).

In chapter one, it is reported that Namibia obtained its independence from the South African government in 1990 after which a strong infrastructure of library and information services was built. It is, therefore, after independence that library services of different types were built across the country. In 2000, the legislation for the Republic of Namibia's Library and Information Services Act 4 was enacted and established the framework under which libraries operate (Republic of Namibia, 2000). It is important to note that since the library and information Act only came into force in 2000, this practically made it clear that all public and community library services in rural areas were established from the year 2000 onwards, specifically in the Omusati and Ohangwena regions respectively where this study sites are based.

The Ohangwena regional public library, which was one of the libraries that participated in the study, and the Oshana regional public library which this study had piloted, were inaugurated in 2014. They are the only public libraries in the northern part of Namibia, called Ovamboland, which are equipped with modern facilities and offer services with the standard of a knowledge economy (IREX, 2014). These are state of the art public libraries built with assistance from the Millennium Challenges Account (MCA).

The newest of public or community library services establishment and development, which are considered part of the innovation system in the Omusati and Ohangwena regions, are also what has intrigued this study's choice of the four pillars of the World Bank KE framework.

The pillar is of prime importance, as it explores the benefits brought by the public library services, programmes and ICTs infrastructure as an innovation system contributing to the social and economic development of the two communities concerned.

3.3 World Bank KE Framework Indicators

Table 2: World Bank KE framework indicators (Chen and Dahlman, 2005; World Bank, 2007)

Economic and institutional regimes - Tariff and non- tariff barriers - Regulatory quality - Rule of law	Information / Knowledge infrastructure - Telephone: mainline and mobile phones - Computers - Internet connectivity
Education and training - Adult literacy (age 15 and above) - Secondary enrolments - Tertiary enrolments	Innovation system - Researchers in R&D - Patent application granted - Scientific and technical journal articles

As discussed earlier in section 3.2, this study has modified some of the indicator variables of the framework pillars slightly to focus on the role of public libraries towards a knowledge economy.

3.4 Roles of public libraries towards a knowledge economy: application of the World Bank KE framework

This framework is mostly used to assess countries' readiness to transition to a knowledge economy as proposed by the World Bank's Knowledge for Development (K4D) programme. It uses the Knowledge Assessment Methodology (KAM), an interactive diagnostic and benchmarking tool designed to help countries understand their strengths and weaknesses (World Bank, 2012). KAM indicators shown above do not look at differences in the social economic development levels of countries globally. These indicators have omitted variable indicators for the less developed and developing countries; hence, favouring developed countries and elite cities (Amoah, 2014). Notwithstanding this, the framework has strengths such as determining countries' weaknesses and strengths, which may allow even developing countries to possibly leapfrog into developed nations.

3.4.1 Interaction among the four pillars

Before discussing the previous studies, which have applied this framework to libraries empirically, it is important to understand that the pillars can function in isolation or

independently. However, they are more effective when working together in order to develop knowledge-driven growth. Therefore, investments in the four pillars must be balanced and coordinated so that the pillars interact to produce benefits greater than those obtainable from their independent operation (World Bank, 2007).

The interaction is illustrated in the figure below, showing the relationship among the four pillars that make up the knowledge economy. It is worth noting that, as indicated in the framework, the economic and institutional regime is the base on which the other three pillars rest. In this way, the interdependence and the relationship amongst all are created. This means that, in terms of its applicability to this study and in relation to the role of public libraries towards a knowledge economy, a society must have a minimum level of human capital (qualified librarians) capable of acquiring relevant information, knowledge and ICT infrastructural resources in accordance with the national policy and legislative framework. Society should then reap productivity gains from the acquired knowledge and an up-to-date information technology infrastructure at public libraries to lead to innovation for enhanced economic development. Without an effective information and knowledge infrastructure and good education and training, innovation systems will find it more difficult to reap the full benefits of global knowledge (World Bank, 2007).

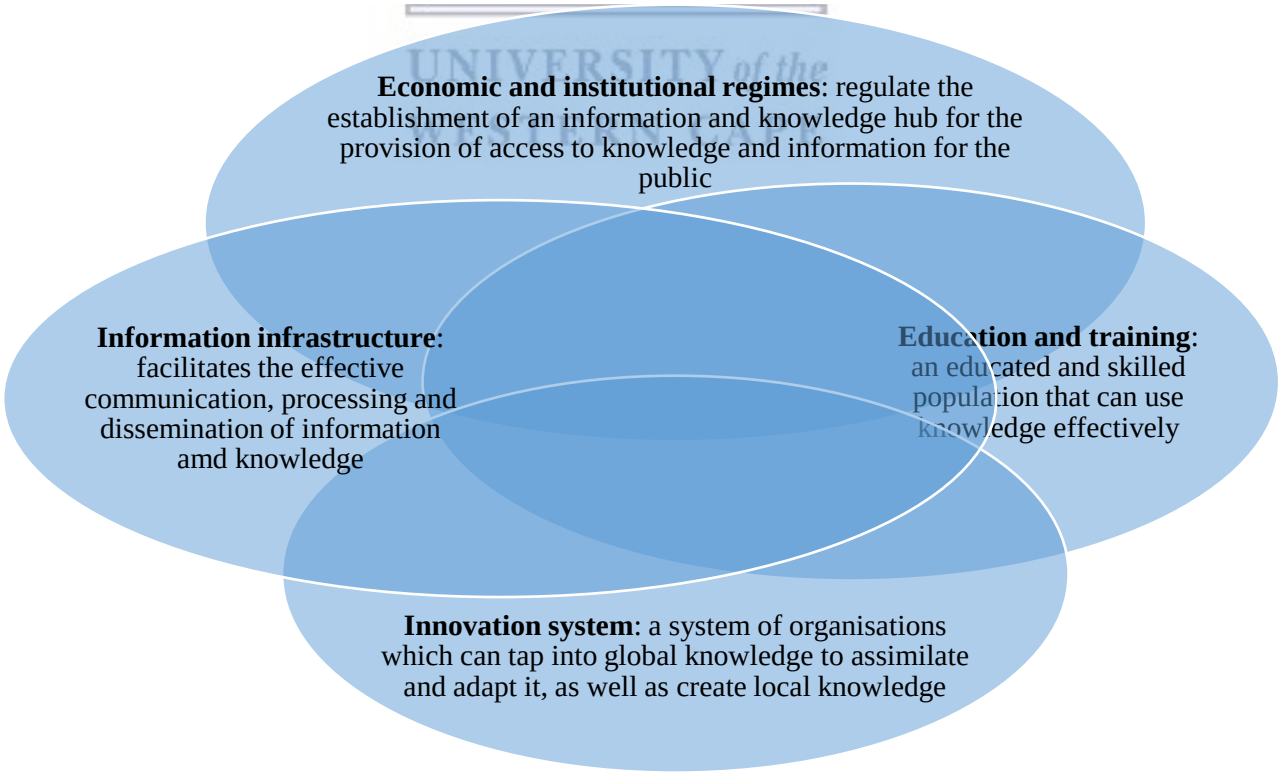


Figure 3: The Four Interactive Pillars of the Knowledge Economy (adopted from World Bank, 2007)

3.4.2 World Bank KE framework application in public libraries towards a knowledge economy

The previous section has discussed the collaboration among the four pillars of the World Bank's Knowledge Economy framework. It has proven that one can either operate independently or dependently on other pillars for serving their purpose effectively. This section has indicated how the framework has been used by scholars in investigating the role of public libraries in the knowledge economy. The researcher has found few studies that have applied this framework specifically to libraries, access to information and knowledge services.

The following studies combined all pillars (see section 3.4.1). Asselin and Doiron (2016), in their book on linking literacy and libraries in global communities, confirm the application of the framework to libraries by demonstrating that libraries are key role players, particularly within three of the strategies, which are a) education in literacy and how to learn; b) a point of access for global knowledge, and c) a place for providing new technologies. Libraries provide literacy development through reading promotion activities that support a community's literacy programmes (Asselin and Doiron, 2016). The literacy activities include navigating websites by using effective search skills, using social media ethically, creating new knowledge and effectively distributing it online (Asselin and Doiron, 2016). In a nutshell: different literacies offered by libraries are summarised as digital literacy, media literacy and information literacy (Asselin and Doiron, 2016). These literacies are crucial to a knowledge economy (Asselin and Doiron, 2016).

Haq and Ahmad (2012) apply the World Bank's KE framework in a study based on a knowledge economy from a Pakistani perspective. The study combines all four pillars and identifies public libraries as public universities that are great sources of self-learning and have vital means of attaining excellence in a knowledge economy. ICTs have advanced education through distance learning, providing access to government information sources and online job searching (Haq and Ahmad, 2012).

In recognition of libraries as public institutions that provide access to information and knowledge for all citizens to have the ability to acquire, create, disseminate and use knowledge, Pakistan has established the national digital library with access to international scholarly literature based on the online delivery of high-quality peer-reviewed journals and databases.

This is done to disseminate information and knowledge of domestic and international content to relate both, and to apply and use both knowledge and information in the local context (Haq and Ahmad, 2012).

The establishment of a national digital library initiative to improve access to knowledge and information is the result of the poor condition of libraries in Pakistan. In view of the study by Haq and Ahmad (2012), the poor condition includes outdated public library book collections along with limited services that do not meet the needs of society or the knowledge economy requirements. Also, very few schools have libraries, while the book publishing industry is poorly developed. Pakistan's dependence on the United Kingdom (UK) and the United States of America (USA) with their major publishing industry is another cause of the poor condition of its libraries (Haq and Ahmad, 2012). A proper publishing industry will increase the country's literacy rate and develop reading habits that will increase the use of public libraries where both local and foreign books will be available at no or low cost (Haq and Ahmad, 2012).

Oseghale and Adeyomoye's study (2011) study highlights the relevance of all four pillars to libraries that found that libraries are hubs of knowledge contents and repositories where the acquisition, creation, dissemination and utilisation of knowledge take place (Oseghale and Adeyomoye, 2011). According to Oseghale and Adeyomoye (2011), libraries provide access to both forms of print and electronic resources through ICTs, and offer internet access to global knowledge, as well as disseminating and using knowledge free of charge or at low cost. Through public libraries, information and knowledge is made available in the formats that users understand (Oseghale and Adeyomoye, 2011). Access to information and knowledge educates the masses in promoting socio-economic development, through improved education, health, adding to the pace of capacity for change and innovation (Oseghale and Adeyomoye, 2011).

Oseghale and Adeyomoye's (2011) study further reveals that the provision of quality library services for a knowledge economy does not come easy, as there are implications, especially for successfully achieving the education and training and innovation system pillars (Oseghale and Adeyomoye, 2011). The implications include poor supply of electricity in Nigeria to enable the use of ICTs and other educational platforms, as well as internet connectivity to universities (Oseghale and Adeyomoye, 2011). These are drawbacks, because a knowledge economy depends on how quickly the country becomes a learning economy (Oseghale and Adeyomoye, 2011). This is a concept that is not only based on the use of technologies to access global

knowledge, but also to use them to communicate with the purpose of being innovative (Oseghale and Adeyomoye, 2011).

Lor and Britz (2010) in their study reveal that although the economy of a country rests on the four pillars of the KE framework, the education and training and innovation pillars show that not only access to knowledge and information is important, but mostly the ability of people to assign correct meaning to the accessed knowledge (Lor and Britz, 2010). The study indicates that public libraries are the places where people can access the internet free of charge to provide lifeline information to people looking for jobs and searching to acquire new skills (Lor and Britz, 2010).

Ghosh and Ghosh (2009) conducted study combined the four pillars of the KE framework application to libraries where India's first focus area is ensuring that access to knowledge is provided through the strengthening of libraries' information infrastructure and networks in India (Ghosh and Ghosh, 2009). This was done through promoting and adopting open-access literature, open-course software and open-source software in successfully building a knowledge economy (KE) (Ghosh and Ghosh, 2009). The study discovered that good information infrastructure can empower scientists, researchers, educators, business people, policy-makers and ordinary citizens with the ability to access, create and distribute information much more powerfully and quickly for sustainable development and growth (Ghosh and Ghosh, 2009). This led India's government and non-governmental institutions to invest in the areas of information literacy, life-long learning and knowledge repository development (Ghosh and Ghosh, 2009).

With the Indian national strategy on access to information and knowledge in contributing to all four pillars of the World Bank's KE framework, the following national projects were established:

- An internet-enabled mobile digital library was developed by the Rajio Gandhi University of Health Science's library and information network for the common citizen with the purpose of promoting literacy. Mobile vans with satellite connection are used in remote areas for connectivity to the internet.

- Indian village knowledge centres or community information centres lend books, offer Web-based services such as e-learning, banking and insurance, as well as e-governance and community information, and content and database creation.
- The digital library of India (DLI) provides free access to all human knowledge, and acts as aggregator of knowledge and digital content created by other digital library initiatives in India.

The applications of the KE framework four pillars in those five studies to libraries have enabled them to unearth the relevance of public libraries for the country's economic and social development. All studies finding are crucial to the research objectives or questions of this study. These studies finding have provided predictions of the expected results of the study under investigation. They all found public libraries as key role player in education in provision of free access to global knowledge and information infrastructure to promote self-learning, distance education, access to government information sources and online job searching. Challenges identified and the realisation of the value of public library for sustainable development led to countries investment in library programs as national projects to strengthen information infrastructure and empower citizens with the ability to access, create, and disseminate more quickly for sustainable development and growth. Although the researcher literature searches on the application of the World Bank KE framework application to public libraries did not yield more studies, these retrieved studies have provided rich information and strengthen the originality of this study under investigation.

3.4.3 Criticism on the World Bank KE framework

The application of the World Bank's KE framework seems to be well-applied in the public libraries' role towards a knowledge economy, as noted in the previous section. All empirical studies come from developing countries where technological infrastructure resources are found to be weak and hindering the progress towards full transition to a knowledge economy.

According to the World Bank, the purpose of the Knowledge Economy framework is in essence to evaluate the quality, adaptation and use of knowledge in an economy, with the goal of creating effective knowledge economies capable of competing in the global economy (World Bank, 2007). It is reported that advanced countries in the Organization for Economic Co-operation and Development (OECD) with more than 50% gross domestic product are estimated to be knowledge-based countries, and they have made the transition to knowledge economies decades ago. This adds to other developed countries globally that have all the elements such as

high-quality education, research-based work, innovative ideas, skilled manpower, strong policies and legal legislation, good and effective knowledge and information infrastructure resources and equal opportunities for all (Dutta, 2016).

Furthermore, the attainment of all four pillars for effective succession to the global knowledge economy has disadvantaged the undeveloped and developing countries where most of the valuable assets of development are greatly absent or limited. These countries rely heavily on the developed countries for assistance with improvement on national developmental issues (Dutta, 2016).

Adding to that, knowledge economy factors differ among countries, based on their levels of socio-economic development (Sundać and Fatur Krmpotić, 2011), but the four pillars of the World Bank's KE framework consist of a large number of indicators or variables (briefly listed in section 3.3 of this chapter), as per the knowledge assessment methodology (KAM), which is an online interactive tool that produces the Knowledge Economy Index (KEI). The KEI is an aggregate index representing a country's or a region's overall preparedness to compete in the knowledge economy (KE) (World Bank, 2012). Consequently, it is financially unsustainable for developing countries to invest in the four pillars concurrently. Therefore, governments of developing countries will have to prioritise the specific pillars in which to invest, although the World Bank has stressed that all pillars should be accomplished for a knowledge economy (Sundać and Fatur Krmpotić, 2011).

In spite of the weaknesses of or criticism of the World Bank's KE framework, it has affirmed that it is crucial for developing countries to gain easier access to global knowledge and technologies to achieve the Millennium Development Goals, also presently known as the Sustainable Development Goals (SDGs) (International Federation of Libraries Association (IFLA), (2015), despite the widening in the existing knowledge gap and the digital gap (World Bank, 2012).

3.5 Chapter summary

Chapter three describes and explores the World Bank Knowledge Economy framework that informs this study with its four pillars. It is a framework that describes a knowledge economy (KE), which relies on knowledge as the key engine of economic growth. The application and relevancy of the framework to the study are provided by highlighting relevant literature that

strengthens the study. This is not the only study regarding public libraries that has made use of the World Bank's KE framework, which is normally utilised for assessing countries' performance in respect to knowledge economy.

The framework offers public libraries opportunities to accept their valuable recognition as knowledge hubs with the roles of knowledge acquisition, knowledge creation and knowledge dissemination for communities to tap into knowledge, and to assimilate and apply it as innovation to their needs for enhancing social and economic development. Despite the strength of the World Bank's KE framework, there are also criticisms regarding its four pillars application to developing countries and which seem as designed to favour the developed world with its existing advanced infrastructure resources in place.

Literature suggested that it is financially unsustainable for developing countries to invest in the four pillars concurrently. However, the framework offers developing countries opportunities to equally invest in public libraries as they invest in other national developmental sectors, using the four pillars as benchmarking indicators for efficient and effective service delivery.

CHAPTER FOUR

RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

This chapter explicates the design and methodology underpinned for conducting this research study. It provides clarification on how the study has utilised the World Bank Knowledge Economy Framework in framing the study empirically to obtain the research data that enable the ontological and epistemological discoveries of answers to the research questions. In understanding the concept of research design, Babbie and Mouton (2011) define it as a plan or blueprint of how researchers intend conducting the research while Bless and Higson-Smith (1995) define it as the planning programme to guide the researcher in collecting, analysing and interpreting observed facts. A recent description of research design by Byrne (2016) asserts that the term is usually used in reference to the design of experimental research. However, it is also used in other types of research study designs such as descriptive or exploratory design, correlational design, quasi-experimental design, experimental and review design, and meta-analytic design. Creswell (2014: 12) defines research designs as "types of inquiry within qualitative, quantitative, and mixed methods approaches that provide specific direction for procedures in a research design".

This chapter provides the descriptions of the design and methodology underpinning the research study. It encompasses the research paradigm chosen as a framework of observation and understanding (Babbie and Mouton, 2011) in investigating the roles of public library services towards a knowledge economy of Namibia from the two regions of Ohangwena and Omusati, as well as the piloted regional public library of Oshana in the Oshana region.

The chapter also provides reasons for conducting a research study at public libraries in the Ohangwena and Omusati regions chosen from all 14 regions in Namibia. It further explains why the Oshana regional public library has been piloted for this study. The historical profiles of the Ohangwena and Omusati regions as research sites and public libraries under investigation have been highlighted for understanding the nature of the environment in which this study has been constructed.

The path undertaken for the research process that has led to obtaining data and how the data have been captured and analysed to form the synthesised findings is explicated. In ensuring that sources of errors are prevented in the research process, the study used a mixed method of quantitative and qualitative design. Semi-structured interviews, survey questionnaires and a content analysis of the review and an analysis of the Namibian policy and legislative framework documents were used as techniques for data collection.

4.2 Research approaches

According to Creswell (2014), research approaches are the plans and the procedures undertaken by the researcher for research that spans the steps from broad assumptions to detailed methods of data collection, analysis and interpretation. The research approaches comprise the philosophical assumption or worldview the researcher brings to the study. Some researchers refer to this as the paradigm of the study (Guba and Lincoln, 1994). Furthermore, part of research approaches includes the procedures of inquiry, which are termed "research designs", and the specific research methods of data collection, analysis and interpretation, as illustrated in figure 4 below (Creswell, 2014).

A brief discussion of the research approaches undertaken for this study in investigating the roles of public library services towards a knowledge economy of Namibia in terms of the paradigm assumption selected, the research design employed and the research methods underpinning it, is presented below.

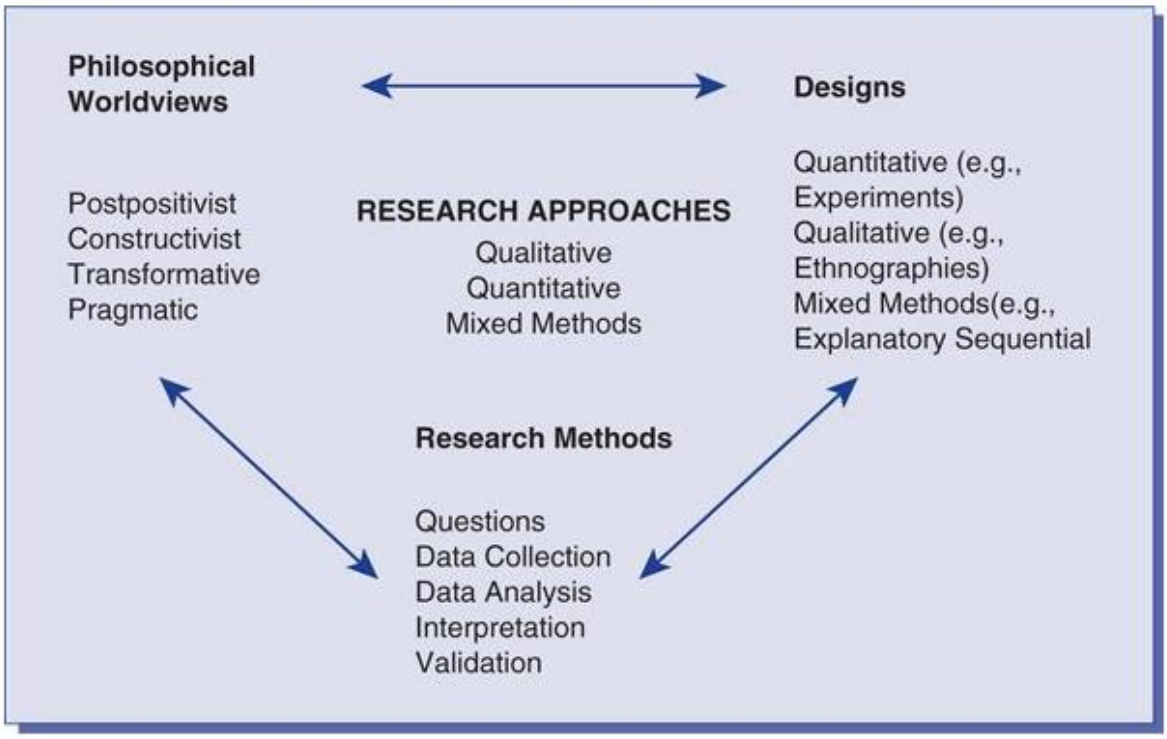


Figure 4: Components of research approaches (Creswell, 2014: 5)

4.2.1 Post-positivism research paradigm

The term "paradigm" is defined by Guba and Lincoln (1994: 105) as "a basic belief system or worldview that guides the investigator, not only in choices of methods but in ontologically and epistemologically fundamental ways". In that view, this study is a mixed-methods study that is informed by the post positivist paradigm. This paradigm advocates for the methodological pluralism of combining or integrating both quantitative and qualitative research methods (Creswell, 2014; Schwartz and Jacobs, 1979). Post positivists have implied that research studies be conducted, based on the research questions being observed or addressed, which this study has followed (Schwartz and Jacobs, 1979). The assumption of post positivists implies that causes determine effects or outcomes in the research study, which is also framed by theories that can be tested, verified and polished for better understanding the world (Creswell, 2014).

In that view, the research questions for this study were designed, based on the World Bank KE framework's four pillars. These are explored quantitatively through survey questionnaires from public library users, qualitatively through semi-structured interviews conducted with public libraries heads or chiefs of public libraries who have participated in this study, and also by

reviewing Namibia's policies and legislative framework, which is part of the qualitative method. Although Creswell (2014) emphasises that the post-positivist lens is based on careful numeric observation and measurements of the objective reality that exists out there in the world, which holds true more for quantitative than qualitative studies, he has also indicated the role of post positivists in studying the behaviour of individuals, which is interpretive in nature and part of the qualitative design (Creswell, 2014; Wildermuth, 1993). Moreover, Wildermuth (1993) affirms that the epistemological assumption of an interpretive approach underpins that realities are subjective and socially constructed in such a way that researchers study the individuals as actors to find the reality in order for them to understand this reality.

According to Guba and Lincoln (1994), the post positivist ontological reality must be subjected to the widest possible critical examination to facilitate the apprehending reality as closely as possible. Therefore, this view affirms that empirical investigation is crucial to capture reality as closely as possible (Lor, 2014). As such it makes the post positivist research paradigm relevant to this study, as it implies the use of multiple methods, data collection and analysis in establishing contemporary practices of public libraries in contributing to the knowledge economy of Namibia's ontology, based on the researched questions, as framed by the four pillars of the World Bank KE framework.

If this study had not been guided by the World Bank KE framework when collecting research data, the researcher could have chosen pragmatism as its philosophical assumption or paradigm. The reason being that pragmatists also support the use of mixed methods in both qualitative and quantitative research by focusing on the research problem by means of pluralistic approaches and with differing forms of data collection and analysis (Creswell, 2014). Pragmatism is the philosophy that is mostly considered in mixed-methods research studies for its flexibility and openness on focusing on research questions (Feilzer, 2010; Johnson and Onwuegbuzie, 2004; Teddlie and Tashakkori, 2009).

The main difference between post positivism and pragmatism lies in the support of a theory or framework as the guide for research studies. Post positivism supports a theory and this study is, therefore, based on post-positivism, consequently making pragmatism not suitable for this particular study. (See table 3 below.)

Table 3: Two research paradigms or philosophical worldview assumptions (Creswell, 2014)

Post-positivism	Pragmatism
• Determinant • Reductionism • Empirical observation and measurement • Theory validation	• Consequences of actions • Problem-centered • Pluralistic • Real-world practice orientation

4.2.2 Mixed methods research design

Mixed methods research (MMR) is defined as "the type of research in which the researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration" (Johnson, Onwuegbuzie and Turner, 2007: 123). MMR is also defined as "an inquiry in which the investigator collects and analyses data, integrates the findings, and draws inferences using either qualitative and quantitative approaches or methods in a single study or programme of inquiry" (Tashakkori and Creswell, 2007:4).

According to Creswell (2014), mixed methods research is still new in the social and human sciences. However, his view is challenged by Ngulube (2010) who asserts that combining methods in a single study is not new, as some scholars have been using closed-ended questions for quantitative research and open-ended items for qualitative research in one questionnaire for a single study, which is, in an actual sense, MMR. On the other hand, the ethnographers also claim to having been employing MMR when conducting research by collecting both qualitative research data through interviews and quantitative data in survey research. The difference is that the practice is, however, not called MMR, although it involves the use of multiple methods when conducting research (Ngulube, 2010).

The birth of the integration of quantitative and qualitative methods as mixed methods only surfaced in the 1990s where it was even called "the third methodological movement" (Creswell and Plano Clark, 2007; Teddlie and Tashakkori, 2003). As such, the elements of both

qualitative and quantitative research methods were then integrated in a research study, making it a mixed-methods research design (Creswell, 2014; Teddlie and Tashakkori, 2009). This is done when the researcher combines qualitative open-ended questions and quantitative closed-ended questions in one questionnaire, just like ethnographers used to do (Feitzer, 2009; Ngulube, 2010).

The purpose of mixing the two research methods is triangulation by gathering and analysing data of the same phenomena in order to eliminate the inherent biases associated with using one method only, and also to validate the research instruments (Bryman, 2008; Ngulube, 2010). Mixed-methods ideologists believe that all methods have bias and weaknesses built in, but having both methods of qualitative and quantitative data neutralizes those biases and weaknesses through triangulation (Creswell, 2014). Another reason for the rise of the mixed-methods research design was due to perceived anomalies within the separate qualitative and quantitative research methods (Morgan, 2007).

In this study, therefore, survey-structured questions of the quantitative method were combined with a few open-ended questions of the qualitative method in a single questionnaire for data collection from public library users. Semi-structured interviews of the qualitative method were employed in obtaining data from heads of public libraries and chief librarians. Furthermore, a content analysis of Namibian policies and legislative frameworks on providing access to information and knowledge by public libraries was conducted as part of the qualitative method.

The aforementioned methods and data collection tools have qualified this study to be a mixed-methods research (MMR) study. One of the advantages of the combination of both quantitative and qualitative methods is that it helps to explain and deeply explore the purpose of the study (Creswell, 2014).

In that sense, there are different types of mixed-methods research designs, as one research design differs from another. Based on Creswell's study (2014), the basic three mixed-methods designs are the: 1) convergent parallel mixed-methods design; 2) explanatory sequential mixed-methods design; and 3) exploratory sequential mixed-methods design. Among the three mixed-methods designs, this study has been designed with a convergent parallel mixed-methods design.

4.2.3 Convergent parallel mixed methods design

A convergent mixed methods design involves the collection of both quantitative and qualitative data, which are then analysed separately by the two databases, namely SPSS for quantitative and Atlas.ti for qualitative data. The data are then compared in order to see if the findings confirm or deny each other (Creswell, 2014).

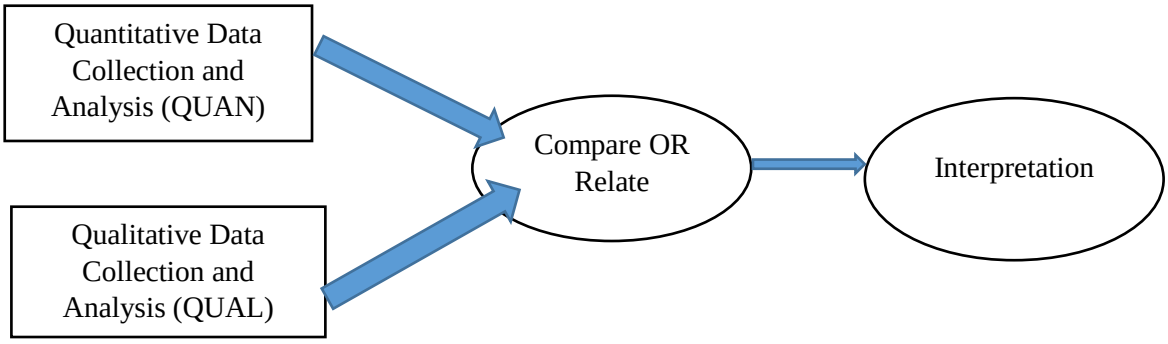


Figure 5: Convergent parallel mixed methods design (Creswell, 2014: 221)

According to Fetters, Curry and Creswell (2013: 2136), the difference between the three mixed methods designs is that, in sequential designs (explanatory and exploratory), "the intent is to have one phase of the mixed methods study build on the other, whereas in the convergent designs the intent is to merge the phases in order that the quantitative and qualitative results can be compared". In a convergent design, which is sometimes referred to as a 'concurrent design', the qualitative and quantitative data are collected and analysed within the same period of time (Fetters, Curry and Creswell, 2013).

The convergent parallel mixed methods design was applied in this study by simultaneously collecting quantitative survey data from public library users from all eight (8) participating libraries. The quantitative survey data were collected by eight (8) research assistants who were assigned to the eight public libraries, namely four (4) in the Ohangwena region and the other four (4) in the Omusati region by means of questionnaires. There was one (1) research assistant stationed at each participating library for the same timeframe of data collection. As for qualitative semi-structured interviews, the researcher conducted interviews herself by travelling from one public library to another during the same time that research assistants were collecting the quantitative survey data.

The survey questions were designed in the same way as the qualitative semi-structured interview questions as framed by the research theoretical framework, namely the World Bank Knowledge Economy (KE) four pillars as discussed in chapter three, and also based on the study research questions as highlighted below. Furthermore, the content analysis review was also conducted with indicators or themes from the research questions and the World Bank KE framework (1998), which is based on four pillars:

- An economic and institutional regime
- Information/knowledge and ICT infrastructure
- Education and training
- Innovation system

The World Bank KE theoretical framework has been chosen based on its relationships among its pillars and the convergence with the study's research questions, as discussed in chapter one and outlined below:

- How do Namibia's legislative frameworks, national development plans and policies reflect access to knowledge and information, as provided by information services such as libraries?
- What public library information and knowledge, and ICT infrastructural resources and services are available for the effective facilitation of the communication, dissemination and processing of knowledge, and how are they accessible for the knowledge economy?
- How do public library services contribute to education and training of both users and librarians to ensure that they have the competencies and skills for the knowledge economy?
- What public library innovation systems are in place to deliver quality library services to users and enable them to tap into the growing stock of global knowledge, and to assimilate and adapt it to local needs for economic and social development (innovation)?

This study included all research questions in the survey questionnaire, and in the semi-structured interviews. Content analysis reviews of Namibia's policy and legislative frameworks also covered all the research questions. The purpose of having the same or overlapping questions was to correlate the results from all three research instruments in establishing knowledge economy benchmarking tools, as per World Bank KE framework (1998) for public library services.

4.3 Research study population sampling

According to Bless and Higson-Smith (1995: 99), a population "is the set of elements that the research focuses upon and to which the results obtained by testing the sample should be generalised". The population of this study was drawn from two of the fourteen (14) Namibian regions, namely Ohangwena and Omusati. The Ohangwena and Omusati regions each has four public libraries; thus, in total there are eight (8) public libraries. Two of the public libraries are regional libraries, which were built and fully furnished with assistance from the Millennium Challenges Account (MCA), one in each participating region.

The study has used stratified random sampling to which is referred as a proportional or quota random sampling. This involves the dividing of populations into homogeneous subgroups and then taking a simple random sample in each subgroup (Trochim, 2006).

4.3.1 Research participant selection and sampling

In chapter one, it is reported that Namibia has 66 public or community libraries across the fourteen (14) regions (Namibia Library and Archives Service, 2015). The decision on regions for the study was based on certain criteria. The selection of the two regions (Ohangwena and Omusati) participating in the research study was based on their having the highest populations of all the regions in Namibia, and they were also geographically located in the remote rural areas.

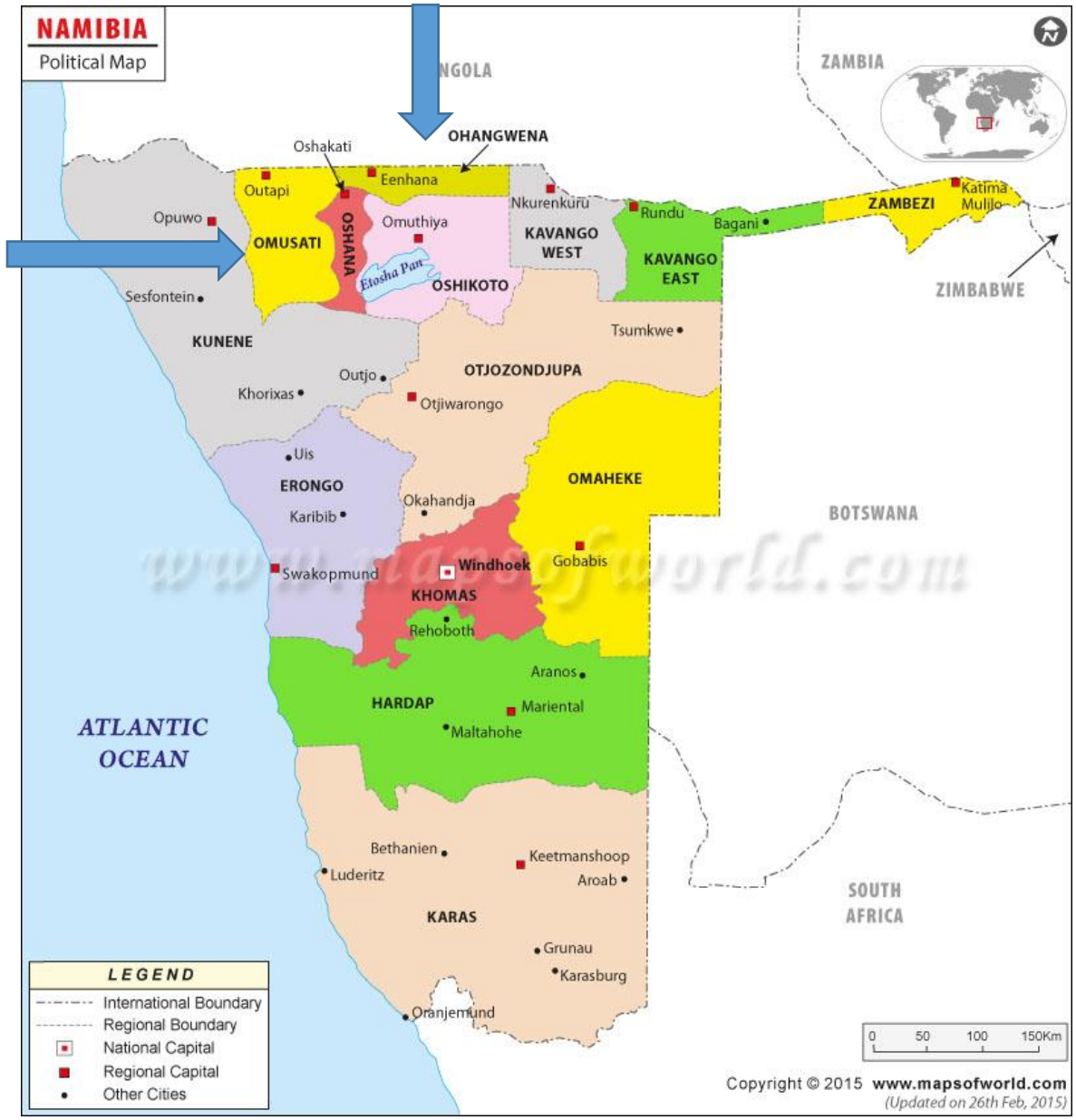
The population size of the Ohangwena region is 252 146 and the population size of the Omusati region is 247 680 (Namibia Statistics Agency, 2015; Namibia Library and Archives Service, 2015), as indicated in table 4 below.

Table 4: Fourteen (14) Namibian regions with numbers of public libraries, librarians and populations (Namibia Statistics Agency, 2015; Namibia Library and Archives Service, 2015)

Region	Number of public / community libraries	Number of librarians	Population size
!Kharas	9	9	82 809
Erongo	9	9	170 227
Hardap	7	6	84 248
Kavango East	2	2	143 710
Kavango West	2	2	90 176
Khomas (City)	8	8	385 567
Kunene	4	4	93 900
Ohangwena (Participant)	4	10	252 146
Omaheke	4	10	75 070
Omusati (Participant)	4	10	247 680
Oshana (Pilot)	3	10	184 996
Oshikato	3	4	189 657
Otjozondjupa	5	6	151 087
Zambezi	2	2	96 851
Total: 14	**66**	**89**	2 247 124

The Namibia map showing the 14 regions is also provided below. The Ohangwena and Oshana regions can be seen located at the top north side or left side of the map (Map 2), as illustrated by the arrows.

Map 2: Namibia's 14 regions



Source: Map of the World, 2015

As indicated in table 4, the regions with more librarians are the few with regional libraries, namely Khomas (capital city), Ohangwena, Omaheke, Omusati and Oshana. As indicated in the map above, the Ohangwena, Omaheke and Oshana regional libraries were built and fully furnished with financial assistance from the Millennium Challenges Account (MCA) (Namibia Library and Archives Service, 2015). The Namibian government plans to roll out the improvement of public library services to all the regions in working toward achieving Vision 2030 for the country. The planned services are aimed at enhancing the contribution of the education sector in attaining the strategic national development goals, and also at facilitating

the transition into a knowledge-driven economy (Namibia. Ministry of Education, 2007). To achieve these goals, the government implemented the plan by outlining strategic plans for building regional libraries in all other regions. The strategy resulted in the construction of a big regional public library in Outapi in the Omusati region that was built at the same level as the three (3) regional libraries in the Ohangwena, Oshana and Omaheke regions. The new regional library building in Outapi is still under construction and funded by the Namibian government's budget for development programmes (Namibia. Office of the President, 2014).

The main reason for selecting only public libraries from the Ohangwena and Omusati regions was because the research project was limited to the study's purpose of completing a doctorate programme, which is also featured by other limitations such as financial implications, a restricted timeframe, great distances and human resources. Given these factors, the whole population of the two regions did not participate in the study. However, the sample size of 624 participants represented the population. The sample size was established from using Slovans (2017) formula calculation based on the population sizes of the Ohangwena region (252 146) plus the Omusati region (247 680), which is a 499 826 population size.

Calculation is as follows:

$n = N/(1+Ne^2)$ as calculated in chapter 4, where n is the sample size, N is the population size and e is the margin of error.

n=499826/

e=1-0.96 = 0.04

$n=499826/ [1+(499826x0.04^2)]$

n=499826/[1+466826x0,0016]

n=499826/[1+799.7216]

n=499826/800.7216

n=624 Population Sample Size

The sample size included a 96% confidence level that the data were going to reflect the entire population (Slovans, 2017). On that note, a probability sample of stratified random sampling was used for collecting data from the public library users, whereas purposive sampling was employed for semi-structured interview data collection from public librarians. As for the pilot study, semi-structured interviews were conducted with the chief regional librarian, senior librarian and the information and communications technology (ICT) librarian. Stratified random sampling was applied when the researcher first divided all the population elements into

groups or categories, and then drew independent random samples from each group or stratum. Data were then collected from all public libraries, four (4) in the Ohangwena and four (4) in the Omusati region. The data were categorised in forms of strata based on their homogeneous character (Bryman, 2008; Connaway and Powell, 2010). In stratified sampling, resulting sample strata should be distributed in the same way as the population in terms of the stratifying criterion when determining the sample size for each public library (strata) (Bryman 2008: 173).

4.3.2 Data collection

It was discussed earlier in this chapter (see section 4.2.3) that this study is informed by the convergent parallel mixed methods design, which is key to collecting both forms of data and using the same or parallel variables or concepts (Creswell, 2014). This emphasises the fact that concepts used in quantitative survey data collection should be the same as or related to those of qualitative semi-structured interviews and content analysis, which was the case with this study.

Research data were collected from the two (2) regions in Ohangwena and Omusati. There were eight (8) public libraries in each region, as illustrated in table 6 below. As discussed earlier, the study used mixed methods by integrating both the quantitative and the qualitative research methods. The combination involved the concrete operation at the technique level of research in terms of data collection for qualitative or quantitative research, such as open-ended and semi structured interviews and structured questionnaires respectively (Creswell, 2014; Sandelowski, 2000). The qualitative data collection results were aimed at gaining an in-depth perspective, while the quantitative data collection results aimed to be generalized according to the population (Creswell, 2014).

4.3.2.1 Research pilot study

The research study was piloted at the Oshana regional library that is located in Oshakati in the Oshana region. A pilot study is a research study, which is conducted before the intended main study. This is sometimes referred to as a feasibility study aimed at identifying potential practical problems in following the main research procedure. Problems could be based on inappropriate and complicated research instruments (Bell, 2014). These need to be ruled out to prevent the main research study to fail. The pilot study is usually conducted on a small scale (Van Teijlingen and Hundley, 2017).

The pilot study was conducted with 50 public library users completing the survey questionnaire. The semi-structured interviews were conducted with three (3) librarians who included the chief librarian, the ICT librarian and the circulation librarian.

The pilot study found minor errors with the study questionnaire. The errors were mainly present in the instructional part of the category selection where users were supposed to select more than one category, because the researcher had not provided the "Please tick more than one box" option. Another mistake was the phrasing of questions; however, some questions were rectified by the researcher, since she was always present to guide and assist users with filling out the questionnaire, even though she had two research assistants who were administering questionnaires with her.

Table 5: Pilot at the Oshana regional library

Pilot at regional library	**Sample size**	**Number of interviewers**	**Region and location**
Oshana Regional Public Library	50	3	Oshana, Oshakati

The pilot questionnaires were not included in this document data analysis report. Although only minor corrections were made from the research data collection instruments.

4.3.2.2 Survey structured questionnaire techniques and data collection

The quantitative research method involves the collection of numerical data and exhibits the relationship between theory and research as deductive, a predilection for a natural science approach and as having an objectivist conception of social reality. Data collection techniques in qualitative research include structured closed-ended questions, experiments, correlation and the regression analysis method (Bryman and Bell, 2007).

This study was informed by stratified random sampling; therefore, the researcher relied on a sampling frame to represent all of the elements of the population of the two regions where the participating public libraries are located (Bryman and Liao, 2004). A regional population sampling frame was done under the assumption that people who lived great distances from the public library or travelled long distances to use the library, since there were few public libraries

within a region instead of a specific area where the public library was based. This was not investigated in the study though. As thus, 624 questionnaires were distributed and administered proportionally to users at eight public libraries in the Ohangwena and Omusati regions.

Survey questionnaires used a combination of closed-ended questions for the quantitative research method and open-ended questions for the qualitative research method (Pickard, 2013), all framed by the research according to the four pillars of the World Bank KE framework and structured in alignment with the research questions outlined in section 4.2.3 above.

Table 6: Quantitative data collection unit of analysis: participating public libraries as strata

Ohangwena region (252 146 residents)	Omusati region (247 680 residents)
Eenhana public library	Okahao public library
Okongo public library	Outapi regional public library
Ohangwena regional public library	Okalongo public library
Omungwelume public library	Tsandi public library

4.3.2.3 Semi-structured interview technique of data collection

It is indicated that this study employed a convergent parallel mixed methods research design. This included the use of different mixed methods data collection techniques in parallel (Creswell, 2014). The previous section discussed how the research data were collected by using the survey questionnaires as its quantitative and qualitative methods.

This section focuses on how the research data have been collected by using semi-structured interviews, which is a qualitative research method technique. It involves covering a wide range of contexts where the interviewer had a series of questions on an interview schedule. It is possible to vary the sequence of questions, which tends to be more broadly framed than those in a structured interview (Bryman and Bell, 2014).

Qualitative research investigates the qualities of phenomena rather than quantities. Qualitative inquiry thus seeks to find out not only what happens but also how it happens and why it happens the way it happens. Therefore, qualitative research involves an inquiry in which the qualities, the characteristics or the properties of phenomena are examined for better understanding and explanation (Henning, Van Rensburg and Smit, 2004: 5). The qualitative method is

investigated in structured and semi-structured interviews, observations, documents and records, focus or group discussions, and historical studies (Babbie and Mouton, 2011; Creswell, 2014; Gorman and Clayton, 1997).

This study used semi-structured interviews to collect data from heads of public libraries, and chief librarians. Semi-structured interviews, as means of qualitative data collection research, look for a true understanding of what is happening; therefore, the interviews are usually not entirely pre-structured with respect to content, formulation sequence and answers; neither are they left entirely open (Boeije, 2010: 62). Semi-structured interviews are conducted either face-to- face or by telephone, or they may also be conducted through the modern social media such as intervideo links (Boeije, 2010).

According to Neuman (2000: 196), in terms of sampling for the purpose of collecting qualitative research data, qualitative research focuses less on a sample's representativeness or on detailed techniques for drawing a probability sample; it rather focuses on how the sample or small collection of cases, units or activities illuminates social life. In this case, since only the Ohangwena and Outapi regional public libraries had more than two librarians and a chief librarian, the researcher interviewed the two chief librarians from the regional libraries in Ohangwena and Outapi respectively, and then also interviewed the head of each of the public libraries listed in table 7 below.

Table 7: Unit of analysis: librarians interviewed in public libraries

Ohangwena Region	Omusati Region
Eenhana public library (Librarian)	Okahao public library (Librarian)
Okongo public library (Librarian)	Outapi regional public library (Chief Librarian)
Ohangwena regional public library (Chief Librarian)	Okalongo public library (Librarian)
Omungwelume public library (Librarian)	Tsandi public library (Librarian)

As indicated in table 7 above, eight (8) librarians were interviewed, representing all participating public librarians. Creswell (2014) states that data for qualitative data collection

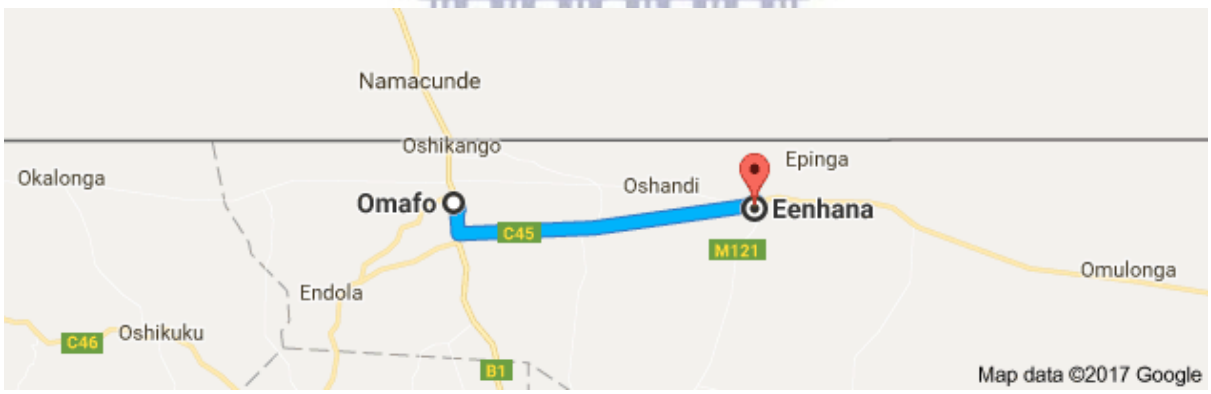
are usually smaller than that for quantitative data collection because the intent of data collection for qualitative research is to locate and gather extensive information from a small sample, while the quantitative survey data are needed to conduct meaningful statistical tests.

The public libraries are located great distances from one another. Therefore, the researcher made appointments by means of e-mails and telephone calls with the chief librarians and librarians to be interviewed at each library, and set dates on which to conduct the interviews. This great distance was the reason why research assistants were recruited. This is illustrated in the maps below (Map of the World, 2015).

The Ohangwena region public libraries: Distances

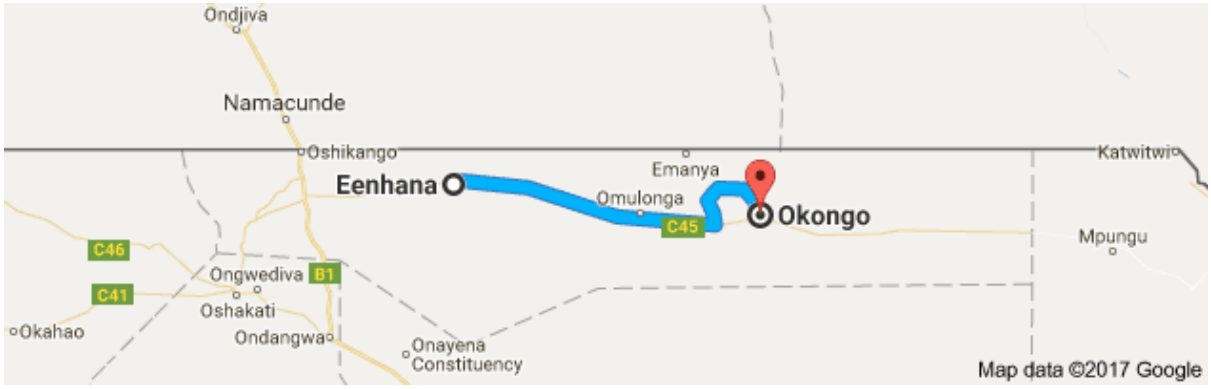
Map 3: Distance between the Ohangwena regional public library located in Omafo and the Eenhana public library

38 min (53.3 km) via C45



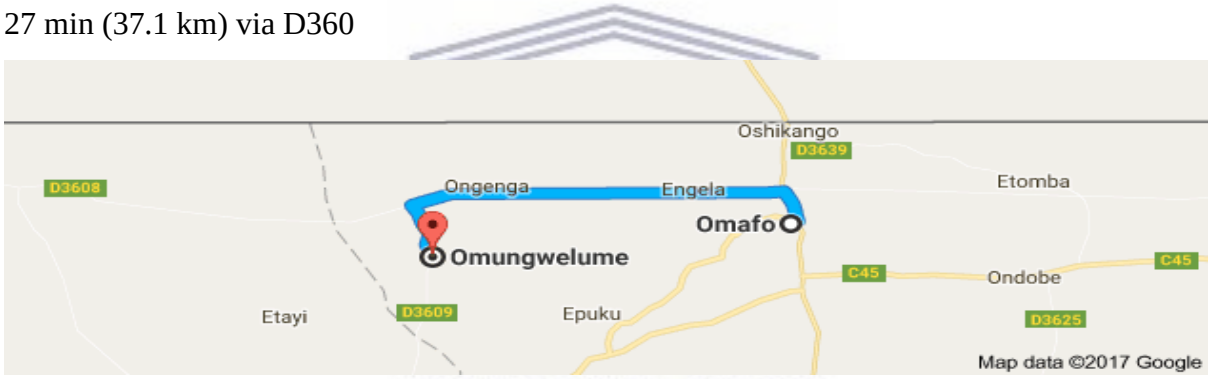
Map 4: Distance between the Eenhana and Okongo public libraries

1 h 30 min (115.5 km) via C45



Map 5: Distance between the Ohangwena regional library located at Omafo and the Omungwelume public library

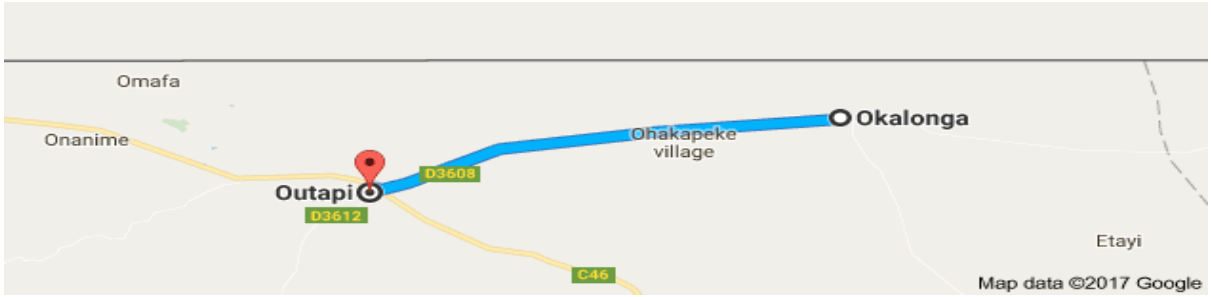
27 min (37.1 km) via D360



The Omusati region public libraries: Distances

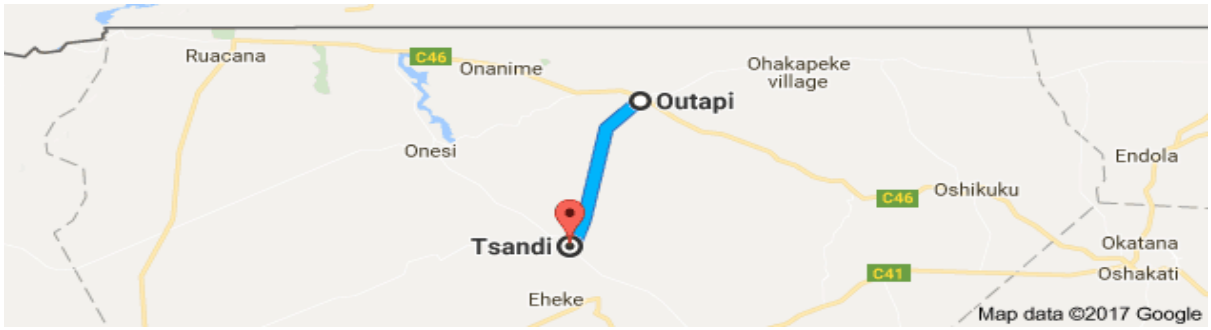
Map 6: Distance between the Okalongo public library and the Outapi regional library

30 min (38.9 km) via D3608



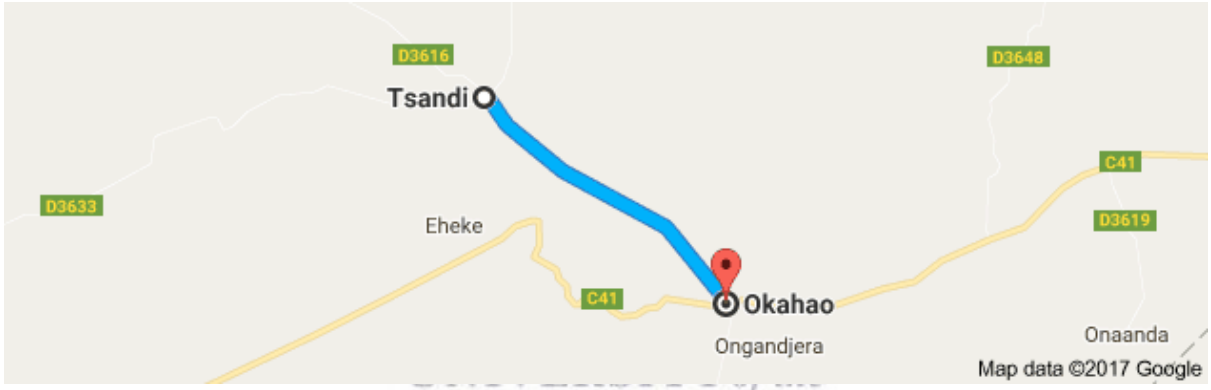
Map 7: Distance between the Outapi regional library and the Tsandi public library

24 min (30.4 km) via D3612



Map 8: Distance between the Tsandi and Okahao public libraries

23 min (25.7 km) via M123



The researcher travelled from one public library to another, starting in the Ohangwena region to the Omusati region to conduct interviews. Interview sessions were held with the aid of a digital tape-recording, as stated in the information sheet and the consent form. Creswell (2014) affirms that researchers conducting qualitative interviews should record the information acquired during the interviews by making handwritten notes, by audiotaping or by videotaping. Creswell (2014) further argues that the audiotaped interviews be transcribed, which the researcher did to enable the analysis of the data.

4.3.2.4 Content analysis

The previous sections describe how the research study has used the face-to-face survey questionnaires and semi-structured interviews for collecting data in investigating the contribution of public library services towards a knowledge economy for Namibia. It is

mentioned in chapter one that the study used three different research tools or techniques for data collection of which the third technique was content analysis. The reason was to triangulate the findings for the purpose of mutual corroboration (Bryman, 2008).

In view of the above, content analysis is therefore defined as "an approach to the analysis of documents and texts that seeks to quantify content in terms of predetermined categories and in a systematic and replicable manner" (Bryman, 2008: 275). In qualitative content analysis, focus on the construction of the meaning in texts recognises the significance of understanding meaning and the context in which the item being analysed appears (Bryman, 2008).

The study has used the content analysis technique by analysing the Namibian policy documents and legal legislative framework in investigating access to knowledge and information, as provided by public libraries. This technique also shows how the four pillars of the World Bank KE framework (1998) has guided this research study. The pillars are: 1) an economic and institutional regime; 2) information/knowledge and ICT infrastructure; 3) education and training, and 4) innovation systems, which are highlighted in the formulation of public library services' contribution to a knowledge economy – an economy whereby every individual in a country has access to knowledge and information in order to be equipped with relevant skills and capacities to contribute to economic growth (World Bank, 2007).

The four pillars of the World Bank's KE framework and the research questions were used as indicators of the Namibia policy and for the legal framework content analysis. The sample used for identification of documents was purposive. The researcher first identified national development policies, such as Vision 2030, NDP 2, 3 and 4, as well as the Namibian Library and Information Services Act, Act 4 of 2000, by investigating access to knowledge and information provided by public libraries. Then the way in which public libraries are supposed to provide quality services to the community were investigated, as well as the intended impact of library services to a community's economic and social development as well as its knowledge economy. The NDP documents led to the identification of other policy and legislative framework documents, which covered access to knowledge and information, as provided by public libraries.

4.4 Data analysis

In Bernard (2013), a data analysis is described in terms of what findings mean and links these findings to the findings of other research studies. The researcher has analysed the data using the Statistical Package for the Social Sciences (SPSS) software for quantitative data and the Atlas.ti software for qualitative data. There are a number of research data analysis computer software packages available, which include but are not limited to the following: QlikSense, Matlab, SAS Business Intelligence, Alteryx Designer, Minitab 17, MaxStat, and Stata, for quantitative statistical research data analysis (Capterra, 2017). The qualitative computer data analysis software packages include but are not limited to QGA Miner software (PROVALIS research, 2017: Predictive Analytics Today, 2017), Atlas.ti, HyperRESEARCH, MAXQDA, NXivo, Qiqqa, Quirkos and Xsight (Predictive Analytics Today, 2017). Among the data analysis software packages, MAXQDA and HyperRESEARCH are suitable for mixed methods data. In MAXQDA user-defined variables can be set and then edited in cross-tabs to be exported to SPSS and Excel.

The choice of using SPSS and Atlas.ti is based on the availability, accessibility and skill of working with the software. As for this study, the researcher's University has paid for postgraduate students to have access to the software, and has provided experts who train postgraduate students to effectively work with the software when analysing research data. The software is then made available to be installed on the researcher's laptop. The researcher received training in both software handling and was therefore able to analyse the research study's data with the assistance of the statistician when it was necessary.

SPSS Statistics data analysis is software developed by International Business Machine (IBM), one of the world largest computer companies, which offers advanced statistical capabilities and analytics to help researchers gain deep, accurate insights from data in order to inspire better decision-making (IBM, 2017). SPSS is considered one of the most commonly used data analysis software packages in social science research because it is comprehensive and compatible with nearly any type of data file. SPSS is found to be very user-friendly and able to run both descriptive statistics and other more complicated analyses. Data are entered directly into the program that then generates reports, graphs, plots and trend lines, based on the data analyses [Center for Innovation in Research and Teaching (CIRT), 2017]. This was evident, as this study's research data generated from survey questionnaires were captured onto the SPSS

program, and then translated into meaningful reports, graphs, plots and trend lines, based on the data analyses [Center for Innovation in Research and Teaching (CIRT), 2017].

The qualitative semi-structured interviews that were conducted with the aid of the digital recording tape were transcribed and then analysed, using Atlas.ti software. According to Predictive Analytics Today (2017), this software is a tool for qualitative research data analysis in order to manage documents, to view multi documents, to serve as a high-performance multimedia engine and acts as an intuitive margin area coding for all data types. The software uncovers and systematically analyses complex phenomena hidden in unstructured data as a text and multimedia. The Atlas.ti program provides tools that let the researcher locate, code and annotate findings in primary data materials to weigh and evaluate their importance and to visualise the often complex relations between them. Furthermore, Atlas.ti software consolidates large volumes of documents and keeps track of all notes, annotations, codes and memos in all fields that require close study and analysis of primary material consisting of texts, images, audio video and geodata (Predictive Analytics Today, 2017).

It is indicated earlier in this chapter that the study has employed the convergent parallel mixed-methods research design. It is vital to note that the research data were analysed by the two databases for SPPS and Atlas.ti separately, then brought together, working side by side in comparing results. Detailed results and the interpretation of the data analysis will be discussed in the next chapter. The research study reports on the quantitative statistical results generated from SPSS software, and then discusses by incorporating of the qualitative findings, based on the related themes as per research questions in relation to the quantitative findings (Creswell, 2014).

4.5 Ethical issues

The researcher took the research ethics policy of the University of the Western Cape regarding conducting research into consideration. Research consent was obtained from the Ministry of Education, the directorate of Namibia's Library and Archives Service, as well as from all participants in the eight public libraries in the Ohangwena and Omusati regions. Participants were informed that they had the right to withdraw from the study at any time and no names would be made known – i.e., anonymity was guaranteed. Information provided by participants was treated as confidential. A digital voice tape recorder was used for semi-structured interviews, and interviewees were assured that the recordings would be deleted after the

transcriptions had been completed. All participants were free to ask questions and raise concerns about the study.

4.6 Chapter summary

This chapter discussed how the research design and methodology of the study had been undertaken. The study utilised the mixed-methods research design, informed by the post positivist philosophical worldview, which implies that research studies be conducted, based on the research questions under investigation. The mixed methods research design of qualitative and quantitative research methods was implemented in investigating the role of public library services in contributing to a knowledge economy for Namibia. The research study used survey questionnaires and semi-structured interviews aided by digital tape recordings, together with a content analysis of Namibian policy and legal framework documents as research instruments for data collection. The chapter further discussed details on how data had been collected and analysed. The chapter then concluded by highlighting research ethical issues.

The next chapter presents the data presentation, the interpretation of findings thereof and an in-depth discussion of the research findings.

CHAPTER FIVE

PRESENTATION AND INTERPRETATION OF FINDINGS

5.1 Introduction

This study presented the state of public library services in contributing to Namibia's knowledge economy. The findings were established from the investigation that was conducted, and aimed at answering the study's research questions which were highlighted in chapter one.

As discussed in chapter three, the study research questions were constructed taking into account the four pillars of the World Bank Knowledge Economy Framework (World Bank, 1998), namely:

1) An economic and institutional regime
2) Information/knowledge and ICT infrastructure
3) Education and training
4) An innovation system

Those aspects put together, were used in crafting the research instrument questions.

The four research questions represented the four principal themes of the study framework, which were used as determinants of the functions of public library services in contributing to Namibia's knowledge economy envisaged in the Namibia Vision 2030 document. That, however, strengthens the study's mixed methods design by following its assumption of gathering evidence based on the nature of the research questions and theoretical orientation (Creswell and Plano Clark, 2011).

5.2 Data analysis

Data analysis involves working with data, organising it, breaking it into manageable units, synthesising it, searching for patterns, discovering what is important and what is to be learned, and deciding what to present to others (Bogdan and Biklen, 1992:153).

In chapter three, the researcher highlighted that the study employed a convergent parallel mixed methods design whereby both quantitative and qualitative data were collected simultaneously during the research phase (Creswell, 2014; Stentz, Plano Clark and Metkin, 2012). The mixed methods data analysis involves the reduction and displaying of data in various ways (Onwuegbuzie and Teddlie, 2003). The quantitative survey questionnaires of categorical and open-ended data were captured using the SPSS computer software for summarization of the data in generating descriptive (Raykov and Marcoulides, 2013). The descriptive statistics were, however, used to describe the body of categorical variable results that had led to generating an informative summary of statistics and meaningful graphical presentations of data.

The quantitative survey open-ended questions were formatted to a Word document that was loaded together with interview transcripts from video recordings onto Atlas.ti software for qualitative data analysis. The analysis was conducted in line with the study's research questions and theoretical framework. The process of coding was used to analyse open-ended data and interview transcript reports. The analysis involved reading one by one and line by line in order to identify meaningful and relevant passages of texts, phrases, sentences, patterns, and to then build connections and relationships in relation to the research questions and objectives.

In terms of content analysis, the researcher listed all policy documents and legal framework legislation that were identified from the open-ended survey questionnaires and interview responses to assess their relevancy in respect of access to knowledge and information as provided by public library services. In addition, the researcher searched the internet and found other relevant Namibian policy documents and pieces of legislation that covered the access to information and knowledge with regard to achieving a knowledge economy. All documents found, were analysed to find relevant information in supporting, verifying or contrasting the quantitative survey research study findings.

Meaningful codes were assigned to the relevant quotations, which were then formed into the study themes of the theoretical framework. The themes and quotations were used for interpretation and discussion of both quantitative and qualitative findings. Resultantly, the two databases were merged side by side for comparison of data.

The study firstly reported the results for the quantitative statistical report and then merged the discussion of qualitative findings based on the same themes as the quantitative findings to

either confirm or disconfirm the quantitative results' statistical data for the purpose of triangulation.

In brief, the study also followed the mixed methods data analysis suggested by the Center for Innovation in Research and Teaching (CIRT) (2017), which is described in the table below.

Table 8: Process mixed methods research data analysis

Data Analysis Procedures	Quantitative Data	Qualitative Data
1) Data preparation	Data coding and assigning numerical values, capturing of data using SPSS software	Transcribing recordings of interviews and preparing documents for contents analysis and loading onto Atlas.ti software
2) Reviewing and exploring data	Descriptive analysis, looking for trends and distributions	Reading data notes, developing qualitative codes from interview transcripts, survey questionnaires, open-ended questions and document analysis
3) Analysing data	Using SPSS software; recording confidence intervals	Coding data and assigning labels, grouping of data and looking for related themes
4) Data presentation	Generating results into tables, graphs and figures	Presenting interpretations and discussions of findings in text form, figures and visuals to represent themes

In order to adhere to the code of ethics and confidentiality standard, both quantitative and qualitative subject representatives are presented with unique codes to protect the identity or original source of data.

Table 9: Number of respondents and response rates

Libraries participating in the study	Code (Public Library)	No. of survey question-naires distributed	No. of survey question-naire responses.	Response rates	No. of librarians inter-viewed	Notes
Ohangwena Regional Library	PL1	78	77	99%	1	
Eenhana Public Library	PL2	78	77	99%	1	
Omungwelume Public Library	PL3	78	48	62%	1	Same users who came to the library during data collection period
Okongo Public Library	PL4	78	72	92%	1	
Outapi Regional Library	PL5	78	51	65%	1	There was a problem with the electricity, which resulted in closing the library for a few days during the data collection period.
Okahao Public Library	PL6	78	40	51%	1	The research assistant did not stay for the full duration of the research

						data collection phase due to health problem intervention.
Tsandi Public Library	PL7	78	65	83%	1	8% of library users failed to complete questionnaires without providing any reason.
Okalongo Public Library	PL8	78	66	84%	1	6% of library users failed to complete questionnaires without providing any reason.
Total		**624**	**496**	**79%**	**8**	

The study used a 624 sample size taken from a population of 499 826, as calculated in chapter four. The sample size included a 96% confidence level that the data were going to reflect the entire population (Slovan, 2017). The response rates above indicate that a total of 496 public library users have participated in the research study, which means a 79% confidence level for the entire population.

The distribution was done proportionally based on the 624 sample size that was calculated by using Slovan's (2017) formula where: $n = N/(1+Ne^2)$ as calculated in chapter four, where n is the sample size, N is the population size and e is the margin of error. The calculation was done as follows:

n=499826/

e=1-0.96 = 0.04

n=499826/ [1+ (499826x0.04^2)]

n=499826/[1+466826x0,0016]

n=499826/[1+799.7216]

n=499826/800.7216

n=624 population sample size

Therefore, the 624 sample size divided by 8, which is the number of public libraries in the two regions of Ohangwena and Omusati regions with four libraries per region that have participated in the study equals 78, which was allocated proportionally to each library as per table 9 above.

5.3 Research findings

The research findings presented include the interpretation and discussion of the results, and provide reference to previous literature and the theoretical framework of the study. The study investigation focuses on the five main variables but each has its own sub-variables. The first starts with public users' demographic information, which is followed by the themes or pillars of the World Bank Knowledge Economy (KE) framework, as discussed in chapter three and listed in this chapter, section 5.1 above.

5.3.1 Demographics of respondents

The findings cover all eight of the public libraries from the Ohangwena and Omusati regions. The demographics report for individual public library statistical data is provided as an appendix at the end of the thesis for more details.

From the findings, it was discovered that more young people aged between 10 to 19 years across all eight public libraries in the regions of Ohangwena and Omusati used the library illustrated in figure 6 below (60%), followed by young adults aged between 20 to 29 with 26%. Moreover, the study found only a 7% representation of both age groups between 30 to 39 and 40 to 49 respectively.

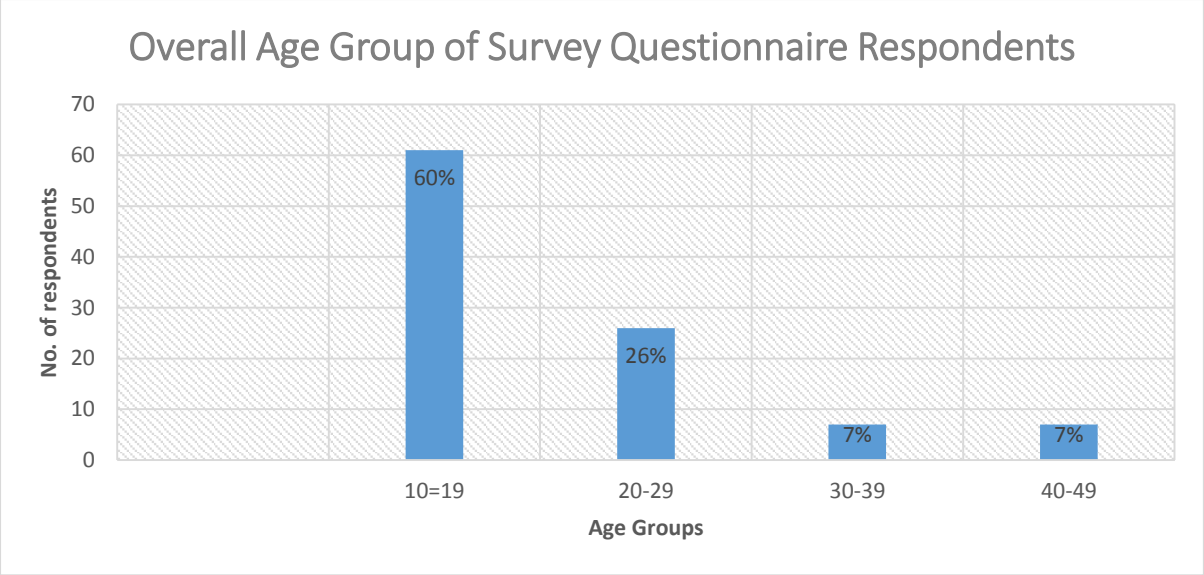


Figure 6: Overall Age groups of survey questionnaire respondents

In terms of gender, an equal distribution of 50% for both males and females of public library users in both regions was found. This is illustrated in figure 7 below.

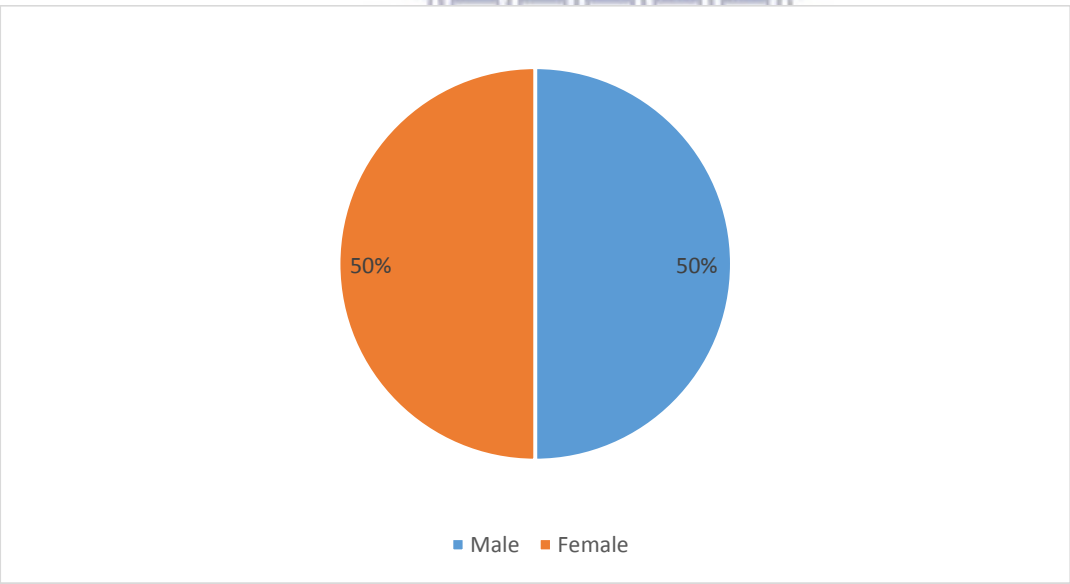


Figure 7: Regions gender survey questionnaire respondents

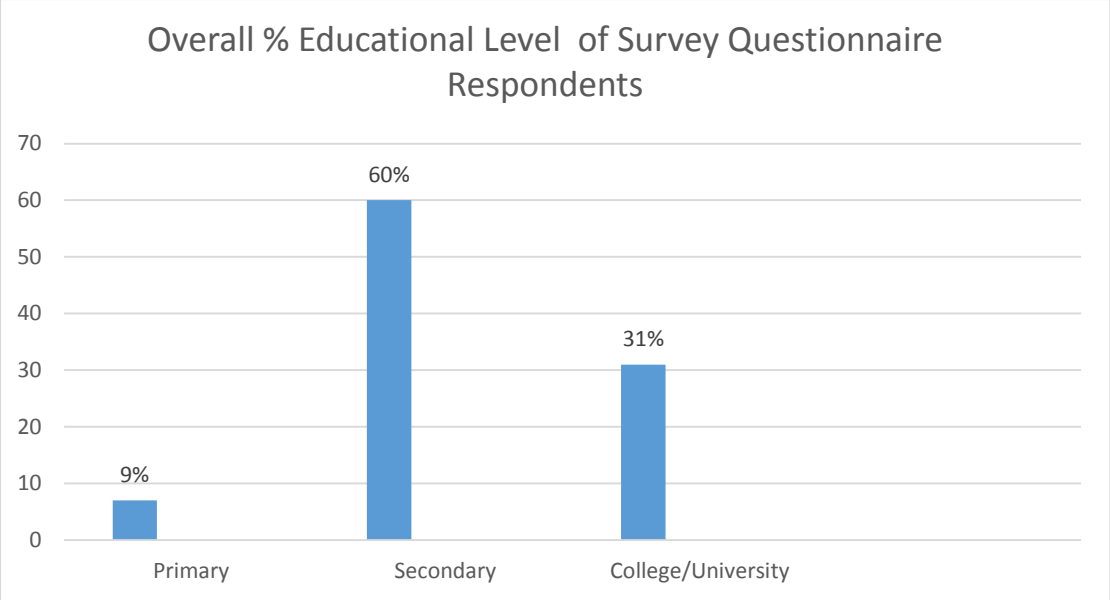


Figure 8: Overall % educational level of survey questionnaire respondents

Figure 8 above shows the level of education of the survey questionnaire respondents. The figure indicates that 60% of library users across all eight (8) public libraries have a secondary level of education. There were more users with college and university education at 31%. The results of respondents' levels of education correspond with the age groups results which have indicated that more users of public libraries fall in the age group of 10-19, and in relation to the level of education these are young people currently still at school or who have just completed their secondary schooling.

5.3.2 Policy legislation framework and its implementation

In a knowledge economy, the countries should have strong sets of economic policy legislative frameworks which regulate the efficient mobilisation and allocation of resources, and stimulate creativity and incentives for the efficient creation, dissemination and use of existing knowledge. The application of the framework to this study is based on the theory that universal and national access to knowledge and information for economic growth provision should be regulated by international and national policies as well as legislative frameworks, which enable strategies for the effective and successful establishment of public libraries, their functions and operation as platforms for accessing knowledge and information for economic and social development (World Bank, 2007).

The study investigated the reflection of access to knowledge and information as provided by public libraries in Namibian policy and legislative frameworks. It has established how these policies and legislation frameworks are implemented for the efficient dissemination, creation and use of knowledge by communities for the knowledge economy.

It furthermore explored how librarians of public libraries have adopted these policies and legislation frameworks in governing the library's operation and management. The study also highlights the adopted guideline tools for the functioning of public libraries and the strategic policies which are in place for the professional capacity building of librarians.

5.3.2.1 Emerged legislative framework and policy awareness and adoption

Figure 9 below illustrates an awareness of library policies and legislative frameworks or related strategic policies in determining whether the knowledge of such policies and legislative frameworks have motivated public library users to visit the library for their knowledge and information needs.

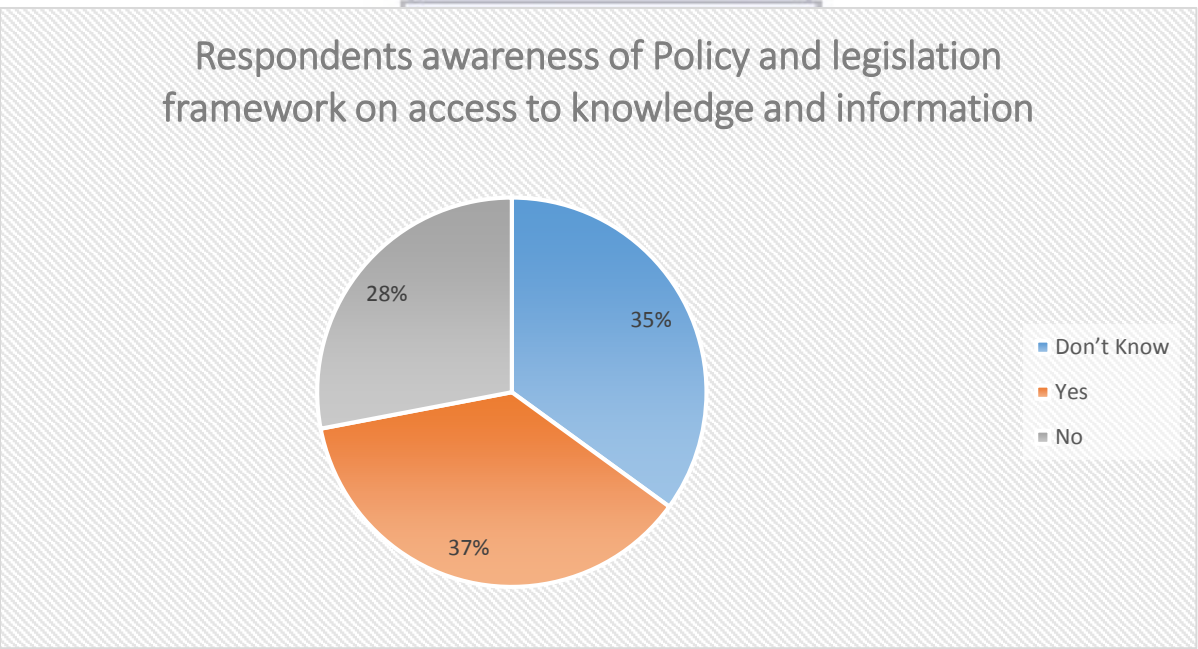


Figure 9: Respondents' awareness of Policy and legislative framework on access to knowledge and information

As thus, users were asked whether they had been aware of any policy and legislation framework on access to knowledge and information that had empowered them to use the library. As per information illustrated in figure 9, 37% of respondents had knowledge of policies and legislation related and reflecting access to knowledge and information, while 35% of the respondents did not know anything about policies and legislation frameworks, and 28% of the respondents do not know about policies and legislation frameworks on the access to knowledge and legislation frameworks. Resultantly, the 37% who had indicated that they were aware of policies and legislation frameworks on access to knowledge and legislation were further asked to pinpoint them. The majority indicated the Namibia Vision 2030, the Ministry of Education's strategic plan and the UN Sustainable Development Goals 2030. Some respondents failed to pinpoint them though they indicated that they were aware of access to knowledge and information policy legislation frameworks. The failure of respondents to identify policy and legislation frameworks has left the researcher puzzling as to whether they indeed have knowledge of policy on access to knowledge and information.

On the other hand, librarians were also asked to pinpoint strategic policy and legislation frameworks which they have adopted in governing their respective libraries, and which have provided operational functions and guidelines to effectively provide quality public library services for a knowledge economy. The Namibia Vision 2030 again was identified by the majority of librarians as the main umbrella document and mother of all Namibian strategic policies and legislative frameworks. Furthermore, the librarians specified the following strategic policy legislation as guidelines with functions of managing public library services in achieving the Namibian Narrative Vision 2030 toward a knowledge economy. Those guidelines and policy legislation are the following:

- The Namibia Library and Information Service Act 4 of 2000
- Education and Training Sector Improvement Programme (ETSIP)
- Namibia Ministry of Education, Arts and Culture (MOEAC) 2017 – 2018 Performance Agreement
- Namibia Harambee Prosperity Plan
- Namibia Development Plan (NDP 5) outcomes and objectives
- International Federation of Library Association (IFLA) guidelines on public libraries
- UNESCO Public Library Manifesto
- 2030 Sustainable Development Goals

The highlighted documents are supported by some of the quotations that are provided below:

Yeah, in terms of policy and legislation framework adoption we have the Ministry of Education, Arts and Culture (MoEAC) 2017-2022 Strategic Plan 8; the NDP5 is also out, so we are working towards achieving its Outcomes and Objectives. You see from those policies now we have the Regional Performance Agreements of the Ministry of Education Arts and Culture for 2017 – 2018. The main reason why we operate under these policies is simply because these are the national and regional policies that are in place under the Government's Harambee spirit of 'Ensuring inclusive and equitable quality education for all'. So talking of procedures and guidelines in place in relation to the functions of public library services and ICT infrastructure, you see here in Namibia we only have one body that provides most of the operations and functions, which is the Community Library Services (CLS). This is the branch of NLAS (Namibia Library and Archives Service) responsible for the collection development of all community libraries in Namibia (PL6).

Mhuuum, okaaaaay, Public and community libraries operate the same and have adopted the Namibia library services act of 2000. The Act regulates collection development and supplements material which meets the needs of users, aaaand makes information resources available and accessible at the library for the people. Sooo, the Act includes also how the library can give advice and guidance to users on how to use the library resources. The other important part is, you know our people do not know anything about library. It is something new to them, so the Act made provision that librarians should promote and encourage people to use available library and information resources at international level, access to knowledge and the library is regulated by you know, the International Federation of Library Associations and Institutions (IFLA), and again the UNESCO Public libraries manifesto: those documents provide guidelines on public libraries. Yeah, the guidelines provide outlines on the functions and management of public libraries in developing effective services, relevant

collections, and accessible formats meeting the community needs. So yeah, we have those ones (PL2).

Yeah, thank you, just in brief we have, yeah we fall under NLAS, of course Ministry of Education but in terms of guidance and operation, we are guided by NLAS and the Archives services. NLAS has also adopted international standards and guides for operation for example the IFLA information guidelines. So you find us with IFLA so of principles that indicate that information is a right. So we are guided by that. And probably national review we are looking at what is the government trying to do in terms of Government Harambee Prosperity Plan and we here this as we are singing around there. We are also looking at what the government is trying to do, we are aware that there are no jobs, we are aware that people do not have skills. So as a library, so we are saying that we need to provide skills and information for people to do their own things. There are some people who may not know where that is and as a library we are playing that role (PL1).

Okay, mmmm, if you are talking about what is guiding us in running the library, we are guided by different policy guidelines, but only took what fit with our community needs. Yeah, we have IFLA Guideline on Public Library; our Namibia Vision 2030; the Ministry ETSIP; the Namibia Library and Information Act. Now we are busy working on how we can contribute to this AUs Agenda 2063. In fact, the Namibia Vision 2030 is the bigger strategic vision of the country that most of the strategic plan work as guidelines set to achieve in ensuring that by 2030 Namibia will be a knowledge based economy (PL5).

The qualitative interview results revealed that public librarians were well-informed and equipped in terms of knowing and understanding the role of access to knowledge, the information policy and legislative framework, whether national or international, to effectively deliver quality public library services. Moreover, the strategic policy and legislation frameworks, which respondents had identified, were investigated in exploring how they

reflected on access to knowledge and information in relation to what had been implemented at the eight (8) public libraries in the Omusati and Ohangwena regions.

Using the search engine Google, the researcher searched the highlighted policy and legislation framework as well as the strategic policy documents one by one, and the downloaded pdf document's search box, using keywords: *access to knowledge or information; library or libraries; public libraries and knowledge economy* respectively in investigating how access to knowledge and information is presented. The following are the results:

5.3.2.1.1 Reflecting on access to knowledge and information in adopted legislation framework by Namibia's public libraries

The Namibia Library and Information Science Act 4 of 2000, as the most featured piece of legislation from the qualitative interview with librarians, was enacted in 2000 and came into force in 2001. The Act was identified by librarians as the leading legislative document in providing a framework for the effective management of public library services. In the Act, section 6, subsection (1) describes public libraries as other libraries that are called "constituent libraries" whose functions are to (1) collect, develop and supplement knowledge and information resources which will meet the needs of users; (2) collect, preserve or document information pertaining to local events, customs and history; (3) make knowledge and information resources accessible to people; (4) provide proper instruction and guidance to library users; (5) conduct research on any matter; (6) promote the library through projects that encourage people to use available knowledge and information resources (Republic of Namibia, 2000).

In confirmation, the Act and the IFLA/UNESCO Public Library Manifesto, as pointed out by librarians, have indeed provided guidelines on the management and functions of public libraries. Although the two documents have been written during the same period, they both emphasize the same functions of public libraries. In support of the Act, the IFLA/UNESCO Public Library Manifesto argues that the public library should provide information and knowledge resources and services in a variety of media to meet the needs of individuals and groups for education, information and personal development, including recreation and leisure. Public libraries provide access to a wide range of knowledge, ideas and opinions for the development and maintenance of a democratic society (IFLA/UNESCO, 2001).

In this regard this finding therefore confirms the availability of a legislation framework which regulates the governing of Namibia's public library and information institutions, as argued by Vitiello (2000) and Ocholla (1991). The study finding is also in line with the adapted World Bank Knowledge Economy Framework (1998). As discussed in section 3.2.1 in this study, the economic and institutional regimes to which are referred and interpreted as policy and legislation framework, state that the successful transformation into knowledge economy requires good economic policy and legislative frameworks which permit efficient mobilisation and allocation of resources, and stimulate creativity and incentives for the efficient creation, dissemination and use of existing knowledge.

Furthermore, this study's qualitative interviews discovered that public library services were aligned with the universal UN 2030 Sustainable Development Goals (UNSDGS) in supplement to the identified Namibian legislation in order to deliver quality library services to the community, creating a smooth transformation into a knowledge economy. As such, the researcher's internet search found that goal 16.10 of the UN 2030 Sustainable Development Goals (UNSDGS) stressed the importance of national legislation frameworks regulating the provision of public access to information and protect fundamental freedoms (United Nations, 2015).

In spite of the available identified strong Namibia legislation framework which provides clear regulation on the operation and management of a public library or a constituent library, as per the Act, in 2004, three years after the enforcement of the Namibia Library and Information Act, the Namibia Vision 2030, which was identified as the main body or national development plan of all Namibian policies, was released (Namibia. Office of the President, 2004). According to the Namibia Vision 2030, in 2004, Namibia's libraries were poorly equipped to play their vital role in the information age. As a result, very few libraries offered internet access and no public library had any media other than reading materials available, meaning there were no videos, CDs, DVDs etc. and only a limited number of periodicals. In terms of human resources capacity, there was a lack of qualified librarians who could render quality library services (Namibia. Office of the President, 2004).

After the release of the Namibia Vision 2030, which excavated the reality of library sector development at that time, several national development plans and policies were developed with strategies aimed at addressing library developmental issues as highlighted by Vision 2030. As

such, the study's qualitative interviews, in addition to the legislation frameworks highlighted in the list above, revealed the adoption of Namibian and international policy which made provision for accessing knowledge and information via public libraries.

5.3.2.1.2 Adopted strategic policies frameworks on provision of access to knowledge and information by Namibian public libraries

In response to the Namibia Vision 2030 statement on poor library development stated in section a) above, the Namibian government's Ministry of Education developed the Strategic Plan for the Education and Training Sector Improvement Programme (ETSIP) 2005-2020 (Namibia. Ministry of Basic Education, Sport and Culture, 2005). ETSIP covers the development of knowledge and innovation policies which guide and support Namibia to transit to a knowledge-based economy, and recognise the need for stocking libraries with information and knowledge resources and good ICT provision (Ministry of Basic Education, Sport and Culture, 2005).

In terms of providing information and communication technologies (ICTs) to public libraries, the Namibian government has made provision for the deployment of ICTs to public or community libraries through the ICT for Education Policy (Republic of Namibia, 2005) and Policy for E-government Strategic Action Plan for the Public Service of Namibia 2014-2018 (Namibia. Office of the Prime Minister, 2014). The aforementioned policies stipulate that access to publicly funded knowledge and information means are made available to the communities and individuals gaining access to ICTs and information resources (Namibia. Ministry of Basic Education, Sport and Culture, 2005; Office of the Prime Minister, 2014; Republic of Namibia, 2005).

Moreover, the Namibian Ministry of Education performance agreement indicators, as another policy arising from the study interviews, developed strategic indicators for measuring the level of ICT coverage of educational institutions such as schools, libraries and museums in ensuring equitable access to knowledge and information, and integrating the use of ICTs in education (Namibia. Office of the Prime Minister, 2016). According to the interview findings, the strategy is one which has been developed by the Namibian government for achieving the Harambee Prosperity Action Plan developed towards prosperity for all. In validating the qualitative interviews, the researcher's content analysis of the Harambee Prosperity Plan document of Namibia has not found any mention of any library or libraries and knowledge economy. The researcher has, however, found that the Harambee Prosperity Plan has put emphasis on the

importance of access to public information in ensuring that citizens have access to relevant information. The plan is set to be achieved by accelerating the deployment of e-governance to cover all ministries and public agencies by 2020 (Republic of Namibia, 2016).

The last Namibian policy that has arisen from the qualitative interviews is Namibia's Fifth Development Plan (NDP5), a document that works in parallel with the Namibian Harambee Prosperity Plan. The NDP5 has identified critical success factors that are needed for Namibia to be transformed into a knowledge economy. These factors include the integration of ICTs in all sectors with priority attention to e-business, e-learning, e-healthy and e-governance.

NDP5 highlighted that the Namibian government should develop a strong framework to enhance the core skills of literacy and numeracy while promoting critical thinking and information literacy through provision of enrichment programmes in schools and public libraries. The government should also make provision for skills development in support of the plan and enable the full utilisation of available ICTs that is required for the knowledge-based economy (Republic of Namibia, 2017).

The finding from the content analysis of this study shows that the availability of a strong policy legislative framework and national development plan regulates access to knowledge and information as the cornerstones for a knowledge economy in Namibia. The inclusion of access to knowledge and information in the Namibia policies and legislative framework indicates that the Namibian government values and regards the need for access to knowledge and information as critical to economic and social sustainable development (Alemayehu, 2014).

This study further discovered that the availability of strong library and information legislation frameworks and the inclusion of access to knowledge and information in Namibia's strategic policies sketch an elusive picture that is contrary to what is reported by the Network Information and Digital Access (NIDA) (2011) consultancy report. The NIDA report has found an information gap between rural and urban areas of Namibia. These areas are faced with unevenly distributed infrastructure and lack of access to libraries, with low rates of the various types of literacies such as information, digital and media literacy as well as lack of materials written in the multiple indigenous languages spoken by Namibian communities.

Alemayehu (2014) claims that lack of access to knowledge and information, which is found to be an obstacle to development in Africa, could be solved by the inclusion of access to knowledge and information in national legislative frameworks and national development plans aimed at educating citizens to be given the tools and resources to reduce their inequalities while fostering economic empowerment.

However, Azubuike (2007) claims that strong policy legislation can be enacted but access to information and knowledge is more successful in countries where there is enforcement of those strong policy legislative frameworks to impact the community (Azubuike, 2007). In Kenya, there are good library and information legislative frameworks in place but successful implementation has not been realised yet (Ocholla, 1991).

Resultantly, the next part of this chapter's themes focuses on how Namibian library and information legislative frameworks and strategic policies in respect of access to information and knowledge with regard to (a) public library knowledge and information resources services, and ICTs infrastructure, (b) public library education and training of both users and librarians in having relevant skills and competencies for a knowledge economy, (c) how the accessible services and infrastructure contribute to the users for innovation purposes, as well as (d) how libraries are being innovative in providing quality services to their users as regulated in the abovementioned Namibian legislation frameworks and strategic policies that have been implemented in public libraries for the purpose of delivering quality library services to the community for a knowledge economy.

The next section of this chapter focuses on public library knowledge and information resources services, and ICTs infrastructure.

5.3.3 Knowledge / information resources and ICTs infrastructure

The Namibian legislation framework and strategic policy on library and information, and those documents reflecting access to knowledge and information, which are discussed in the above sections, regulate the provision of public library information and knowledge resources and ICTs infrastructure to be accessed by the communities in order to contribute to Namibia's transformation into a knowledge economy. This section is subdivided into two parts, namely the knowledge/information resources, and ICTs infrastructure being accessible at public libraries.

5.3.3.1 Public library knowledge/information resources

As discussed in chapter three, according to the World Bank (1998), a knowledge economy should have a dynamic information and knowledge infrastructure, which facilitates the communication, dissemination and processing of information and knowledge. Information and communication technologies (ICTs), including telephone, television and radio networks, are recognised as essential infrastructure of the global, knowledge-based economies for the 21st century, since they are able to promote and increase ready access to information and knowledge resources (World Bank, 1998).

For the public library to provide access to the needed information and knowledge resources and services to meet the needs of the community it is essential to first identify information and knowledge needs. As discussed in chapter two, section 2.3.1.1, information needs in the context of the library and information profession are value judgements a particular client group, service provider or facility has regarding an information-related problem. These needs require solutions in order to fulfil a necessary, useful and defensible purpose (Dorner, Gorman and Calvert, 2015).

5.3.3.1.1 Public library communities' information needs

Figure 10 below illustrates various information needs for the different public library users in the Ohangwena and Omusati regions, as identified from the eight (8) public library survey questionnaire respondents. As shown in figure 10, the highest information need identified has been the internet with 22%; use of computers for typing with 21%; attending various training sessions with 20%, and education with 13%. Other information needs identified by less than 5% respondents were health, professional capacity, family, finance, entrepreneurship/business and agriculture respectively. It did not mean that the other information needs below 5% were not important for the users; however, the highest information needs should be met as tools to meet the other needs.

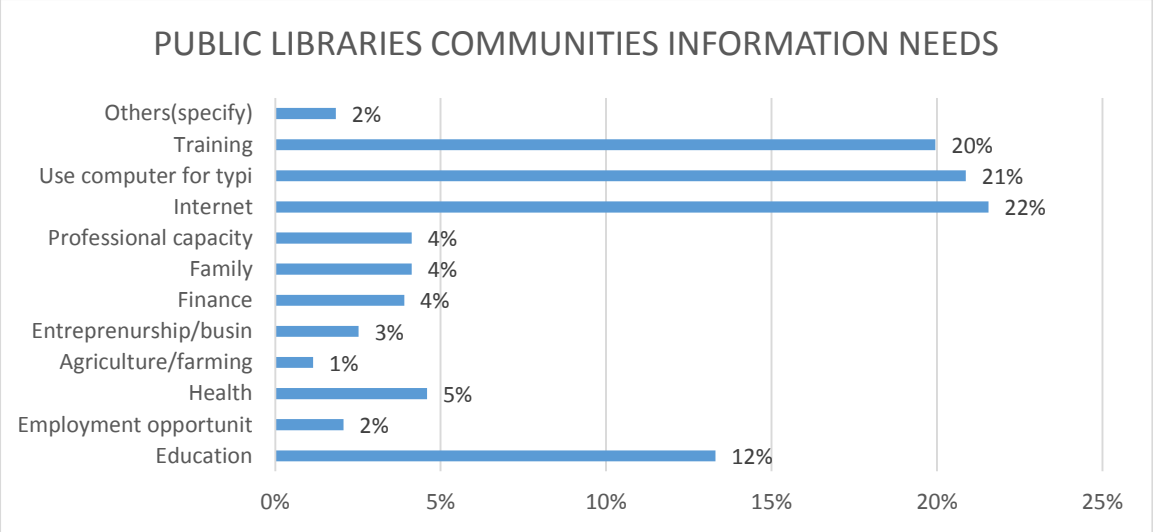


Figure 10: Public libraries communities' information needs

The findings of this survey questionnaire are supported by the qualitative interview results discovered by librarians when they conducted a user need analysis and those that arose from everyday inquiries. Their results showed that the information needs of the majority of public library users were mostly a need for computer training, school and NamCol books, grade 12 learner assistance, job application forms, agricultural information and access to the internet.

Other training on matters like youth development, HIV/AIDS, job seeking, basic training on SMEs, writing and speaking English, gender-based violence awareness, financial literacy, farming and agriculture, and local indigenous knowledge were identified from the survey questionnaire open-ended questions.

Selected interview comments for the discussion above are highlighted below:

> *Most users coming here are learners but other people also come for newspapers and the free computer with internet. The out of school youth do come to ask for guides to the job market, because of the high unemployment rate in the region, youth wants to prepare themselves for job hunting. Both youth and adults including school learners come for computer training, they want to acquire computer skill* (PL5).

The town of Okahao consists of a very sustenance-based economy – thus most of our information based relate to agriculture. As we have a lot of unemployed youths, our collection has a lot of resources on youth career guides, curriculum books for those improving their points with NamCol and other tertiary educations. And lastly, as most of the demographic are fluent in Ongandjera tradition/norms – literacy and indigenous books are highly prominent as well (PL6).

Here the library is surrounded by schools as you can see outside. Learners always passed here after school looking for text books or school readers that they do not have at school, including NamCol books. The community wants the library to provide SME information and information on job seeking and application forms. Most users want the library to have computers with internet Wi-Fi, and then be provided with training to be able to use computers like other people, but our library does not have computers. Some students that are doing distance with UNAM and Polytechnic ask for higher education books (PL4).

I would say, most people in Ohangwena region are employed by the ministry of education that includes learners and teachers; hence we try to provide books along that line. They maybe vary, like management, Development studies, or whatever community development but again these are people from education. Most people are working for the ministry for the government. There is no other business here or industry here, most of users, if you ask them, will tell you are a teacher. I am doing my study; I am doing my Masters degree. Availability of computers and the internet WI fi have attracted more users to the library. You find users demanding more for computer training to be able to use them. In this area and the surrounding people have no skills to use computers because not so many schools have computers in the rural areas like Ohangwena region (PL1).

These research study findings support studies by Mchombu and Cadbury (2006), Rutland and Smith (2010) as well as Taylor et al. (2012). Their studies emphasise that public library user

needs comprise the need for ICTs training in using computers, for effective internet information searching, and relevant electronic literature search training.

Mchombu (2012) conducted a study with library users of the Greenwell Matongo public library in Windhoek, Namibia, and found that adults expressed the need for the public library to provide business classes, computer classes, driving school classes and cinema or video shows on farming. Jiyane and Mostert (2008) identified some business information needs for female entrepreneurs to empower them in contributing to economic development.

In summary, the study findings on the knowledge and information needs of public library users found that most users of public libraries are learners, out-of-school youth, teachers, and a few entrepreneurs and farmers. This is shown by the high need for school books, the Namibia College for Open Learning (Namcol) books, basic computer skills training, as well as access to computers, agricultural and farming information, information on HIV/AIDS and relevant training, business information and training, writing and speaking English, gender-based violence awareness, financial literacy and local indigenous knowledge as emerged from this study's findings.

The next section of this chapter addresses whether the information and knowledge needs identified by respondents are being met by public libraries.

5.3.3.1.2 Extent to which user demanded information and knowledge needs are satisfied by public libraries

Figure 11 below presents the extent to which public libraries provide information and knowledge resources meeting the needs expressed by users. The study found that 85% of users' information and knowledge needs are met by the libraries, while only 15% are not met by the libraries.

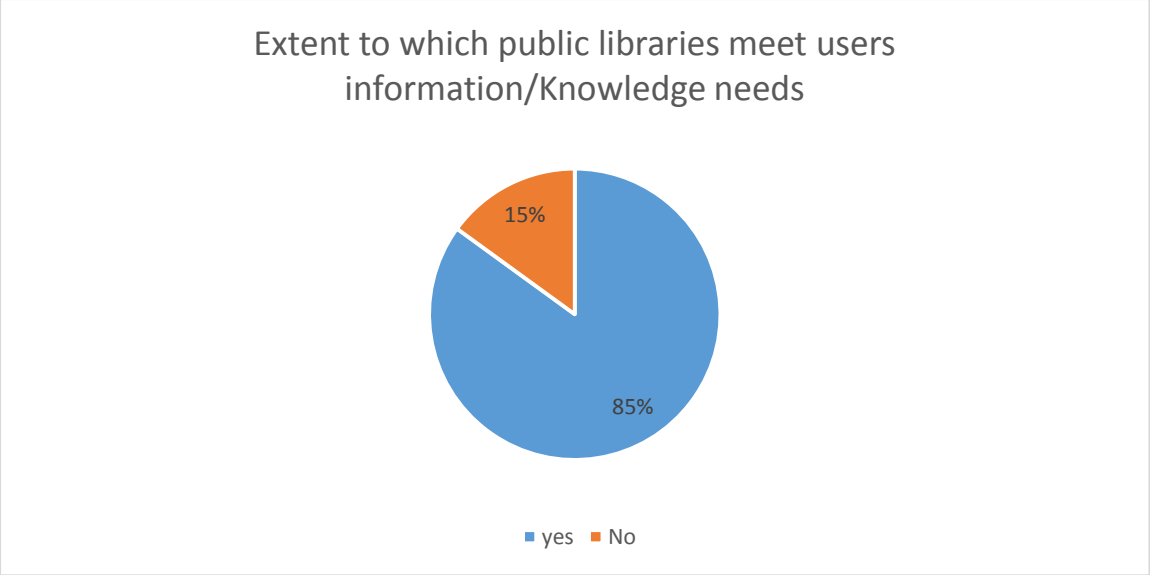


Figure 11: Extent to which public libraries meet users' information/knowledge needs

According to the librarians in the regions under study, they acquired most of the information and knowledge resources demanded by users, as identified from their user needs analyses, suggestion boxes or users taking their demands for information to the librarians. Evidence of the satisfaction of users is seen in some of the qualitative interview comments below:

> *hmmm . . . through suggestions box where every now and then we inform users to put write down their needs and put in the suggestion box. We also listen to our users. Some of them come straight to us and tell us what they need then we list all that. We do the selection; send a list of all what we want. This is done through the circulated form to all public libraries to write list of books needed for the library. This based of the demands from users and those that we identified as needed in the library* (PL3)

> *Through book selection process whereby senior and chief librarians are taking along the list of book had been requested by the user from different libraries in the region so that they compiling one list that will be used to acquiring books from bookshop and individual authors* (PL7).

> *The library acquires its materials through community library services depending on the demand from users and library collection development* (PL2).

5.3.3.1.3 Types of knowledge and information resources available and accessible at the public libraries

The legislation framework and strategic policy, discussed in section 5.3.2 of this chapter, regulate the functions of public library services in Namibia to (i) collect, develop and provide knowledge and information resources, which meet the needs of users; (ii) collect, preserve or document information pertaining to local events, customs and history; and (iii) make the available knowledge and information resources accessible to people in a variety of media to meet individuals' and groups' needs for education, information and personal development for a knowledge economy (IFLA/UNESCO, 2001; Republic of Namibia, 2000).

In implementing these legal frameworks and strategic policies table 1 below lists various information and knowledge resources that are available and accessible at public libraries in Namibia.

Access to Knowledge resource by School levels								
	Primary Education		Secondary		College/Univesity		Total	
	Value	%	Value	%	Value	%	Value	%
Textbook	6	14%	23	8%	4	3%	33	7%
Reference books	0	0%	17	6%	8	6%	25	5%
Ministry of health bo	0	0%	9	3%	4	3%	13	3%
Ministry of Agricultu	0	0%	6	2%	4	3%	10	2%
Health print and DVD	0	0%	11	4%	4	3%	15	3%
Agricultural farming	0	0%	3	1%	0	0%	3	1%
Business/Entrepreneur	0	0%	7	3%	5	4%	12	3%
Indigenous knowledge	2	4%	5	2%	5	3%	12	2%
Newspapers	10	23%	45	16%	26	19%	81	18%
Global Databases	0	0%	2	1%	4	3%	6	1%
E-Government database	1	2%	0	0%	2	1%	3	1%
Universities research	2	5%	9	3%	5	4%	16	3%
Local School Books	17	40%	80	29%	20	14%	117	25%
University application	2	5%	23	8%	15	11%	40	9%
Government Job Applic	0	0%	15	5%	20	14%	35	8%
Company registration	1	2%	6	2%	6	4%	13	3%
Namibian students NSF	2	5%	12	4%	7	5%	21	5%
Namibian Development	0	0%	2	1%	1	1%	3	1%
Others	0	0%	3	1%	0	0%	3	1%
Total	**43**	**100%**	**278**	**100%**	**140**	**100%**	**461**	**100%**

Table 10: Accessible information and knowledge resources at public libraries

Based on the results derived from table 10 above, the study discovered that the most accessible information and knowledge resources for respondents at public libraries were local school

books at 25%, newspapers at 18%, university application forms at 9%, government application forms at 8% and textbooks at 7%. In terms of school education levels, as indicated in the table above, the study revealed that 40% of respondents who had access to local school books across all public libraries were primary school learners and 29% respondents were secondary school learners.

Another information resource with a high access rate was newspapers with again primary school learners having more access at 23%, while 16% of the respondents were at secondary school level and 19% of the respondents being university students.

In validating the quantitative survey results, the qualitative interviews for librarians indicated that public library users had access to books of different disciplines, the internet, e-readers or kindles, subject CDs and DVDs, journals and periodicals, local daily newspapers, as well as electronic resources of Emerald, Ebscohost and Hinari databases collection. The interviewees further stated that public libraries held information and knowledge resources in all subject areas, because the libraries catered for the needs of the entire community though they tended to have only limited resources.

Below are a few comments from the qualitative interviews in line with the above findings:

> *Ninety percent of our information resources are book/manuals format. Electronic resources are very limited (as with many community libraries operating from remote places like Okahao) – but we have over 50 video cassettes with subject matter ranging from the country's Independence Struggle to educational/school curriculum videos. The library has also acquired 10 E-Readers (Kindles) available for community users/researchers – this helps a lot when the 12 computer stations in the computer lab is full of users. For the children section – the library has 4 Leap Pads (IPad-like Gadgets), as well as educational games and puzzles used during our Storytelling Sessions* (PL6).

> *Well, mhuum, we have books, DVD, internet, we also have people, and we have people who have information, who are resourceful. As a library we do identify people. For example, we have children section where they do*

storytelling. Here people will identify community members who can do story telling. So that is part of information services. People will bring that person to the library for the children story telling. The children sit under a tree just to listen to this meme or tate telling the story (PL1).

Okay, we have only four types of information resources which are available and accessible to the users. They are in form of books this print materials, newspapers, and journals and…aaaaa, we also have magazines. On top of that, we also have the internet which is widely used by our users here. People come then research to become knowledgeable. Yeah, those are types of information resources, which we have available for the users (PL3).

- *5.3.3.1.3.1 Local school books, textbooks, reference books and local newspapers*

Table 10 above revealed that the highest information and knowledge resources in terms of books and daily periodicals that were accessible at public libraries as being local books, textbooks, reference books and local newspapers. This showed how much in demand the aforementioned resources were among the community members. As evident in table 10 above, having provided the level of education of respondents per accessible information and knowledge resources showed a high rate at all levels of education with the primary school level being more than secondary and university levels.

These research study findings confirmed what Haq and Ahmad (2012) had claimed, namely that very few schools have libraries; thus people use public libraries where both local and foreign books are available at no or a very low cost. Moreover, the study supported the findings of Ignatow, Webb, Poulin, Parajuli, Fleming, Batra, and Neupane, (2012) as well as of Mchombu (2012), which revealed that public libraries provided access to some fiction material, including books by local Namibian and South African authors, which were mostly meant for educational purposes.

Similarly, this study agreed with Nassimbeni and Tendwa's (2008) study, which revealed that among information and knowledge resources accessible at public libraries included magazines, fiction, cookery books, business-related books, books that helped with daily challenges such as health issues and social grants, and school textbooks.

Krolak (2006) claimed that sub-Saharan Africa imported close to 7% of its books accessible at public libraries. Those books included textbook-based learning and teaching, since the majority of people could not afford buying books themselves. The only other means of accessing the books was the library purchasing them to provide free access services for the public (Krolak, 2006).

Even though the survey indicated a high access rate to local books, textbooks and newspapers, public librarians expressed in their qualitative interviews that information and knowledge were available but very limited. They further pointed out the challenges of stocking libraries with relevant kinds of information and knowledge resources in order to meet the needs of their users. These included budget constraints, a lengthy acquisition process and delays in delivering local newspapers to some public libraries because of the long distances suppliers have to travel to deliver the newspapers. They rely heavily on single financial services provided by the Namibia Library and Archives Service (NLAS) department which caters for the needs of all public libraries in the country.

The qualitative interviews revealed that the regional directorates do contribute to the library management, but only a minimum, leaving the NLAS with the sole responsibility. The reference below gives context:

> *The budget for books is still with the NLAS, but in our budget for the region, if we made request that we have few books that we want to buy, they will not stop us, but I am saying is not a lot of money that you will say we want to stock the library, we want to buy 50 books or we want to buy 100 books. Is just the little money to buy just a few books if it happens* (PL1).

- *5.3.3.1.3.2 Government information and knowledge resources*

In addition to local school books, textbooks, reference books and newspapers that are accessible at public libraries, as it emerged from the quantitative survey results in table 10 above, the study further revealed that public libraries offered access to government information and knowledge resources. Of these resources, 3% were those of the Ministry of Health, 2% were of the Ministry of Agriculture and 8% were government job application forms. In support of this, the qualitative interviews discovered that some public libraries had received government information and knowledge resources in the form of leaflets and pamphlets from

the Ministry of Health, the Ministry of Agriculture, while the Ministry of Trade and Industries provided entrepreneurship information and application forms for business entrepreneurs. The users also downloaded government job application forms online, and then printed them to make them available to users. Librarians further stated that they referred users to the internet to search for government information and knowledge resources that they do not have in the library.

> *Yeah, if you go to the business section, you find that there is a shelve, where we shelve Namibian information materials that we received from everywhere in the country. Be it a ministry, university, or whatever. They keep that information for the community members to have easy access to that national information. You find pamphlets on farming, health, SMEs, government employment application forms, different information for the people to access locally* (PL1).

> *Okay, we do get few government ministries information resources like health booklets for different diseases awareness to display for the users and users do access them. Most government books are distributed by the community library services to all public libraries around the country. Soooooo, yeh. We do not receive booklets or pamphlets from all government ministries because there are no agreements yet but we will look into that in future. Users get government application forms here; we do print out government job application forms from the internet for the users. We refer our users to the internet for most of government information that we do not have, but we have problem with connection most of the time* (PL8).

> *The library is located at the centre of everything, be it youth centre, ministry of education, shopping mall you name it. We try to have at least most of government information, you know different types of people come here for computer skills training that is free, they end up finding other information services that they want especially health, farming, SMEs, and education pamphlets, booklets, comics flyers. Shuuuu, (laughing) this is why the library users keep coming every times to access that information that they cannot get it anywhere but here only* (PL5).

This finding from this study compared favourably with that of Smith (2011) in terms of the distribution of government information to public and community libraries in the public library network to provide space for the collection and personnel in assisting the public in using the materials as stated by PL5 above. The qualitative interviews with librarians indicated that the deficiency of information and knowledge resources of some of the government ministries in public libraries was due to a lack of regulation that put partnerships of information and knowledge dissemination services to public libraries as per the quote below (PL8).

> *We do not receive booklets or pamphlets from all government ministries because there are no agreements yet but we will look into that in future. Users get government application forms here; we do print out government job application forms from the internet for the users. We refer our users to the internet for most of government information that we do not have, but we have problem with connection most of the time* (PL8).

The study showed that there were no Namibian legislation and policy frameworks in place to regulate the distribution and deposit of information of government ministries to public libraries other than the legal deposit held by national archives and the national library of Namibia (Republic of Namibia, 2000). In other countries, the distribution and provision of accessibility of information and knowledge resources of government to public libraries were regulated by legislation and policy frameworks, such as the Kenya Books and Newspaper Act of 1962, amended by Act 1986 (Ocholla, 1991).

In further support of Smith (2011), this study found that some public librarians referred users to search on the internet for information about the Namibian government they did not have in print in the library. In this regard, Smith (2011) stated that the majority of public libraries provided public access to computer equipment, software and search assistance necessary to find government information on the Web. With regard to that, findings of this study in connection with e-government were in line with the study done by Hill and Bossaller (2013). Their study revealed that public libraries in Canada and the USA provided support to access e-government services.

Based on the content analysis on the implementation of e-government in Namibia, the study has found that the Namibian government e-services website at http://www.gov.na/gov-website-links provides access to government information (Government of Namibia, 2017). The web page, however, does not include relevant forms for the provided information, which results in public librarians downloading the forms where they are available for easy access to users, as quoted by PL1, PL3 and PL8.

In relation to the findings of this study, Uutoni, Yule and Nengomasha (2011) state that Namibia's public libraries have the potential to provide and promote e-governance, but they are faced with the challenges of technological diffusion, as well as human and financial resources to effectively deliver the service. However, the findings of this study revealed high interest in accessing government information at public libraries just like other public libraries around the globe. Users in Canada and the USA gain access to government tax forms from the public libraries together with genealogy information, employment resources, medical/health website resources such as the Internet Public Library and MedlinePlus, as well as local/regional information and educational sources (Hill and Bossaller, 2013).

5.3.3.1.3.3 Electronic global databases information and knowledge resources

Table 10 further illustrated that only one percent (1%) of the quantitative survey respondents had access to global databases at public libraries. The one percent represented all eight public libraries. Furthermore, the qualitative interviews affirmed that public libraries provided access to the internet, e-readers or kindles, subject CDs and DVDs, video cassettes, electronic resources of Emeralds and Ebscohost, as well as Health Inter-Network Access to Research Initiative (HINARI) databases.

It emerged from the qualitative interviews that only one (1) public library of all eight libraries in the Ohangwena and Omusati regions did not have internet or computer facilities for its users although the library had a computer for the librarian's use, which was connected to the internet. The other seven (7) public library users had access to the internet, thus providing the identified electronic resources. The one percent of respondents who had access to electronic resources showed a low rate of access, which, according to the respondents in the survey questionnaire, was the result of inadequate basic computer skills training, as well as library information searching skills as demanded by the majority of the respondents.

Following are a few quotes from the respondents on the highest rated ICTs tools of which basic training in computer skills and searching skills for library information were demanded by the majority of the respondents, and reason why the training was needed to support the low rate of access to electronic resources.

Reasons for basic computer skills training were the following:

- *To improve my computer skills*
- *Because I want to be computer literate*
- *Need basic computer skills to use computers in my business*
- *To know how to use a computer to type my assignment*
- *So that I will have knowledge of how to use it properly*
- *If I know how to use a computer, it will help me to get a job*

Reasons for library information and knowledge searching skill training (information literacy)

- *In order to search for e-books if they are not available in the library*
- *Research for information on my own without anyone's help*
- *It will help me to search for articles to do our assignments*
- *To be able to search for relevant information that I can use in my daily work and studies*

One percent of access to global databases, as referred to in table 10, or electronic resources and the demand for training to access these, as per the study finding, show the interest of the users to search for global information and knowledge that will result in them tapping into the growing stock of global knowledge, and assimilate and adapt it to local needs (World Bank, 2007). The availability of electronic resources also shows that public libraries in Namibia are transforming public library services into knowledge economies.

It is evident from the Singaporean public library system that it has access to more than three million e-books (Sabaratnam and Ong, 2013). American public libraries have access to e-books, digital audio material and video material that can be downloaded on users' personal devices (Rosu and Storey, 2016).

The study results correspond with the studies conducted by Sabaratnam and Ong (2013) and Taylor et al. (2012) that 21st century users demanded and preferred e-resource services from

the public library where resources could be accessed anytime anywhere. Similarly, as it emerged from this study, users also found it difficult to access digital collections (e-resources) due to a lack of skills to use new technologies (Taylor et al., 2012).

5.3.3.1.3.4 Public libraries indigenous knowledge resources

As can be seen in table 10 above, accessibility of indigenous knowledge at public libraries has been illustrated by 2% of the respondents of the quantitative questionnaire. In addition, the open-ended questions requested respondents to identify information and knowledge resources currently inaccessible, which they wanted the library to make available.

In this regard, indigenous knowledge was one of the top needs identified by the majority of respondents. The reasons for the demand given included:

- *to be able to maintain and sustain local culture and mostly for the future generation*
- *for the children to practice culture at home*
- *because we need to discover our past*
- *so that people get knowledge of their culture*

On the other hand, the qualitative interview respondents confirmed that public libraries were providing access to indigenous knowledge in the form of local books and storytelling or folklore whereby some public libraries invite senior citizens from the community for storytelling under a tree. According to the interviewees, accessibility of indigenous knowledge in public libraries was relatively poor. Below are quotes that confirmed the 2% access by respondents of the quantitative survey.

> *And lastly, as most of the demographic are fluent in Ongandjera tradition/norms – literacy and indigenous books are highly prominent as well* (PL6)

> *We also have people, and we have people who have information, who are resourceful. As a library we do identify people. For example, we have children section where they do storytelling. Here people will identify community members who can do storytelling. So that is part of information services. People will bring that person to the library for the children*

storytelling. The children sit under a tree just to listen to this meme or tate telling the story (PL1).

We have international and local indigenous books based on our local languages such as story books and language books but the collection is limited (PL8).

Local contents books here are very few but we do have. Those are in demand; we are working on sourcing more of them (PL5).

Given the results above, the conclusion was that the availability and accessibility of indigenous knowledge in public libraries were fairly poor despite the research done by Chinsembu and Cheikhyoussef (2016) who discovered that there was ample information on Namibia's indigenous knowledge, but such knowledge needed to be documented. Their research focused on indigenous knowledge regarding medicinal plants for treating HIV/Aids-related symptoms as well as for diseases like malaria, cancer and other microbial infections in humans and livestock. Their research further covered indigenous foods, indigenous knowledge used to cope with human wildlife conflicts and floods; climate change, management of natural resources and adolescent customary and initiation ceremonies (Chinsembu and Cheikhyoussef, 2016).

The fact that indigenous knowledge has not been preserved in public libraries is what has contributed to the 2% of respondents in this study. Lack of indigenous knowledge in public libraries resulted in the development of the national project of indigenous knowledge preservation. The initiative is supported by the Namibia Library and Archives Service (NLAS) project on preserving Namibia. This project started in March and ended in September 2015 after the shortage of indigenous knowledge at public libraries, as well as its importance to the economic and social development and knowledge economy of Namibia was realised. The project recorded 16 videos on the Ovawambo tribe's indigenous foods, drinks and utensils. These videos were uploaded on the newly designed website on Namibia indigenous knowledge. The captured DVDs are in the process of being distributed to all public libraries across the 14 regions of Namibia. The project is continuing to record and capture indigenous knowledge on intercultural activities of the Ovahimba/Herero and Damara/Nama tribes of Namibia. It will then continue to other tribes until the entire Namibian body of indigenous knowledge has been recorded and captured for preservation (Ministry of Education Arts and Culture, 2016).

The World Bank emphasises how important it is for many developing countries to protect, preserve and promote indigenous knowledge, which is a unique intellectual property (IP), that is increasingly recognized as a valuable asset in industrialised and developing countries alike (World Bank, 2007). Furthermore, preservation of indigenous knowledge is imperative, as it provides input in many modern industries such as pharmaceuticals, cosmetics, agriculture, food additives, industrial enzymes, biopesticides and personal care. Its importance may not be realised in developing countries, but most of the value added in such cases is appropriated by firms in industrialised countries whose advanced scientific and technological capabilities make appropriation possible without the prior informed consent of the holders of that knowledge (World Bank, 2007).

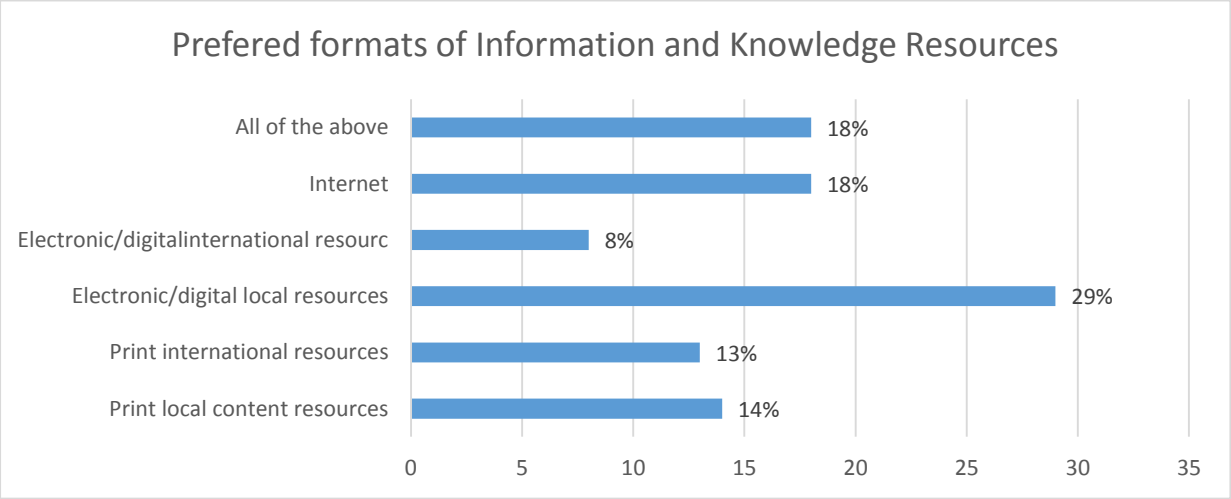


Figure 12: Preferred formats of information and knowledge resources

Figure 12 shows different formats which respondents preferred when accessing public libraries' information and knowledge resources. As seen in the figure, more users preferred accessing local information and knowledge resources in electronic format, which is illustrated by 29%. Even though the majority of respondents opted for electronic local print resources, which, according to table 10, are the most accessible information and knowledge resources at the public libraries, 14% of the respondents preferred print local content resources. Reasons obtained from the open-ended questions, the majority of respondents indicated that:

- *Print resource format are the only one available*
- *They are reliable and easily accessible at the library and I cannot access them at home, yet I need information for my studies.*

5.3.3.2 Public library ICTs infrastructure for a knowledge economy

As discussed in section 5.3.2.1 of this chapter, provision for ICTs infrastructure to public libraries is regulated by Namibian legislation and policy frameworks. Figure 13 below shows the extent of the availability and accessibility of ICTs across the eight public libraries in the Ohangwena and Omusati regions. The results in figure 13 indicate that the highest percentage (38%) of public library users have access to the internet and wi-fi, followed by 12% respondents with access to printers, 10% to television, 9% to laptops and computers, 4% to video conferencing, 3% to laminators, 2% to DVDs and CDs, 2% to presentation projectors, and 1% to fax machines, telephones, video cassettes, as well as Daisy players for visually impaired people.

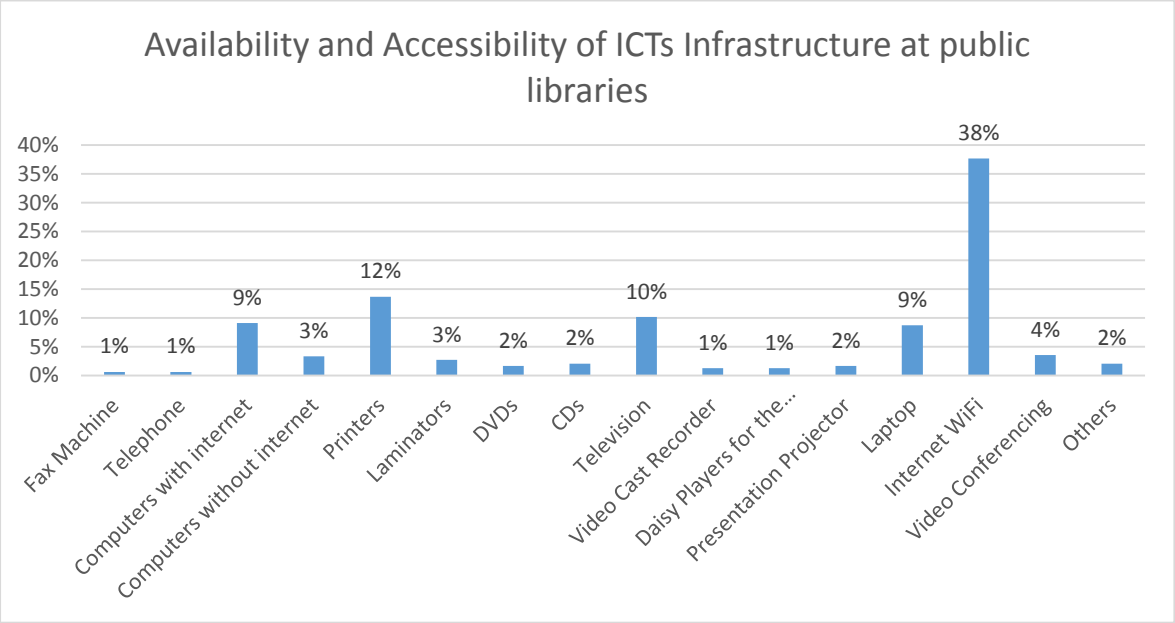


Figure 13: Availability and accessibility of ICTs infrastructure at public libraries

These results were supported by the qualitative interviews with librarians. Librarians added scanners, e-readers, LeapPads and 3M security machines to detect theft of library resources. Although 4% of the respondents indicated the availability of video conferencing, according to the list provided by the librarians, only one regional library that was built with the assistance of the Millennium Challenged Account (MCA) has a video conferencing facility According to the regional librarian, the video conferencing facility is there, but is currently not working or it seldom works:

Even we have a video conferencing, I think that video conferencing is not working and it has not been working. I never seen it working (PL1).

Similarly, 10% of the respondents indicated the availability and accessibility of audio-visual television. However, the librarians revealed that only one regional library has an audio-visual television.

Yeah, we also have the audio visual television for the community that if they want to watch a video, they go there. We also have wi fi for internet connection, we give them password to connect. They actually bring their laptop to use or connect to their cell phones to use the internet. We have games for the children, computer games for children, photocopies, scanning, lamination machines (PL1).

The other seven (7) public libraries did not mention televisions in their interviews; neither did the researcher see a television in those libraries during the visits. In terms of the internet and Wi-Fi connection, the librarians also revealed that the internet connection is very poor in most public libraries. Apart from its availability and accessibility, this is rated the highest accessible ITC infrastructure. Only two (2) public libraries with access to the internet had good internet connection, as is evident below:

When users are registered as members of the library, they are able to use ICT facilities such as computers/internet and scanning for free of charge however those that are not registered can also use the facilities. We are operating in the same complex with the youth office. The youth come to the library to connect and use the internet. Jhooo, its fast here (PL2).

Our ICT include computers and laptops with internet connections, Photo copier machine that users pay when making copies. Users come in numbers for the free internet at the library and also the fact that it is faster than internet café around. You know we are busy building the regional public library that side of the road which is bigger than this one. So that one will have all the ICT infrastructure just like those for Ohangwena, Oshana, and Omaheke. The new library will be completed soon (PL5).

On the other hand, the only public librarian without computers for users indicated that:

> *Meeem, there are no ICTs here, not even space for the computers. As you can see. This place is even smaller than a classroom. What you can see is what we have. Few shelves for books, newspapers that we get sometimes. My computer has internet but there is no network connection this side, it comes and goes. Like for a month now, the network in Okongo is not there. You see, that's the reason you said you have been calling me but my phone is unreachable for days. That is our story here. Not only at the library but the whole Okongo constituency has network problems* (PL4).

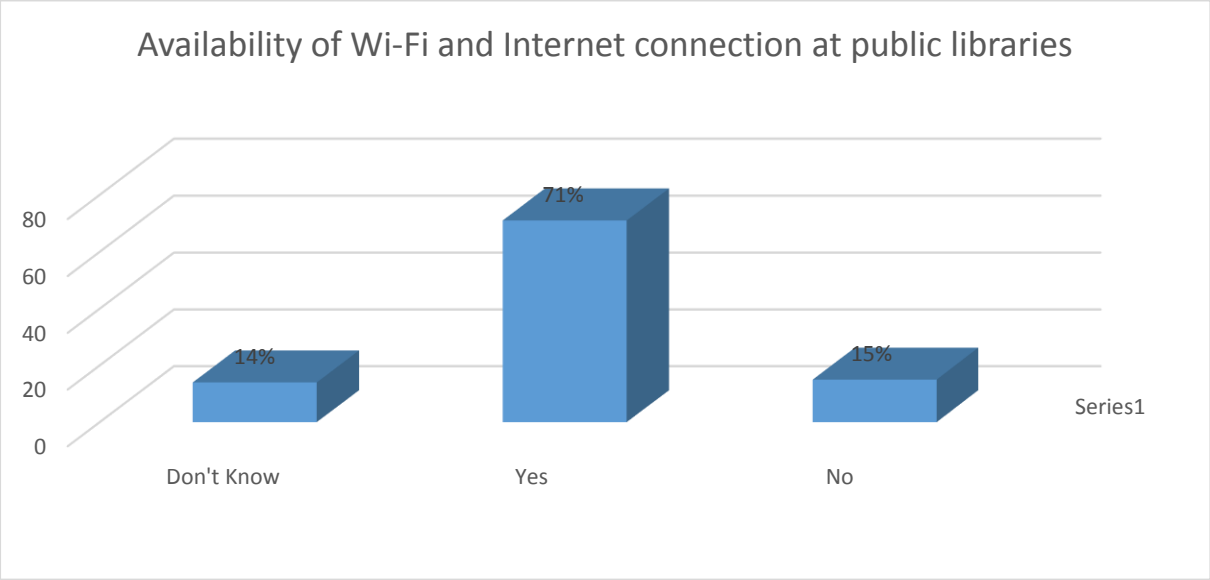


Figure 14: Availability of wi-fi and internet connection at public libraries

Figure 14 above illustrates the availability of wi-fi and internet connection in the public libraries in the Ohangwena and Omusati regions. It shows that 71% of public libraries provide access to wi-fi and the internet, 15% respondents have indicated that their public libraries do not provide access to wi-fi and the internet, while 14% do not know whether their public libraries provide access to wi-fi and the internet. The qualitative interviews have revealed that only one public library located in the Ohangwena region does not have computer or internet facilities for public library users.

Surprisingly, as indicated in figure 14 above, it appears that there are still users who are not aware that they have access to wi-fi and the internet at their respective libraries, although

availability is proven in 71% of public libraries that have wi-fi and internet connection. The 14% shows a poor marketing strategy by public library services.

With regard to the availability and accessibility of ICTs at public libraries, the findings of this study support the World Bank Knowledge Economy Framework indicators. The indicators indicate that citizens in a knowledge economy should have access to information and communication technologies (ICTs), including telephones, computers, televisions, internet connectivity, and radio networks. This is essential global infrastructure that enables facilitating of effective communication, dissemination and processing of information and knowledge (World Bank, 1998; 2007). However, not all public libraries in the two regions have access to the same ICTs infrastructure. This situation is to the disadvantage of other users from fully receiving the benefits that come with the availability and accessibility of ICTs as the one found at the Ohangwena regional library. Therefore, the information gap at public libraries is based on uneven infrastructure and a lack of access to digital media (Network Information and Digital Access [NIDA], 2011).

The study found major improvements in public library service delivery in transforming Namibia into a knowledge economy in comparison to the statement report reflected in the Namibia Vision 2030 that:

> *Namibia's libraries are poorly equipped to play their vital role in the Age of Information. Very few offer internet access. None had any media other than reading materials available (no videos, CDs DVDs etc.) and only a very few limited number of periodicals. There is also a lack of qualified librarians* (Office of the President, 2004: 77).

This study found different types of ICTs available and accessible at public libraries even if those libraries were not all well-equipped with the necessary ICTs. The result revealed that one public library showed major progress in terms of implementation of Namibia's legislative and strategic policies framework with regard to make information, knowledge resources and ICTs infrastructure available and accessible in comparison with the Namibia Vision 2030 statement report of 2004. As indicated, the results also further indicated challenges experienced in the public library that limited high-quality services.

This study found that Namibian legislation and strategic policies on ICTs were implemented through the deployment of different ICTs infrastructure to public libraries. This improvement also supports the views of Mamafha, Ngulube and Ndwandwe (2016), and Nwabueze and Ibeh (2013). They affirmed that public libraries should provide computers, internet-based facilities and other equipment such as photocopiers, printers, mobile phones, scanners, laminators, DVDs, CDs, CD-ROMs and faxes to improve services to user communities.

Figure 15 below illustrates different reasons for what respondents use the internet at public libraries. It emanates that more respondents use the internet for educational and employment purposes with 33% and 16% respectively. Health and wellness form a category, which is also rated highly with 12%, while the use of electronic books stands at 10% and social media networking at 8%.

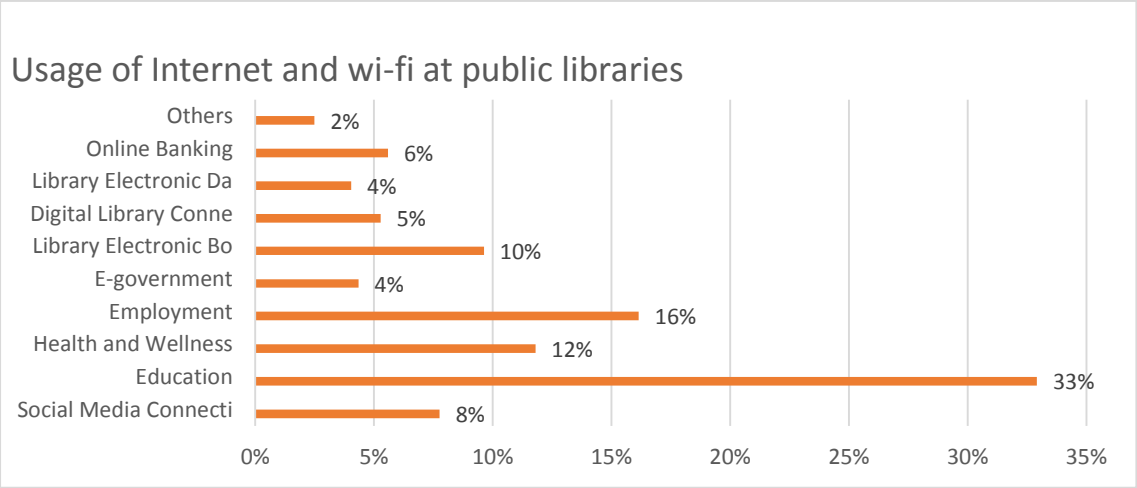


Figure 15: Usage of internet and Wi-Fi at public libraries

Figure 15 indicates the usage of the available Wi-Fi services at the public libraries where education is the most important reason why respondents use the internet, followed by looking for employment and social media.

The interviews with librarians established that in addition to education and employment as the most used for ICTs, the internet and Wi-Fi. The respondents have also identified social networking as an emerging reason for using the internet and Wi-Fi at public libraries. Such evidence is expressed in the quotations below:

I would say both, (Education and entertainment), mhuu yesh with older people especially the youth most of them you find that they want to be on Facebooks, social network. I also believe people can learn positive from this Facebooks. I also share on Facebook, and I also learn from others on Facebook. For older people or users, those one when they come to the library many times they are coming to study. Those are the people who even come to me saying please teach me Ebscohost. Here when most people come is because they are seriously come to study. This other young people, they want to join, yeah, they want to, so in terms of using the facilities for educational purpose, they busy experimenting (PL1).

The library is mostly used by young people, those at primary school level, Namcol and higher institution, so that means that they mostly use the internet for educational research purposes, recreation and social networking. You find that most out of school youth come to use the internet to look for jobs (PL2).

Learners, students, and community members are the most users of ICTs. They use it for E-mail, typing of assignments, CV writing, Facebook, YouTube and general search or I can say entertainment (PL5).

Here users mostly used ICTs for research on school work, employment searching, social networking, printing and making copies (PL8).

Similarly, the study's findings have confirmed the findings of studies done by Bradley (2016), Evans and Savard (2008), Lor and Britz (2010), as well as Satgoor (2015). They held that public libraries were entry points to free access to ICTs, including the internet for people who might not own computers or have internet access in their homes.

In general, the study further contributed to the claim made by Mandel et al. (2010) that 71.4% of public libraries in Africa were reported to be the only providers of free access to internet services in their communities whereas in the USA, nearly all public libraries provided free public internet access at 98.7% overall (Lor and Britz, 2007).

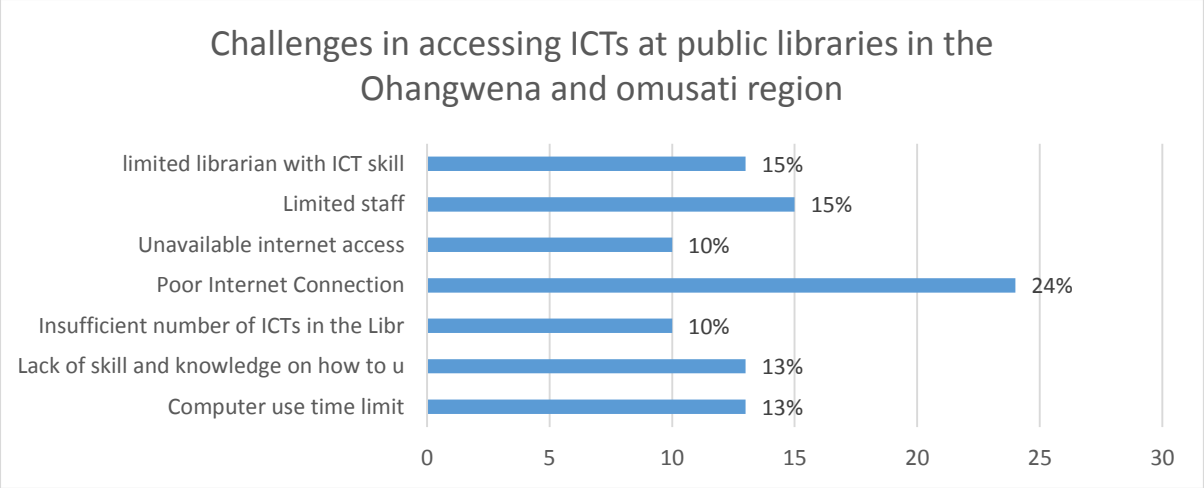


Figure 16: Challenges in accessing ICTs at public libraries in the Ohangwena and Omusati regions

According to the World Bank (2007), there appears to be challenges mostly in developing countries when transforming to a knowledge economy. These challenges include the threat of a widening in the existing knowledge gap in terms of accessing scientific articles between developed and developing countries. The other eminent challenge is the digital gap with the difference in accessing ICTs, which include telephones and the internet. The problem is the inequality in internet access among the poor and the rich plus the quality of internet infrastructure in terms of bandwidth. It is, therefore, imperative to provide access to knowledge and modern technology to achieve the sustainable development goals.

Figure 16 is based on what challenges respondents experienced in accessing ICTs and the internet. As illustrated in figure 16, respondents have indicated that the greatest challenge they face when utilising ICTs and the internet is poor internet connection (24%). This view is supported by the interviews with the librarians. Some of their views are quoted below:

> *mhuum, yeah, is not because things are not happening, but yeh, one is the issue of staff, a staff member who was responsible for the left. This is why I was saying we actually received our senior IT today and aaaa the second reason, the internet is not as fast as we would think or as we ought it to be. This was supposed to be the fastest internet. Actual if you to go to any internet café, you will see how internet there is. If you have a yahoo email address, you will not get in or read you email or search it, only google with Gmail is*

working. I was also talking to management that if telecom can help us to see where is the problem (PL1).

Yeah, we provide access to computers with internet which is very poor. Sometimes yeah, I understand can because by power outage, but it demoralised users when they want to work on the internet but it keeps loading the whole day. Mostly doesn't give us time to train users anymore (PL8).

aahm, yeah, the challenges like I have mentioned is internet, you know if something come up unpredictable, there is nothing we can do about it. It's very slow like there is nothing at all sometimes. But is there and one need to be very patient if you want to search for something. Another challenge here is One photocopy that we have also especial when learners come from school and they want to make copies of school work. It became cumbersome with them queuing up waiting to make copies (PL3).

In addition to poor internet connection, other challenges identified include limited staff to assist with ICTs (15%), the limited number of librarians with ICTs skills (15%), lack of skills and knowledge on how to use ICTs effectively (13%), computer use time limit (13%), insufficient numbers of ICTs in the libraries (10%) and unavailable internet access (10%). These challenges are supported by the interviews with librarians who have also added lack of space for computer training in libraries and internet cut-off problems due to payment failure.

Under those circumstances, this study finding has therefore agreed with Uutoni et al. (2011) that Namibian public libraries have a shortage of skilled library professionals and financial resources for effective deployment of ICTs, which have resulted in users feeling challenged when they use technology. Moreover, similar challenges are experienced at South African public libraries where poor ICTs facilities, access time limits, an insufficient number of ICTs facilities, lack of ICTs knowledge and skills demoralise users to utilise the facilities. These factors have also prevented users from benefiting socially and economically (Mamafha et al., 2016; Nwabueze and Ibeh, 2013).

5.3.4 Public libraries: Educational and training programmes for a knowledge economy

5.3.4.1 Educational and training programmes offered at public libraries

Figure 17 below shows different educational and training programmes offered at public libraries, which some respondents have attended in acquiring skills and competencies for a knowledge economy. It shows that computer literacy is the most offered and attended programme by the majority of the respondents at 31%, while youth career development information sessions have been attended by 18% of the respondents. Reading promotion programmes have been attended by 16% of the respondents, information literacy programmes by 12%, basic literacy programmes by 9%, job-seeking literacy programmes by 8%, health literacy programmes by 3%, agriculture/farming literacy programmes by 2% and SME literacy programmes by 2% of the respondents.

Surprisingly, the study also found that some respondents did not attend these educational workshops, information sessions or training offered by different public libraries even though they had utilised the libraries. According to the librarians, not all public libraries provided the same training programmes. Other educational workshops and information sessions, as identified in figure 17, were presented.

However, the librarians indicated other training programmes offered by some of the public libraries, which were not included in the category list of the quantitative questionnaire. These included grade 10 and 12 learner examination preparation, as well as indigenous knowledge-sharing sessions by senior community members in the form of folklore, library orientation and foreign language training sessions.

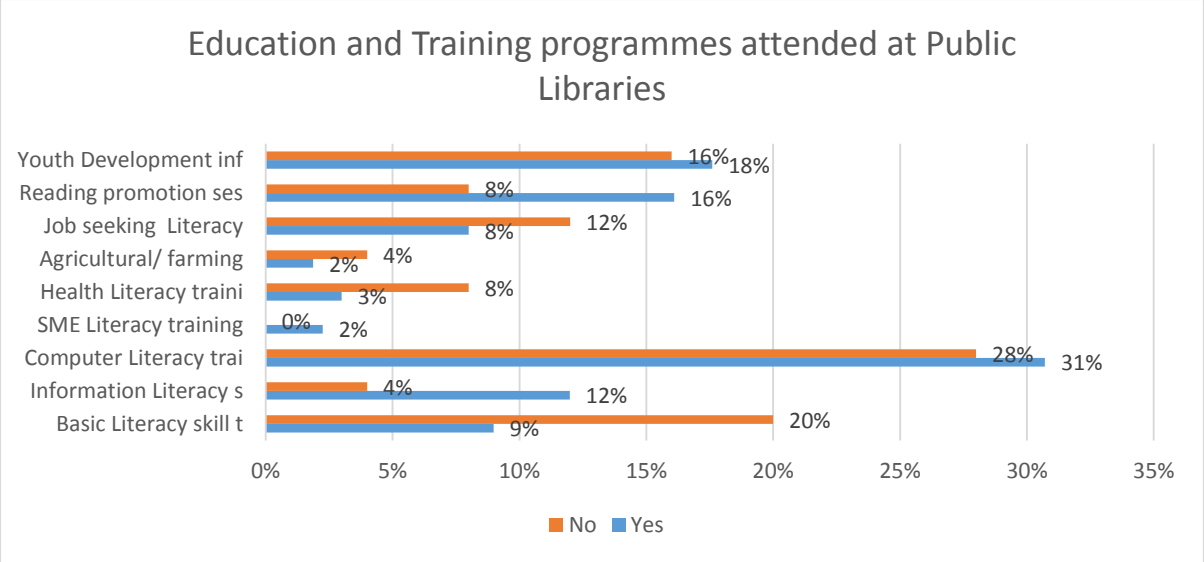


Figure 17: Education and training programmes offered at public libraries

Below are some of the quotations from the interviews with the librarians:

> *We offered basic computer training and library orientation to users. Basic computer training or computer literacy is mostly well attended by all types of community members, young and old because it's free and people real want to know how to use computer, especially the youth that are looking for jobs. The information literacy we do is only library orientation. We introduce people to the library services and facility, show them how to search for library materials using card catalogue and how to browse through the shelves by teaching them how to find books in those shelves* (PL2).

> *Yeah, ICT/Computer Basics Classes, ICT/Computer Basics Classes – most of the users want to be computer literate, apart from getting assistance from library staff, users are availed computers where they can satisfy their needs online. The MS Access database is also available if the users need to find out the whether a certain information source can be found in the library. We also do youth Guide on the Job Market, you know where Unemployed youths trained on how the job market works, applying for jobs, etc., and Grade 10 and 12 Learners Supported in Academic Information Use and Retrieval* (PL6).

People should be able to come and find information that is available in the library. For now, we do not have a system that people can use to search and find what they want. We are moving toward that because our library management system, there are quite a number of things that we are working on. We have in place staff to orient our users to know this is where you get information, this is how to get this information. On top of that we have a user's registers, there users service staff identify what users are looking for then guide them through in finding what they want. some users come for computer training. Yeah there are time when we received many people coming for training then we have two sessions a day one morning and the other one in the afternoon. yeah, for information literacy, that's one we normally do it on individual basis that when we identify that this person is doing a research and need this information then we concentrate on what the user wants. So we do offer. To school learners what we do, we have done that in a form of workshop, especially grade 10 and 12 we normally invite them for workshop. I would say, we have also reached out to the memes at Omatala open market. We have reached out to them. We have called them for some workshop aaaa, on how to, just on their business. How to acquire financial assistance and how to improve their business. They need a lot, so we called that, the needs of SME. Aaaa, we approached ministry of trade, just to connect them (PL1).

Most people demand for basic computer training this is because most of the users want to use computers but they lack ICT skills. So that is offered, and the youth guide to the job market and grade 12 assistance, on information use and retrieval (PL8).

Our library does not have computers to offer computer basic training which is mostly demanded by users. as an information centre, we provide information session on SME, agriculture, tender, and job seeking for the youth hunting for jobs (PL4).

In terms of the provision of educational and training programmes at public libraries, this study's finding therefore supports the views held by Asselin and Doiron (2016), Balina

(2014), Evans and Savard (2008), Ghosh and Ghosh (2009), Haq and Ahmad (2012), Iilonga (2015) and Krolak (2006) who have all stated that librarians have to take up the new role of educating users in information retrieval skills on different forms of knowledge tools. These include training in various forms of marketing and literacy skills, such as basic adult literacy, language classes, basic computer and internet skills, job searching and online government services, the use of public and private sector e-services, information literacy and digital literacy, including Web 2.0 and Library 3.0 programs. These educational and training programmes are aimed at providing access to the high volume of various disciplines of print and electronic knowledge and information media available in public libraries.

According to the World Bank Knowledge Economy Framework (World Bank, 2007), the country's knowledge economy labour force should have educated and skilled citizens who are able to continuously upgrade and adapt their skills to create and use knowledge efficiently. The framework further stressed that education and training systems should encompass primary and secondary education, vocational training, higher education and lifelong learning. Therefore, public libraries in Namibia fall under the Ministry of Education, Directorate of Lifelong Learning. The framework stated that lifelong learning is becoming increasingly important in the current context of the knowledge revolution. It requires constant adaptation of knowledge and know-how, which grows in importance as the population ages (World Bank, 2007).

Based on the study results, as illustrated in figure 17 above, not all respondents have attended educational training sessions offered at public libraries and not all public libraries provide all the training programmes as listed in figure 17. Resultantly, this study found a gap in terms of the provision of education and training in contributing to Namibia's knowledge economy.

5.3.4.2 Skills and competencies gained from attending public libraries' educational and training programmes

Upon receiving training provided at public libraries participants are expected to have gained certain skills and competencies. Figure 18 below illustrates the impact that various training programmes offered by public libraries have on respondents.

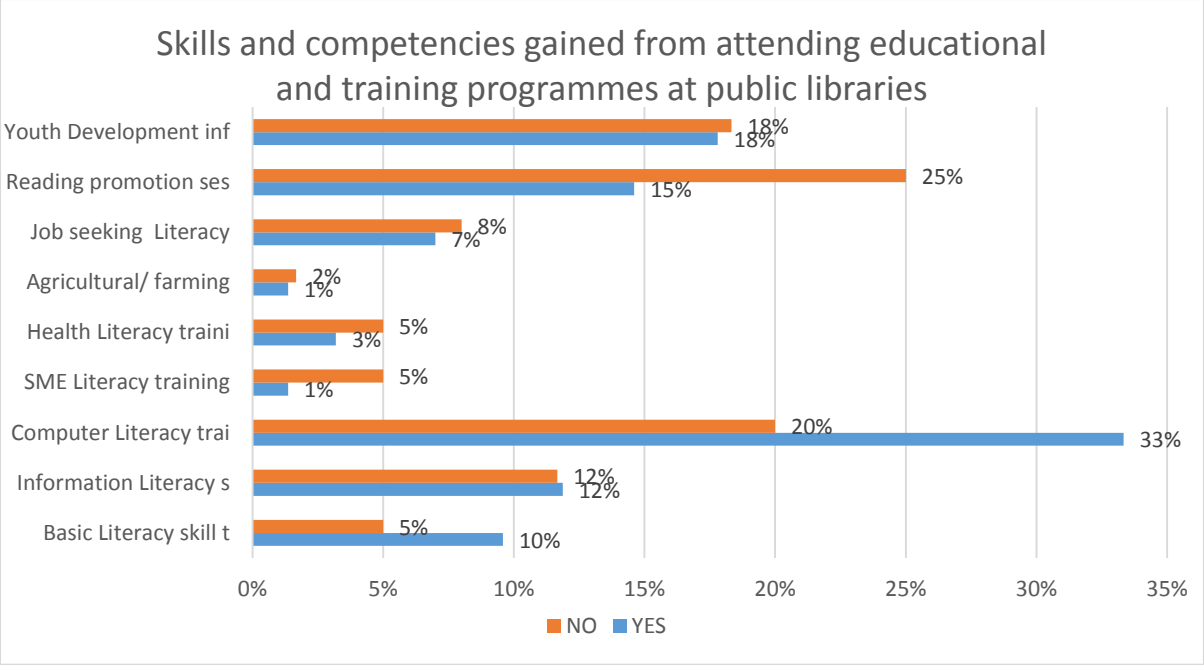


Figure 18: Skills and competencies gained from attending educational and training programmes at public libraries

Figure 18 above indicates that attending educational and training programmes at public libraries does not guarantee gaining certain skills and competencies as listed. Although figure 17 shows that some respondents did not attend the different educational and training programmes offered at public libraries, the reasons for not attending were not ruled out. What has emerged is that most public libraries, excluding regional libraries, only provide basic computer literacy and other training with individual users.

It is, therefore, clear from figure 18 that most respondents with scores of 33% have obtained skills and competencies from computer literacy training and 20% did not, while 25% of respondents obtained skills and competencies from reading promotion training programmes and 15% did not. Through Youth Development 18% of the respondents received skills training, while 18% did not. Information literacy training impacted 12% of respondents to gain skills and competencies and another 12% did not acquires any skills and competencies. Ten percent of the respondents acquired skills and competencies from attending basic literacy training programmes, while 5% did not. Job-seeking literacy training programmes empowered 7% of respondents to gain skills and competencies and 8% not. Health literacy training benefitted 3% of respondents and 5% did not benefit them at all. SME literacy programmes impacted 1% of respondents to gain certain skills and competencies, while 5% of respondents did not benefit

from the training programmes. Agriculture literacy programmes were responsible for 1% acquisition of skills and competencies and 2% of respondents did not benefit.

The results show a discrepancy in terms of impacting the intended skills and competencies with a high percentage of respondents who have not obtained skills and competencies from attending the provided training programmes at public libraries. The results also show poor progress towards the achievement of knowledge economy as envisaged in the Namibian Vision 2030 document.

Namibia's National Development Plan indicates that the Namibian government should develop a strong framework to enhance the core skills of literacy and numeracy, while promoting critical thinking and information literacy through provision of enrichment programmes in schools and public libraries (Republic of Namibia, 2017). Provision of education and training to library users is also emphasized in the Namibian Library and Information Act, Act No. 4 of 2000. It prescribes that public libraries should provide proper instruction and guidance to library users (Republic of Namibia, 2000).

Public library training has made significant contributions to train users so that their newly acquired skills could contribute to their finding employment and establishing stronger connections with family members through e-mails (Julien and Hoffman, 2008). Public library staff reported that although there is library training, users still do lack relevant skills to use the library effectively (Julien and Hoffman, 2008).

Positive effects of training provided by public libraries are appreciated by learners' parents who experience the improvement in information literacy and IT skills in their children, as they have become more exposed to reading material when searching for information and no longer being limited to textbooks only (Chu, Tse, and Chow, 2011).

5.3.4.3 Public librarians' skills and competencies in providing training programmes

Figures 17 and 18 show educational and training programmes offered by public libraries and the influence they have on respondents. The study also looks at whether librarians, as trainers of the identified programmes, have relevant skills and competencies to deliver training services effectively.

According to Figure 19 below, 68% of the respondents indicated that librarians had the skills and competencies to deliver training services, 24% respondents indicated that librarians did not have the skills and competencies, and 8% of the respondents were uncertain of whether librarians had the skills and competencies to providing training.

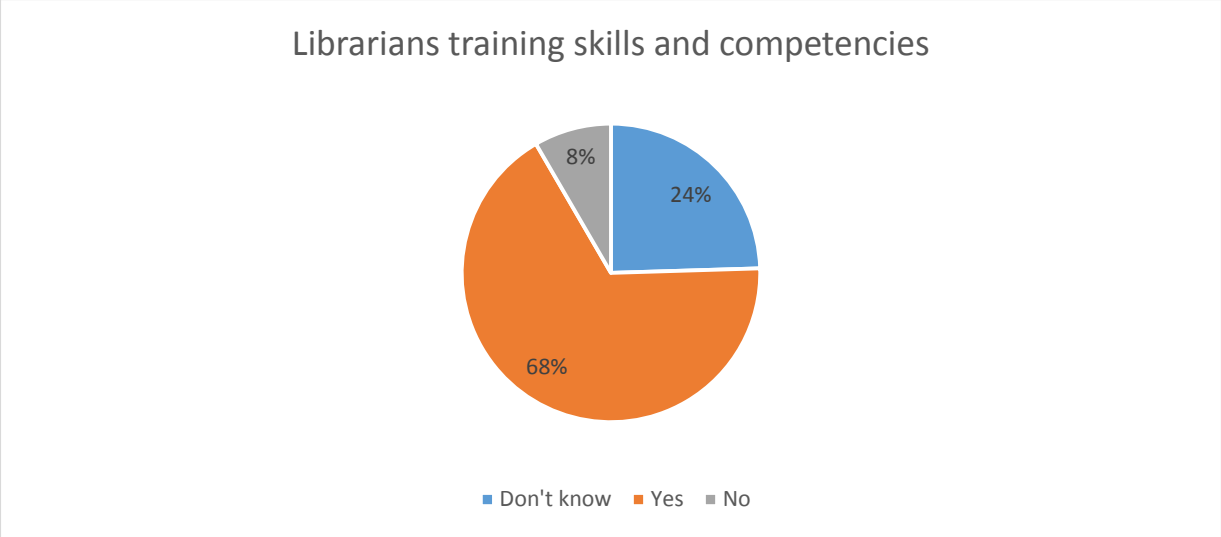


Figure 19: Librarians training skills and competencies

The above finding is supported by the open-ended questions from the questionnaires that show that some librarians have the skills and competencies to deliver training, while some do not. Below are quotations in support of this argument:

> *Yes, because they do teach us how to use library resources.*
>
> *Because they provide many information and training.*
>
> *They prepare classes for learners and students, then provide training on computer skills.*
>
> *They provide training and workshops on youth development.*
>
> *Not all library staff have skills and they are not always capable of providing quality library services, because sometimes they find it difficult to provide us with training on how to search and find relevant resources.*

Library staff do not have experienced in ICT training.

The qualitative interviews have established that there are five (5) librarians with bachelor degrees in Library and Information Science, one (1) regional librarian has a master's degree in Library and Information Science and two (2) librarians have grade 12 certificates. There is a significant relationship between educational background and place or location of a library. Librarians with grade 12 are heading libraries in deeper rural remote areas with no or limited infrastructure. Those with bachelor and master's degrees and upgrading are heading libraries in rural remote small towns.

In terms of capacity building and professional development for librarians of public libraries, the qualitative interview established that librarians did not attend teaching courses but they had received information in-service training, attended workshops, seminars or conferences that completely prepared them for library educational training or instruction, as referred by to Julien and Genuis (2011). This is supported by the following selected quotations:

Staff members are sent for capacity building workshop program offered by the ministry of Education, arts and culture (PL2).

We have different sections, so each will be trained according to their training needs. So it is up to the employees to identify the gaps, identify institutions that can offer such training (PL1).

Staff is always encouraged to pursue further studies – but the MoEAC does provide 60-70% tuition coverage to any staff member wanting to study at any accredited institution (PL6).

The four O regions held capacity building workshop annually for librarians. Attend workshops on library and records managements (PL8).

In my opinion, we are about to approach the end of the year. There was no capacity building and the previous years I attended one for two days in strengthening innovative library leaders training (PL4).

The 67% respondents' support of relevant skills and competencies of librarians in presenting different training programmes is in line with Julien and Genuis' (2011) findings that public librarians view teaching or instruction as part of their duty or expectation.

On strengthening public librarians' training skills and competencies, librarians need to start reading professional research literature and attend courses for teaching pedagogy skills (Julien and Genuis, 2011). Further, public librarians need to upgrade their skills and knowledge of information systems management and the use of modern technologies to effectively educate users on knowledge economy competency tools (Leilei and Jinmin, 2012).

This study finding rejects the study conducted by Davis (2015), which stated that education of public library users is found to focus more on ICTs training. Indeed, basic computer literacy training is the highest attended and demanded kind of training, but as seen in figure 12, there are different training programmes on offer and these have been attended by respondents at different public libraries that are based on the needs of the particular community.

5.3.4.4 Collaboration in enhancing skills and competencies of public librarians and users

The World Bank Knowledge Economy Framework (2007) states that collaboration is vital to the transformation into knowledge economy among a wide range of partners locally and internationally in developing skilled human capital. In enhancing the quality of public library educational and training services, some librarians approach other institutions and agencies to provide training to library users in programmes in areas of which they do not have expertise.

According to the interviews with librarians, public libraries organise training and information sessions on SMEs, agriculture and farming, health, financial literacy and job-seeking information to the community through collaboration with the institutions responsible for rendering services to facilitate training. This is evident in the following quotations:

> *Other libraries do collaborate but with our library we are still busy with user education because we have people who still think they can buy books from the library* (PL8).

Yes, we do collaborate, say for instance during the information sessions for SME, we invited the expertise from the Ministry of Industrialisation, Trade and SME development at Eenhana and Ongwediva SMEs (PL4).

Yes, through invitation for orientation, especially when it come computer training, the library collaborates with institutions like hospitals (PL2).

mhuuum, we do work or collaborate with Okahao VTC by assisting their students with Computer classes and Office Administration. Aaaand the Ministry of Education Arts and Culture (MoEAC's), Adult Education Department bring their adult literacy learners to the library to be more equipped with basic Literacy and information literacy and be exposed to the library services and facilities (PL6).

In terms of collaboration to enhance librarians' skills, these study findings are in line with the study conducted by Ullah (2016). He found that universities, research and development institutes or academies, library associations and some business organisations participated in promoting the skills of librarians in Pakistan. The interviews with librarians did not express any international collaboration in terms of the enhancement of librarians' skills. This shortcoming was also present in Pakistan public libraries, but at least they attracted the cooperation of three international organisations.

The interviews revealed that some public libraries do in fact collaborate with hospitals to provide health information training to users. In that regard, the finding affirms what Whitney, Keselman and Humphreys' (2017) study proved. They stated that in the American district of Columbia, the National Library of Medicine and the Kellogg Foundation, the NLM and the NN/LM, with public libraries collaboration, help public libraries enhance the public's access to health information through provision of grants to provide computers, internet access or health information materials to their patrons. The NN/LM network library provided staff training, including in the use of MedlinePlus and other NLM information services, and advice about handling health questions (Whitney, Keselman and Humphreys, 2017).

The collaboration contributed to improvement of public librarians' capabilities to provide consumer health information as a response to consumer demand and the availability of

consumer health information training. This resulted in the implementation of health information outreach programmes that employ variations of the train-the-trainer approach by partnering with community-based organisations. The trainer model outreach programmes in training community members increase libraries' reach exponentially, as community members teach their peers who then go on to teach others (Whitney, Keselman and Humphreys, 2017).

In support of Whitney, Keselman and Humphreys (2017) on the trainer model outreach programmes working with the community organisations, this study showed that some public libraries had collaborated with their community organisations such as local councillors, the health, agricultural and farming sectors, as well as schools in providing them with a mobile library. This evidence is highlighted below:

> *We have a mobile library here as a services, we go out. Normally what I do I write letter to inspectors to inform them we are coming to these areas. Then in that circuit all schools that are close to that areas I will also write to them. I also write to councillor and say please can you use you air time to promote Ohangwena library services to the community. So every Saturday you hear the councillor announcing that the Ohangwena regional mobile library is going to this place all school and community members around that area should go to the library* (PL1).

> *As a regional library for the whole Omusati region, we have a mobile Library that work in collaboration with the school and communities to provide library services including training to the school learners, teachers and the ordinary community* (PL5).

The study found the approach of Whitney, Keselman and Humphreys (2017) to be similar to the mobile library service system as referenced in the quotations above. Their service differed in that the regional mobile library provided training to the entire targeted community. In Whitney, Keselman and Humphreys (2017), public libraries trained the trainers from the community who worked with the entire community directly in terms of providing library and information skills training, including all training programmes provided by the library.

5.3.5 Public library innovation system, service provision and the impact on users

As discussed in chapter two section 2.5, innovation has the ability to tap into the growing stock of global knowledge and information, to assimilate and adapt it to local needs, and to create new knowledge to improve the current status quo of socioeconomic development (World Bank, 2012).

This study explored the way in which public libraries, as organisations, and their users have adapted and assimilated knowledge and information resources to tap into the local needs for socioeconomic development, as well as how users benefitted innovatively from ICTs training skills and other services provided by the public libraries. Furthermore, the public library staff was researched in terms of how they had adapted ICTs innovation systems in improving communication, as well as the dissemination and processing of information and knowledge to the communities, as required for the knowledge economy.

5.3.5.1 Public library technological innovation adoption benefits

According to Schmidt and Rammer (2007), the concept of technological innovation is typically associated with the development or application of new technologies. In establishing how public libraries have adopted ICTs innovation systems in improving communication, as well as the dissemination and processing of information and knowledge to the communities, as required for the knowledge economy, the discussion in this section focuses on a technological innovation system and the benefit the users in the community derive from it.

In terms of technological innovation, the study found that some public libraries had taken advantage of ICTs to improve their library services through reaching out to the community and making information and knowledge resources more accessible. This is demonstrated in figures 20, 21 and 22 below in which respondents have expressed the types of technological innovations that public libraries have initiated.

Respondents were therefore investigated on the availability of the web-based library catalogue that is accessible through the development of the integrated library management system. On that website, 68% of the respondents indicated that they did not know if their libraries had a library Web catalogue that allowed users to search and easily locate information and knowledge resources in the library without browsing from one shelve to another. Sixteen percent (16%) of

the respondents revealed that their libraries did not have a library Web catalogue, with another 16% admitting that their library did have a library Web catalogue.

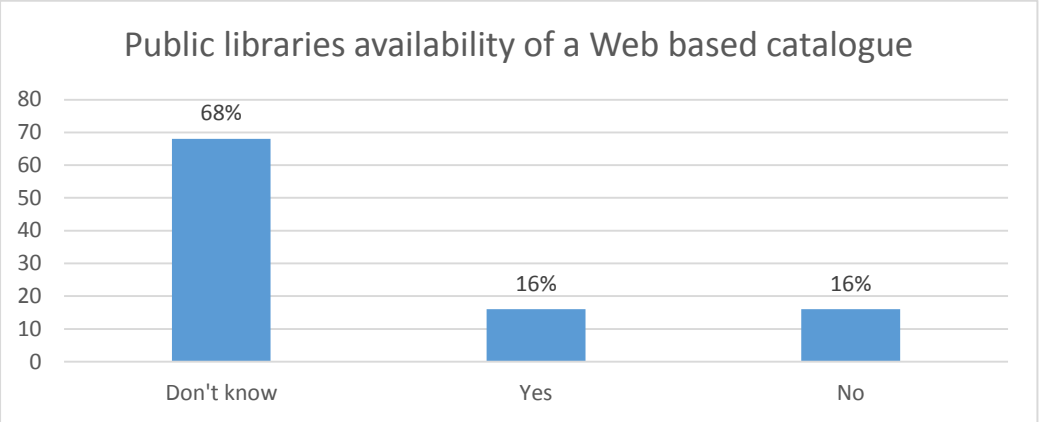


Figure 20: Public libraries availability of a Web-based catalogue

The quantitative survey results correspond with the qualitative interviews with librarians. It shows that out of the eight public libraries in the two regions of Ohangwena and Omusati only two public libraries have automated their collection to the in-house library management system in facilitating the search for and retrieving information. According to the interviewees, the developed library management system (LMS) can only be searched within the library and not on the Web.

> *The library's MS Access database hosts all the resources found in the library's collection – thus information retrieval is made easier* (PL6).

> *Basically we are using a library system that go through cloud ware, to usually manage our resources to search library resources. The system was installed when the library was established and it is quite flexible and well manageable. The system only work when you are in the library, or any of MCA regional library* (PL1).

> *Nope, we do not have the electronic library management system. I will discuss it with my superior. But I thought about it. Probably when time allows it plus the budget. All those issues will be taken care of. Probably in the near future we are going to have* (PL3).

Although not a Web-based catalogue, development of the library management system is an innovation that these libraries utilise. However, the regional library already had the catalogue up and running, since it is part of the three regional public libraries constructed and fully furnished by the American Agency Millennium Challenged Account (AAMCA).

In terms of the use of social media or Library 2.0 tools for dissemination of library services, and for inclusion and outreach to the community users figure 21 displays public libraries that take advantage of ICTs to improve their library services innovatively. WhatsApp was found to be the most used tool with 36% respondents using it, with Twitter at 18%, YouTube at 10%, television at 10%, Facebook at 8%, local radio stations at 6%, Wiki at 6% and others at 6%.

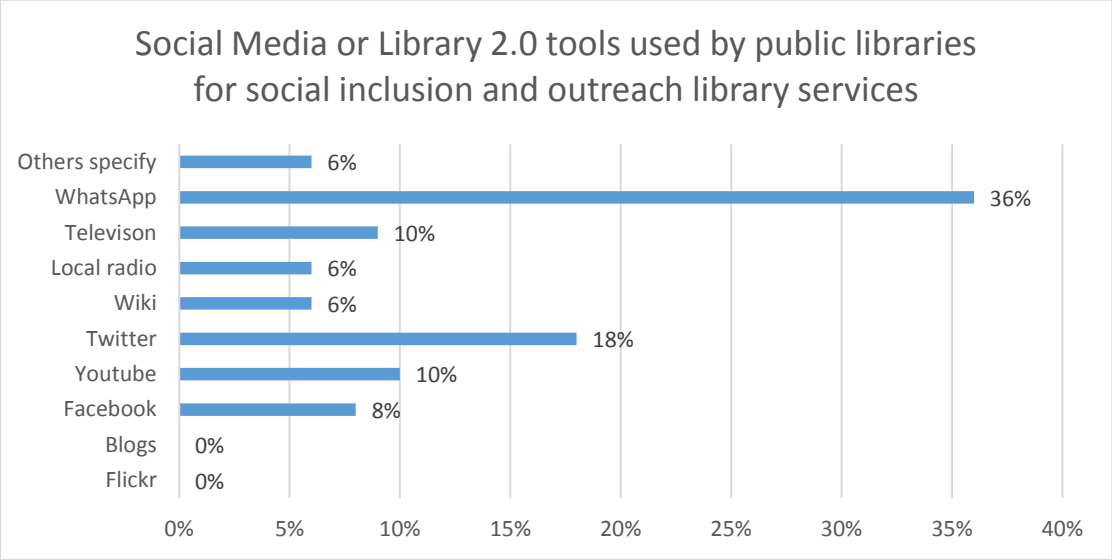


Figure 21: Social media or Library 2.0 tools used by public libraries for social inclusion and outreach library services

The quantitative survey findings, however, contradicted the qualitative finding with a few respondents who supported the use of the WhatsApp tool. Facebook rated at 8% by quantitative survey respondents and was supported strongly with the aid of desktop internet research. It became clear that only three public libraries did not use Facebook for library service dissemination, social inclusion and outreach to community users.

The contents disseminated are library training programmes which entailed mostly basic computer training programmes, community events hosted at the library such as readathons,

storytelling and writing, drawing and posters and quizzed. One public library even disseminated library services unique from the rest by focusing on all contents of the library collection, training programmes, events and information sessions hosted at the library. That particular public library did not use English only but both English and the local indigenous languages for the people to understand without further questions or clarifications.

> *We also use a WhatsApp group, we also do WhatsApp video that is on my computer, yeah Facebook but not up to date. Different management, directorate we have a WhatsApp group I can where I can also share library services and resources awareness. So as library workers we also have a WhatsApp group* (PL1).

In addition to the above social media or Library 2.0 tool, participants were asked if their respective libraries had a website. Figure 22 below indicated that 51% of the respondents did not know, 33% illustrated that they had a website and 16% indicated that they did not have a website. The study did not investigate further to find out why 33% of the respondents did not know whether their libraries had a website or not.

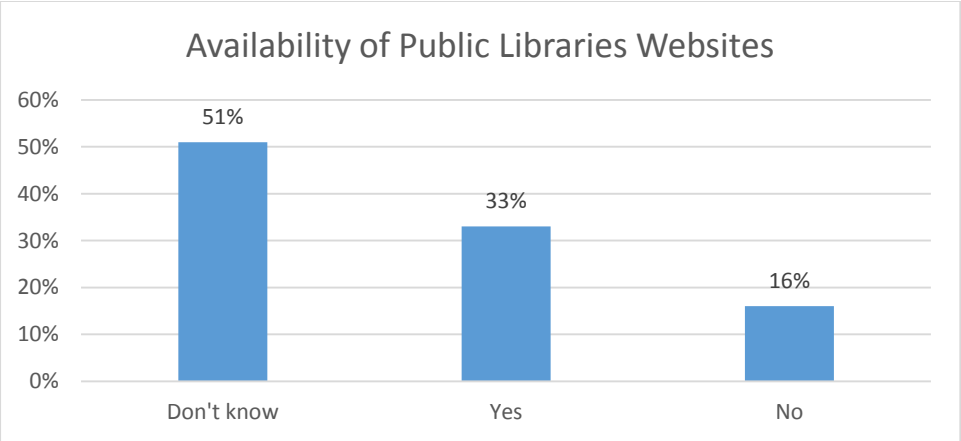


Figure 22: Availability of public libraries websites

Similarly, the interviews with librarians revealed that public libraries did not have websites or a website where services were to be disseminated to the target users. Below are quotations from the respondents:

I think as I was saying this movement of people specially those assigned to work with particular things like website, and even with Facebook is not as active as we would want to be (PL1).

Currently we do not have a website. We were working on the website for regional libraries with the ICT from NLAS at the national library in Windhoek. We have agreed to put up a website where she advised that we send content to her to upload in Windhoek. After she left National library nothing is happening. Currently are still looking for someone who can assist us at NLAS. We are working on it and hopefully before end of this year we will have one (PL5).

The fact that there are no websites for the public libraries prevented them from having access to collecting digital information of other institutions, locally or internationally. According to the interviewees, not having a website did not prevent them from providing access to global knowledge. In this regard, however, most public libraries provided access to global knowledge resources through Ebscohost and HINARI databases which are password-authenticated. Users accessed those databases in-house to be able to search and retrieve the needed online information.

mhuum, yeah. ICTs has brought about many developments to library. it has introduced us to online sources, where users are now able to access information obtained from EBSCOHOST as well as HINARI (PL2).

Yes, social network. I also believe people can learn positive from this Facebooks. I also share on Facebook, and I also learn from others on Facebook. For older people or users, those one when they come to the library many times they are coming to study. Those are the people who even come to me saying please teach me Ebscohost. Here when most people come is because they are seriously come to study. This other young people, they want to join, yeah, they want to, so in terms of using the facilities for educational purpose, they busy experimenting (PL1).

Furthermore, interviewees feel that having a computer in the library is an innovation, since it is something that is new to use and it contributes to people's knowledge. The opportunity for public libraries in the remote areas to provide training on basic computer literacy for free is a major innovation, which has never been seen before in the community.

> *The innovation brought by ICTs development I think is the opportunity for public libraries in the remote areas to provide training on basic computer literacy for free. I believe this is a major innovation which is never seen before in the community* (PL8).

> *Innovation, so it's like what ICTs can do to improve communication and dissemination for that then having a computer in the library. You know our library does not have computers for users but am using my computer or staff computer to help the community with typing their CV, presentations, community meeting speeches, business proposals and all their typing needs. is a lot of work and this is why am saying having a computer make life easy* (PL4).

Both the quantitative survey and qualitative interviews revealed that some public libraries have taken advantage of ICTs innovation to further extend their services to their user community in various ways, as identified in figures 21, 22 and 23, and in the quotations above. It is surprising that different public libraries view ICTs as an opportunity for advancement of development at community level. It is also remarkable that the respondents have not mentioned the internet among the different types of innovation, as the internet is found in most public libraries in countries like South Africa as part of ICTs innovation that transformed public libraries services (National Library of South Africa, 2014).

Different types of ICTs innovation introduced in South Africa's KwaZulu-Natal Provincial Library Service have identified free public internet access and ICTs training that is conducted by more than 60 unemployed youth who have been appointed and trained as cyber-cadets in libraries across the province. These cyber-cadets provide training and assistance to members of the community in accessing the library to use computers and the internet (National Library of South Africa, 2014).

Further to that finding, the study has found poor exploration of ICTs for innovation in social media or the Library 2.0 tool in public libraries whereby only a few libraries have automated their library collections to the integrated library management system (ILMS), although not the web-based system. The ILMS is an automated package of library services and resources that manages several functions of any library such as circulation, acquisitions, cataloguing, serials, interlibrary loans, reports, statistics and administration. The most used ILMS in public libraries is open sources, which include but are not limited to KOHA, NewGenLib, Libsys and Virtua (Madhusudhan and Singh, 2016).

In terms of poor automation of public libraries, the finding of this study is similar to that of Adeleke's (2017) study. The study found limited automation in public libraries in South-West Nigeria, though the majority of library patrons and librarians were skilful in the use of ICTs. According to Adeleke (2017), that was due to inadequate ICTs infrastructure and the absence of technical skills, negative attitudes towards automation, absence of senior management support, use of inappropriate library software and technophobia.

Lack of technical skills was also identified from the interviews with librarians as a contributing factor to poor automation in the public libraries to develop websites and automate to ILMS. Furthermore, Babu and Krishnamurthy (2013) postulated that many public libraries had adapted Koha as an ILMS and the Delhi public library was the first in India to put Koha 3.0 into production.

The subscriptions to electronic resources, specifically Ebscohost and Hinari, and basic computer training were among innovation efforts in public libraries. The study therefore agreed with Tripathi (2010) and Hedstrom and King (2006) who stated that international e-books and e-journals as well as open-access journal provision are major innovations that shape modern public libraries.

Although Namibia's public libraries do not have access to e-books yet, other public libraries have seized the opportunity of technological advancement to integrate both print and digital electronic databases in their collections through subscriptions and open-access electronic resources (Brooklyn Public Libraries, 2016; City of Cape Town Library 2016; Vaughan Public Library, 2016).

In America, the hybrid library of print and electronic public library services innovation benefit both library staff and users, as librarians are trained to use MedlinePlus, PubMed and Toxnet health databases. The purpose is to provide training to users so that they improve their health literacy skills and find health information that they can trust on the internet (Radick, 2015).

In terms of other social media or the Library 2.0 tool, the study finding corresponds with the findings of other researchers who found social media such as Twitter and Facebook to be explored in public libraries in promoting events and providing outreach services to communities (Abdullah et al. (2015); Smeaton and Davis, 2014).

Figure 23 below illustrates what the demand for the exploration of social media or the Library 2.0 tool are at public libraries.

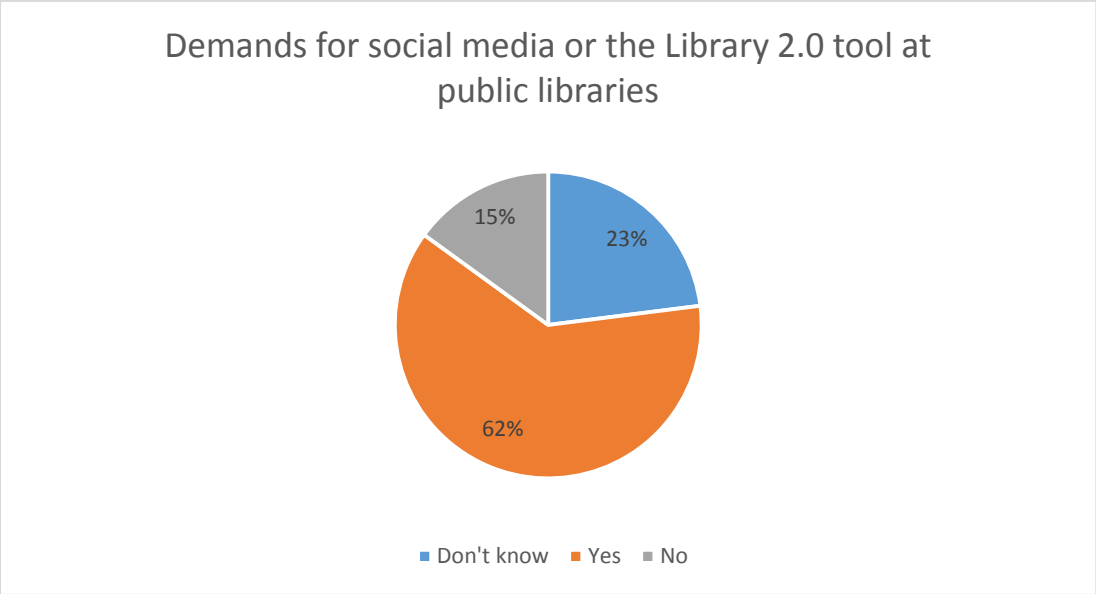


Figure 23: Demand for social media or the Library 2.0 tool at public libraries

According to figure 23, 62% of the respondents demanded public libraries to transform the library by introducing social media or the Library 2.0 tool. Twenty-three percent (23%) of the respondents indicated that they did not know how public libraries still did business, while only 15% of the respondents were comfortable with the way in which public libraries did business. Those in favour of the need for social media innovation at public libraries expressed the benefits of social media and the Library 2.0 tool through ICTs in the following quotations derived from the open-ended questions of the quantitative survey:

To get more information and received library services on time

Will be able to be linked with many different people of the same library community for knowledge sharing

It will help to stay updated with library new information and not to be behind

Many people in the community will have access to library knowledge resources as far as they are

It will enable me to communicate with library staff for continuous assistance

Will allows me to search the library catalogue on online before I go to the library

It will reduce the need to go to town, as thus reducing transport cost

Other people will know our library

The findings above strengthen the assumption made by Sawaya et al. (2011) that opportunities for accessing ICTs at public libraries enable users to gain technology skills, which then result in users improving their businesses, becoming better educated and accessing government services. These opportunities do not discriminate regarding rendering services and benefit all people in the community.

The knowledge-sharing opportunities stated in the above quotations are also evident in Serbia where the AgroLib online market enables farmers to share information about farming methods and marketing their products (Fairbairn and Lipeikaite, 2014). Further to education contributions made by public libraries, at New York City's three public libraries librarians provide technology training programmes to search for and find information online. An 81% increase in online activity in three years was recorded (American Library Association, 2016a).

Contrary to this study's finding is the innovation introduced in some public libraries in South Africa and America. In South Africa, public libraries are urged to innovate through outreach services that include dissemination of information to the community by using popular technology, notably cell phones (Sturges, 2010).

5.3.5.2 Public libraries' non-technological innovation benefit to user communities

Non-technological innovation, as per Schmidt and Rammer (2007), is innovation of development derived from services which are not of technological or technical nature.

This study has investigated the impact of knowledge and information resources accessed from public libraries in terms of new development and innovation on users. Figure 19 below illustrates the respondents' perceptions on innovation gained from accessing knowledge and information resources in public libraries. Figure 19 shows that 78% of the respondents have indicated that they have innovated as a result of skills acquired from accessing knowledge and information sources at public libraries, while 14% of the respondents have indicated accessing public libraries did not change their knowledge, and 8% do not know whether accessing library services have contributed to their welfare of social and economic development.

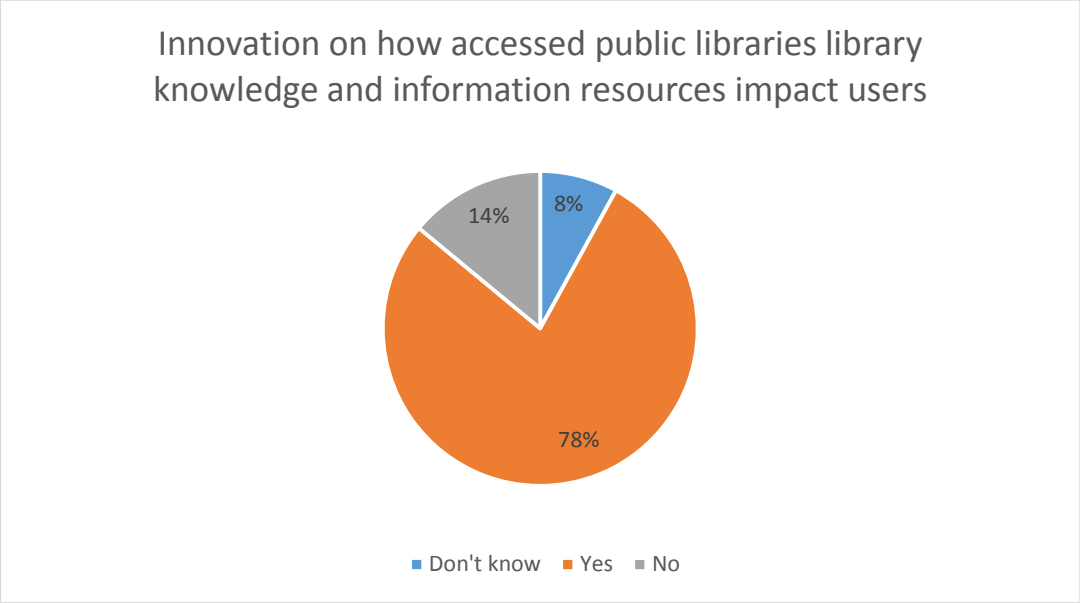


Figure 24: Innovation on how accessed public libraries' knowledge and information resources impact users

The 78% of respondents who have benefitted from accessing knowledge and information resources of public libraries specify that the acquired skills and knowledge have contributed to

their economic and social development. The majority have identified education and health, and some employment benefits, business and entrepreneurships, engineering and manufacturing, agriculture and farming benefits.

Following are respondents' quotations from each theme:

Health benefits innovation: - Major themes included identification and management of diseases such as tuberculosis (TB), human immunodeficiency virus (HIV) and cancer; hygiene and sanitation; wellness and exercise; circumcision.

I didn't know much about certain diseases, but the library provided me with information about unknown diseases to me and how to prevent them.
I suffered from TB, and searched information about it, the library staff directed me where I found relevant information that helped me.

Reading health books help me prevent myself from different types of diseases and how to treat them. Now I know how to different types of diseases and how they are cured.

I got pamphlets about health on how to take care of myself to live a healthy lifestyle and future generation.

I got information on cancer that I did not know.

I learned about chronic diseases from pamphlets in the library, now I take care of myself knowing the symptoms.

The leaflet on health help me aware and know more about diseases such as HIV and TB.

I have acquired knowledge and skills on hygiene, now I searched for information on sanitation and hygiene.

I got knowledge of how to keep my body clean and the importance of visiting clinic.

I got information on circumcisions.

I update myself with the latest news on how to maintain fitness that help me to become fit, doing exercise for good life style.

***Education benefits**:* - Major occurring themes include improvement in reading skills, studying, learning and teaching methodologies; discovering further study opportunities and scholarships; quiet spaces for studying and learning; materials and textbooks that are not found at schools; meeting place for discussion and engagement; place for research.

Reading different books develop my skills and knowledge on writing, spelling communication and reading and now my vocabulary has improved.

I found it easier to answer questions and am now successful in my school work without any barriers.

Using the library has improved my studying standard that I didn't have on a long time and I am seeing colourful symbols in my school report.

Visiting the library improved my reading skills and performance in my school work.

The library has improved my leaning and understanding and provided more information that are not available at my school.

The library provide access to university information.

I get assisted in furthering my studies and having more conducive environment to work from.

The library allows me to acquire different knowledge and use e-journals.

At the library I used study room and books that the school cannot provide to improve my learning.

My English language became proficient when I began using the library.

I used library study space because it's cool and free from noise and I passed well.

The library provides university brochure for different courses and I can decide on where to study further.

Reading and accessing more resources at the library expanded vocabulary of learners.

Library resources help me a lot with my research which I did not understand. The library helps me to search and find good information for my assignment and personal development.

I have now acquired research skills from using the library.

It helps me to do my research project that I passed well at the University of Namibia.

It helps me improve my teaching methodologies that contributed to new knowledge to teaching my learners that are now doing well in exams.

Employment benefits: - Major occurring themes were access to local newspapers with vacancies/job advertisements and books on employment and occupations; provision of government job application forms; provision of books with information on preparation for interviews.

I always apply for job with government employment forms provided by the library.

The library provides newspapers with job vacancies which we apply for.

I get more information from books on jobs and occupations.

I accessed interviews information from books in the library.

Library services enabled me to get a job, now I am working.

Business / Entrepreneurship benefits*:* - Business and entrepreneurship skills and knowledge acquired from library resources have contributed to business success that enable some users to start their own shebeen businesses, to become good entrepreneurs, to earn an income and improve customer care.

Library provide business information which made my business succeed.

Yes, it provides materials on business and entrepreneurships for running a business and information on SME.

I have learnt how to run a business and how to become a good entrepreneur.

I learnt how to overcome obstacles in business.

I learnt how to start my business and make income and making budget.

With the knowledge I have gained from reading from the library resources, I now know how to run a business and improve customer care.

The information provided from the library taught me how to start my own shebeen business.

Agriculture and farming benefits: - Growing different crops, farming, livestock, animal disease control, food production

I read information on how to grow different types of crops on the same land in different seasons.

The library provides booklets and brochures on agriculture that have improve my farming skills.

I gained knowledge on how to farm with livestock.

The information in the brochures I got from the library taught me how to farm chicken and vegetables.
Our library provides us with information that equipped us with knowledge on how to control pests and livestock diseases.

I gained knowledge on new methods of farming and food production skills.

The study findings showed how respondents or public libraries users benefitted from accessing knowledge and information resources from the public libraries in terms of health, education, employment, business, entrepreneurship, agriculture and farming. PricewaterhouseCoopers (2008) has stated that public libraries promote physical activities and create health awareness, which, in turn, improve wellbeing, as carried out in their study in Northern Ireland. Based on the study findings on non-technological innovation, as discussed above, the study has indeed confirmed this assumption. The finding is also in line with the information gathered during the interviews, namely that users do benefit from utilising knowledge and information resources in libraries. On their part, the librarians have indicated that having a library is in itself an innovation that exists to improve the economic and social development of the community it serves.

In providing access to the community, librarians have developed different ways of innovation. These include the distribution of old newspapers to nearby schools, the creation of a suggestion box for assessing the community's needs as well as platforms for indigenous knowledge-sharing of folklore by senior community members, the circulation of library promotional leaflets and pamphlets, guiding users on business proposals, designing curriculum vitae, the provision of university, scholarship and employment forms, guidance to the youth on the job market.

These benefits correspond with the quotations below:

> *Collaborate with business and entrepreneurship community such as Namibia Chambers of Commerce Industry (NCCI) to provide information session to community, the ministry of Health for health campaign, ministry of agriculture for livestock diseases outbreak awareness and information sharing and distribution of pamphlets to the community* (PL1).

> *You know having a library in the community like this, it's real an innovation. The library provide space for learning and studying, and we initiated the indigenous knowledge sharing of folklore from community senior members* (PL1).

> *In order to provide services meeting the needs of the community we created users' needs assessment forms and suggestion box that provide platforms for users to recommend improvement of services and resources needed in the library* (PL2).

> *As non-technological innovation for improvement of services to the community, we developed library promotional leaflet and pamphlet with all services that is circulated to the community* (PL3).

> *. . . provision of space for meeting and engagement and networking for the community for example the Orphan and Vulnerable children (OVC) group that meet in the library once in a month* (PL4).

> *. . . guiding and facilitating users to write business proposal, Curriculum Vitae, students applying for scholarships, provision of employment forms and guide with filling and guiding youth on job market* (PL4).

> *As a library, we do not throw away old newspapers, and we do not have an archive here. So we take them to nearby schools in the community to be used by learners in entrepreneurships lessons and English lesson* (PL7).

According to Garmer (2014) in her report, "Dialogue on Public Libraries" published by the Aspen Institute, knowledge economy requires individuals to acquire a range of skills and to continuously adapt those skills to changing circumstances. This study has demonstrated how respondents have innovated the non-technological environment or benefitted from accessing knowledge and information resources in public libraries.

This study finding confirms what Barron et al. (2005) and Nassimbeni and Tandwa (2008) have postulated. They found that public libraries in Africa contribute to lifelong learning, which supported educational innovation in terms of non-technological innovation. According to them, public libraries also provide business information to businessmen, which has contributed to their successful entrepreneurship.

At international level, the study finding is also in line with that of Vakkari et al. (2014) conducted in Finland, Norway and the Netherlands where public libraries users have benefitted from self-education regarding reading, work, business and everyday activities where health is also included.

In terms on contribution to agricultural and farming, the finding is in line with Elbert, Fuegi and Lipeikaite's (2012) study in six different countries in Africa (Kenya, Ghana, Ethiopia, Tanzania, Uganda and Zimbabwe) that public libraries in rural remote areas, in collaboration with local agricultural agencies and government ministries, have improved the flow of information and knowledge-sharing among the communities' information needs regarding farming on crucial topics like plant pests and animal diseases.

The study conducted by Elbert, Fuegi and Lipeikaite (2012) differed in that their study discovered more innovation benefit services regarding agriculture compared to the finding of this study. Their study included the dissemination of information and knowledge-sharing to accommodate the community's information needs regarding weather patterns, environmental sustainability, farming practices, consumer needs and market prices (Elbert, Fuegi and Lipeikaite, 2012).

In respect of health-related non-technological innovation benefits to the community, as presented in the finding above, Radick (2015) stated that public library users in America had

indicated that health literacy programmes, which they had attended at a public library, enabled them to find good information on medical issues that affected them. The information included hypertension, diabetes, heart disease, breast cancer, prostate cancer, strokes, mental illness, amputations, kidney disease, teen pregnancy, sexually transmitted diseases, diet and exercise (Radick, 2015). This study finding did not identify all the benefits of managing chronic diseases and other means of living a healthy lifestyle like Radick (2015) did. This study finding established that accessing health knowledge and information resources at public libraries did in fact contribute to living a good, healthy lifestyle.

In contrast, an interesting best practice was reported by the American Library Association (2016a) that public libraries in America had contributed to the personal wellbeing and finances of their users whereby libraries provided resources and training on personal finances and made access to information about healthcare and insurance possible. Two-thirds of public libraries in America helped people identify health insurance resources.

In line with this study finding is a practice applied by the public library in the Wilkes county in North Carolina. It has organised a six-week workshop for community members, focusing on chronic disease self-management in partnership with the local health department (American Library Association, 2016a). The same library has a circulation service, which includes circulating microscopes, science kits, educational board games, software, curriculum materials and catalogues (American Library Association, 2016a). Based on one of the findings of this study, circulation at the Ohangwena and Omusati public libraries is done in the form of books or other printed resources, videos, e-readers and newspapers.

In respect of creating employment as a non-technological innovation strategy, this study finding supports the view held by Garmer (2014) that public libraries can help to accelerate workforce development and learning opportunities by providing a connection between industry and education. Therefore, a public library is in a good position to connect community members to the training and career development resources that local employers need through partnering "with local businesses, chambers of commerce and community colleges to provide access to curricula and resources, … to maintain a highly skilled yet highly flexible workforce" (Garmer, 2014: 50).

> The Department of Small Business Services in New York City has "established one of its Workforce 1 career centers at the Brooklyn Central Library [that] prepares and connects city residents to job opportunities in the city, with emphasis on both job skills needed by local employers and soft skills such as interviewing" (Garmer, 2014: 28).

Similarly, the library professionals at the Gail Borden Public Library District in Illinois provide resources to its users to improve their job skills, obtain certification, prepare for vocational tests and explore new careers. The library has also co-sponsored the Manufacture Your Future event with the Elgin Chamber of Commerce in which local manufacturers networked and answered questions related to products and careers in manufacturing (American Library Association, 2016a).

In addition to the non-innovation services derived from accessing knowledge and information resources and services of public libraries another non-technological innovation to note which is also supported by this study's finding is one that is taking place in some South African public libraries. It involves the development of four mobile library trucks and trolley services that have been established in 20 rural areas in KwaZulu-Natal. These vehicles have been purchased for the public libraries to increase access to services, including the establishment of a new regional library depot (Library and Information Association of South Africa [LIASA], 2015).

In Mpumalanga, the provincial library services have procured three mobile buses, while four container libraries have also been established to increase access to library services for the knowledge economy of South Africa (Library and Information Association of South Africa [LIASA], 2015).

The presented innovation systems either technologically or non-technological excavated the position of Namibia public libraries towards a knowledge economy. Although that has already addressed throughout this chapter in the above sections, the overall question of rating the contribution of public library services to Namibia's knowledge economy has been presented individually to respondents in the next section.

5.4 Rating the contribution of the overall public library services to the knowledge economy of Namibia

The figure below illustrates the current contribution of the overall public library services to Namibia's knowledge economy as rated by the respondents from the Ohangwena and Oshana regions. As indicated, 41% of the respondents have mentioned that the current services are good, 24% of the respondents have said the services are fairly good, which means the public library contributes to a knowledge economy at a pace which is not bad but also not good. Fifteen percent (15%) of the respondents have said the services are very good, probably because the respondents come from libraries with good infrastructure such as the Ohangwena regional libraries. Eleven percent (11%) of the respondents have said the services are poor and 9% said they are very poor, which gives a combined rating of 20%.

This result clearly shows that public libraries in the Ohangwena and Omusati regions contribute to a knowledge economy. Using the findings of this study as justification for this rating, based on the tested research questions of the study as discussed in this chapter, the 41% in support of a good rating of public library services is significant in that the investigated themes of the four pillars of the knowledge economy framework are also the research questions of this study. The findings have shown slight positive results as demonstrated in the four pillars of the knowledge economy (see figure 25 below).

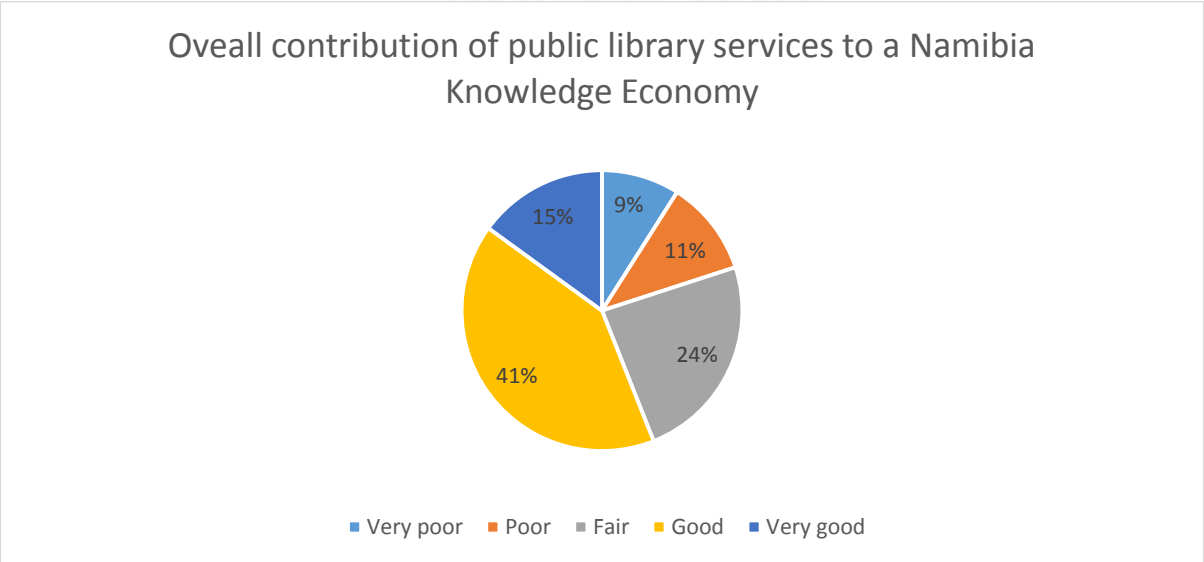


Figure 25: Overall contribution of public library services to a Namibia knowledge economy

The results of the good rating of the overall contribution of public library services to the knowledge economy of Namibia, as illustrated in figure 25 above, reveal that, despite the challenges which public libraries face in contributing to the knowledge economy of Namibia, they impact the lives of the targeted communities in contributing to a knowledge economy. This is done through the application of knowledge in education, entrepreneurship, health, employment and career growth, agriculture and farming. These are the elements, which have been identified as the key sources of growth of the global economy (World Bank, 2007).

The discussion in section 5.3.2 of this chapter focuses on the provision of legislation and policy frameworks on access to knowledge and information and how relevant they are in contributing to a knowledge economy. The study has agreed with the American Library Association (2016b) which lobbies for the need to increase policy action for economic opportunities such as a knowledge economy which should involve participation from the National Library Association (American Library Association, 2016b).

Further to this finding, the contribution of public libraries to a knowledge economy has also been found by studies from different countries. In South Africa, public libraries are involved in the provision of public internet access, access to health information and support for transparency through a programme of workshops for librarians. They are responsible to promote community-wide information literacy to enable the intelligent and effective use of digital and print resources (Sturges, 2010).

The positive overall rating of the current contribution of public libraries to a knowledge economy by the respondents is elusive if compared to performance based on the four pillars of the knowledge economy, as investigated in this study. However, the finding is unquestionable, as it covers the weight of the respondents' objectives views. Despite the challenges mentioned in section 5.5 below those challenges do not completely hinder public libraries from contributing to the knowledge economy of Namibia.

Accessing the library for the first time could be the reason for the significance of the innovation and the community's satisfaction with the service, since some librarians have indicated that merely having a library in a rural remote community is in itself a major innovation. It means that the opportunity to access knowledge and information at a library is a possibility now. The

same applies to people who are given access to information through the mobile libraries as mentioned above. Qualified public libraries contribute to a knowledge economy based on their role as catalysts for human progress because they help in the development and transmission of knowledge and culture; they also foster civic awareness in support of economic productivity and innovation in society (Kargbo, 2011).

Not disputing the study's finding, revisiting the four pillars of the World Bank Knowledge Economy Framework of how each pillar had been achieved by public libraries in creating a knowledge economy, this study found that the first pillar of the knowledge economy framework adopted by this study promoted access to knowledge and information for economic growth in respect to economic and institutional regime. This pillar postulated that countries transforming into a knowledge economy should make provision for good economic policy legislative frameworks promoting access to information knowledge for economic growth. In this regard, this study shows that Namibia has good policy and legislative frameworks, which promote access to knowledge and information. In addition to the local and national policies and legislative frameworks discussed in this chapter, public libraries have also adopted international policies and legislative frameworks aiming to keep abreast of international trends.

The Namibian policies and legislative frameworks did, however, not cover all major aspects of or standards set for a knowledge economy as promulgated by the knowledge economy framework theories. The study showed that the Library and Archives Service Act, Act No. 4 of 2000, had never been amended to include current developments and in the library and information services industry for the 21st century.

Its content did not consider the future trends though it had been supplemented by the IFLA/UNESCO (2001) Public Library Manifesto, which argued that a public library should provide information and knowledge resources and services in a variety of media to meet the needs of individuals and groups for education, information and personal development, including recreation and leisure (IFLA/UNESCO, 2001). However, the policies and legislative frameworks did not stipulate as to how the different types of knowledge and information were to be acquired by the public library for providing access to the public.

The excluded knowledge and information include collecting and preserving the different kinds of Namibian indigenous knowledge, as well as e-government information. The study found that there were no clear guidelines on making those types of knowledge available to the

communities who are to benefit from it. Sections 5.3.5.1 and 5.3.2.2 clearly demonstrated how respondents benefit from accessing knowledge and information regarding matters on health, education, employment, business and entrepreneurship, as well as agriculture and farming accessed from public libraries for economic and social growth.

In section 5.3.2.2, most respondents clearly indicate they have benefitted from the leaflets and pamphlets at public libraries made available by different government ministries. According to this finding, not all public libraries have received government-related information. Therefore, some public libraries refer their users to government websites for the information with which they are not familiar. Consequently, the finding confirms what Kargbo (2011) has found in his study. He found that many economic programmes have been implemented by government but a vast amount of information is unused, either because national decision-makers do not realise its importance or because people who might want it do not know how to access it (Kargbo, 2011: 62).

Aspects responsible for policy and legislative frameworks failing are issues of unqualified librarians, library space and poor internet connection. The Library and Archives Service Act, Act No. 4 of 2000, promulgated the establishment of public libraries in regional constituencies. Out of the eight (8) public libraries, four (4) are located in the Ohangwena and Omusati regions. Only three of these have ample space that is conducive to housing library users. The regional library in the Ohangwena region is a very modern building constructed by MCA, while as Omungwelume, and Okalongo public libraries has no computer laboratory although the space is big enough for partitioning them into small laboratory for presenting training and workshops.

The Tsandi public library is operating from within the Teacher Resources Centre (TRC), which is equipped with facilities for teachers, including a large computer laboratory, which is shared with library users. The library space is very small and disorganised. There is, however, opportunity for refurbishing the library through purchasing new shelves and reorganising to easily find books, magazines and newspapers, while using the small space for reading and researching. The TRC computer laboratory may be utilised for accessing electronic knowledge and information resources and gaining internet access.

Both the Eenhana and Okahao public libraries are very small and congested with no space for creating a computer laboratory, neither for collection growth or extension. The reading and research space is also very small.

The Okongo public library is the tiniest of all, situated in a room smaller than a classroom, in a children's care centre. The library is very neat and well-organised, but has no office. The librarian sits among the users. Fortunately, she has a computer; however, it is the only computer in the library. Although it has internet connection, it is down most of the time due to the area's poor infrastructure development.

The Outapi regional public library for Omusati region is also very small, but it is about to move into a large, newly constructed library building.

In respect of providing equitable access to knowledge and information resources, and integrating the use of ICTs in libraries, the ETSIP policy discussed in this chapter (see section 5.3.2.1 (b)) has made provision for the need for stocking libraries with information and knowledge resources and providing good ICTs (Namibia. Ministry of Basic Education, Sport and Culture, 2005). The ICTs for the education policy (Republic of Namibia, 2005) and the policy for e-government, namely the Strategic Action Plan for the Public Service of Namibia 2014-2018 (Office of the Prime Minister, 2014) will also contribute to developing a knowledge economy in Namibia.

The aforementioned policies stipulate that access to publicly funded knowledge and information facilities is made available to the community, and individuals should gain access to ICTs and information resources (Ministry of Basic Education, Sport and Culture, 2005; Office of the Prime Minister, 2014; Republic of Namibia, 2005).

However, the study found discrepancies regarding the well-articulated policies mentioned above. The study found that seven (7) public libraries, except the Okongo public library which has only one (1) computer for the staff, boasted computers and internet connection for their users. The internet connection at the eight (8) libraries is very poor, which is evident in this study finding, as reported by the respondents.

The researcher spent three days at the Okalongo library and during this time it was not possible to connect to the internet. The same happened at the Omungwelume, Okahao, Tsandi, Eenhana and Outapi libraries.

In this regard, the study shows that the provision of ICTs services is one thing and having efficient ICTs services is another. This finding shows that public libraries in a remote rural location, are denied access to knowledge and opportunities to generate and disseminate new knowledge. Accessing the internet is regarded as a human right for citizens to stay informed and utilise relevant information and online services needed in the 21st century (Beyond Access, 2012).

The study finding, is in support of Spacey, Cooke, Muir, and Creaser, (2014), that stressed that internet access in public libraries provides a means for those without access at home or at work to access commercial and governmental services in addition to health, education, business and entrepreneurship, agriculture and farming, employment, time saving, as well as income and financial knowledge resources.

This study uncovered the fact that the investigated libraries were understocked with local books. This is a challenge, as the library is the only place where those books are available. Elbert, Fuegi and Lipeikaite (2012) also found that African public libraries are under-resourced, lacking updated resources and not equipped with properly functioning technology, if any.

Another challenge arising from this study, which came as a result of the weaknesses in policy and legislative frameworks, is the lack of the necessary skills users have to use the library effectively. However, the study reported that users were satisfies with public library services to create a knowledge economy despite their lack of the necessary skills for using the library to satisfy their economic and social needs. Amoah (2014) and the World Bank (2007) stated that people's basic education is necessary, but not adequate, to have the capacity to acquire, create, disseminate and use knowledge effectively in improving social and economic growth. As such, people should have different forms of literacy skills to effectively participate in the knowledge economy.

In terms of shortages in qualified library staff, the same situation is present in the Eastern Cape, one of the rural provinces in South Africa, where a number of libraries have been closed due to staff shortages or the complete lack of staff. The Eastern Cape Provincial Library Services changed the card to focus on appointing qualified staff. The transformation has improved the situation whereby half of the previously closed libraries received fully qualified librarians and they are back to rendering quality library services to the communities (Library and Information Association of South Africa [LIASA], 2015).

Despite these challenges the majority of the respondents in this study assured the researcher and believed that public libraries contributed to community development, as well as to a knowledge economy. This was also evident in the way in which they had expressed innovations derived from accessing public libraries. Knowing that the rural remote communities are appreciative of public libraries services, even with their lack of proper infrastructure for quality service delivery, they need to be supported in provision of proper and well-equipped libraries in order for them to fully test the benefits of access to knowledge and information for social and economic development.

The government therefore holds the key to transforming infrastructure through developing strong policies and amending legislative frameworks to focus investing in public libraries for community development. This is done by allocating adequate and ongoing budgets for staff development and relevant library knowledge information, the development of ICTs infrastructure and building new spacious libraries for the community to fully be part of a knowledge economy. This will then justify the assumption made by Azubuike (2007) that the enforcement of access to information and knowledge is more successful in countries with strong policy legislative frameworks in place.

However, in Namibia, legislative policies are enforced only in elite areas while in disadvantaged, rural and remote communities, according to this study's finding, public library infrastructural services are poorly implemented. If comparing these services with those of public libraries in urban areas, they differ substantially as demonstrated in this study.

Reaching the level of public libraries in developed countries such as Europe and America, Namibia still has a long way to go, as libraries here are enormously far behind in their

development. Some public libraries in the United Kingdom do not have to be visited physically by elite communities, since they are able to access such services from anywhere at their own convenience.

5.5 Challenges hindering public libraries to effectively contribute to Namibia's knowledge economy

In an effort to contribute to Namibia's knowledge economy in creating, disseminating and using knowledge to enhance economic growth, this study has established that there are many challenges hindering proper transition although public libraries are contributing to the knowledge economy of Namibia. These challenges emanate from interviews with librarians in which they indicated that they are willing to fully transform their libraries into the standard of public libraries in developed countries. However, with the limiting factors they face daily the services will continue moving but at a slow pace. The challenges identified are:

- Insufficient budgets and lack of funding for library infrastructural development
- Shortage of qualified librarians
- Inadequate ICTs infrastructural facilities
- Inadequate information and knowledge resources
- Lack of library user skills for conducting research and using the library
- Lack of collaboration with other institutions in enhancing library services
- Limited space
- Language barriers
- Community ignorance
- Difficulty in maintaining the MCA regional library
- Difficulty in maintaining MCA mobile library truck
- Slow internet connections

The above challenges are validated by the following quotations as per the interviewees:

> *My understanding there is no other financial assistance or whatever, nothing to my knowledge and I also think, or that when they finished their term of operation also come to an end. I wish they have finished and give enough time to see it working and evaluating how things are done. When we came in, quiet a number of things where not working as they ought to. Even this*

library there are some licking somewhere. I think there are some rules or whatever if after two years sometimes is difficult to go back to the constructors and say the building has a problem and also some equipment's just stopped functioning and again it was not an individual contract between them and the ministry of education, it was a contract between them and MCA. Now when you go there you go as who, what was the contract. I would say those are some of the challenges, for example right now we have this building and the way this building is contracted there is a solar panel, power, generator, three should be connected and synchronize. So that if the electricity is gone, the generator should just automatically take over. But now it's there but is not connected. So when electricity is gone is gone. So what is it that I think there was a rush at the last minutes, now we are saying who should connect that one, this one is saying our part was to make sure that you get the panel, generator was not our part. You go to ministry of work, ministry of work says ooooh, that kind of generator, we were not part of it, and also the way it is designed we do not know how to connect it. Soo, yeh, those are part of the challenges are facing and will still face. We acknowledge MCA it has done its part and if there is promise of any continuous funding for maintaining this building, I know nothing about them yet. I think at the last minute; people were trying to meet the target. So some of the things where left out (PL1).

Even we have a video conferencing, I think that video conferencing is not working and it has not been working. I never seen it working. mhuum, yeah, is not because things are not happening, but yeh, one is the issue of staff, a staff member who was responsible for the left. This is why I was saying we actual received our senior IT today and aaaa the second reason, the internet is not as fast as we would think or as we ought it to be. This was supposed to be the fastest internet. Actual if you to go to any internet café, you will see how internet there is. If you have a Yahoo email address, you will not get in or read you email or search it, only google with Gmail is working. I was also talking to management that if telecom can help us to see where is the problem. I think is a fiber thing and it should be perfect. Now that we have an IT person, I will make sure she attends to those issues. Only google is

working well, with others unless you want them to keep loading the whole day. I have notice that this youngster sometimes they watch too many game on the computers and that might contribute to traffic. Apart from that I just think there is a need for telecom to look at our internet (PL1).

yeaah, I would just say, the absent of qualified personnel's is the worrisome. I know is not only a case of Ohangwena alone. Ohangwena it becomes worse in the sense that this is a semi urban rural whatever. The facilities are not the best in terms of staff looking for a house. The place is so hot that someone who is coming from Windhoek will not bear staying here. They want to go back. The accommodation issues are a problem. So I have challenges with staffing. As I told you we ended up recruiting people outside librarianship field. Some of the people staff members have done HRM. Yeah, assistant librarians have done HRM, but they could not find a job in their own field of study. So they ended up applying to work as librarians because they are no people with librarian qualifications. So what does that mean? It means this colleague has no clue about library science at all. It also means this is a marriage of convenience. What will happen when they find job in their field. They are always looking in papers for a job. Is like you are marriage; a wife has a Katungu pack somewhere there. So when you are gone to work you find a Katuntu was there, always there when you are away. So are we here to be marriage or are we here to divorce. So even with me here, I look at these colleagues that I know they are here to go. So I am just busy always advertising. When will I start to work and enjoy my work. You are always advertising, advertising. Right now, I have posts for librarians, I can't find librarians (PL1).

Lack of space, inadequate number of computers, Language barrier, slow internet connectivity and lack of computerized library system (PL2).

aahm, yeah, the challenges like I have mentioned is internet, you know if something come up unpredictable. There is nothing we cannot. One photocopy that we have also especial when learners come from school and they want to make copies of school work. It became cumbersome with them

queuing up waiting to make copies. Another major challenge is the geographical location of the library, a challenges that that is so difficult when it comes to giving directions of where to find us. Since we are situated at the back deep in the location, very far from the main known infrastructure like the hospital, school and police. The place is wonderful, nicely big and among the community this side but, is only difficult coming from the main road (PL3).

Library infrastructure discourage users to visit the library, those include the internet which we do not have for users and photocopier are limiting users to become new members as member would have copy of an identification Document (ID), which they are supposed to get from the library (PL4).

The challenges that are real limiting us to deliver quality library services to our user's community are insufficient Budget, shortage of qualified staff, and the library space is very limited for both human and physical resources, as we also want to host community information sessions. Mhuu, yeah, the newly constructed regional library, very big as you have seen is about to be completed, but that will still require funding and budgeting enough for the required resources and services (PL5).

Lack of funds to carry outreach activities such as School Visits and far remote areas, Space is too small, Lack of shelves, Educational videos on subject related e.g. Maths etc., Lab is too small (there is a big demand for computer training and services), Uninterruptible Power Supply (UPS) need batteries to be replaced (PL6).

Other libraries do collaborate but with our library we are still busy with user education because we have people who still think they can buy books from the library (PL8).

Despite this study's finding revealing that public libraries do contribute to the knowledge economy of Namibia, it has pointed out different challenges or limiting factors toward full

transformation into a knowledge economy, as asserted in the World Bank Knowledge Economy Framework (World Bank, 2007).

Similar challenges have been revealed by Ignatow et al. (2012) that are most common in public libraries located in poor townships. These libraries are found to be poorly stocked with current relevant information and knowledge resources. This study focuses on public libraries that are located in remote area of Namibia. Thus, public libraries in poor townships and remote areas like those visited for this study are mostly meant to serve educational purposes. The leading benefit of public libraries in these areas is indeed education, as per discussion throughout the study.

In terms of ICTs, library human resources, funding and budgeting challenges arising from this study, the study confirms what has been said by Uutoni, Yule, and Nengomasha (2011). They claim that people are willing to use public libraries but lack the skills to use the available technology. In addition, there are shortages of skilled library professionals in some libraries, along with lack of financial resources for effective deployment of ICTs in public libraries (Uutoni, Yule and Nengomasha, 2011).

Azubuike (2007) states that the enforcement of access to information and knowledge is more successful in countries with strong policy and legislative frameworks in place. With reference to this chapter, section 5.3.2 and in contrast to Azubuike's view, this study has found that Namibia has strong legislative and policy frameworks in place. Yet, these are poorly implemented, and so, access to knowledge and information resources and services for the knowledge economy is an enormous challenge.

The identified challenges are not only visible in Namibia, but also in South Africa and elsewhere. Mamafha et al. (2016) have found that public libraries are faced with various barriers, which include poor ICTs facilities, an insufficient number of ICTs facilities, access time limits and restrictive library policies that affect the optimal utilisation of ICTs applications, together with a lack of ICTs knowledge and skills that demoralises users to utilise the facilities. In Nigeria, Nwabueze and Ibeh (2013) have established that Nigerian public librarians possess the skills to integrate ICTs to a large extent, but similar to this study's finding, they have poor funding, a poor training culture and general inadequacy in relevant infrastructure.

In Australian public libraries, the development of digital technologies poses challenges that have yet to be fully explored. While the library sector believes that digital technologies bring change to all aspects of library operations, it is not enough to focus on the technologies alone, as understanding of the nature of the environment in which they operate is changing, especially the ways in which both the ecology and economy of information are evolving (Waller and McShame, 2008).

Lack of funding and cutting library budgets are other challenges the Namibian rural libraries face. This scenario is also a challenge in Zimbabwean public libraries as a result of the devaluation of the Zimbabwean dollar against all other global currencies between 2007 and 2008. This seriously affected public libraries' collection development and it then forced libraries to rely on Book Aid International and other book donations. The introduction of library subscription fees for users for service sustenance also drove away patrons, as they could not afford it (Chisita, 2011).

In respect of the language barrier challenge, this study finding is similar to that of Gould and Gomez's (2010) study in which they have established that in Ugandan public libraries, underserved library communities do have the ability to access information, but the information is not useful to them, since it is usually written in a foreign language like English; consequently, the information is not relevant to the particular communities in which the libraries are located. Therefore, public libraries suffer from a lack of books and they are mostly overloaded with irrelevant content that does not meet the needs of the particular communities.

While public libraries in Africa are faced with the challenges identified at the beginning of this section, public libraries in the UK also face challenges, including the implications of historic under-investment in capital assets and service modernisation, fewer users and a general decline in book-borrowing. These challenges result from the rapid growth of the UK's internet economy, which consequently, has led to the significant take-up of e-readers and e-books. It has also played a part in luring more wealthy communities away from libraries in recent years (Naylor, 2014).

5.6 Proposed improvement for the enhancement of public libraries services for a knowledge economy

After the study has successfully attended to all the research questions highlighted below, as well as the challenges faced by the respondents of both the quantitative survey and the qualitative interviews, together with a literature review, the study has investigated the proposed factors for improving public library services so as to contribute fully to a knowledge economy. The following questions had to be answered by means of the present study:

- How do Namibia's legislative frameworks, national development plans and policies reflect access to knowledge and information, as provided by information services such as libraries and their implementation?
- What public library information, knowledge, ICTs infrastructural resources and services are available for effective facilitation of the communication, dissemination and processing of knowledge, and how are they accessible for the knowledge economy?
- How do public library services contribute to education and training of both users and librarians to ensure that they have the competencies and skills for the knowledge economy?
- What public library innovation systems are in place to deliver quality library services to users and enable them to tap into the growing stock of global knowledge, and to assimilate and adapt it to local needs for economic and social development as innovation?

The themes which appeared most often in connection with the proposed improvement of public library services for a knowledge economy, as they emerged from the open-ended questions in the quantitative survey are:

- Increase the number of public library staff
- Extend of public library space
- Provide more local books
- Provide more training sessions for library staff on ICTs and other skills
- Provide transport to the library
- Offer more mobile library services to deeper remote areas
- Provide access to people with disabilities
- Open the public library on Saturdays

- Improve customer care
- Provide instructions on leaflets for the use of the library and computers
- Provide online services
- Provide the library with computers and internet connection
- Increase the number of computers in public libraries
- Improve internet connection at the library
- Provide services for fax, laminator, photocopiers, and more chairs
- Provide air-conditioners in the libraries

Detailed responses to some of the abovementioned aspects are the following:

- Improvement in public library number of staff members

  Increase number of staff during examination

  Increase number of assisting staff in the library

  Provide more librarians to assist in the library

  Increase number of trained staff

  Bring in more librarians with library knowledge and skills

  Hire more librarians to assist us

  More library trainers are needed in the library

- Extend the public library space

  Extend the library to accommodate more people, its currently very small

  Library space need to be enlarge

  Renovate and make the building big to accommodate more people

  Build a new library with enough space

  Needs a bigger library for people and books

  Expand the library and create more space for different sections for different services

  Library must be extended to enable space for different segments e.g. computer, people, and books

  Build more library in the regions and communities because this one is very far and its costly

  The library need to be extended because the space is too small and more people use the library

- Provide more information and knowledge resources in the library

  We need more books to read from all subjects' disciplines

  Library should provide books in all local Namibia languages

  Provide more schools books and textbooks

  Improve access to Newspapers, and to be kept up to date

  The library books are too outdated, it should provide more relevant and up-to-date books

- Provide online library services

  The library need a website for online services to access it from our home places

  We need to have eBooks

- Provide more training sessions for library staff on ICTs and other skills

  We need more training on knowing on how to access library resources

  Librarians should be training us on how to search and find books in the library

  We need to use the internet to search assist with assignments but we don't know, more training is needed

  Provide instruction on leaflets on usage of library and computers then put them on display for people to take and follow

  Provide ICTs training

  Provide educational training on computer usage

  Create more literacy classes like adult literacy

  Adults need to be train on how to use the computers to improve their skills and access to information

  Start offering computer literacy training

  Librarians should provide more training so that we know how to use internet

  Staff should improve their ICTs skills so that they give proper training to users

  Staff should be trained on ICTs

  Library staff need to be provided with on the job training

- Provide transport to the library

  Provide transport for library users to and from the library

Library should have a car for transporting people from far

The library is far and transport is always a problem for us

We want to read in the library but want transport to take us home

The library should have transport to get people from the villages

Our village is far from the library; I need transport to use the library

- Offer more mobile library services to deeper remote areas

  Library need to reach to the rural community by providing mobile library

  Mobile library to teach farmers the methods of farming

  The library must take the services to schools in villages for the people to have an understanding of what the library is all about

  To be taken to the community in order to cut out the distance for many

  Mobile library to the community to do awareness of library services and tell people to start searching for information to know more about the library and to be confident about using it

  Library to do more promotion on the use of library with mobile library

  Library must attend church services on Sunday and have meeting in the village to tell people about access to information at the library

- Open the public library on Saturdays

  The library should open on Saturday

  Let the library open on Saturday

  Increase library opening time

  Library should open during weekend

  It's a public library, it should open on Saturday

- Improve computer and internet connection at the library

  Increase internet connection so we have good one

  We need high speed internet

  Improve the quality of internet access

  Provide good internet service

  We need excellent internet services

  Give us good internet services, the current one is very poor

Provide the library with the internet

The library must buy more computers because they are only 12

Increase numbers of computers

We need many computers for more people

Need to equip the library with more computers for users

- Improve customer care

  Improve staff behaviour that is very poor

  Library staff must be friendly

  Staff need to be trained on customer care services

  Library staff behaviour must change

  Staff members need to improve on how to give customer services to library users

- Improve library facility and equipment

  Provide air conditioners in the library

  Increase computer time limits

  Provide services for fax, laminator, photocopiers, and more chairs

5.7 Chapter summary

This chapter discussed the findings and interpretation of the research study based on the research questions applied in the form of the four pillars of the World Bank Knowledge Economy Frameworks. Each pillar of the framework is interpreted as to how it is significant to the public libraries towards achieving a knowledge economy.

The next chapter deals with the conclusions and recommendations of this study.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

The previous chapter presented the findings and interpretations derived from the mixed method of quantitative and qualitative data collected and analysed through survey questionnaires, semi-structured interviews, as well as a policy and legislative framework content analysis aided by the literature review.

This chapter provides the conclusion to the study by revisiting the primary purpose of the research study and addressing the extent to which the research questions have been answered. It further discusses pertinent matters of interest discovered from literature in relation to the new insights that have emerged from these research findings. In addition, the chapter discusses the uniqueness of the study and its contribution to the body of knowledge management in the library and information services (LIS) profession and the impact on the practice. Furthermore, it highlights the study's limitations and provides some critical reflection on the study research design processes and how they could have been done differently. Last but not least, the chapter provides direction relating to future research in the area of a knowledge economy in LIS.

As discussed throughout the study, its primary purpose was to investigate the roles of public library services towards a knowledge economy for Namibia. This was achieved through addressing the four main research questions that were aligned with the study World Bank Knowledge Economy Framework of four (4) pillars. The research questions concerning these pillars are:

1) How do Namibia's legislative frameworks, national development plans and policies reflect access to knowledge and information, as provided by information services such as public libraries and their implementation (an economic and institutional regime, policy and legislative framework)? Pillar 1

2) What public library information and knowledge, and ICTs infrastructural resources and services are available for the effective facilitation of the communication, dissemination and processing of knowledge, and how are they accessible for the knowledge economy (information knowledge and ICTs infrastructure)? Pillar 2

3) How do public library services contribute to education and training of both users and librarians to ensure that they have the competencies and skills for the knowledge economy (education and training)? Pillar 3

4) What public library innovation systems are in place to deliver quality library services to users and enable them to tap into the growing stock of global knowledge, and to assimilate and adapt it to local needs for economic and social development (innovation system)? Pillar 4

Subsequently, the above study research questions were answered in chapter five (5) and are each presented in the next section (s) below with brief summary discussion of conclusion drawn from the finding, on the extent to which they were successfully answered.

6.2 Pillar 1: Reflection of Access to knowledge and information in Namibia policies and legislative framework

To what extent do Namibia's legislative frameworks, national development plans and policies reflect access to knowledge and information, as provided by information services such as libraries, and their implementation (an economic and institutional regime, policy and legislative framework)?

In answering this research question, the conclusion drawn from the content analysis and qualitative interviews with librarians indicates that several Namibian legislative and policy frameworks have made provision for access to knowledge and information as provided by public libraries. This evidence is discussed in chapter five, section 5.3.2.1, subsections a) and b) respectively.

To conclude from this finding, the study found that Namibia had very strong legislative and policy frameworks that reflected or promoted access to the provision of information and knowledge through public libraries for transforming to a knowledge economy. However, in terms of their implementation, those legislative and policy frameworks were neither effective, nor strong as they were presented to be. Practically based on the findings, they were being implemented but only fairly, not good and also not too poor.

This conclusion is based on the fact that some of the legislative and policy frameworks, as per the reference above, are still very new at the implementation process. Examples are the Policy for E-government Strategic Action Plan for the Public Service of Namibia 2014 – 2018 and the Namibia Fifth National Development Plan (NDP5) 2017/18 – 2021/22. The NDP is actually not entirely new because it is a continuation of the previous NDPs (1, 2, 3, 4) and has its origin in the Namibia Vision 2030 policy. However, the detailed contents pertaining to the discoveries of the fifth NDP have not been covered in this study.

Based on the Namibia Library and Information Service Act 4 of 2000 which promulgated the establishment of public libraries according to section 6, subsection (1), eight libraries, four in each of the two regions of Ohangwena and Omusati research sites of this study were established as a consequence of the Act, which came into effect on 30 April 2001 by GN 69/2001 (GG 2519) (Republic of Namibia, 2000). It was discovered that only four public libraries were available to the community with a population of 252 146 in the Ohangwena region and a population of 247 680 in the Omusati region (Namibia Statistics Agency, 2015). Hence, the Act made provision for their establishment so as to provide access to information and knowledge.

The study findings further conclude that, in respect to stocking libraries with equitable information knowledge resources, the ETSIP policy of 2005 has made provision for ensuring that public libraries are well stocked with higher quality knowledge and information resources (Ministry of Basic Education, Sport and Culture, 2005). The deployment of ICTs for use in libraries is covered by the Namibian ICT for Education Policy (Republic of Namibia, 2005) and the Policy for E-government Strategic Action Plan for the Public Service of Namibia 2014 – 2018 (Office of the Prime Minister, 2014). The Namibia Fifth National Development Plan (NDP5) has made provision to improve access to broadband at public libraries at 100% (Republic of Namibia, 2017). Poor internet connection has been found by this study as one of the major challenges to accessing information and knowledge provided online.

The issue of education and training of public library users is covered by the NDP5. It stipulates that there should be a strong framework to enhance the core skills of literacy and numeracy by providing enrichment programmes in schools and public libraries. The NDP5 fails to cover the need for qualified librarians which this study has found to be a major barrier at public libraries. However, the NDP5 has addressed the national need to increase the numbers of qualified

teachers, and to improve the competencies and skills of educators (Republic of Namibia, 2017). The researcher assumes this includes librarians.

Even with this strong well-crafted legislative and policy framework the study has found it to be of a poor standard in comparison to the public libraries located in urban areas in terms of implementation at some of the public libraries in the Ohangwena and Omusati regions (Ignatow et al., 2012). With reflection on the extent of coverage of access to information knowledge in Namibia's legislative and policies framework, this study strongly concludes that access to information and knowledge is well-articulated with the emphasis of transformation into a knowledge economy.

With respect to the implementation of the legislative and policy framework, the study found a huge discrepancy between public library services in urban areas and those in remote rural areas where this study had been conducted (Ignatow et al., 2012). In addition, the study has concluded that there are legislative and policy frameworks dating as far back as 2000 and 2005 respectively. Without amendments these frameworks do not show how some of the library information and knowledge may be acquired and accessed at or through public libraries to benefit everyone regarding a knowledge economy. Library information and knowledge entail aspects such as local information resources, indigenous knowledge from the local community members and government information resources from different ministries and agencies. The respondents consider these resources to be the most accessible and favourable library resources.

On top of the weakness in the effective implementation at remote rural public libraries, the study further concludes that there are weaknesses in the legislative and policy frameworks in terms of coverage of access to resource infrastructure with regard to information knowledge for the public knowledge economy. These shortcomings need to be addressed, as many challenges have emerged from these study findings and the literature review. Lack of access to information and knowledge cannot be solved by the inclusion of access to knowledge and information in national legislative and policy frameworks as Alemayelu (2014) has claimed it is possible. Including access to information and knowledge in national legislative and policy frameworks and ensuring execution at all levels of development nationally are preferred, which are aspects Azubuike (2007) has emphasised.

6.3 Pillar 2: Availability and accessibility of knowledge and information and ICTs infrastructure resources at Public libraries

To what extent are information and knowledge resources as well as ICTs infrastructure services available and accessible for the effective facilitation of communication, dissemination and processing of knowledge for the knowledge economy (information knowledge resources and ICTs infrastructure)?

This research study established that the most accessed public library resources were local school books, textbooks, reference books, newspapers and government information. Little access to global electronic resources and the internet was available. However, these global electronic resources were available and accessible on kindles which were loan-circulated. Multi-discipline CDs, DVDs and video cassettes carrying health and agricultural information were also available. Furthermore, access to the subscription databases of Emerald and Ebscohost, and to the open access databases of the Health Inter-Network Access to Research Initiative (HINARI), a worldwide database collection of biomedical and health literature of journals and e-books, aimed at contributing to improving world health, is provided at public libraries. The researched public libraries did not have access to e-books though they formed part of HINARI.

In addition, the study revealed that access to indigenous knowledge was available in some public libraries. These included local indigenous languages books and folklore storytelling knowledge that senior citizens from the villages shared. Local schools are the most frequent users of public libraries, but there are very limited resources such as printed material with only a few copies available for sharing. The same applied to textbooks. This finding is significant, based on figure 6, section 5.3.1, which shows that learners are the most frequent users of public libraries. This factor has contributed to the demand for local school books; however, this study finding shows that there are no libraries at local schools. Therefore, learners have to rely on public libraries for their school library needs.

In terms of the preferred formats of information and knowledge resources, it was reported that most public libraries only provided printing services, even though respondents preferred both print and electronic resource services.

In respect to ICTs infrastructure services, the study revealed that the internet at public libraries was accessed most often of all available facilities, followed by printing, television services, and the use of computers and laptops. The study finding indicated that video conferencing was available at the MCA-built regional public library, which apparently had not ever worked since the opening of the library in 2013. This was because of a lack of ICTs skills related to operating the video-conferencing facility, which is aimed at benefitting the communities through knowledge sharing. Only one public library had the facility, although not in working condition. It was also reported that the library had received IT staff who reported to work on the day that this research study interview had taken place.

The study findings showed that all eight (8) public libraries that had participated in the research study had access to the internet. There was only one (1) library in the Ohangwena region that did not have computers for its users, since it had only one computer with internet connection for the library staff members and to serve public users. Internet connections at all public libraries were very poor but available.

This finding was found to differ from public libraries in urban areas of Namibia and those in developed countries where access was not limited and poor as compared to the remote rural public libraries. This was part of the poor implementation of national legislation and policy frameworks as emphasised by Azubuike (2007).

To conclude this section, the study found a huge discrepancy between the provision of library services to remote rural communities and the effective accessibility of the services. Chapter five, section 5.4 showed that the overall rating of public library services had contributed to the knowledge economy of Namibia. Respondents indicated that they were satisfied with the library services, thereby confirming its contribution to the knowledge economy through improvement of their social and economic development despite a number of challenges.

Respondents did not regard the challenges as affecting the delivery of quality library services. This was based on the finding that having public libraries in remote rural areas was a huge innovation for the community. They were then able to access information and knowledge resources and ICTs infrastructure for free as stated in the quotations below.

You know having a library in the community like this, it's really an innovation. The library provides space for learning and studying, and we initiated the indigenous knowledge sharing of folklore from community senior members (PL1).

The innovation brought by ICTs development I think is the opportunity for public libraries in the remote areas to provide training on basic computer literacy for free. I believe this is a major innovation which is never seen before in the community (PL8).

It is evident from the findings that public libraries in remote rural areas are having a huge positive impact on communities in terms of providing access to information and knowledge resources and ICTs infrastructure. Although resources and infrastructure were not sufficient, they were still found to be satisfactory. It was also found that there were still communities that did not know what a library was and that it provided access to information and knowledge resources and ICTs services for free or at a minimum cost in terms of making photocopies and printing learning material.

It was evident that remote rural communities were excited by and appreciative of services even if the services were below standard compared to those in urban areas. The situation was the result of poor implementation of legislative and policy frameworks.

6.4 Pillar 3: Education and training

To what extent do public libraries provide education and training services to both users and librarians to ensure that they have the competencies and skills for the knowledge economy (education and training)?

The study's findings confirmed that basic computer literacy is the education and training programme offered at most public libraries. Some libraries offer training in information literacy for library users, while basic literacy is mostly provided by the adult education department. Libraries also offer services regarding health literacy, agriculture and farming literacy as well as speaking and writing English and Afrikaans. Some libraries organise information sessions in collaboration with relevant institutions on youth career development, reading promotion, current health, agricultural and farming issues, SME businesses and entrepreneurships, and

grade 10 and 12 examination preparation. However, the study shows that not all respondents who have attended these training and information sessions have gained skills and competencies in the areas in which they have been trained although libraries provide such sessions.

In relation to this finding, the study has also reported that not all respondents or library users have attended those training and information sessions. This has contributed to lack of skills and knowledge to effectively use the library in terms of searching for relevant information and knowledge for their social and economic needs.

Another dimension may be the lack of awareness of the functions of the library, since some libraries are still very new and in the process of promoting and creating awareness of the library services in the community as per quotation below.

> *Other libraries do collaborate but with our library we are still busy with user education because we have people who still think they can buy books from the library* (PL8).

In terms of qualified staff, the study shows that all libraries have a shortage of staff, especially qualified staff. Most staff members have other qualifications that are not library-related. These staff members undergo in-service training of librarianships. However, this is costly, as they do not work in the library for a long period. They continue searching for other jobs and leave as soon as they are appointed elsewhere, leaving their positions vacant. Qualified librarians are no different, as not all of them are interested in working in remote rural areas. If they are hired, they stay on in their positions for a shorter period for experience purposes and then move to urban areas.

The study has indicated that some librarians have relevant skills and competencies in providing library information searching and retrieval skills. However, most librarians do not have relevant expertise in basic computer literacy which is the training programme most often demanded and attended. Some librarians do improve their skills through attending capacity-building workshops in ICTs although it has not been offered for a long time due to financial constraints.

6.5 Pillar 4: Innovation systems at public libraries

To what extent do public libraries have innovation systems in place to deliver quality library services to users and enable them to tap into the growing stock of global knowledge, and to assimilate and adapt it to local needs for economic and social development (innovation system)?

The study's findings in respect of innovation systems reveal that there are two types of innovation systems at public libraries that are derived from accessing library service ICTs and information knowledge resources, and secondly education and training programmes being offered. These services are categorised as technological innovation systems and non-technological innovation systems.

In respect of technological innovation systems, the study reports that, in general, public libraries do little innovation in taking advantage of the availability of ICTs infrastructure. Out of the eight libraries studied, only two have developed the integrated library management system for collection automation to enhance the searching and retrieval of library resources. The automated systems are not part of a web-based catalogue yet, since they are only in-house searchable by staff and users. The other six libraries still use the manual card catalogue system. As stated in section 6.4, it is revealed that all public libraries provide access to global electronic databases of Ebscohost, Emerald and HINARI. These databases are also only used in-house since no libraries have any websites. This has prevented libraries from providing internet access to digital collections from other institutions.

The study has shown that the public libraries make use of social media or the Library 2.0 tool for social inclusion and the dissemination of library outreach services to the communities. The most visited social media are Facebook and WhatsApp. The majority of respondents demanded the provision of online library services where the internet is accessible at anytime and anywhere in a modern world.

Provision of computers for library users as well as training in basic computer literacy were identified as major innovation systems by respondents, as such systems enable remote rural schools to gain access to mobile library services. These mobile library services are not offered by all libraries but the librarians are willing to provide the services on condition that they have the necessary resources and capacity.

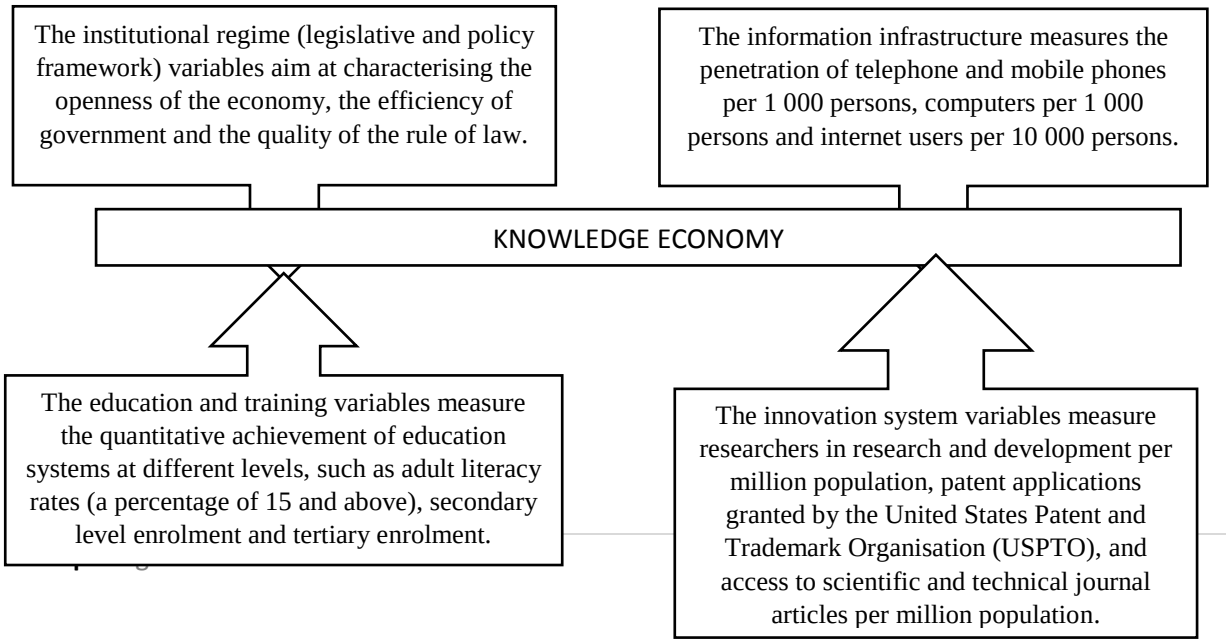
Furthermore, in view of the non-technological innovation system derived from accessing public library services, respondents have contributed to their social and economic developmental aspects. The majority of respondents reveal that they benefit more in terms of education, health, employment and career development, business and entrepreneurship as well as agriculture and farming as discussed in section 5.3.5.2.

In conclusion, it has been noted that there are challenges inhibiting the provision of quality library services in remote rural communities (see section 5.5). In an attempt to attend to resolve some of these challenges, the study proposes solutions to the challenges that are highlighted in section 5.6. Access to the internet has not been mentioned directly as part of these innovation systems but library users need to connect to the internet and have access to Wi-Fi services in order to access Facebook and WhatsApp, and to search the Web by means of a multitude of search engines.

6.6 Revisiting the World Bank KE Framework

The World Bank has used a Web-based knowledge assessment methodology tool to measure the progress countries and regions have made towards a knowledge economy by using the four pillars based on the countries' gross domestic product (GDP) rate. This assessment is designed to help countries understand their strengths and weaknesses, whereby policy-makers may use the results to pinpoint problems and opportunities facing the country. Then they are able to address aspects where more investment is required for transition to a knowledge economy (World Bank, 2007).

In view of the above, the diagrams below summarise the variables measured per pillar:



This study did not measure all four pillars specifically as stated in the World Bank KE Framework above. Rather, variables were adjusted to fit in with the objectives and the research question of the study. There were not many adjustments to be made. The main adjustment was that this study measured the pillars from a community point of view and its members' experiences on how each pillar affected them in terms of public library services and knowledge economy requirements

According to the World Bank (2007: 21), under these circumstances, "a knowledge economy (KE) relies on knowledge as the key engine of economic growth. It is an economy in which knowledge is acquired, created, disseminated, and applied to enhance economic development". The study's findings in chapter five, section 5.3.4.1, subsection c), reveal that public libraries, to which are referred as 'constituent libraries', are responsible to (1) collect, develop and supplement knowledge and information resources which will be aligned with the needs of users; (2) collect, preserve or document information pertaining to local events, customs and history; (3) make knowledge and information resources accessible to people; (4) provide proper instruction and guidance to library users; (5) conduct research on any matter; (6) promote the library through projects that encourage people to use available knowledge and information resources (Republic of Namibia, 2000).

The primary purpose of public libraries, as per this finding, has qualified these libraries as core public institutions where knowledge is acquired, created, disseminated and applied to enhance economic development; therefore, making the institutional regime pillar of this study to measure the reflection on access to knowledge and information in Namibia's legislative and policy frameworks provided by information services such as public libraries. The availability of library and information services legislation, and the strong representation or reflection on access to knowledge and information in Namibia's policies have, however, illustrated the efficiency of the Namibian government and the quality of the rule of law in supporting the people towards the transformation to a knowledge economy.

Looking at the information infrastructure pillar, instead of implementing this pillar (see diagram above), this study measured the availability and accessibility of library information and knowledge resources as well as ICTs infrastructural services at public libraries for the effective facilitation of the communication, dissemination and processing of knowledge that will result in economic growth. Under this pillar, the variables of telephones, computers and the internet were measured as ICTs infrastructure of public libraries together with other ICTs services such as photocopying and other forms of digital representation (see chapter five, section 5.3.3.2).

With respect to the education and training pillar, the World Bank KE variables measure the quantitative achievement of education systems at different levels, such as adult literacy rates (15% and above), secondary level enrolment and tertiary enrolment. In this regard, this study has investigated how public libraries contribute to the education and training of both users and librarians to ensure that they have the competencies and skills for the knowledge economy. The finding is that public libraries are mostly used by school learners in the age group 10-19. It further reveals that some older people, who are users of public libraries, do not understand the English language. One should keep in mind that most sources in public libraries are written in English.

> *Again we have the second category which are told you are community members who are not working in government or in any sector. They are peasants or working in their farms. In the morning they go to the farm and come back in the evening. Some do business by selling articles in the street. These categories have specific information needs that would help them to prepare their way. The majority of those people cannot read, cannot write. What we do, we engage them for discussion by bringing in expertise from veterinary and agriculture ministry, and from NCCI because we are members of the NCCI. They come to talk to the community on how to improve business, talking in Oshiwambo. Resources in this case is provision of space for discussion and engagement.* (PL1)

According to this study, only 14% of respondents were in the age group 30-49, as illustrated in chapter five, figure 6. This age group is a combination of 7% for both the 30-39 and 40-49 age groups.

Based on the quote above, public libraries provide periodic educational information sessions to the older age group through partnership with other institutions that specialise in meeting the needs of this age group. The library only provides space for the discussions and engagements with the purpose of knowledge sharing. For those who can read and write, the study reports that they are provided with workshop training to acquire skills needed to effectively search and find relevant knowledge and information resources for social and economic growth (see section 5.3.4). All user groups in different categories are trained to have the ability to acquire, create, disseminate and apply knowledge for the purpose of contributing to economic development.

In the innovation systems pillar, the World Bank variables measure researchers in research and development per million of the population, patent applications granted by the United States Patent and Trademark Organisation (USPTO) as well as access to scientific and technical journal articles per million of the population (World Bank, 2007). This research study has investigated the public library innovation systems in place to deliver quality library services to users and how the tapping into the growing stock of acquired global knowledge has been assimilated and adapted to local needs for economic and social development as discussed in section 5.3.5.

The study has discovered that measuring a knowledge economy based on the GDP of a country does not mean that the majority of the country's people are contributing to the GDP. The use of the World Bank KE Framework has proven that national legislative and policy frameworks regarding access to knowledge and information are implemented poorly despite the fact that the largest population of Namibians live in remote rural areas. This denies remote rural communities quality access to knowledge in order for them to have the ability to acquire, create, disseminate and apply knowledge effectively so as to become productive citizens capable of contributing to the country's GDP as well as its knowledge economy.

The application of the World Bank KE Framework indicates that Namibia is making moderate progress despite the challenges which have been identified when comparing it to remote rural library development in other developing countries. Namibia is a pioneer in terms of development since independence in providing access to knowledge and information in terms of the deployment and establishment of public libraries in Namibia's regional constituents.

However, that does not normalise the poor implementation of policy frameworks in remote rural areas and outdated legal frameworks that hinder progress. Good and strong legal and policy framework implementation can result in equipping libraries with quality knowledge and information infrastructural resources as well as improve community skills to access knowledge and information resources for innovation purposes. In addition, it further contributes to building up of innovative people and activities that enable the creation of a spirit of entrepreneurship and a culture for economic development.

6.7 The extent to which the research questions have been answered

The research has brought together the qualitative and quantitative data collected from the survey questionnaires, semi-structured interviews, and the content analysis of legislative and policies framework with integration of literature reviews. The triangulation of the mixed methods approach added value to the depth and quality of the research study. The research being conducted from the two regions out of the fourteen regions of Namibia, and the application of the World Bank Knowledge Economy (KE) Framework of four pillars, this research finding is likely to be transferred to other regions, rural remote areas.

6.8 Contribution of the study

The study has made significant contributions to the research and LIS professional practice.

6.8.1 Contribution to research

According to this study's literature review, this is one of only a few studies that has empirically investigated the roles of public library services towards a knowledge economy; in particular, one which has been conducted at remote rural areas. This makes it unique.

Furthermore, it is the only study that has employed the four pillars of the World Bank Knowledge Economy Framework specifically to test the relevance of public library services in communities. Other researchers have conducted similar studies (Garmer, 2016; Haq and Ahmad, 2012; Kargbo, 2011; Mchombu, 2010; Sturges, 2010) but those studies were all literature-based and not conducted empirically to understand what the real-life situation is. Though these studies were literature-based, their findings in terms of public libraries as engines that drive access to knowledge and information for education, health, finance, agriculture, farming, business and entrepreneurship were confirmed by this study.

The World Bank KE Framework has conceptualised that a knowledge economy country is a country where knowledge is acquired, created, disseminated and applied to enhance economic development (World Bank, 2007). Though access to knowledge and information at public libraries is cultivated in other studies as well, they have contributed to the social and economic development of the respondents in this study. Access to knowledge and information at public libraries has also contributed to the knowledge economy of Namibia. Generally, one can safely say this study has crossed an important bridge in achieving the goal set by the World Bank (2007).

Because Namibia comprises 14 regions, there are 121 constituencies or districts altogether. Each constituency aims to have a public or community library to provide access to knowledge and information to its local community towards the knowledge economy (Republic of Namibia, 2000). Therefore, this research study focused on two remote rural regions, Ohangwena and Omusati, with a very high population rate. As highlighted in chapter one, Ohangwena has 11 constituencies and Omusati has 12. There are only four public libraries in each of the two regions that participated in this study. Some of those libraries are still very new, which is evident in the following quotation:

> *Other libraries do collaborate but with our library we are still busy with user education because we have people who still think they can buy books from the library.* (PL8)

The quotation above validates that the realisation of the goals set by the World Bank KE Framework and that of the Namibia Vision 2030 for Namibia to be a fully developed knowledge economy are doubtful. This is because Namibia's socio-economic development is limping in terms of providing access to knowledge and information through public libraries, even with the rating of Namibia as an upper-middle income group by the World Bank (World Bank, 2017). The statistics of available public libraries per region show that the majority of regional constituencies are without libraries – they do not even have school libraries, especially not in remote rural areas.

In addition, the study has revealed some new insights that most accessible information knowledge resources at public libraries were local schools' books, newspapers, government information (ministries healthy, agriculture, SME and Entrepreneurships, Education

information pamphlets and textbooks, even though those were most accessible, they are however very limited because of budget constraints. These libraries rely heavily on one funder, the NLAS. On that note, this finding affirms the study done by Kargbo (2011) who has found that vast amounts of information are unused, either because national decision-makers do not realise its importance or because people who might want it do not know how to access it.
With respect to the innovation system, as reported in section 5.3.5.1, the study has found that some public libraries in rural areas provide outreach services through Facebook and other social media, using both English as an official language and Oshiwambo which is the vernacular language spoken in the regions. This initiative breaks the language barrier that is identified in Gould and Gomez (2010) and is confirmed by this study.

However, the initiative still does not serve any of those residents who do not understand English. The problem is that most of the content in public libraries is available in English only. This has prompted some respondents to demand that public libraries offer classes for speaking and writing English. Fortunately, higher numbers of school learners and university graduates understand English today in comparison to the age group of 30-49, as shown in figure 6 in chapter five, since they have received some form of education and training in English. This finding is supported by the quotation below:

> *This is a public library, not a special library. Our users come from different vast background. I can categorise them into three or four categories, which build the collection. We have category one which are called students for learners. There are about 30 schools around here. All learners relied on this library. We have in that case different resources aimed at catering for the needs of all students and learners, chemistry, English social studies etc. that's one side. Again we have the second category which are told you are community members who are not working in government or in any sector. They are working the farm. In the morning they go to the farm and come back in the evening, and they do business by selling articles in the street. These categories have specific information needs that would help them to prepare their way. The majority of those people cannot read, cannot write. What we do, we engage them for discussion by bringing in expertise from veterinary and agriculture ministry, and from NCCI because we are members of the NCCI. They come to talk to the community on how to improve business,*

talking in Oshiwambo (the indigenous language that they understand. Resources in this case is provision of space for discussion and engagement as knowledge sharing. (PL1)

The quote above clearly shows that, although Namibia is categorised as an upper-middle income country, it suffers from extreme socio-economic inequalities inherited from the years of colonial regime (World Bank, 2017). This study has revealed that there are people in Namibia who cannot write nor speak, and even worse, understand the official language English. The inability to read and speak English has disadvantaged them to fully utilise library services for a knowledge economy.

Another new insight from this study is derived from the innovation system of the non-technological innovation system (see section 5.3.5.2). The study has shown that this section in public libraries drives the most innovation or benefits, as it makes accessing local knowledge resources such as government ministry pamphlets and leaflets for education, health, agriculture, business and entrepreneurship as well as government employment application forms possible.

According to this study, not all public libraries provide the identified services which are found to have brought social and economic development innovatively to respondents. Based on the literature review, the disparity in service delivery is due to lack of amendments to legislation and policy frameworks, recruitment of qualified library personnel and the provision of proper and effective ICTs infrastructure with good internet connectivity in public libraries and access to government information services in the remote rural areas.

Furthermore, the study has discovered the practice of distributing old local newspapers from public libraries to nearby schools to be used by teachers during English, and Business and entrepreneurship lessons have also been presented by some public libraries, as this has not emerged from the literature review. This means that newspapers are not archived in some public libraries for future reference in the rural areas. Instead, they are distributed as supporting teaching aids at primary schools in the villages.

The research study has filled a significant gap in the literature regarding empirical studies on the roles of public library services towards a knowledge economy. Its uniqueness lies in

addressing and unearthing the application of the four pillars of the World Bank Knowledge Economy Framework to the public library entity. It is clear that public library services contribute to the social and economic development of communities towards a knowledge economy.

This study presents the actual reality of the readiness of residents to a knowledge economy, as shared by the respondents who are remote rural residents where the majority of the population resides.

6.8.2 Contribution to the LIS professional practice

The four main objectives and research questions of this study, as referenced to in section 5.5, contribute to the library and information science (LIS) professional practice in that the study has identified all relevant existing legislative and policy frameworks that reflect access to knowledge and information services provided by public libraries and how these are implemented. In this regard, the study has pinpointed the gaps and strengths in the legislation and policy frameworks, thereby recommending where amendments should be made in terms of the poor implementation of these services in remote rural areas.

Secondly, the study has revealed different types of library knowledge and information resources as well as ICTs infrastructure that are available to and accessible in the communities in order to contribute to the knowledge economy of Namibia. Resultantly, this finding will help LIS practitioners or librarians understand what is more useful and beneficial to the community so they may focus more on meeting and satisfying the community's needs in delivering quality library services.

Thirdly, with respect to the contribution of public libraries to education and training of their users and staff members to ensure they acquire the relevant skills and competencies for a knowledge economy, the study has contributed to the LIS practice by revealing the different types of educational and training programmes provided by public libraries. LIS practitioners may obtain details on how to learn best practice principles for improving the educational and training programmes they offer their users by establishing strategies aligned with the literature review in this study. The study has unveiled the need for LIS professional development of librarians so they may deliver effective training to their users. Recommendations with regard to these aspects are provided in the recommendation section below.

Finally, regarding the innovation system objectives, the study has contributed immensely to both the technological and non-technological systems as to how users and librarians have been assisted to access information and knowledge resources (see chapter five, sections 5.3.5.1 and 5.3.5.2).

6.9 Limitations

Although the study has been completed successfully, the process was not a simple and straight-forward one without hiccups. Like all other studies, there have been different observable limitations, some of which are pointed out in chapter 4 of the research methodology and design. However, there are some identified limitations that may potentially have affected the whole dissertation. These are highlighted below.

- Generally, the research survey questionnaire sample targeted a 96% confidence level. However, it achieved only a 79% confidence level which was accepted. The 79% response rate was due to factors highlighted in chapter 5, table 5.2. In addition, even with 79% response rate, there were challenges of sections in the questionnaire not being filled out by the respondents. This was only discovered during the analysis process. This demonstrated respondents exercising their right to answer only some of the survey questions. This was a limitation, since the researcher expected to obtain information from all the questions in the questionnaire.

- By the design of this study and for the purpose of completing the dissertation, the research study only focused on public libraries of two of the 14 regions in Namibia, namely Ohangwena and Omusati. This was due to lack of time, financing and personnel. Consequently, these were limitations in possibly transferring the study findings to the entire Namibia. As indicated in chapter one, there are 121 constituencies in Namibia. According to the Namibia Library and Information Services Act 4 of 2000, there should be a public library in each constituency. At the time of this study, there were 66 public libraries out of the 121 constituencies in all fourteen regions.

- The final observed limitation was the effective application of the World Bank KE Framework to public libraries specifically. The literature review did not yield sufficient empirical studies that had been applied for the same framework; particularly, to public libraries. Therefore, the study relied mostly on theoretical studies that have not provided strong evidence based on the practical roles of public library services towards achieving a knowledge economy.

6.10 Critical reflection

The researcher discovered that she was a novice in the research process. At first, she was too ambitious and excited to move into a PhD venture with an unrealistic proposal. Thanks to the supervisor who worked with her to shape the proposal and educate the researcher in research design and methodology at a higher level, the study was completed successfully. During the data collection process, the researcher realised that she had embarked on the research study without familiarising herself with the research geographical sites in advance. As presented in chapter 4, the sites were located far from one another, causing time and financial challenges and prolonging the data collection period.

The researcher is satisfied with the dissertation report. All trouble that she had to endure during the data collection and analysis processes enabled her to obtain the necessary data to answer all research questions, and generally, to transfer valuable skills to future researchers.

6.11 Recommendations

Based on the four pillars of the World Bank Knowledge Economy Framework, it appears that the knowledge economy of a country can only be achieved when all productive citizens or people of the country contribute to the GDP, as the GDP is used by the World Bank to measure a country's readiness for a knowledge economy. The study has revealed that Namibia is still in the process of developing its infrastructure as well as shaping its education system for the people to have an equal share in the country's economic growth.

Pillar 1: Reflection of Access to knowledge and information in Namibia policies and legislative framework

In briefly, the study has highlighted critical developmental challenges hindering the contribution of public libraries to the knowledge economy of Namibia. These challenges are due to the poor implementation of legislation and policy frameworks in the rural areas in comparison to urban areas. Furthermore, to a lack of amendment of the available library legislation in addressing modern LIS trends.

However, the study has also identified that the latest National Development Plan (NDP5) provides great opportunities and recognition for the development of the library sector in Namibia towards a knowledge economy as indicated in section 5.3.2.1(b). Furthermore, the

NDP5 is in agreement with and strengthens the ETSIP 2005-2020 strategic plan, which makes provision for availing adequate library resources for a knowledge-based economy. As further indicated in this study, preceding policies are working in parallel with the policy of E-government strategic plan for the public services of Namibia 2014 – 2018. Resultantly, these policies are all still in progress and their implementation processes are moving steadily at some of the public libraries in Namibia.

Recommendations:

It is, therefore, recommended that:

- The Namibia Library and Archives Service (NLAS), as the LIS body responsible for advocating for the development of libraries and the promotion of access to information and knowledge in the country, and the government therefore hold the key to transforming infrastructure through developing strong policies and amending legislative frameworks to focus investing in public libraries for community development.
- This will be done by ensuring that Namibia policies and legislative framework include and reflect public library development. The focus will be, the allocation of adequate and ongoing budgets for staff development and relevant library knowledge information resources, the strengthening of information resources and ICTs infrastructure, the creation of space through building new spacious libraries for the community to fully be part of a knowledge economy. This will then justify the assumption made by Azubuike (2007) that the enforcement of access to information and knowledge is more successful in countries with strong policy legislative frameworks in place.
- However, in Namibia, legislative policies are enforced only in elite areas while in disadvantaged, rural and remote communities, according to this study's finding, public library infrastructural services are poorly implemented. If comparing these services with those of public libraries in urban areas, they differ substantially as demonstrated in this study.
- Legislation and policy framework should include the development of cohesive collaboration systems for the provision of Namibia local and government ministries information and knowledge resources to all public libraries in the country. The finding discovered that accessed government information such as health, agriculture and farming, small medium enterprises and entrepreneurship, education, youth

employment and skill development is highly demanded improve the community's social and economic development.

Pillar 2: Availability and accessibility of knowledge and information and ICTs infrastructure resources at Public libraries

Recommendation:

- NLAS and the Ministry of Education Lifelong Directorate should identify eligible stakeholders to supplement government funding in addressing the challenges hampering public libraries in delivering high-quality library services to the communities so as to promote social and economic development, which, in turn, will lead to establishing a sound knowledge economy. This will ensure that legislation and policy frameworks pertaining to information and knowledge, as identified in this study, is implemented properly at all public libraries across the country.
- NLAS should develop strategy of strengthening public libraries' information infrastructure and networks in Namibia to ensure the availability and accessibility of local including indigenous knowledge and international global knowledge resources.
- This will be achieved through the creation of online portals that are linked to repositories of government ministries and other local and international information providers' as well as the development of National digital library. The study discovered that good information infrastructure can empower Namibian citizen with the ability to access, create and distribute information much more powerfully and quickly for sustainable development and growth.
- Moreover, the possible networking with relevant stakeholders may enable the provision of online library services which are in high demand. It may also address the poor internet connectivity in the regions, along with more computers for research purposes. Space allocation for building bigger libraries, as indicated by the respondents, with bigger spaces for reading, engagement with the public, discussions and studying may make people's dreams come true.
- Namibia need a national consortium or acquisitions collaborative system for subscriptions to global knowledge databases with other libraries. This will offer opportunities to gain large discount, through licences negotiation for databases at affordable prices.

Pillar 3: Education and training

Regarding the education and training pillar, the study has found higher percentages of respondents who are not adequately trained and others who lack the necessary skills to fully utilise the library resources. The study has found that librarians do not have adequate skills and competencies in producing library information searching and retrieval services.

Recommendation:

- There is a need for the National Information Literacy project to address lack of information searching skills of both librarians and public members to fully utilise the available library resources.
- It is, therefore, recommended that the NLAS revive the training programmes for librarians to further improve their skills for a knowledge economy through government and non-governmental institutions investment in the areas of information literacy, life-long learning and knowledge repository development.
- Librarians are urged to participate in international workshops and conferences where librarians with common interests meet and discuss their challenges and workshops provide training in the challenges that affect them all.
- In addressing the shortage of trainers or qualified trainers, librarians can employ the system suggested by Whitney, Keselman, and Humphreys (2017) with their outreach programme, as discussed in chapter 5, section 5.3.4.4. The implementation of the model will attract many unemployed youth in the rural areas to get involved, while at the same time creating more library staff to provide library services at the respective libraries, especially in remote rural areas by presenting mobile library service programmes. It will further enhance different training programmes offered at libraries.

Pillar 4: Innovation systems at public libraries

Despite remarkable innovations and benefits gained by respondents from accessing public library services, the study has found a poor innovation ability from the librarians' side in terms of taking advantage of ICTs infrastructure for reaching out to the communities. They acknowledge the financial constraints facing the government which, consequently, hinder the provision of high-quality global knowledge information resources such as subscription to international global knowledge databases. However, there are no excuses in this regard, as Namibia qualifies for access to open access research in global database collections such as AGORA, OARE, ARDI, GOALI in addition to the HINARI to which public libraries have

access, even harvesting relevant free open access databases as its done by public libraries at the City of Cape Town, South Africa and developed countries.

Literature reviewed from South African, American and European public libraries demonstrated the availability of many open-access sources for online e-books and journals.

Recommendations:

- Namibian librarians need to be proactive in taking advantage of the available ICTs infrastructure despite the challenges of poor internet connectivity to innovate by reaching out to the communities through different modes as discussed in the findings of this research study.

Moreover, this study's finding and those from literature reviewed are of paramount to NLAS which is a decision and policy making body of library network in Namibia. To use this dissertation as a guiding instrument in establishing public libraries national strategic model with strategic issues aligned with that of the NDP5, and Harambee Prosperity Plan 2016, for the Vision 2030.

The proposed national public library strategic model should include:

- the development of digital network for access to Namibia indigenous knowledge
- National Network for all local books and national content publishers
- Access to Government Ministries Published Information network for distribution to public libraries countrywide
- Development of National Consortium for access to Global research information resources
- Strategies to increase library outreach program to remote and marginalised areas
- Strategies for public library Physical space infrastructural transformation to quality library services provision
- Strategies for training and development for both users' library staff.

In conclusion, this dissertation finding is a ground breaking research in the Namibia Library and Information sector, which has provided renowned evidence to how public library is contributing to the knowledge economy of Namibia through NDP5 four pillars (economic progression, social transformation, environmental sustainability, and good governance) founded on the principal of sustainable development to enhance growth and economic diversification.

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APPENDICES:

Appendix 1: Request for research permission letter

UNIVERSITY of the
WESTERN CAPE

27 April 2016

Director: Directorate of Namibia Library and Archives Service (NLAS)
Ministry of Education
Windhoek
Namibia
Tel.: +264 61 293 3181

Dear Ms Kauaria

REQUEST TO OBTAIN INFORMED PERMISSION TO CONDUCT A RESEARCH STUDY ON THE DOCTORAL STUDY TOPIC: AN INVESTIGATION INTO THE ROLE OF PUBLIC LIBRARY SERVICES TOWARDS A KNOWLEDGE ECONOMY FOR NAMIBIA: CASE STUDY OF THE OHANGWENA AND OMUSATI REGIONS

I, Selma Iilonga, a PhD student at the University of the Western Cape, South Africa, hereby request permission from your esteemed office to conduct a research study at public libraries in the Ohangwena and Omusati regions from May to July 2017 on the abovementioned topic. Data will be collected from library users (survey questionnaires) and librarians (semi- structured interviews). Kindly be informed that survey questionnaires will be distributed by the research assistants. While semi-structured interviews will be conducted by the researcher with the aid of a voice/tape recorder. The study will be piloted at the Oshana regional library.

The research project thesis is a requirement towards the completion of the PhD studies. The aims of the research study are:

- To explore Namibia's legislative frameworks, national development plans and policies reflecting access to knowledge and information, as provided by information services such as libraries.
- To examine public libraries' information and knowledge, as well as their ICT infrastructural resources and services available for the effective facilitation of the communication, dissemination and processing of knowledge, and how these are accessible for a knowledge economy.
- To explore public library education and training programmes of both users and librarians to ensure that they have competencies and skills for a knowledge economy.

- To explore public library innovation systems to deliver quality library services to users and enable them to tap into the growing stock of global knowledge, and to assimilate and adapt it to local needs for economic and social development.

Please note that participation in the study is entirely voluntary and the identities of participants will be kept anonymous. Further, all data to be collected will be treated with confidentiality. In case of anyone being dissatisfied with the research study process, please do not hesitate to contact the study supervisor at +27 82 335 8565.

Your approval will be highly appreciated.

Yours faithfully

Selma Iilonga
PhD Student
Department of Library and Information Science, University of the Western Cape (UWC)
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Appendix 2: Research permission approval letter

REPUBLIC OF NAMIBIA

MINISTRY OF EDUCATION, ARTS AND CULTURE

Private Bag 13186, Windhoek, Namibia

Tel: 264 61-293 5255
Fax: 264 61-293 5253
Enquiries: Ms. A.K. Dunn
Ref: 16/1/1/1/4

28 April 2017

Ms. Selma Iilonga
PhD Student:
Library and Information Science Department
University of Western Cape
Cape Town
South Africa

RE: APPROVAL FOR COLLECTING DATA: AN EMPIRICAL INVESTIGATION OF THE ROLE OF PUBLIC LIBRARY'S SERVICE TOWARDS A KNOWLEDGE ECONOMY FOR NAMIBIA: CASE STUDY OF OHANGWENA AND OMUSATI REGIONS"

In response to your request dated 27 April 2017, to carry out a research on the role of public Library's service to knowledge economy for Namibia, Namibia Library and Archives Service is hereby granting you approval to carry out your study during the months of May, June and July 2017 at public / community libraries in Ohangwena and Omusati regions respectively.

This approval is based on the condition that you will provide a copy of the outcome of your study to the Ministry of Education, Arts and Culture: Directorate of Libraries and Archives Service.

Wishing you all the best on your studies.

Yours Sincerely

CHIEF LIBRARIAN

Ms T. Shuumbili

Chief Librarian: Community Library Service

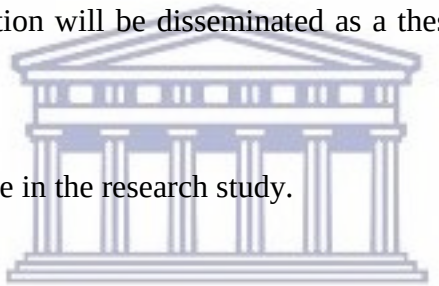
Appendix 3: Participants consent form

CONSENT FORM

Informed consent form to participate in this study

Herewith, I, ……., had the opportunity to ask any questions related to this study, and received satisfactory answers to my questions. I understand that all information to be gathered is confidential and will not prejudice me in any way. Therefore, I voluntarily agree to take part in this research. I am also aware that I may withdraw from this study at any stage. I am informed that the information I am providing in the questionnaire and that to be recorded by the digital recorder will strictly be used for writing up of the PhD thesis of Miss **Selma Iilonga**, a student at the University of the Western Cape, Department of Library and Information Science in the Faculty of Arts. The researcher has informed me that the information will be disseminated as a thesis, conference presentations and publications.

I agree and accept to participate in the research study.



_____ _____

Signature of Participant Date

_____ _____

Signature of Researcher Date

Place where agreement was signed: _____

Appendix 4: Structured survey questionnaire for library users

Questionnaire #

Research Project Title

AN EMPIRICAL INVESTIGATION INTO THE ROLE OF PUBLIC LIBRARY SERVICES TOWARDS KNOWLEDGE ECONOMY FOR NAMIBIA: CASE STUDY OF THE OHANGWENA AND OMUSATI REGIONS

I, Selma Iilonga, a PhD student at the University of the Western Cape, South Africa, is conducting a study on the above research topic. The purpose of the study is to investigate the contribution of public libraries towards a knowledge economy for Namibia as envisaged by the Vision 2030.

The researcher will collect data from public library users in order to complete the research project.

Please give 20 minutes of your time to complete the questionnaire. All information that you will provide is strictly confidential and no name of any participant will be mentioned in the study. You are free to withdraw from the study at any stage.

Thank you for your support and time.

Part 1: Personal Information

1.1 What is your age group?

10 - 19	
20 - 29	
30 - 39	
40 - 49	
50 - 59	
60 and above	

1.2 Gender

Male	
Female	

1.3 Educational level

Primary school	
Secondary school	
College/University/Vocation	
Never attend school	
Other. Please specify	

1.4 Under what industry below does your occupation fall? What you do for a living?

Agriculture/farming/forestry and fishing	
Mining and quarrying	
Manufacturing	
Electricity and related industries	
Water supply and related industries	
Construction	
Schooling	
Wholesale and retail trade	
Transport and storage	
Accommodation and food service activities	

Information and communication	
Financial and insurance activities	
Real estate activities	
Scientific and technical activities	
Administrative and support service activities	
Public administration / defence	
Education	
Human health and social work activities	
Art, entertainment and recreation	
Health and social services	
Private households	
Other. Please specify…….	

1.5 What is the name of your library?

Ohangwena Regional Library	
Eenhana Public Library	
Omungwelume Public Library	
Okongo Public Library	
Outapi Regional Library	
Okahao Public Library	
Tsandi Public Library	
Okalongo Public Library	

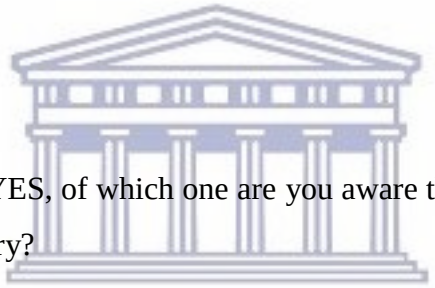
Part 2: Institutional regime: Library policies and legislation awareness

2.1 Does the library have guidelines on how to use the library resources and ICTs infrastructure effectively?

Yes	
No	
Do not know	

2.2 Are you aware of any policy legislation on library provision of access to information and knowledge which has given you confidence in using the library; e.g., national, regional or international policy legislative frameworks such as Vision 2030, UNESCO's Sustainable Development Goals 2030, presidential state of the nation address, ministry policies or strategic plans?

Yes	
No	
Do not know	



2.3 If your answer to Q2.2 is YES, of which one are you aware that has given you confidence and courage to utilise the library?

…….

Part 3: Information/knowledge resources and ICTs infrastructure

3.1 Information/knowledge resources

3.1.1 What are your information needs? You may tick more than one box.

Education	
Employment opportunities	
Health	
Agriculture/farming	
Entrepreneurship/business	
Finances	
Family	
Professional capacity building	
Internet	
Using a computer for typing	
Training	
Other. Please specify……	

3.1.2 Does the library provide you with relevant information to satisfy your needs?

Yes	
No	
Somewhat	

3.1.3 Which of the collection formats do you use at your library? You may tick more than one box.

Print local content resources	
Print international resources	
Local electronic/digital resources	
International electronic/digital sources	
Internet	
All of the above	
None of the above	
Bring my own books to use	
Other. Please specify……	

3.1.4 Why do you prefer the chosen collection format?

……....

……

……

3.1.5 In case of relevant information sources being unavailable, does the library obtain them from other libraries through interlibrary loans?

Yes	
No	
Do not know	

3.1.6 Explain the event/s when the library had provided you with information resources that were not available in the library at the time and how they obtained these for you.

……....

……

……

……....

3.1.7 To which of the following information and knowledge resources do you have access at or through the library? You may tick more than one box.

Textbooks	
Reference books	
Ministry of Health booklets, pamphlets and brochures	
Ministry of Agriculture booklets and brochures	
Health-related print material, DVDs and CDs	
Agricultural/farming DVDs	
Business/Entrepreneurships	
Indigenous knowledge DVDs/Videos	
Indigenous knowledge print material	
Newspapers	
Global databases; e.g., Ebscohost, AGORA, HINARI etc.	
E-government databases	
University research repositories	

Local school books	
University application forms	
Government job application forms	
Company registration application forms	
Municipality application forms	
Namibia Students Financial Assistance Funds (NSFAF) application forms	
Agribank loan application forms	
Namibia Development Bank (NDB) application forms	
Other. Please specify……	

3.1.8 What information and knowledge resources and services that are not currently available at the library do you need the library to provide access to and why?

a) Demanded information resources

……

……

……

……...

b) Reasons for the demand

……

……

……

……

3.2 ICTs infrastructure

3.2.1 To which of the following ICTs facilities do you have access? You may tick more than one box.

Fax machine	
Telephone	
Computer with internet	
Computer without internet	
Printer	
Laminator	
DVDs	
CDs	
Television	
Video cassette recorder (VCR)	
Daisy players for visually impaired persons	
Projector presentation	
Laptop	
Internet / wi-fi	
Video conferencing	
Other. Please specify……..	

3.2.2 What ICTs training did you receive at the library or through the library? You may tick more than one box.

Internet search	
Information literacy	
Microsoft Word	
Microsoft Excel	
Microsoft PowerPoint	
Microsoft Access	
Searching for e-books	
Searching for e-journals	
Searching E-government databases	
Other. Please specify……	

3.2.3 Have you acquired new skills and competencies for using the above ICTs facilities in Q3.2.1 and 3.2.2?

Yes	
No	
Do not know	

3.2.4 If your answer to Q 3.2.3 is NO, in which of the ICTs tools do you need training and why?

a) ICTs training needed …….....

b) Reason for the needed training ……

……..…

……

3.2.5 Does the library have an internet connection?

Yes	
No	
Do not know	

3.2.6 If your answer to Q3.2.5 is YES, for what purpose do you mostly use the library internet? You may tick more than one box.

Social media connections	
Education	
Health and wellness	
Employment	
E-government	
Library electronic books	
Digital library collection	
Library electronic databases, e.g. Ebscohost	
Online banking	
Other. Please specify…….	

3.2.7 How do you rate the internet connection at the library?

Very poor	
Poor	
Fair	
Good	
Very good	

3.2.8 For what purpose do you use any of the ICTs in the library? You may tick more than one box.

Typing	
Internet search	
Searching the library catalogue	
Scanning	
Skyping	
Video conferencing	
Faxing	
Playing games	
Searching library electronic databases	
Other. Please specify……	

3.2.9 What barriers/challenges do you experience to access ICTs? You may tick more than one box.

Time limits set on using the computer	
Lack of skills and knowledge on how to use ICTs	
Insufficient number of ICTs in the library	
Poor internet connection	
Unavailable internet access	
Limited number of library staff for assistance	
Limited librarians with ICTs expertise for assistance	
Other. Please specify……..	

Part 4: Education and training

4.1 What is the purpose that you visit the library? You may tick more than one box.

For schoolwork	
To read for pleasure	
To read books for personal development	
To conduct research	
To attend information literacy training classes	
To attend basic computer literacy training classes	
To attend media and digital literacy programme training classes	
To attend SME/entrepreneurship training classes	
To obtain health-related information	
To obtain financial information	
To read newspapers	
To use the internet	
To use the computer	
Other. Please specify……	

4.2 Does the library provide you with training on how to search and find relevant resources to meet your needs?

Yes	
No	
Do not know	

4.3 If the answer to Q4.2 is NO, how do you search for library resources?

……...

……

……

4.4 If the answer to Q4.2 is YES, which of the training/information sessions below have you attended at the library? You may tick more than one box.

Basic literacy skill training	
Information literacy training/Information searching skills	
Computer literacy training	
SME literacy training	
Health literacy training	
Agriculture/farming literacy training	
Financial literacy training	
Job-seeking training	
Reading promotion session	
Youth development information session	
Other. Please specify……..	

4.5 What other training/information sessions do you need the library to organise for you to contribute to social and economic development?

……

……

……

4.6 Do the library staff have the necessary skills and competencies in providing quality library services?

Yes	
No	
Do not know	

4.7 Please elaborate on your answer to Q4.6.....

.....

.....

Part 5: Library innovation system

5.1 Technological innovation system

5.1.1 Does your library have a website?

Yes	
No	
Do not know	

5.1.2 If the answer to Q5.1.1 is YES, to which of the digital collections below does the library provide access or it is linked? You may tick more than one box.

Local newspaper databases	
Indigenous knowledge	
E-government	
Local research institution repositories	
Electronically subscribed databases	
Open-access databases	
International research repositories	
Other. Please specify……	

5.1.3 If the answer to Q5.1.1 is YES, which of the following social media/Library 2.0 tools does the library use for social inclusion and outreach library services? You may tick more than one box.

Flickr	
Blogs	
RSS	
Facebook	
YouTube	
Twitter	
Wiki	
Local radio	
Television	
WhatsApp	
Other. Please specify……..	

5.1.4 If the answer to Q5.1.1 is NO, do you need the library to provide the services in Q5.1.2 and Q5.1.3?

Yes	
No	
Do not know	

5.1.5 If the answer to Q5.14 is YES, how will the identified services of social media benefit you? …….

……

……

5.1.6 Does the library have a Web-based catalogue?

Yes	
No	
Do not know	

5.2 Non-technological innovation system

5.2.1 Does information/knowledge you acquire from using the library improve your knowledge level?

Yes	
No	
Do not know	

5.2.2 If the answer to Q5.2.1 is YES, how do the acquired knowledge and skills contribute to your social and economic development in the following aspects? Only elaborate on one aspect from which you have benefited.

5.2.2.1 Health……..

……

……

……

5.2.2.2 Education ……..

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……

5.2.2.3 Employment ……..

……

……

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5.2.2.4 Business and entrepreneurship……..

……

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5.2.2.5 Engineering and manufacturing……..

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……

5.2.2.6 Agricultural and farming……..

……

……

……

5.2.2.7 Other. Please specify and explain……..

……

……

……

5.2.3 How did you become aware of the services the library offered? You may tick more than one box.

From friends / family members	
From colleagues	
Announcement in church	
Radio announcement from regional governor office / councillors	
Billboards	
Searched the local map	
On the internet: Google	

On the internet: social media	
Other. Please specify……	

5.2.4 Which of the following library service programme benefited you? You may tick more than one box.

Homework club	
Book and reading club	
Library services to farmers	
Library information sessions	
Library exhibition	
Mobile library services	
Indigenous knowledge storytelling club	
Other. Please specify……	

5.2.5 Which of the following non-technological social media does the library use for social inclusion and outreach library services? You may tick more than one box.

Notice board	
Church gathering	
Community meeting	
Other. Please specify……	

5.2.6 What challenges do you experience in finding information/knowledge to satisfy your needs? You may tick more than one box.

Transport problem: library is too far	
Lack of time to visit the library	
Lack of knowledge and skills of how to use the library	
Shortage of information/knowledge resources meeting my needs	
Non-availability of online library services to access the services at my own pace	
Poor customer service by librarians	
Outdated library materials	
Lack of awareness of availability of new resources	

Other. Please specify……	

5.2.7 Generally, how do you rate the current library services and facilities in contributing to communities' social and economic development?

Very poor	
Poor	
Fair	
Good	
Very Good	

5.2.8 What improvement(s) do you propose for the library to enhance its services in contributing to social and economic development of communities?

……
……
……
……
……

THANK YOU

Appendix 5: Semi-structured interview with public librarians and chief librarians

Research Project Title

AN EMPIRICAL INVESTIGATION INTO THE ROLE OF PUBLIC LIBRARY SERVICES TOWARDS A KNOWLEDGE ECONOMY FOR NAMIBIA: CASE STUDY OF THE OHANGWENA AND OMUSATI REGIONS

I, Selma Iilonga, a PhD student at the University of the Western Cape, South Africa, am conducting a study on the above research topic. The purpose of the study is to investigate the contribution of public libraries towards a knowledge economy for Namibia as envisaged by Vision 2030.

Semi-structured interviews data are to be collected from the heads of public libraries or chief librarians in order to complete the research project.

Kindly allow me to have one hour of your time for an interview session that will be aided by a tape recorder. All information that you provide is strictly confidential and no name will be mentioned in the study. You are free to withdraw from the study at any stage.

Thank you for your support and time.

Contact details: Tel.: 081 641 4507; e-mail: ndategak@gmail.com

Interview Information

Semi-structured interviews are categorised according to the four pillars (themes) of the World Bank Knowledge Economy Framework (1998) that has been developed, namely:

1. Institutional Legislation Regime
2. Knowledge/Information and ICTs Infrastructure
3. Education and Training
4. Innovation Systems (improvement gained from the benefit of accessing public library services and ICTs infrastructure)

The following research questions and sub-questions are designed within the parameter of the four pillars:

1. Institutional legislation regimes

1.1 What national/international policies or strategies/legislative frameworks have public libraries adopted in governing their operations and management, and why?

1.2 What procedures and guidelines are in place regarding the functions of public library services and ICTs infrastructure?

1.3 How does public libraries ensure the sustainability of knowledge and information resources and ICTs facilities?

1.4 What strategical policies do public libraries have for professional capacity-building of staff development?

2. Information/knowledge resource services and ICTs infrastructure

2.1 Information/knowledge resource services

2.1.1 What knowledge and information resources are available to and accessible by the users, and in which formats are these resources?

2.1.2 What is the knowledge/information subject content and types which your library collection covers?

2.1.3 What is the process of acquisition of both local (including indigenous) and global print and electronic knowledge and information resources, and from where are they acquired?

2.1.4 What knowledge/information content does your library mostly have and why? For example, with respect to health, business, agriculture and farming, etc. Are there more foreign than local contents?

2.1.5 Does the library have access to subscription electronic resources or open-access resources?

2.1.6 Which collections are mostly used and why?

2.1.7 How do you ensure that the knowledge/information resources collection meets the needs of the user community you serve?

2.1.8 How do libraries ensure the sustainability of delivering up-to-date and relevant quality library services to the communities?

2.2 ICTs infrastructure

2.2.1 What ICTs infrastructure is available and accessible at the library for knowledge acquisition, dissemination, creation and utilisation?

2.2.2 What types of ICTs are available at the library for both users and administration and management of resources?

2.2.3 How are available ICTs accessible to users?

2.2.4 For what purposes do users utilise ICTs facilities?

2.2.5 From your observation, who are mainly users of ICTs?

2.2.6 What challenges are faced by users and library staff in effectively utilising ICTs?

3. Education and training

3.1 How do public libraries educate users and librarians to ensure that they have the competencies and skills enabling them to acquire, create, disseminate and use knowledge effectively to contribute to the knowledge economy?

3.2 What, according to your observations, are the information needs of the library users OR for what purposes do users use the library?

3.3 What educational training programmes do public libraries offer the user community to enable them to acquire, create, disseminate and use knowledge?

3.4 Which of the library educational programmes are mostly attended by users and why?

3.5 How do users search for and find library resources?

3.6 Do libraries collaborate with other institutions, government and the private sector in providing quality services to users and how do they do it? For example, agricultural literacy training, financial literacy training, SME training, legal literacy etc.

3.7 How does the library build the capacity of staff members in keeping them abreast of developments in the field in order to deliver an up-to-date and quality library service, and what training courses do they attend?

3.8 How do you create awareness of library services among community members?

4. Innovation System

4.1 What are library innovation systems for delivering quality library services to users for them to be able to tap into the growing stock of global knowledge, and to assimilate and adapt it to local needs for economic and social development?

4.2 What are technological library innovation systems and their benefits to the user community?

4.3 What are non-technological innovation systems and their benefits to the user community?

4.4 What challenges are you facing in delivering quality library services?

4.5 What improvement(s) do you propose for the library to enhance its service delivery?

Thank you