

**THE PERCEPTION OF FACULTY MEMBERS OF NAMIBIAN  
OPEN DISTANCE LEARNING INSTITUTIONS ON THE USE  
OF  
OPEN EDUCATIONAL RESOURCES**

**by**

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**Submitted in fulfilment of the requirements for the degree**

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**UNIVERSITY OF SOUTH AFRICA**

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## DECLARATION

I, Edwig Karipi declare that this thesis under the title *The Perception of Faculty Members of Namibian Open Distance Learning Institutions on the Use of Open Educational Resources* is a true reflection of my own research and all resources used have been acknowledged.



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Signature

**June 2020**

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Date

## **ETHICS STATEMENT**

The author, whose name appears on the title page of this thesis, has obtained applicable research ethics approval for the research described in this work. The author declares that she has observed the ethical standards required in terms of the University of South Africa's code of ethics for researchers and the policy guidelines for responsible research.

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**Qualification:** PhD in Curriculum and Instructional Studies

Thank you for the application for research ethics clearance by the UNISA College of Education Ethics Review Committee for the above mentioned research. Ethics approval is granted for the period 2018/05/16 to 2023/05/16.

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## DEDICATION

To my grade 1 teacher, who is also my mother, meme **Anna Domaala Nghipunya**.

My mother served as a great inspiration throughout my life, especially as she was among the first few female teachers in Northern Namibia who graduated from Oniipa Seminary in 1945.

To my late father, tate **Elifas Aaron Hashikutuva**, who has always with no doubt supported my endeavours and provided for my needs.

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## **ABSTRACT**

Open educational resources (OER) is a new innovation coined to bridge the educational divide by way of providing free quality learning resources. Consequently, this study explored the perception of the faculty members of the Namibian open and distance learning institutions on the use of OER as a pedagogical approach. This study was prompted by the presumption that if ODL institutions adopt open educational resources to replace costly textbooks, an increased number of the Namibian population could access education in the equitable manner. The study focused on faculty members from the three public ODL institutions in Namibia, namely, the Namibian College of Open Learning (NAMCOL), University of Namibia (UNAM)-Centre for Open, Distance and eLearning (CODEL) and Namibian University of Science and Technology (NUST)-Centre of Open and Lifelong Learning (COLL).

The following integrated theories were adopted to underpin this study: Transformative Learning Theory, Heutagogy Learning Theory, Cognitive Learning Theory and Social Learning Theory, Constructivism Learning Theory, Connectivism Theory and the Diffusion of Innovations Theory. The theories were compared to the findings to assess their applicability.

This is a qualitative case underpinned by an interpretivist paradigm. Data were collected through interviews, non-participant observations and document analysis, and analysed through the inductive approach. The results of this study showed inconsistency between the perception of the faculty members and the use of OER within the ODL institutions in Namibia. Although the faculty members displayed positive attitudes towards the use of OER, very little has been achieved in the use of OER within the institutions for the benefit of the Namibian ODL students. The study identified challenges that impede the adoption of OER at institutional level, such as lack of institutional policies, lack of awareness, technological factors, as well as management support. The study further crafted strategies to address challenges, including the OER design based on the Diffusion of Innovation Model. The study advanced recommendations for consideration by the institutions and the faculty members as well as suggestions for future research. The knowledge contribution made by this PhD is the proposed OER design for adoption by the ODL institutions to facilitate the use of OER by faculty members.

**Key words:** Open Educational Resources, open and distance learning, teaching and learning, OER adoption, ODL pedagogical approaches, lecturer perceptions, awareness creation, student reflection, ODL institutions, faculty members

## **ISISHWANKATHELO**

Ubuchule bokufunda ekuthiwa yi *Open Educational Resources (OER)* licebo elitsha lokunikezela simahla ngemithombo yokufunda esemgangathweni, nelenzelwe ukukhawulelana nobunzima bokushiyashiyana emfundweni. Esi sifundo siphonononge indlela abacinga ngayo abahlohli bamaziko emfundo aseNamibia avulekileyo nafundisa abafundi bekude (ii *ODL*), ngokusetyenziswa kweOER njengendlela yokufundisa. Esi sifundo sisuswe kukucingela ukuba xa amaziko emfundo avulekileyo nafundisa abafundi bekude enokusebenzisa izixhobo zokufunda ezivulekileyo endaweni yokusebenzisa iincwadi ezibiza imali eninzi, linganda inani labantu abanokuxhamla imfundo ngokulinganayo. Esi sifundo sigxininise kubahlohli bamaziko amathathu kawonkewonke, angawemfundo evulekileyo nafundisa abafundi bekude eNamibia, angala - iNamibian College of Open Learning (NAMCOL), iUniversity of Namibia (UNAM) - Centre for Open, Distance and eLearning (CODEL) kunye neNamibian University of Science and Technology (NUST) - Centre of Open and Lifelong Learning (COLL).

Kusetyenziswe ezi ngcingane zihlangeneyo zilandelayo njengezisekelo zokukhokela esi sifundo: Ingcingane Yokufunda Okuhambelana Nenguqu (*Transformative Learning Theory*), Ingcingane Yokufunda Ngokuziqhuba Komfundi (*Heutagogy Learning Theory*), Ingcingane Yokufunda Ngokuqiqqa Neyemfundo Esekelwe Kwezentlalo (*Cognitive Learning Theory and Social Learning Theory*), Ingcingane Yokufunda Ngokuzakhela Ukuqonda (*Constructivism Learning Theory*), Ingcingane Yokufunda Ngoncedo Lobuchwepheshe (*Connectivism Theory*) kwakunye nengcingane Yokufunda Ngokunwenwa Kobuchule (*Diffusion of Innovations Theory*). Ezi ngcingane ziye zathlekiswa nokufunyanisisweyo ngenjongo yokukhangela ukuba zingasebenziseka kusini na.

**Kusetyenziswe indlela yophando ngokuzathuza nokutolika izimvo ezahlukeneyo. Iinkcukacha zolwazi okanye idatha yaqokelelwa ngokuqhuba udliwano ndlebe nabathatha inxaxheba, ukuqwalasela abangathathi nxaxheba nokuphengulula imibhalo ukuze kudalwe ingcingane entsha. Iziphumo zesi sifundo zivelise ukungahambelani phakathi kwengcinga yabahlohli nokusetyenziswa kweOER kumaziko emfundo avulekileyo nafundisa abafundi bekude eNamibia. Nangona abahlohli bebonakalisa uthakazelelo ngokusebenzisa iOER, kuncinci kakhulu okwenziweyo malunga nokusebenzisa iOER kumaziko emfundo ekuncedeni abafundi baseNamibia kumaziko avulekileyo nafundisa abafundi bekude. Esi sifundo sichonge imingeni ethibaza ukusetyenziswa kweOER kumaziko emfundo, mingeni leyo ifana nokungabikho kwemigaqo nkqubo, ukungabikho lwazi, imiba yobuchwepheshe kwakunye nentswela nkxaso yabalawuli. Kuqwetywe amacebo obuchule okulwa nemingeni, macebo lawo aquka ukuqulunqwa kweOER esekelwe kwingcingane Yokunwenwa Kobuchule. Kunikwe iingcebiso nezimvo ezinokuqwalaselwa ngamaziko emfundo nabahlohli ngophando olusenokulandela olu. Igalelo lolu phando luyilo olucetywayo lweOER olunokwamkelwa ngamaziko emfundo avulekileyo nafundisa abafundi bekude ukuze kukhuthazwe ukusetyenziswa kweOER ngabahlohli.**

**Amagama aphambili: Imithombo Yemfundo Evulekileyo, imfundo evulekileyo efumaneka kwabakude, ukufundisa nokufunda, ukwamkelwa kweOER, iindlela zokufundisa zeODL, iimbono zabahlohli, ukwakha ukuthathela ingqalelo, iingcinga zabafundi, amaziko emfundo avulekileyo nafundisa abafundi bekude, amalungu ecandelo lokufundisa/abahlohli**

## MANWELEDZO

Zwiko zwa nnyi na nnyi zwa pfunzo (OER) ndi vhubveledzi vhuswa ha u d̩isa khethekanyo ya pfunzo nga u n̩etshedza wo vhofholowa zwiko zwa u guda zwa ndeme. Ngudo heyi yo wanulusa mbonalo ya miraq̩o ine ya funza yunivesithi kana magudedzini a Namibia ya zwiimiswa zwa pfunzo yo vulelwaho nnyi na nnyi ya u guda u kule (ODL) nga ha u shumisa OER sa n̩ila ya pfunzo. Ngudo heyi yo t̩ut̩uwedzwa nga u humbulela ha uri arali zwiimiswa zwa ODL zwo t̩anganedza OER u thivha bugu dza u gudisa dzine dza d̩ura, tshivhalo tshi re n̩tha tsha vhatu vha Namibia vha nga swikelela pfunzo nga n̩ila i linganaho. Ngudo yo sedza kha u bva kha zwiimiswa zwa nnyi na nnyi zwa ODL zwa Namibia, zwine madzina azwo avha Gudedzi la Namibia la u Guda ha Nnyi na nnyi (NAMCOL), Yunivesithi ya Namibia (UNAM) – Senthara ya Nnyi na nnyi, u Guda u kule na nga Lubuvhisia (CODEL) na Yunivesithi ya Saintsia na Thekhinolodzhi ya Namibia (NUST) Senthara ya nnyi na nnyi ya u Guda ha Tshothe (COLL).

Thyeori dzo t̩anganelaho dzi tevhelaho dzo shumiswa u tikedza ngudo iyi: thyeori ya u guda ine vhagudiswa vha t̩alutshedza na u tshenzhela zwipfi zwavho, thyeori ya u ta u guda ha iwe muṅe, thyeori ya u guda ya kuhumbulele na thyeori ya u guda ya matshilisano, thyeori ine ya dzhiela n̩tha n̩ivho na kupfesesele kwa vhagudiswa kha tshenzhemo yavho phanda ha musi vha sa athu u ya tshikoloni, thyeori ya u pfesesa u guda nga didzhithala na thyeori ine ya t̩alutshedza phimo ya mihumbulo miswa na kuphadalele kwa thekhinolodzhi. Thyeori dzo vhambedzwa na mawanwa u gaganya u tea hadzo.

Heyi ndi ngudo ya khwaṭhethivi yo khwaṭhisedzwaho nga tshiedziso tsha saintsia ya matshilisano. Data yo kuvhanganyiwa nga kha inthaviwu, u sedza hu si na u dzhenelela na u saukanya maṅwalo, na u saukanya nga kuitele kwa u humbula. Mvelelo dza ngudo heyi dzo sumbedza u sa vha na thevhekano ya zwithu vhukati ha kuvhonele kwa miraq̩o ine ya funza yunivesithi kana magudedzini na u shumiswa ha OER kha zwiimiswa zwa ODL ngei Namibia. Naho miraq̩o ine ya funza yunivesithi kana magudedzini yo sumbedza vhuvha ha vhuṭi kha u shumiswa ha OER, ho swikelelwa zwit̩uku kha u shumiswa ha OER kha zwiimiswa hu tshi itelwa u vhuelwa ha matshudeni a ODL a Namibia. Ngudo yo topola khaedu dze dza thithisa u

ṭanganedzwa ha OER kha leṭe ya tshiimiswa, u fana na ṭhahelero ya mbekanyamaitele dza tshiimiswa, ṭhahelero ya tsivhudzo, zwiṭuṭuwedzi zwa thekhinolodzhi, na thikhedzo ya ndangulo. Zwiṭirathedzhi zwo bveledzwa u amba nga ha khaedu, hu tshi katelwa na nyolo ya OER zwo ḡi sendeka nga muandadzo wa ndisedzo ya tshiedziso tsha vhubvedzi. Themendelo dza u dzhiela nṭha nga zwiimiswa na nga miradḡo ine ya funza yunivesithi kana magudedzini na khumbudzo kha ṭhoḡisiso dza tshifhingani tshidaho zwo itwa. U shela mulenzhe ha ndivho ho itwaho nga ngudo iyi ndi u kumedza nyolo ya OER uri i ṭanganedzwe nga zwiimiswa zwa ODL u thusa u shumiswa ha OER nga miradḡo ine ya funza yunivesithi kana magudedzini.

**Maipfi a ndeme:** Zwiko zwa nnyi na nnyi zwa pfunzo, pfunzo yo vulelwaho nnyi na nnyi ya u guda u kule, u guda na u funza, u ṭanganedza OER, maitete a u funza a ODL, mbonalo dza lekitshara, u fhirisa ndivho na zwikili, mbonalo dza mutshudeni, zwiimiswa zwa ODL, miradḡo ine ya funza yunivesithi kana magudedzini

## LIST OF ACRONYMS

CCBY SA	Creative Commons Share Alike
CES	Centre for External Studies
CODeL	Centre for Open, Distance and eLearning
COL	Commonwealth of Learning
COLL	Centre for Open and Lifelong Learning
DHET	Department of Higher Education and Training
EFA	Education for All
ETSIP	Education and Training Sector Improvement Plan
GNU	General Public Licence
GPL	General Public Licence
HEI	Higher Education Institution
HSM	House Style Manual
ICDE	International Council for Open and Distance Education
ICT	Information Communication Technology
ID	Instructional Developer
JSC	Junior Secondary Certificate
LMS	Learning Management System
MOOC	Massive Open Online Course
MOODLE	Modular object-orientated dynamic learning environment
NAMCOL	Namibian College of Open Learning
NBC	Namibian Broadcasting Cooperation
NDP4	National Development Plan 4
NIED	National Institute for Education Development
NOLNeT	Namibian Open Learning Network Trust
NQA	Namibia Qualifications Authority
NQF	National Qualification Framework
NSSCO	Namibian Senior Secondary Certificate Ordinary Level
NUST	Namibian University of Science and Technology
NUST-COLL	Namibian University of Science and Technology Centre of Open learning
ODL	Open Distance Learning
OECD	Organisation for Economic Co-operation and Development

OER	Open Educational Resources
OER4OS	OER for Open Schooling
PETE	Pre-Entry to Tertiary Education
PoN-COLL	Centre for Open and Lifelong Learning at the Polytechnic of Namibia
PQA	Programmes and Quality Assurance
SAIDE	South African Institute for Distance Education
UK	United Kingdom
UNAM	University of Namibia
UNAM-	University of Namibia Centre for Open Distance and eLearning
CODEL	
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNISA	University of South Africa
USA	United States of America
WWW	World Wide Web
ZPD	Zone of Proximal Development

## **DEFINITION OF KEY TERMS**

This section defines terms and concepts which are key for the study with the purpose of placing the terms used throughout the study in an appropriate perspective and to give clarity to the phenomenon under study.

### **Open Educational Resources**

Open Educational Resources, referred to as OER in this study, are defined by UNESCO as resources that are made freely available for use by the public and can be adapted, reused and shared without copyright fees (UNESCO, 2012). In this study, OER refers to any educational resource made available online to be used by learners, tutors, lecturers and any member of the public for free or without having to apply for a copyright license. OER are released under a Creative Commons licence which allows individuals and institutions to give permission for their creative work to be used for free. Examples of OER include: full courses, syllabi, audio and video materials, lectures and many more resources found in digital format.

### **Open and Distance Learning (ODL)**

The term open and distance learning is defined as the education system whereby teaching is done by someone who is not at the same place with the learner and whereby a learner studies at his/her own pace (UNESCO, 2002). It is, thus a system of providing flexibility in learning by offering education to learners geographically removed from the educational institution. The Commonwealth of Learning on the other hand, refers to ODL as a learner-centred educational system that involves multiple media for delivery of instruction including face-to-face tutorials (COL, 2015). This study refers to ODL as a system whereby out-of-school youth and adults are given opportunities to learn both at secondary and tertiary levels through open modes of delivery such as online and use of multimedia. In the context of this study, ODL refers to the system where a learner-centred approach is used to allow access to education wherever and whenever possible through the use of information and communication technologies (ICTs).

## **ODL Institutions**

ODL institutions as per this study, are institutions which offer an open distance learning education system, whether at secondary or at tertiary education level.

## **Digital Pedagogy**

This study refers to digital pedagogy or technology-enabled learning as way of promoting a constructivist approach to learning. Digital pedagogy as per this study refers to the use of technology to advance learning, a technological-enabled interaction between learners and teachers that facilitates co-construction of knowledge. Digital pedagogy refers to the use of internet and social networks as a source of knowledge through collaborative engagements. This study promotes OER as a digital pedagogical approach that can be embraced, especially in a distance education system, where time and space does not limit learning.

Faculty members referred to in this study include all academic staff, full-time and part-time employed by the ODL institutions in Namibia.

## **Learner**

In this study, the term learner is used to represent any out-of-school youth or adult who has enrolled for an open distance learning programme.

## TABLE OF CONTENTS

<b>DECLARATION</b> .....	<b>ii</b>
<b>ETHICS STATEMENT</b> .....	<b>iii</b>
<b>ETHICAL CLEARANCE CERTIFICATE</b> .....	<b>iv</b>
<b>DEDICATION</b> .....	<b>vi</b>
<b>ACKNOWLEDGEMENTS</b> .....	<b>vii</b>
<b>ABSTRACT</b> .....	<b>viii-xii</b>
<b>LIST OF ACRONYMS</b> .....	<b>xiii-xiv</b>
<b>DEFINITION OF KEY TERMS</b> .....	<b>xv-xvi</b>
<b>LIST OF FIGURES</b> .....	<b>xxiii</b>
<b>LIST OF TABLES</b> .....	<b>xxiv</b>
<b>CHAPTER 1: THE INTRODUCTION AND OVERVIEW</b> .....	<b>1</b>
1.1 INTRODUCTION.....	1
1.2 THEORETICAL FRAMEWORK .....	2
1.3 PROBLEM STATEMENT .....	5
1.4 RESEARCH QUESTIONS .....	8
1.5 THE AIMS AND OBJECTIVES OF THE STUDY .....	8
1.6 RESEARCH PARADIGM .....	9
1.7 RESEARCH DESIGN AND METHODOLOGY .....	10
1.7.1 Population and Sample .....	11
1.7.2 Data Collection .....	11
1.7.3 Data Analysis.....	12
1.8 TRUSTWORTHINESS .....	12
1.9 ETHICAL CONSIDERATIONS.....	13
1.10 SIGNIFICANCE OF THE STUDY .....	14
1.11 LIMITATIONS OF THE STUDY .....	15
1.12 CHAPTER OUTLINE.....	15
<b>CHAPTER 2: BACKGROUND AND LITERATURE REVIEW</b> .....	<b>17</b>
2.1 INTRODUCTION.....	17

2.2	THE USE OF OPEN EDUCATIONAL RESOURCES IN EDUCATION	18
2.3	BENEFITS OF OPEN EDUCATIONAL RESOURCES.....	22
2.4	THE IMPACT OF OPEN EDUCATIONAL RESOURCES ON STUDENT PERFORMANCE AND SELF-DIRECTED LEARNING .....	24
2.5	STRATEGIES TO PROMOTE THE USE OF OPEN EDUCATIONAL RESOURCES IN TEACHING AND LEARNING.....	26
2.6	CHALLENGES IN THE USE OF OPEN EDUCATIONAL RESOURCES .....	28
2.6.1	Challenges in the Use of Open Educational Resources by Faculty Members .....	30
2.6.2	Challenges in the Use of Open Educational Resources by Learners .....	32
2.6.3	Challenges of Open Educational Resources Sustainability .....	33
2.7	LEGISLATIVE FRAMEWORK: OPEN EDUCATIONAL RESOURCES IN CONTEXT .....	34
2.7.1	Open Educational Resources within the ODL System in Namibia .....	34
2.7.2	The Namibian Government ICT Policy .....	36
2.8	OPEN EDUCATIONAL RESOURCES GLOBALLY .....	38
2.8.1	Open Educational Resources in Developed Countries.....	38
2.8.2	Open Educational Resources Activities in Developing Countries .....	39
2.8.3	Open Educational Resources within the Namibian Context .....	40
2.9	THEORIES UNDERPINNING THE STUDY .....	42
2.9.1	Transformative Learning Theory.....	42
2.9.2	Heutagogy Learning Theory .....	45
2.9.3	Cognitive Learning Theory and Social Learning Theory .....	48
2.9.4	Social Constructivism Learning Theory .....	51
2.9.5	Connectivism Theory.....	52
2.9.6	Diffusion of Innovations Theory .....	54
2.10	CONCEPTUAL FRAMEWORK.....	58
2.11	CONCLUSION .....	59
<b>CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY .....</b>		<b>61</b>
3.1	INTRODUCTION.....	61
3.2	THE RESEARCH PARADIGM .....	61

3.3	THE RESEARCH APPROACH .....	64
3.4	THE RESEARCH DESIGN .....	66
3.5	POPULATION AND SAMPLING .....	67
3.5.1	Description of Research Sites .....	67
3.5.2	Sampling Procedure .....	69
3.6	DATA COLLECTION.....	71
3.6.1	Data Collection Instruments.....	71
3.6.2	Data Collection Procedures .....	75
3.7	DATA ANALYSIS .....	76
3.8	TRUSTWORTHINESS.....	78
3.8.1	Credibility.....	78
3.8.2	Transferability .....	79
3.8.3	Dependability.....	79
3.8.4	Confirmability.....	80
3.9	ETHICAL CONSIDERATIONS.....	81
3.10	CONCLUSION .....	81
<b>CHAPTER 4: DATA ANALYSIS, INTERPRETATION AND PRESENTATION OF FINDINGS .....</b>		<b>82</b>
4.1	INTRODUCTION.....	82
4.2	PARTICIPANT DEMOGRAPHICS .....	82
4.2.1	NAMCOL Participants.....	83
4.2.2	CODeL Participants.....	83
4.2.3	COLL Participants .....	84
4.3	PRESENTATION OF FINDINGS FROM INTERVIEWS.....	87
4.3.1	Theme 1: OER Awareness among Faculty Members.....	88
4.3.2	Theme 2: The Use of OER by Faculty Members .....	92
4.3.3	Theme 3: Faculty Members' Perception of the Use of OER ....	96
4.3.4	Theme 4: Faculty Members' Perception of the Benefits of OER.....	102
4.3.5	Theme 5: Challenges in the Use of OER.....	108
4.3.6	Theme 6: Strategies to Promote OER Usage.....	113
4.4	NON-PARTICIPANT OBSERVATIONS .....	117
4.4.1	NAMCOL .....	118

4.4.2	CODeL.....	120
4.4.3	COLL .....	122
4.5	DOCUMENT ANALYSIS .....	124
4.5.1	Theme 1: Reference to Open Educational Resources .....	125
4.5.2	Theme 2: Adoption of OER by the Institutions .....	126
4.5.3	Theme 3: Use of OER in Teaching and Learning .....	126
4.5.4	Theme 4: Training of Faculty Members on OER .....	127
4.5.5	Theme 5: Guidelines in place for the Development of Learning Materials .....	127
4.5.6	Theme 6: Learner Support Strategies .....	128
4.5.7	Theme 7: OER Benefits.....	128
4.5.8	Analysis of Learning Management Systems (LMSs) .....	129
4.6	CONCLUSION .....	130
<b>CHAPTER 5: DISCUSSION OF FINDINGS AND CONCLUSIONS .....</b>		<b>132</b>
5.1	INTRODUCTION.....	132
5.2	DISCUSSION OF FINDINGS.....	132
5.2.1	Sub-Question 1: What are the trends in the scholarly literature about OER and what are the theory bases for the usage of OER in teaching and learning? .....	132
5.2.2	Sub-Question 2: To what extent, if any, are faculty members empowered to use OER in their classes? .....	137
5.2.3	Sub-Question 3: What are the perceptions and attitudes of faculty members regarding the benefits of using OER in facilitating learning? .....	139
5.2.4	Sub-Question 4: What are the challenges regarding the use of OERs in teaching and learning by faculty members of Namibian ODL institutions? .....	148
5.2.5	Sub-Question 5: What strategies/OER design can be developed to improve faculty members' proficiency regarding the use of OER at ODL institutions? .....	156
5.3	SYNTHESIS OF RESEARCH FINDINGS .....	158
5.3.1	Sub-question 2: To what extent are faculty members empowered to use OER in their classes? .....	158
5.3.2	Sub-question 3: What are the perceptions and attitudes of faculty members regarding the benefits of using OER in facilitating learning? .....	158

5.3.3	Sub-question 4: What are the successes and challenges faced by faculty members regarding the use of OER in teaching and learning? .....	159
5.4	CONCLUSION .....	161
<b>CHAPTER 6: THE OER DESIGN PROPOSED FOR THE ADOPTION OF OER WITHIN THE ODL INSTITUTIONS IN NAMIBIA .....</b>		<b>164</b>
6.1	INTRODUCTION.....	164
6.2	THE RESEARCHER'S INTENTION WITH THE FINDINGS .....	164
6.3	THE OER DESIGN PROPOSED FOR THE ADOPTION OF OER WITHIN THE ODL INSTITUTIONS IN NAMIBIA.....	165
6.3.1	The Conceptual Framework for the Proposed OER Design ..	167
6.3.2	The OER Design proposed for the adoption of OER within the ODL institutions in Namibia .....	169
6.4	CONCLUSION .....	174
<b>CHAPTER 7: SCHOLARLY REFLECTIONS ON THE RESEARCH PROCESS AND RECOMMENDATIONS FROM THE STUDY .....</b>		<b>175</b>
7.1	INTRODUCTION.....	175
7.2	OVERVIEW .....	175
7.3	SUMMARY OF THE CRITICAL FINDINGS .....	177
7.4	CONTRIBUTION TO THE BODY OF KNOWLEDGE.....	179
7.5	LIMITATIONS AND DELIMITATIONS OF THE RESEARCH STUDY	181
7.6	REFLECTIONS .....	183
7.6.1	Reflection on the Methodology .....	183
7.6.2	Reflection on the Conceptual Framework.....	185
7.6.3	Reflection on the development of the proposed OER design	186
7.7	RECOMMENDATIONS.....	187
7.7.1	Recommendations for Policy Development and Implementation .....	187
7.7.2	Recommendations for the Creation of Awareness and Enhancing the Proficiency of Faculty Members on the Use of OER.....	188
7.7.3	Recommendations for the Use of OER by Faculty Members	189
7.7.4	Recommendations for addressing Institutional Preparedness .....	190
7.7.5	Recommendations for NAMCOL .....	191

7.7.6	Recommendations for the Way Forward .....	191
7.7.7	Recommendations for Further Research.....	192
7.8	A FINAL WORD .....	193
<b>REFERENCES.....</b>		<b>194</b>
<b>APPENDICES.....</b>		<b>218</b>
	Appendix A: NAMCOL Request permission to conduct research .....	218
	Appendix B: NAMCOL Approval letter .....	221
	Appendix C: UNAM-CODEL Request permission to conduct research.....	222
	Appendix D: UNAM-CODEL Approval letter.....	225
	Appendix E: NUST-COLL Request permission to conduct research .....	226
	Appendix F: NUST-COLL Approval letter .....	229
	Appendix G: Participant information letter.....	230
	Appendix H: Participant consent form.....	235
	Appendix I: Interview Guide .....	237
	Appendix J: Observation checklist .....	239
	Appendix K: Document analysis guideline .....	241
	Appendix L: Proof of editing .....	243

## LIST OF FIGURES

Figure 2.1: The integrated conceptual framework of the study .....	59
Figure 4.1: Graphical representation of the participants' demography .....	87
Figure 4.1: Notesmaster Namibia interface (Source: www.Notesmaster. Namibia (2019) .....	130
Figure 6.1: Rogers' five stages of the innovation adoption process (Rogers, 2003) .....	166
Figure 6.2: The conceptual framework for the proposed OER design.....	167
Figure 6.3: The OER design proposed for the adoption of OER within ODL institutions in Namibia (Karipi, 2019) .....	170

## LIST OF TABLES

Table 2.1: Rogers' 5 stages of the innovation adoption process (Rogers, 2003) ....	56
Table 2.2: Summary of the theories that underpin this study .....	56
Table 3.1: An overview of research sites .....	69
Table 4.1: Summary of participant demographic information .....	85
Table 4.1: Document analysis .....	125

# CHAPTER 1: THE INTRODUCTION AND OVERVIEW

## 1.1 INTRODUCTION

Research has confirmed that the accessibility of learning materials can directly influence the value of education. In order to improve the quality of educational instruction, institutions have to invest in materials development, and the most cost-effective approach is to harness Open Educational Resources (OER) (Hoosen, Butcher, Hornsby & Ngugi, 2012). OER, resources that are freely available for use by the entire public, can be adapted, reused and shared without copyright fees (UNESCO, 2012), are mostly found in digital format and can include resources such as video clips, audios, animated pictures and full textbooks. With the escalating demand for access to quality education, lack of financial resources and ongoing rollout of Information Communication Technologies (ICTs), OER proves to offer the solution to equitable access to inclusive and lifelong learning through Open Distance Learning (ODL).

The OER concept is relatively new in Namibia. The Commonwealth of Learning (COL) introduced the concept through the OER project for Open Schools in 2008. I am a programme developer for the Namibian College of Open Learning (NAMCOL), and was part of the OER project development teams of the COL OER project. Together with a few subject expert teachers selected from formal schools, we developed OER in selected secondary school level subjects, using different multimedia such as print, video, audio and animation. Subsequently, I have recognised the potential of OER in enhancing access to quality learning resources for the Namibian ODL system. Given the fact that faculty members have to play a central role in the creation and usage of OER, I have developed a desire to investigate the perceptions of the Namibian ODL institutions' faculty members towards the use of OER in teaching and learning.

The Namibian government acknowledges that OER can reduce the cost of education and improve access, which thus supports the adoption of the 2012 Paris Declaration that directed all governments to release all public-funded resources as OER (UNESCO, 2012). These OER include resources developed for state-funded, conventional as well as distance education institutions. In Namibia, there are three public institutions which provide Open Distance Learning (ODL) programmes, namely, the Namibian College of Open Learning (NAMCOL), the Centre for Open, Distance, and

eLearning (UNAM-CODEL)<sup>1</sup> at the University of Namibia and the Centre for Open and Lifelong Learning at the University of Science and Technology (NUST-COLL). NAMCOL offers open schooling programmes to Grade 10 and 12 learners who wish to improve their grades, as well as tertiary programmes. These government-funded institutions, in collaboration with the Ministry of Education, established a network called Namibian Open Learning Network Trust (NOLNeT) in 2001, through which all activities are coordinated in order to avoid duplications of services (Ngatjizeko, 2014). The NOLNeT objective is to develop, support, coordinate and maximise resources to provide quality, inclusive, flexible, relevant, innovative and sustainable ODL programmes and services. To adhere to this purpose, NOLNeT has developed national policies, namely, the National Open and Distance Learning policy and an OER draft policy (Möwes, 2008). From the experience of being part of OER development process and being a senior manager for open schooling at NAMCOL, I have noticed that, despite the observable awareness among faculty members about OER and the existence of NOLNeT policies, very little is currently being done to foster the use of OER within Namibian ODL institutions. This study anticipates to establish the extent to which the faculty members of Namibian ODL institutions adopt OER and formulate strategies or frameworks to empower them on the proficient of use OER in teaching and learning.

## **1.2 THEORETICAL FRAMEWORK**

Taking into consideration the context in which this study is situated, various theories support OER as a model for technology-enhanced learning and have been deemed suitable to underpin this study. The theories are Transformative Learning Theory, Heutagogy Learning Theory, Cognitive Learning Theory and Social Learning Theory, Constructivism Learning Theory, Connectivism Theory of Siemens and Downes (2004) and the Diffusion of Innovations Model proposed by Rogers (2003). The researcher adopted these theories to form an integrated theoretical frame to foreground and support the use of OER as digital pedagogical technology in enhancing teaching and learning.

Transformative learning theory is adopted to provide a theoretical framework of how

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<sup>1</sup>The term CODEL and COLL will be used throughout the study.

adults learn (Mezirow, 1991) through the process of change in three dimensions – psychological or change in understanding of self, convictional or revision of belief systems and behavioural change or changes in lifestyle. The theory is used in this study to understand how faculty members, as adults, learn and how their perceptions are changed through the process of adopting OER for teaching and learning.

Another theory explored by this study is the heutagogy learning theory grounded in the concept of self-determined learning (Hase, 2013), works hand-in-hand with transformative learning and is a theory that applies to new technologies, especially in the field of distance education.

Heutagogy focuses on the learner as the manager of his/her own learning (Hase & Kenyon, 2013). OER is a concept that encourages the learning-how-to-learn approach, developing in the learners the autonomy to manage their own learning, building capacity and their capabilities. The heutagogical approach is key to the success of OER adoption by ODL institutions. OER provides opportunities for learners to develop self-determination, which is a requirement for employment in the current job market.

In addition, the cognitive learning theory and social learning theory proposed by Albert Bandura (1977), addresses the importance of facilitated learning (Terras, Ramsay & Boyle, 2013) with emphasis on the role of communication networks and how learners learn (Redmond, 2016). This study focuses on the role faculty members play in facilitating learning through the use of digital open educational resources, hence cognitive learning theory and social learning theory ties in well with the purpose of this study.

A key feature of the theories of constructivism and social constructivism is learning through actively creating knowledge out of experience. This means that learning is not acquired but constructed through self-direction and social interaction through collaborative learning (Knestrick, 2012), and which is determined by social and cultural contexts and environments. Constructivism and social constructivism relate to the purpose of this study by way of promoting self-study and the use of the interactive web. If the ODL institutions in Namibia adopt OER as a pedagogical approach, learners will be able to construct more knowledge through collaborative networks.

Connectivism theory addresses the importance of media in enabling network connections between people and providing a platform for information (Goldie, 2016:1069). Moreover, the theory of connectivism emphasises the online OER content via internet connections, which have created new opportunities for people to learn and share information across the World Wide Web (www) .

Rogers' diffusion of innovations theory aids in understanding what informs the views of faculty members concerning OER usage in Namibian ODL institutions. Rogers' model further assists in understanding the processes in which innovation (OER) is communicated within the ODL institutions. The assumption for this study is that faculty members for ODL institutions should adopt OER as an innovation through communication channels within the institutions. Rogers' diffusion of innovation theory proposes four elements that influence the rate at which an innovation can spread within an institutions; namely, time, channels of communication, innovation itself such as OER, as well as a social system (de Hart, Chetty & Archer, 2015).

Much of the literature available in the field of OER focuses on how OER is created, shared and licensed but not how OER is used. Issues about funding and various OER initiatives are also well documented in the literature (McGreal, 2017; COL, 2017) and there are some studies that indicate students' appreciation of engaging in the creation of their own content using OER (Petrides, Jimes & Detzner, 2011). There is, however, a significant gap in the literature with regard to the use of OER by faculty members in ODL institutions. The Organisation for Economic Co-operation and Development (OECD) has identified a number of OER projects which have developed over 3 000 open courseware courses from various universities (Orr, Rimini & Van Damme, 2015). The OECD further noted that the majority of OER resources have originated from English-speaking countries in the developed world, which implies that there is little evidence about OER development in developing countries such as Namibia.

As the OER movement is fairly a new concept, particularly in developing countries, there is a paucity of research studies on the use of OER in distance education in Namibia, which is not surprising as little research has been conducted in Namibia in this field since the term OER has emerged. There is however, evidence of OER initiatives in some developing countries. In 2008, The Shuttleworth Foundation supported a meeting in South Africa where representatives showed their commitment

to OER (Bliss & Smith, 2007). A current OER initiative in developing countries is OER Africa, established by the South African Institute for Distance Education (SAIDE) to spearhead development and use of OER in higher education systems in Africa. This project supports collaboration with African higher education institutions to develop professional competences and skills in creating and using OER to improve the quality of teaching and learning (OER Africa, 2017).

### **1.3 PROBLEM STATEMENT**

The Open Educational Resources (OER) movement is barely 20 years old (Bliss & Smith, 2017). From small beginnings in a number of American universities, the need for open access and sharing intellectual content with no barriers was born. The Hewlett Foundation has, since 2001, provided major funding to develop and extend the reach and effectiveness of OER believing it to have “the potential as a powerful tool for reducing inequalities of educational opportunity and promoting innovative strategies to improve educational problems” (Bliss & Smith, 2017:10). Thus, OER are currently topping the list for receiving major investment globally.

OER are instructional materials made available under free-to-use licences which allows the resources to be shared and reused without any copyright restrictions. OER can mostly be accessed via the internet, thus increasing flexibility in education by providing a platform for studying to take place anywhere, anytime and at no cost (Onaifo, 2016). OER provides opportunities to ODL by increasing access to quality learning content while reducing the cost of education. Of importance in African countries, OER can broaden entry to education to disadvantaged learners especially those situated in isolated areas or have obligations of work and families that prevent them to join educational institutions (Butcher, 2015; Freitas, 2012). However, higher education institutions (HEIs) as well as Open Distance Learning (ODL) institutions have not as yet regarded OER as critical in improving their programme offering (Jacobi & van der Woert, 2012). The supply of high-quality learning resources for the facilitation of lifelong learning is thus being hampered. In Namibia, open distance learning is dedicated to support *Education for All* (EFA) goals and contribute to Vision 2030 in realising the growth of a knowledge-based economy (Kapenda, Kanyimba, Claassen & Mbulu, 2016) by empowering people with the knowledge, skills and values. Harnessing OER in ODL can reduce educational challenges that result from

geographical separation, conventional structures and work commitments which usually prevent people from accessing necessary education and training (Sukon, Boojihawon, Gatsha & Panchoo, 2012). But despite the effort made by UNESCO and the Commonwealth of Learning (COL) in promoting Open Educational Resources for widening access to higher education and life-long learning (UNESCO, 2016), and although many Commonwealth countries have adopted OER policies, very little has been achieved regarding to the implementation and use of OER in ODL institutions in Namibia.

Since the introduction of OER in Namibia by the Commonwealth of Learning in 2008, only the Namibian College of Open Learning, amongst the three ODL institutions has developed an institutionalised OER policy based on the NOLNeT OER draft policy. Equally, there is no report available on the use of the OER by faculty members of the three institutions, including NAMCOL. This notion has been confirmed by a report on lifelong learning programmes in Namibia by Kay and Bacsich (2016). As a result, educational institutions continue to use print-based materials as their main source of learning content, which are very costly and difficult to distribute to wider learner populations (Lwoga, 2012; Nyandara, 2012 cited in Mtebe & Raisamo, 2014). Research further shows that many faculty members have a poor understanding of OER, some interpret 'open' as free and take it for granted that all free resources are OER, while some reason that open resources are the same as open source which refers to software (Stansbury, 2015). One major factor contributing to integration failure of OER in institutions, is the role of institutional staff as developers and users of teaching and learning content. As institutional staff play a major role in the process of harnessing OER in ODL, it is therefore crucial to understand their perceptions and views towards OER. This study intends to investigate the level at which faculty members of Namibian ODL institutions embrace OER, and what strategies/framework/OER design can be developed to empower their proficiency regarding the use of OER.

In Namibia, although the OER concept is relatively new, there have been projects in which OER were developed. Major funding has in recent years been invested by NAMCOL in the development of OER, in which I have participated. Namibia has also put policies in place that give reference to the need for sharing resources between

institutions to cut cost and avoid duplication of efforts (Möwes, 2008). The question that this study tries to answer is whether the OER developed in the country or elsewhere, have been adopted and are being used as part of the instructional system of the institutions in Namibia and whether all the faculty members of the institutions are aware of the existence of OER. I believe that if OER's potential is enhanced, Namibian learners, especially the distance learners, could equitably reap the benefit of the education system without having to feel inferior to those in conventional systems. With extensive challenges faced by the distance education system and with the escalating costs of education, embracing OER-use could bring a major breakthrough to providing educational opportunities to a wider range of people.

In Namibia, many distance learners come from poor backgrounds and the majority live in remote areas with limited resources. Although the Namibian government offers free secondary education, learners who study through distance education still needs to pay for their secondary education. At tertiary level, the government allocates major funding to scholarships and loans for students to afford the high fees demanded by higher education institutions. The biggest chunk of the fees is allocated to study materials. In many cases, learners tend to opt for cheaper low-quality materials instead of the latest edition textbooks, which could result in poor quality education and consequently, devastating effects on the economy of a country. With OER, all learners would be exposed to and could receive the same content at no cost and the number of people registering for learning at higher education institutions could increase.

Open educational resources, as innovative strategies and educational content, offer freedom in that they offer free access to content, are disseminated for free, can be remixed to suit the user and the context needs. However, the role that faculty members play in the preparation and the packaging of the learning content is critical; hence, the perceptions and experiences of faculty members in the use of OER are important to investigate and explore.

## **1.4 RESEARCH QUESTIONS**

Against the background outlined above, the main research question is as follows:

**To what extent, do faculty members of Namibian ODL institutions use OER, and what strategies/OER design can be developed to empower faculty members regarding the usage of OER?**

In order to explore the main research question further, the following sub-questions were formulated:

1. What are the trends in the scholarly literature about OER and what are the theory bases for the usage of OER in teaching and learning?
2. To what extent are faculty members empowered to use OER in their classes?
3. What are the perceptions and attitudes of faculty members regarding the benefits of using OER in facilitating learning?
4. What are the successes and challenges faced by faculty members regarding the use of OER in teaching and learning?
5. What strategies/OER design can improve faculty members' proficiency regarding the use of OER at ODL institutions?

## **1.5 THE AIMS AND OBJECTIVES OF THE STUDY**

This study aims to explore the Namibian ODL institution faculty members' use of OER, and what strategies/OER design can be developed to empower faculty members' proficiency regarding the usage of OER.

The importance of acquiring relevant information regarding this study may inform the Namibian authorities on cultivating appropriate professional development for faculty members in ODL institutions. The data can also be used to direct further research studies on the usage of OER elsewhere.

The main objectives of this study are:

- to explore the trends in the scholarly literature about OER and to ascertain theories that are foregrounding the usage of OER in teaching and learning,

- to find out whether faculty members in ODL institutions in Namibia are empowered in creating and using OER in teaching and learning,
- to determine the perceptions and attitudes of faculty members on the benefits of OER in teaching and learning,
- to find out the success and challenges with regard to the use of OER by faculty members of Namibian ODL institutions, and
- to propose strategies/OER design to improve faculty members' proficiency on the use of OER at ODL institutions.

## **1.6 RESEARCH PARADIGM**

Research paradigms as belief systems, guide how the researcher carries out research, and according to Chilisa (2011) and (Kivunya, 2017), paradigms are classified into four basic categories: namely, positivism paradigms, transformative paradigms postcolonial indigenous paradigms and interpretivism paradigms. The researcher, however, adopted the interpretivist paradigm since the purpose of the study is to understand how faculty members use OER in teaching and learning. Interpretivist paradigm was found relevant to this study as it believes that there is no single reality but many created by individuals. Although the interpretivist paradigm is biased in nature, it is flexible and cares about accommodating personal views (Bhattacharjee, 2012), is open to seize meaning through interactions (Edirisingha, 2012) and creates an understanding of what others perceive as reality (Harrington, 2014). The interpretative researcher tries to understand participants' experiences using their natural settings (Creswell, 2014).

Therefore, this study adopted the interpretivist paradigm (Creswell, 2012) as the aim of the study is to make sense of participants' perception and experiences on the usage of OER in teaching and learning by carefully interacting and listening to them. The interpretive paradigm facilitates exploration of the use of OER as perceived by distance learning faculty members in a natural setting. The positivist paradigm, although equally important, cannot be dominantly used to support this study as it embraces more objectivity towards reality (Creswell, 2012). Secondly, the positivist paradigm sees the researcher as an external observer who controls the research

process. This study, thus through the interpretivist paradigm, seeks to understand the perceptions of the faculty members within their own contextual realities which cannot be explored objectively.

## **1.7 RESEARCH DESIGN AND METHODOLOGY**

The aim of this study is to engage participants in order to hear their life experiences in the usage of OER in Namibian open and distance learning institutions. In addition, this study aims to discover the views, attitudes and perceptions of the faculty members on the use of OER as instructional materials and to propose an OER design to guide the adoption and use of OER by the ODL institutions.

Thus, in line with an interpretivist paradigm, this study follows a qualitative approach, as it allows for the probing of faculty members' perceptions of and experience on the usage of OER in ODL institutions. Qualitative research refers to all-inclusive, subjective, self-discovery processes used to describe and interpret the phenomena (Gray, 2013). The assumption of the researcher implies that the people being studied live the experiences and realities of the situation, hence the knowledge resides in their views. The use of a qualitative approach for this study is consistent with the theoretical perspective (constructivist) employed in this study. The qualitative approach and the constructivist theory hold the views that reality is socially constructed (Taylor, 2014). A qualitative approach thus allows the researcher the opportunity to intensely analyse the views of the faculty members on the use of OER in Namibian ODL institutions.

The institutional case study method was deemed appropriate for this study to draw participants from diverse backgrounds within an institution, for the purpose of eliciting different views to strengthen the research. Case study method, used for exploring and observing a phenomenon in an individual or a particular group, is important as it allows the researcher to limit the subject under study within a context by selecting a small number of participants in an area (Willis, 2014). This study finds case study appropriate as it allows the researcher to engage the participants in their real-life settings in which the researcher is involved and immersed (Wargo, 2014). In this study the case is bounded within specific ODL institutions in Namibia (NAMCOL, UNAM-CODEL, and NUST-COLL) and intends to explore to what extent, if any, Namibian ODL institutions faculty members use OER, and what strategies/framework/OER

design can be developed to empower faculty members' proficiency regarding the usage of OER, hence the use of a case study design is considered appropriate.

### **1.7.1 Population and Sample**

The Namibian ODL institution employ large groups of faculty members who are responsible for various academic functions within each of their institutions. This study however, targets the faculty members, both full-time and part-time, positioned in the teaching and learning functional units such as programme developers, distance education coordinators, instructional designers, academic support officers and part-time tutors and lecturers of the three ODL institutions in Namibia, namely, NAMCOL, UNAM-CODEL and NUST-COLL.

The process of selecting participants relevant for the study is called sampling (Patton, 2015). A sample is a subset of a population that is selected to represent the characteristics of the entire population (Cherry, 2017). This study follows a qualitative approach; therefore, a purposive sampling technique is appropriate. The sample consists of the total of fifteen full time faculty members, five per institution as well as nine part-time lecturers or tutors, three per each institution. This study consists of twenty-four participants in total.

Participants of this study were purposefully selected based on the following criteria:

- Three part-time faculty members from each institution, namely, NAMCOL, CODEL and COLL, who are involved in teaching and learning and have been with the same institution for not less than one year.
- Five full-time faculty members from each institution, who are responsible for teaching and creating learning resources.

### **1.7.2 Data Collection**

Qualitative methods of data collection include a number of instruments such as questionnaires, interviews, focus groups, observations and document analysis (Creswell, 2014). Multiple methods are recommended for qualitative data collection for triangulation purposes. The only way to validate the knowledge is through the real voices of the participants (Sutton & Austin, 2015) and as such, the study employed the following data collection instruments: face-to-face semi-structured interviews with

each participant, non-participatory observations of participants using OER in their teaching and document analysis related to OER policy documents. A methodological triangulation approach, by way of collecting data using different tools, is adopted for this study to enhance the quality of data and subsequently to enrich the quality of the research findings (Guion, Diehl & McDonald, 2011).

An in-depth description of the data collection process and procedures followed is given in Chapter 3.

### **1.7.3 Data Analysis**

Data were gathered through face-to-face semi-structured interviews, non-participatory observations and documents analysis. The recorded data were organised and then transcribed verbatim to allow for analysis. Once the data is transcribed was then organised and coded. Thereafter, themes and categories in which data were grouped were established. By carefully studying the themes and identifying how each is related to the other and compared to a literature review to answer the research question, the data is able to be analysed. Given the purpose of this study to develop an OER design for adoption by ODL institutions in Namibia and elsewhere, the analysis included a second level of integration and synthesis of findings to align the findings to the integrated conceptual framework of the study.

An in-depth description of the data analysis procedure is given in Chapter 3.

## **1.8 TRUSTWORTHINESS**

Trustworthiness in research refers to confidence that can be attached to processes used to collect data (Connelly, 2016). This study used the criteria proposed in the literature, namely, credibility, dependability, transferability and confirmability (Shenton, 2004) to ensure the trustworthiness of data. Credibility in research refers to the confidence in the truthiness of the findings and whether enough justification was given for any deviations (Connelly, 2016). Dependability on the other hand, is the ability of the findings to be repeated in similar studies (Shenton, 2004). Transferability involves the replicability of the findings to other situations (Shenton, 2004), while in confirmability, the researcher stresses the objectivity of the findings through triangulation (Shenton, 2004). The detailed descriptions of strategies employed to ensure that the criteria are met was given in Chapter 3.

One of the main strategies of ensuring credible research findings is prolonged engagement between the researcher and the participants (Creswell, 2012). As a member of one of the institutions being investigated, prolonged engagement with the participants is easily facilitated. Before data collection, all participants are contacted and met on individual basis in order to know them better and to establish a favourable rapport. According to Shenton (2004:69), credibility of data is enhanced when a detailed description of a phenomenon is given. A brief description of OER was given in this chapter, and is elaborated on in Chapter 2, to give readers an opportunity to understand the phenomenon and thus authenticate the findings.

Another key strategy, discussed earlier, and used in this study to ensure credibility of data is the use of triangulation methods in data collection. Triangulation is the process of validating data through cross verification using more than one method of data collection.

## **1.9 ETHICAL CONSIDERATIONS**

Honesty and integrity are an integral part of research. This is done to recognise and protect the rights of human subjects (Creswell, 2013). Research ethics entails principles and values that any researcher should abide to when conducting a research study (Patton & Cochran, 2002).

At the start of the research, an ethical clearance certificate from UNISA is needed in order to conduct research. Written permission to carry out the research study is also required from all heads of institutions. In addition, all participants of the study are required to sign consent forms to show their willingness to participate voluntarily in the study and also acknowledge that they have the freedom to withdraw their participation at any time with no consequence.

Anonymity and confidentiality need to be maintained throughout the study by not revealing actual names of the participants. To ensure confidentiality, participants' responses are used for academic purposes and for further research. Finally, all sources cited in the study are listed under references.

## **1.10 SIGNIFICANCE OF THE STUDY**

The significance of this study is in its intention to examine and reveal the perceptions, views and attitudes of faculty members of ODL institutions in Namibia on the use of OER. This study further intends to investigate, analyse and explain the faculty members' attitudes towards using OER, that is, factors that hamper OER usage in ODL institutions, including challenges and benefits experienced by faculty members in integrating OER in instructional activities. It also investigates the characteristics associated with faculty members who successfully make use of OER in facilitating teaching and learning. The significance of the problem is mainly focused at drawing informed conclusions based on the study findings and crafting strategies or a framework that can be used to empower faculty members' proficiency regarding the usage of OERs and the adoption of OER to promote the sustenance of OER usage in open distance learning by faculty members.

As the researcher, I hope that the findings of this study can be applied to uplift the competence and proficiency of faculty members of the ODL institutions regarding OER-use in teaching and learning. Using OER is critical to increase access and equity in the provision of ODL as it has the potential as to address issues of inequalities in education (Bliss & Smith, 2007). So far, much has been done with regard to awareness creation and development of OER; however, little consideration has been given to the role of faculty members in integrating OER in Namibian ODL institutions. This study plays a role in filling the literature gap which exists with regard to the faculty members' perceptions and the use of OER in ODL institutions in Namibia and beyond. The findings of the research enable the researcher to propose an OER design model for the use of OER in Namibian ODL institutions. Moreover, I hope that the findings of this study contribute to the strengthening of the partnership for sharing and collaboration amongst the institutions to maximise OER potential for the benefit of the country's national development as well as maximise OER potential in higher education institutions in other developing countries.

## **1.11 LIMITATIONS OF THE STUDY**

According to Simon (2011), limitations can be defined as shortcomings of the research findings that a researcher cannot control. This section presents limitations which the study may experience. One main limitation of this study may be the bias and subjectivity from the researcher's part. As an employee of one of the institutions under scrutiny, I have been involved in the development of OER for some time and might influence the data. A further limitation for this study is time, as this study was conducted within a limited time period and depicted what was happening during that specific period. Participants of this study were limited to those faculty members who were part of the institutions during that time of the study. The findings of this study will therefore not be replicable to faculty members outside the scope of this study as their views might be different. The findings, however, could be used to form an opinion about the subject under investigation (Ave, 2013).

## **1.12 CHAPTER OUTLINE**

**CHAPTER 1:** this chapter has presented an overview of the study, grounded in the statement of the problem, research questions and significance. The problem of the study speculates the lack of involvement of the faculty members of the Namibian ODL institutions in the use and promotion of Open Educational Resources in teaching and learning. Namibian ODL institutions need to do more in harnessing the potential of OER in order to increase access to quality educational materials and to enhance national development in the country. This chapter further justifies the research design and methodology adopted to conduct an investigation of the problem.

**CHAPTER 2:** the first part of this chapter examines the existing literature on open educational resources for the purpose of creating an in-depth understanding of the phenomena and to identify the gaps that exist in the literature. This chapter further highlights the important concepts used throughout the study. The second part presents the integrated theoretical framework which underpin the study and formed a blue print on which the study was built. The broad learning theories that underpin this study are; Transformative learning theory of Mezirow (1991), Heutagogy learning theory, Diffusion of Innovation Model; Connectivism and Constructivism learning theories. Theories are analysed to prove their relevancy to the use of open educational resources. The last part presents the conceptual framework based on the applied

theories.

**CHAPTER 3:** outlines the methodological approach of the study which includes the discussion of the research design and the research paradigm adopted to investigate the perceptions of the faculty members of the Namibian ODL institutions on the use of open educational resources. Chapter three describes the study population, the sampling procedure and the study sites. This chapter further outlines the data collection instruments, data collection procedure as well as the process followed to analyse data. Finally, this chapter explains the strategies employed to ensure trustworthiness of the study, factors that limit the study, as well as the ethical issues that were considered in this study.

**CHAPTER 4:** presents the data analysis and interpretations of findings from the interviews, non-participant observations and document analysis. Chapter 4 presents the data based on the themes that emerge from the data itself in order to answer the research question. This chapter presents the findings in line with the objectives of the study.

**CHAPTER 5:** discusses the findings to answer the research questions and sub-questions as outlined in Chapter 1. This chapter highlights the critical findings that come out of the data and creates the relationship between the findings and existing literature reviewed in Chapter 2. This chapter further consolidates the critical aspects raised throughout the study into main findings of the study.

**CHAPTER 6:** presents the intervention model proposed by the researcher to address the challenges raised in the study that hinder the adoption of OER by institutions and as a result, prevent the use of OER by faculty members. The proposed intervention model is designed based on the Diffusion of Innovation theory (Rogers, 2003).

**CHAPTER 7:** presents the scholarly reflection of the researcher and advances recommendations emanating from the study to address the challenges experienced by faculty members of the Namibian ODL institutions in the use of Open Educational Resources. This chapter further highlights how the findings of the study contribute to the body of knowledge and suggests topics for further research in the field of OER.

## CHAPTER 2: BACKGROUND AND LITERATURE REVIEW

### 2.1 INTRODUCTION

In Chapter 1, the background of the study was presented with emphasis on the need to understand the perceptions of the Namibian ODL institutions faculty members on the use of OER in teaching and learning. The purpose of this chapter is to review the literature in order to gain insight into the topic under study and to be able to place the study within a theoretical framework. A review of literature assists in discovering what other researchers have done and what still needs to be uncovered regarding the phenomenon and to confirm that a gap that exists in the literature about research, particularly research conducted in developing countries. There seems to be a general understanding of the concept of OER and globally OER awareness is increasing, yet I argue that there is still a need to explore how OER can be best utilised to shift the educational paradigm in Namibia.

In recent years, the concept of OER has gained indisputable momentum in the field of education and the trends show a significant advancement in terms of the OER movement (Hoosen *et al.*, 2012), with the definition of OER and the unrestrictive Creative Commons licence being well-known. There is also no doubt that institutions and faculty members know about the existence of OER and their value in cutting educational costs (de Hart *et al.*, 2015). Literature has also documented that many academics and faculty members have shared or created OER which are available in the public domain (Ferreira & Gauthier, 2013).

The first part of this chapter addresses the use of OER in education (2.2) with the use of OER benefits in education being described thereafter (2.3). Section 2.4 outlines the impact of OER on student performance within the pedagogy of self-directed learning and strategies to promote the use of OER in teaching and learning is explored in 2.5. Challenges in the use of OER by faculty members, learners and OER sustainability are described in Section 2.6. The legislative framework which frames the use of OER is found in Section 2.7. The literature on the use of OER in developed and developing countries including Namibia is reviewed in 2.8.

There is a paucity of available research studies reported in the field of advancing OER as a digital pedagogical and technological approach, especially regarding the

perceptions of faculty members in ODL institutions of learning. In order to underpin the findings of this study, a number of theories were used to interpret the perceptions, attitudes of participants, and to situate the study within the theoretical context of the body of knowledge (Lynch, 2014). It was difficult to find a one-size-fits-all theory regarding the use of OER; hence this study explores various theories by way of their applicability to the study (2.9)

Theories that explain teaching and learning in relation to the use of OER are: Transformative Learning Theory of Mezirow (1991), Heutagogy Learning Theory proposed by Hase and Kenyon (2010), Cognitive Learning Theory and Social Learning Theory, Social Constructivism Learning Theory (Vygotsky 1978 & Bandura, 1977), Connectivism Theory of Siemens and Downes (2004) and Diffusion of Innovations Model of Rogers (2003). These theories are used as an integrated theoretical framework to foreground and support the use of OER as a digital pedagogical technology in enhancing teaching and learning.

## **2.2 THE USE OF OPEN EDUCATIONAL RESOURCES IN EDUCATION**

Literature indicates that the term OER was coined by David Wiley in 1998 and first used during the UNESCO's forum on Open Courseware for Higher Education in Developing Countries in 2002 (UNESCO, 2012). From then on, all educational materials released under an open licence or Creative Commons or General Public (GNU/GPL) licence were called OER. Open Educational Resources, referred to as OER in this study, are any educational resources, print or digital that are developed and released under a non-restrictive licence that allows anyone to use, re-use, modify and redistribute them without any need to pay copyright fees. UNESCO (2012) defined OER as any educational content available in the public domain that is free to copy, adapt and share.

This study focuses on open distance education delivery which is mainly characterised by the use of eLearning and online learning as a way of giving learners flexible options; thus, focusing on internet-based OER which have been developed for use by educators to support self-directed learning. OER can be in form of text, video, audio, podcasts, lectures as well as whole courses. This study further recognises that not all content is available as OER. The Creative Commons licence under which OER are

released, allows for what has been termed as the 5R activities. Users may *retain* the resources which offers the user the right to make, own and control copies of the content. *Reuse* gives the user the right to use the content in a wide range of ways. *Revise* offers the right to adapt, adjust, modify or alter the content. *Remix* means the user can combine the original or revised content with other open content to create something new and finally, *redistribute* gives the use the right to share copies of the original, the revised or the remixed resource (Bliss & Smith, 2017:12). In other words, OER can be used in a variety of ways to provide content or used as additional and supplementary information for a particular course. The bottom line for this study is that OER usage can save costs, time and labour for institutions especially distance learning institutions where learners are geographically scattered. In addition, OER are learning resources that have the potential to change the way instructional support take place, especially in the ODL system.

Allen and Seaman (2014:11-15) indicate that there has been a significant increase in awareness of OER between the years 2012 and 2016 among educational institutions across the globe with faculty members being the major role players in the success of OER implementation within institutions. Faculty members, such as lecturers, tutors and instructional developers have a final say on which content to be used for the learners to achieve their learning objectives. Wright and Reju (2012:203) stress that institutional communities and faculty members are responsible for the long-term survival and sustainability of OER.

This study recognises that the level of staff awareness can influence their attitudes towards OER. A study conducted by Rolfe (2012) on awareness and attitude towards OER revealed that although only few faculty members knew about the term OER, there is a culture of sharing content between faculty members within institutions. However, OER awareness seems to be higher in the first world countries than in developing countries, which is supported by Shigeta *et al.* (2017:195-206), who argue that more faculty members at Japanese universities are aware of OER as a concept and educational values relating to teaching and learning as compared to India and Africa.

The researcher is also sure that there is a general awareness in Namibia of the benefits and impact of OER for teaching and learning whether for contact, blended or

ODL environments. However, there are very few studies that have explored faculty members' attitudes towards OER, and in the Namibian context, there is no published study that focuses on the faculty members views regarding OER in ODL institutions. This study therefore aims to contribute to the literature by forming a base in exploring the understanding of the views and attitudes of faculty members in order to suggest strategies for the OER adoption in ODL institutions in Namibia.

Attitude refers to an informed opinion or feeling that can affect the status and the behaviour of an individual towards a specific phenomenon (Hodgkinson-Williams, & Arinto, 2017). In many cases, people's attitudes towards new ideas influence their visible actions. Rolfe (2012:5) in a study conducted in the United Kingdom (UK) reported that newly appointed faculty members portrayed a more positive attitude towards OER as a cost-saving mechanism while senior staff members were more reluctant to contextualise OER for their needs. Literature proves that attitude does not always result in changed behaviour (McLeod, 2014). In a study conducted in Indian universities on the perception of faculty members on the quality of OER, the results showed that although faculty members showed a positive attitude toward OER, this was not reflected in the increased use OER within the institution (Mishra & Singh, 2017).

More need to be done to promote the use of OER in ODL institutions, to demonstrate that they can provide equal educational opportunities at no cost to learners. This would be in line with what is happening in the USA, where "thousands of open textbooks and hundreds of full open courses are now available for the most highly enrolled US college course and are being translated into many languages, helping more students afford college" (Bliss & Smith, 2007:18). Hilton (2016) found that in general, faculty members regard OER as of equal or better quality than textbooks currently being prescribed in higher education institutions and learners using OER perform on par with those using conventional textbooks.

Ozdemir and Hendricks (2017:98-113) in their study investigating the perceptions of faculty members on the use of open textbooks found that OER enable personal relationship between authors and users which make it easier for peer review and the editing of content. They also indicated that the portability of open textbooks is advantageous in enabling the integration of new content into the existing materials.

The research of Ozdemir and Hendricks (2017) is particularly relevant to this study as it provides answers to many questions this study is trying to answer. Through their study, Ozdemir and Hendricks confirmed that faculty members were happy with the up-to-date content found in the open textbooks and relevancy of content to the daily lives of their learners. The same study further revealed that faculty members perceived that using open textbooks removes the barrier of compelling learners to buy new editions of expensive standard textbooks. The possibility of repurposing and adaptation of open books was also cited in their study as one of the benefits to faculty members as it gives flexibility to align content to learner needs. Moreover, as the price of textbooks continues to rise, institutions are forced to use outdated versions which lack contextual relevancy (Lwoga, 2012; Mtebe & Raisamo, 2014). The use of OER in ODL institutions can potentially lessen the obligation to buy textbooks and at the same time, improve quality of education in developing countries. A further study entitled *Higher education faculty attitude, motivation and perception of quality and barriers towards OER in India* by Mishra and Singh (2017) conducted in India revealed that faculty members within Indian universities are positive towards the adoption of OER and are willing to share OER content. However, the study did indicate that many faculty members were unknowingly using OER.

Given the fact that the term OER was first used by UNESCO in 2002, it is right to believe that many institutions have been producing and using OER unknowingly. In Namibia, the Namibian College of Open learning has been developing radio and video lessons which have been released freely for the use of all Namibian educators and learners for many years. Upon the implementation of the OER policy in 2014, those resources have been officially declared as OER. In addition, the Commonwealth of Learning (COL) has supported OER projects in various countries including Namibia in which teachers have gained capacity in developing OER (Ferreira & Gauthier, 2013). It seems with the spread of the World Wide Web and the development of OER globally, education at all levels has benefitted.

### **2.3 BENEFITS OF OPEN EDUCATIONAL RESOURCES**

Research indicates that adopting OER to provide learning content for learners is cost saving and increases access to education (Bliss, Robinson, Hilton & Wiley, 2013; Ikahihifo, Spring, Rosecrans, and Watson, 2017; Wiley & Green 2012). Access to and equity in education is considered a basic human right. However, the situation in many developing countries including Namibia, shows a different picture. Institutions of higher learning have been trying to reach out to wider communities by employing the use of technologies to develop and disseminate educational content for many years. Yet, exclusive rights on learning materials prevent many people access to them. The adoption of OER in education promotes equitable access to education, especially to those in distance learning systems (Willems & Bossu, 2012). In a vast country like Namibia, there is a visible gap between the level of education for learners in poor rural communities and those in rich urban communities. OER offer a potential to minimise that gap, improving quality of education, and at the same time, fast-tracking the flow of knowledge among many people (Grodecka & Sliwowski, 2014).

In the ODL system, education is mainly accessed through telecommunication infrastructures, with online learning being a new way of offering distance education. Adopting OER for distance learning is one way to address the escalating costs of textbooks that have a limiting factor on access to education and one which allows educators to repurpose content to fit their own context and the needs of their students (Makhoe, 2010; UNESCO & COL, 2016). On the issue of quality, literature has shown that OER can increase access to more study materials without compromising quality (Ozdemir & Hendricks, 2017). OER developed by institutions undergo rigorous peer review before being made available for public use (Butcher, 2015). In Namibia, in the case of NAMCOL, the quality of OER is maintained by involving teams, comprised of writers, content editors, language editors and peer reviewers, in the development process and publication to the public only occurs after approval by all team members.

Generally, the use of OER can improve the quality of education. Faculty members as well as learners, are now able to access educational materials to which they never had access due to restrictive laws of copyright (Wright & Reju, 2012; Weller, De los Arcos, Farrow, Pitt & McAndrew, 2015). Institute of Educational Technology, Open University (United Kingdom)). Butcher (2012) maintains that the fact that OER reduces

the cost of duplication and distribution of materials, enables quality learning materials to reach many people who need them. In addition, OER could benefit facilitators with minimum experience and knowledge of the subject matter (Wright & Reju 2012). Significant for this study is to note the improvement that OER offers to student achievement, which is reason enough for their possible adoption by institutions. Other benefits to learners are the ability to share knowledge with other learners and to interact with content at anytime, anywhere (Bossu & Brown, 2012).

One benefit OER can offer to the faculty members is the aspect of sharing and collaboration, especially with regard to the development of learning material. Mishra (2017:53) discovered the potential of OER to enable teachers to learn through the creation of new content and through collaborative efforts between teachers and learners, thus allowing learners to take charge of their own learning. OER expose teachers to more teaching content, thus allowing them to include a wider range of information in their lessons and to learn different ways of transferring the content to their learners (Farrow, Pitt, de Los Arcos, Perryman, Weller & McAndrew, 2015).

The licensing of OER allows remix and repurposing of the resource, which means that OER reduces teaching preparation time as teachers can use the already peer-reviewed OER to remix and repurpose to fit their own context without the need for re-inventing the wheel (Ihrke, 2013). Therefore, OER enables developers to use existing OER, adapting it to their own context and cultural norms (Tuomi, 2013). The use of OER minimises the workload of the faculty members whose responsibility is to provide learning content that aligns with the planned curriculum. In other words, if institutions engage in or adopt OER as a pedagogical approach, facilitators will spend more time ensuring the quality of the learning resources instead of developing new content from scratch.

A further benefit of OER is the opportunity for capacity building amongst faculty members. Bossu and Willems (2017:2) stated that in times where funding for further studies are almost non-existing, and universities are struggling to support their faculty members in professional development, OER-based courses can fill the gap. If faculty members upgrade themselves through the availability of the vast array of OER courses, their understanding on how to integrate OER in teaching and learning will improve.

Institutions have the opportunity of increasing their enrolment by adopting OER. Butcher (2012) and UNESCO & COL (2015) have noted that institutions have the ability to draw more students when OER is adopted, thus reaching out to include students who might have previously been prevented for registering at an institution of higher learning. At the same time, institutions can benefit from partnerships and external funding which in return enhances institutional reputation. In Namibia the accredited institutions of higher learning cannot satisfy the large demand for education, which results in many fly-by-night institutions taking advantage of those who wish to further their education. As a result, many people enrol with non-accredited institutions and end up with qualifications unaccepted in the workplace and thus with no employment. This study is under the assumption that if the institutions adopt the digital approach and embrace OER, many people would have the opportunity to access quality education and equity could be maintained.

#### **2.4 THE IMPACT OF OPEN EDUCATIONAL RESOURCES ON STUDENT PERFORMANCE AND SELF-DIRECTED LEARNING**

Literature shows evidence of OER growth and thus educational purpose has been expanded. In addition, governments and institutions of higher learning have responded positively towards the use of OER (Kim, Lee, Lee & Shon, 2015). There are, however, very few studies investigating why adult learners are satisfied when using OER (Kim *et al.*, 2015) and limited studies that focus on strategies to support the implementation and use of OER by educators and learners (Lawrence, 2018).

Although the focus of this study is on the perception of faculty members, it is critical to examine the literature on the benefits of OER to the end users, who are the learners. The perception and the attitude of learners towards OER is an important aspect for their adoption by an institution because if learners do not find OER valuable for their needs, institutions will not succeed adopting them (Roberts, Howell, Seamen & Gibson, 2016).

The idea of ODL as a concept is to provide open and flexible learning opportunities, as opposed to conventional education (Knapper & Cropley, 2014). ODL is therefore in line with promoting lifelong learning for societies to learn anytime when the need arises. Literature suggests that the educational model should change from a

conventional school-based model to open flexible education (Aspin, Chapman, Hatton & Sawano, 2012). OER promotes lifelong learning by providing free content that can be adapted and shared via the internet, thus promoting a better personalised learning experience and increasing equitable learning opportunities, as individuals may learn anywhere, anytime, supported by anyone, by means of any device (Kurelovic, 2016).

An empirical studies by Petrides, Jimes, Middleton-Dezner, Walling & Weiss, (2011) and Farrow, De los Arcos, Pitt and Weller (2016) on the pedagogical role of OER, showed the potential for new teaching and learning behaviours revealing that participants perceived their engagement with OER as a way of expanding their roles as learners to more active innovators through sharing and learning from one another. Kohan *et al.* (2017:117) stated that many learners fail to succeed in the online environment due to lack of self-discipline and other distance learning challenges such as self-motivation. In other words, when introducing a new innovation such as OER, which is based online, learner characteristics and requirements should be considered in order to meet their needs. In many cases, attention is given primarily to the development part of the innovation and very little attention is given to strategies to promote the use thereof (Kim *et al.*, 2015), which can be true in Namibian ODL institutions. Moreover, the introduction of OER requires a systematic approach to ensure its effectiveness for learners, as there is no guarantee that learners will accept a new technology applied in education (Akyuza & Yavuza, 2015).

On the contrary, a study conducted by Farrow *et al.* (2015) revealed that OER can directly influence learner satisfaction and performance due to the fact that OER are engaging and improving learner self-reliance. In addition, OER provides extra learning content with a potential to address the specific needs of a learner outside the teaching space (Masterman, 2016). As in the case of ODL, where learners are expected to master learning objectives on their own, and with little guidance from their tutors, OER plays a significant role in shaping their self-directedness.

The potential of OER to reduce cost of education cannot be overemphasised. In Namibia, the fact that distance learners have to pay for their study materials at the point of registration, prevents many from enrolling for studies as they cannot afford the cost of study materials which form a part of enrolment packages. Students might prefer to enrol with a minimum amount while guided on how to use OER for their studies. A

study conducted in this area discovered that students chose to use online OER instead of printing expensive textbooks (Illowsky, Hilton, Whiting & Ackerman, 2016). Moreover, students find OER, especially in digital format, easy to use and up to date with more relevant information compared to content in traditional textbooks (Feldstein *et al.*, 2012; Hilton *et al.*, 2013). With regard to the quality of OER, research has confirmed that students prefer the quality of OER as compared to traditional textbooks (Bliss *et al.*, 2013).

## **2.5 STRATEGIES TO PROMOTE THE USE OF OPEN EDUCATIONAL RESOURCES IN TEACHING AND LEARNING**

Based on the literature, there has been several attempts and strategies to promote the adoption and use of OER in various countries in the world, but the situation on the ground shows that OER integration in teaching and learning remains a challenge (Misra, 2014). According to Misra, (2014:381), strategies focusing on motivating teachers through training and implementing appropriate policies, are key to the successful OER adoption.

The study conducted by Peñaloza (2015:5) at the University of Mexico (UNAM), outlined several strategies that were used to encourage teachers to use OER. At the university, the following strategies were employed:

- Ensuring top management buy-in through the integration of all online activities in the university strategic objectives and making it part of the university mandate.
- Establishing the internal website where all research is published for the public to access.
- Developing infomediaries to organise information in formats to make it more accessible by users.
- Making OER contribution part of the institutional academic recognition programme. All teachers who contribute to OER are recognised through the academic programme.
- Using social media to share OER among one another.

- Training technical support staff on OER matters (Peñaloza, 2015:5).

One strategy above focuses on the recognition of the work done by faculty members by the institution. It is considered as a general rule in many institutions to give professional recognition through promotional rewards to faculty members who contribute to institutional journals. Kaur and Yip Ping (2009:5) and Yeboah, Alemna & Adjei, (2018) in their studies, stated that faculty members are encouraged to contribute to institutional repositories because there are rewards attached to it. In the same way, institutions can develop strategies to reward those who contribute to OER repositories.

Moreover, the exclusive rights given to published research papers has an adverse effect on the openness of content. Demitar (2010:19) and Hodgkinson-Williams & Arinto, (2017) recommended that all of publicly-funded studies should be published in OER repositories. Similarly, COL and UNESCO through the OER Paris Declaration 2012, urge the member states to support the development and use of OER within their countries and to encourage open licensing of all content developed by government funded institutions (UNESCO, 2012).

Another strategy that can be successfully used to promote the use of OER in institutions of higher learning is the development of awareness campaigns and training of faculty members. The study conducted by Crozier (2018) indicated that in order to promote the use of OER, faculty members should be encouraged to develop and publish OER through open access publishing. According to Crozier (2018:148), it is critical to organise training and workshops on open access publishing for faculty members within their departments and ensure good relationships between librarians, experts and educational technologists. In addition, making students aware of free resources could motivate faculty to engage with OER and thus help students engage with innovative teaching and learning tools which could make education more accessible and affordable.

This study focuses on the faculty members who are involved in teaching and learning from three ODL institutions in Namibia. These institutions are linked through the network trust called NOLNeT, in order to collaborate in research, training and resources. The OER awareness creation for the Namibian ODL faculty members could be organised and coordinated through a collaboration with NOLNeT.

## **2.6 CHALLENGES IN THE USE OF OPEN EDUCATIONAL RESOURCES**

The fact is that the OER concept is a relatively new concept, especially in developing countries such as Namibia. Thus, the level of involvement in OER initiatives is significantly low and there is little impact of OER seen in the developing countries (Bliss *et al.*, 2013). One of the biggest challenges facing education in Africa is a shortage of well-equipped educators (UNESCO, 2015). It can also be proven that in developing countries, learner achievement is closely attached to the quality of the teaching staff (Fong-Yee & Normore, 2013; Harris & Sass, 2011). Faculty members in many developing countries work under harsh conditions and have to do much more with limited resources to achieve positive results. Challenges such as shortages of basic resources, underfunding, demanding working conditions, instability related to frequent policy changes makes it difficult for faculty members to deliver (Cobbold, 2015). Open educational resources will not only cut cost for education, but also alleviate stress of content development from the teaching staff. Dr Kofi Annan (2005 cited in Kisirkoi, 2018:311) made an urgent appeal for the need of well-equipped teachers, quality open universities and ODL programmes with access to modern technologies. The literature indicates that as well as a lack of human capacity there is a lack of quality educational resources within the education sector in developing countries (OECD, 2012). The OER initiative however, offers a significant breakthrough in providing open content, increasing capacity among educators by supporting them to become more reflective as well as enhancing the articulation between theory and practice (Thakrar, Wolfenden & Zinn, 2009; McGreal, Kinuthia and Stewart, 2014).

Many scholars indicated that for OER to be widely accepted, there is a need for better organised OER repositories and aggressive awareness campaigns for better understanding of all OER dimensions (Grodecka & Sliwowski, 2014; Kortemeyer, 2013; Rolfe, 2012; Torres, 2013). Faculty members will have an emotional investment in OER usage if they were involved in designing their teaching and learning materials, as they want their students to succeed (McKerlich, Ives & McGreal, 2013); however, knowledge of OER is vital for both creation and use. One of challenges facing many faculty members is the uncertainty about the copyright of the content they produce while in the employment of an institution. Whilst faculty members invest a lot of energy, time and skill in producing educational content, the time and resources belong to the institution, which in many cases is publicly funded (Kurelovic, 2016). That means, the

issue of copyright ownership between faculty members and the organisations for whom they work need to be well understood. In addition, OER in most cases need to be contextualised. The contextualisation process requires faculty members to spend time, knowledge and resources, which alone could hinder the OER adoption by faculty members as they hesitate to invest in content to be shared with the rest of the world (Torres, 2013). A further challenge that faculty members face regarding OER is institutional research production and consumption. Institutions still require faculty members to publish their academic research through traditional journals which are not open to public access (COL, 2013). This practice prevents academics promoting their work and allowing others to benefit from their findings.

A major limitation for the use of OER is the lack of implementation policies both at national and institutional levels (Kurelovic, 2016). In Namibia, the OER policy development for distance education institutions has been on the NOLNeT agenda for the past couple of years. Although the Namibian College of Open Learning has succeeded in adopting an open licence for its online secondary education content developed on the learning management platform, there is no guarantee that those resources are being utilised by both learners and tutors.

Limited resources to support the adaptation of OER, teacher-centred approaches of education, digital illiteracy and lack of ICT skills are among the top barriers hindering the usage of OER in developing countries (Cobo, 2013). Literature however, argues that there is a huge saving when institutions opt to adapt OER instead of developing new resources (Hysten, 2017). It is however, correct to argue that OER adaptation is costly if institutions develop OER, but at the same time, use other expensive materials for teaching and learning. With regard to approaches to teaching, literature maintains that the use of OER in the classroom inculcates learner-centeredness, encouraging activity-based learning, while promoting the 'guide on the side' principle (OER Africa, 2014).

Moreover, the greatest challenge faced by the education system is to break the aversion to openness (Torres, 2013). In many countries and institutions, it will take some time for many faculty members to change their mind-set from a closed educational set up to openness in education for fear of compromising their quality and effectiveness (Pérez-Peña, 2012).

### **2.6.1 Challenges in the Use of Open Educational Resources by Faculty Members**

Faculty members play a critical role in determining the needs of ODL learners and advising them on the type of OER, based on their needs. Enhancing the knowledge of the faculty members in OER creation and use will aid the ODL institutions in improving access to education in the country. It is right to believe that faculty members have a responsibility to perform quality checks and organise OER to support the learning process. Faculty members are therefore central to the development, use and reuse of OER in any institution. However, Livingston and Condie (2006) in a study conducted in Scotland, show that student progress was hampered by the inability of teachers to leverage free resources to promote independent learning among students. The study further indicated that teachers who lack technological skills fail to effectively integrate OER in their courses.

Many institutions perceive OER as of poor quality because they compare it to copyrighted material, which could hinder the adoption of OER (Bliss *et al.*, 2013; Clements & Pawlowski, 2012). It is for this reason that the current study's focus is on perceptions as a key area for investigation. On the contrary, the OECD has placed emphasis on the quality of OER and their suitability for use worldwide (Hylén, 2012). Kurelovic (2016) has also confirmed the necessity for OER to be of quality due to their potential to widen the educational scope and increase the number of people involved in conventional as well as distance education. The Namibian ODL institutions collectively cater for about sixty thousand ODL learners. It is, however, hypothetically possible that the learner number could double if the use of OER is embraced.

Sharing of OER has created a concern among educators. Butcher (2015) revealed that in many cases, educators are not comfortable when their work is freely available for others to scrutinise as others might find that they are not of appropriate quality. Similarly, in the study conducted in Commonwealth institutions, Phalachandra and Abeywardena (2016:16) discovered that only a few educators understand what open licencing really means which contributes to teachers not wanting to share their material publicly. In the same vein, this study intends to reveal whether the faculty members for the Namibian ODL institutions do understand the issues regarding open licencing of OER.

OER is easily downloadable, and thus faculty members should find no difficulty in adopt them in their teaching and learning materials. Phalachandra and Abeywardena (2016:16) however, highlighted that lack awareness, lack of time, access to technology, computer literacy, and low internet connectivity remain major barriers which make downloading of OER a challenge to many users. One cannot take it for granted that faculty members, especially the teaching staff are all computer literate. Hassall and Lewis (2016:79) in their study, identified shortage of technological skills as a barrier that prevent faculty members from searching for relevant OER for integration in teaching and learning. Similarly, many teachers who took part in the COL OER project for open schools in Namibia indicated in their reports that they had never had email addresses before the project (Ferreira & Gauthier, 2013). Faculty members are responsible for producing content learning materials for classroom use, which can be shared with learners as an open educational resource. If OER are developed but cannot be shared, their usage remains a challenge.

Rolfe (2012) provides an important aspect to consider with regard to the under-utilisation of OER: authors spend a lot of time with little or no incentives for creating OER. The institution funding models for learning resources need to be revisited particularly as OER content replaces the expensive textbooks, institutions make huge savings when OER are adopted. The saving can be shifted to offer incentives to developers (McCrea, 2012). The approach for the COL OER project for open schooling in Namibia was to offer incentives to developers with skills and computer hardware which served as a motivating factor for the success of the COL OER project (Ferreira & Gauthier, 2013).

McCrea (2012) pointed out that the 'textbook syndrome' is a major challenge faced by many faculty members in higher education as they believe that textbooks, sold by publishers, contain relevant information for their courses and programmes, and as a result, they distrust any other sources of learning content. However, the OER world is "vibrant, challenging, and filled with tremendous possibilities" (Bliss & Smith, 2017:22). As it is steadily increasing, faculty members tend to be overwhelmed by the fact that there are so many open educational resources to choose from, hence the need for a well-coordinated structure for OER adoption (McCrea, 2012). It is thus, in the interest of this study, to find out what challenges Namibian ODL faculty members

are facing with regard to OER.

### **2.6.2 Challenges in the Use of Open Educational Resources by Learners**

The development, availability, means of reaching the target group, sharing, relevance, and the use of OER are some challenges that this study explored. The fact that not all OER are fully open for reuse and remix and the fact that internet is not accessible to all learners, poses a challenge in the effective utilisation of OER (McGill, 2014).

The language used in the development of OER has a potential to create a barrier in the effective use of OER. Sabadie, Muñoz, Punie, Redecker & Vuorikari (2014:7) indicated that OER is in many cases developed in English while the majority of learners globally come from backgrounds where English is a second or third language. This is to the contrary to the recommendation by Paris OER Declaration (2012) that urged nations to develop or adapt OER for different language and cultural groups in order to ensure their relevance and accessibility.

The relevance of OER to ODL learners can limit their effectiveness. Many learners registering for ODL courses and degrees to improve their qualifications and skills to ensure job promotion, would be using OER courses relevant to their needs (Willems & Bossu, 2012). Gurrel (2012) argued that although OER is generally considered to be of high quality, the suitability of OER depends on the specific needs of the user, and for OER to be considered for re-use, a systematic evaluation should be undertaken in order to assess the effectiveness in filling the gap (De Vries, 2013:58).

The pedagogical quality of OER is regarded as a barrier to the effective utilisation of OER courseware. Mackenzie (2013) indicated that OER-based courseware usually employs the use of multimedia such as animations, videos, pictures, audio as well as print media, and therefore care needs to be taken in structuring the learning content to ensure that cognitive learning takes place in a logical manner. There are, however, many scholars who advocate in support of the quality of OER. Misra, (2014:382) stated that there is no difference between traditional courseware and OER-based courseware in terms of quality. The only difference is that OER is released under an open licence. It is therefore imperative for faculty members who are the developers and users of OER to advocate for and ensure the quality of OER within institutions.

Although distance education has emerged to address the issue of access to formal education for disadvantaged groups in remote areas, and although access reflects the core philosophy underpinning the OER concept, many learners in distance education are still faced with technological challenges including access to technological infrastructure. Typical challenges in Namibia range from internet instability, low bandwidth, limited computers as well as technological skills. Cheawjindakarn, Suwannattachote and Theeraroungchaisri (2012:63) stated that access is the determining factor for institutions to decide on the appropriateness of technology for ODL. This implies that the technological application for learning resources such as OER to cohorts of students should be assessed in order to determine its suitability. For example, if the majority of learners do not have access to computers but have cellphones, an institution might consider developing OER for mobile learning application. Many students do not have access to internet outside the university, which can limit their access to electronic resources such as OER and those with internet access also experience difficulties due to unreliable internet connectivity within their universities (Cooney, 2017).

Another concern is the skills to utilise the technology. Multiple authors (Johnson, Jacovina, Russell & Soto, 2016; Helsper & Reisdorf, 2016; Kanwar, Kodhandaraman & Umar, 2010; Lane, 2008; Silver, 2009) have emphasised that although computers are now available to many learners in developing countries, there are still many who do not have sufficient technology skills to effectively learn through technology.

### **2.6.3 Challenges of Open Educational Resources Sustainability**

Since the inception of the OER concept, many OER initiatives have been dependent on external funding. The William and Flora Hewlett Foundation through the Commonwealth of Learning has sponsored various OER initiatives including the COL OER project for open schooling, in which Namibia participated (Ferreira & Gauthier, 2013). Given the increasing budget cuts for education, it is a concern for the long-term sustainability of institutionally-based OER projects. Wiley (2007) and Zaid & Alabi, (2020) describe OER sustainability as the ability of an OER project to continuously meet its goals. The sustainability of OER, as per this study, refers to institutional ability to continue maintaining the projects financially and otherwise without external funding. The challenges of sustaining OER is based on various cost drivers, such as the

development and the sharing, as well as the implementation. According to Wiley (2007), it becomes expensive for institutions to sustain the development costs which involve people's time, policy development, purchasing of hardware and software as well as ensuring connectivity. The distribution and sharing of digital content require physical media such as DVDs, USB sticks and hard drives, which are also expensive. OER implementation is always faced with costs, ranging from searching, transferring, adapting, as well as cost for infrastructure and updating of software. These costs are subsumed by institutions at the end of the external projects, which can be a challenge (Chen & Panda, 2013).

On the contrary, Wiley (2007) argues that if people find value in participating in a project, they can commit to perform duties for free in order to sustain it. In other words, if faculty members are involved in the development of OER, and the goals of the project are well articulated, they are likely to take ownership of the project and ensure its sustainability for the future. Moreover, institutions that adopt OER usage will attract more students, thus increasing registration funds and ensuring sustainability (Hodgkinson-Williams & Paskevicius, 2012).

## **2.7 LEGISLATIVE FRAMEWORK: OPEN EDUCATIONAL RESOURCES IN CONTEXT**

### **2.7.1 Open Educational Resources within the ODL System in Namibia**

Namibia is a vast country covering an area about of more than 824 000 square kilometres which makes it impossible to accommodate all learners within the conventional system. Many Namibians take advantage of an ODL system to advance their educational careers. With the inception of OER, education in Namibia could become accessible even more of its people. This section contextualises OER within the ODL system in Namibia.

ODL is defined within the context of this study to refer to approaches that provide cost-effective flexible learning opportunities through ICT networks (UNESCO, 2012). In today's era, ODL is synonymous with online education, which uses computers and an internet connection as a mode of delivery (Allen & Seaman, 2014). In earlier years, distance education was based on the principle of no interaction between a teacher and a student which made it difficult for many people. With the advancement of ICT

and web technology, distance education becomes an option which provides flexibility and access to learning opportunities for many. Many ODL institutions regard online learning as core to the sustainability of their programmes due to increasing demand of flexible learning opportunities (Allen & Seaman, 2014). According to Sener (2014:92-96), online education does not only provide access but it improves the quality of education and adjusts the way knowledge is generated, transmitted and preserved.

The context of this study is ODL institutions in Namibia. Namibia has four main publicly-funded ODL institutions offering pre-tertiary and tertiary level education, namely, the Namibian College of Open learning (NAMCOL), the University of Namibia Centre for Open Distance and eLearning (UNAM-CODEL), the Namibian University of Science and Technology Centre of Open learning (NUST-COLL) and the Institute for Educational Development (NIED). NIED is part of the Ministry of Education, Arts and Culture mainly responsible for curriculum development and in-service training of teachers. This study focuses on the three former institutions which are semi-autonomous institutions, regulated by their own governing bodies.

The Namibian College of Open Learning (NAMCOL) was created by an Act of Parliament (Act 1 of 1997) with the main aim of providing open schooling for Grade 10 and 12 learners who could not be accommodated in formal schools. The College, in line with the Act, also offers tertiary programmes and vocational trades. NAMCOL is currently the largest ODL institution in Namibia with a student population of over 47 000 in 2017.

The University of Namibia Centre for Open, Distance and eLearning (UNAM-CODEL) is a unit within the university, established to provide extension services and lifelong educational services as per the mandate of the university. CODEL recorded a total of 5036 ODL students in 2016 registered for various programmes ranging from bachelor degrees, diplomas and certificates. That number represents 18% of the university total student body (UNAM, 2016).

The Namibia University of Science and Technology (NUST) was established by an Act of Parliament in 1995. NUST-COLL, as an extended arm of NUST, is responsible for the design and delivery of ODL programmes through diverse means of methodologies. COLL recorded 21% of its student population registered for various qualifications at

distance mode in 2008 (Möwes, 2008).

ODL delivery in Namibia follows a blended-learning pedagogy whereby online learning is integrated with a face-to-face environment. At NAMCOL, learners receive self-instructional study materials at registration. Multimedia resources such as videos, audio and online interactive content on Moodle and Notesmaster learning management systems are available for learners to supplement the print materials. NAMCOL learners interact with their tutors via face-to-face sessions offered weekly for secondary level and quarterly for tertiary level learners. At UNAM-CODEL and NUST-COLL, a number of courses are offered online on Moodle and students interact with their faculty members online through chats and discussions. Although online learning supports the use of OER, not all online courses contain OER, although OER use has the potential benefit of cutting educational costs and increasing access to education.

### **2.7.2 The Namibian Government ICT Policy**

The historical and economic links between Namibia and South Africa enables Namibia to have modern telecommunication networks (Sherbourne & Stork, 2010). As a result, internet and mobile technology are well developed in most parts of the country. The Namibian ODL institutions are situated in Windhoek, the capital city, placing them at the receiving hand of ICT infrastructure.

The Namibian ICT policy was adopted in 2003 by the Ministry of Education with a goal to ensure access and use of ICT in the entire education sector. The policy prioritises higher education institutions, secondary schools, libraries and adult education centres as main focus for ICT coverage. The objectives of the ICT policy include, among others to:

- ensure that all Namibians are ICT literate,
- produce capable people that can contribute to the knowledge-based society,
- encourage ICT-facilitated learning, and
- widen access to quality education for learners at all levels of the education system (ICT policy, 2008:15).

The ICT policy implementation in the Namibian education system was facilitated through the project called TECH/NA! aimed to equip educational institutions with hardware, software and connectivity as well as to support and train stakeholders in ICT-related programmes. Through TECH/NA!, educational institutions have been equipped to provide a technology-based environment for the advancement of teaching and learning. ICT forms part of the Namibian education system with teacher training institutions receiving the most ICT support in order to cascade the skills to the entire education system (Shafika, 2007:7).

In the distance education sector, the ICT policy was implemented through the establishment of the co-operative network, the Namibian Open Learning Network trust (NOLNeT). Through NOLNeT, ODL institutions share facilities and services in a collaborative manner to enhance supported and independent learning for those who cannot join the conventional system.

Moreover, the *Namibian Vision 2030* was developed as a national plan to ensure that by the year 2030, all Namibians' standard of living can be compared to those in developed countries. The policy aspires to achieve a knowledge-based society where all Namibian citizens have access to quality education to be able to advance in the rapidly changing environment through the use of ICT (National Planning Commission, 2006).

In addition, the 15-year improvement plan for education, known as the Education and Training Sector Improvement Plan (ETSIP), has been developed. ETSIP has the following aims:

- Ensuring ICT access to all learners and teachers and ensuring that ICT is part of the basic education curriculum,
- Putting in place ICT support structures for education,
- Expanding and strengthening tertiary education and vocational training,
- Establishing governing bodies to ensure quality of higher education in the country, and
- Strengthening lifelong learning and promoting equitable access to education

(ETSIP, 2007:7).

Based on the Namibian policies on ICT presented above, it is evident that ICT is at the centre of the Namibian education system. There are bodies and programmes in place to ensure that education provision and delivery is supported by the use of technology. The reality however, is that many developing countries, including Namibia, are facing a lack of technological infrastructure and skills, with the biggest challenge being low bandwidth (Kipsoi, Chang'ach & Sang, 2012).

## **2.8 OPEN EDUCATIONAL RESOURCES GLOBALLY**

The general idea behind Open Education Resources has been to utilise technology and the World Wide Web to make knowledge accessible to all (Atkins, Brown & Hammond, 2007). This idea was created in 2001 by the USA-based William and Flora Hewlett Foundation with the aim of providing funds to institutions to develop educational content that can be shared and accessed for free via the internet (Bliss & Smith, 2017). As OER are mostly shared and accessed via the internet, the prerequisite for the successful use of OER is the availability of infrastructure. The following sections investigate the use of OER in developed countries (2.8.1), in developing countries (2.8.2) and finally in Namibia (2.8.3).

### **2.8.1 Open Educational Resources in Developed Countries**

Most literature reviewed by this study has indicated that there are more OER initiatives in the developed world compared to developing countries. Early history of OER is traced to the United States of America (USA) with the initiative of the Hewlett Foundation to grant funding to “develop and extend the reach and effectiveness of OER” (Bliss & Smith, 2017:9). However, as early as 1994 individual faculty members in a number of universities have been producing a range of free access curriculum resources, and subsequently funding to major US universities from the Hewlett Foundation has enabled the development of open content. It was during this time that Creative Commons gave funding for the OECD and UNESCO to stimulate and develop open content in the developed and developing worlds. In 2002 at a UNESCO meeting in Paris, the name Open Educational Resources (OER) was adopted for this innovation (Bliss & Smith, 2017) and developed countries agreed to be contributors to

OER. It is no surprise then that developed countries have been at the forefront with regard to the OER movement, especially in terms of access to funding for OER initiatives with countries like Canada having created a repository for a large number of open textbooks (McGreal, 2017:295). Furthermore, countries such as China and India are listed in the literature as first beneficiaries of the Hewlett Foundation funding for OER development (Bliss & Smith, 2017). It is important to note that the development of content requires huge amounts of money and to develop open content which is accessible for free, requires donor funding to succeed. The developed countries benefited enormously from the US-based Hewlett Foundation which provided donor funding of over 170 US million towards OER movement since 2001 (Bliss & Smith, 2017). Other OER projects are undertaken at the institution levels. Institutions such as the University of the UK, Khan Academy and Massachusetts Institute of Technology (MIT) have been at the forefront of the OER movement since 2002 (Bliss & Smith, 2017)

In addition, the OER Declaration that emphasised the open licensing of all publicly-funded educational content by governments, was signed in Paris in 2012 (UNESCO, 2012). It is through the Paris declaration that governments were encouraged to prioritise the use of OER through awareness creation and policy development for the integration of OER in education. The second OER World Congress further reiterated on the use of OER to increase access, equity and inclusive lifelong learning (OER Congress, 2017). The report by COL (2017:4) indicated that although there are still challenges with regard to policies and government commitment towards OER initiatives, almost every country in Europe and North America, has an OER-related activity taking place (COL, 2017). The situation however, is different in Asia where many OER projects are driven by governments and there are high commitments for skills improvement as well as ensuring that OER is developed in local languages (COL, 2017).

### **2.8.2 Open Educational Resources Activities in Developing Countries**

This study is of the view that a paradigm shift in the way open distance education is offered in developing countries is required and the OER movement has an ability to accelerate that change. Research studies that focus on the use of OER in Africa have been difficult to locate. A study conducted by Bateman, Lane and Moon (2012) also

revealed that there is a lack of formal study findings on OER creation, organisation, distribution and use in sub-Saharan Africa. Literature however maintains that OER can be more beneficial to developing than the developed countries for their potential to support Sustainable Development Goals (SDGs) (McGreal, 2017:301), particularly that of ensuring inclusive and equitable quality and promote lifelong learning opportunities for all. McGreal (2017) further argues that in developing countries, OER can be utilised to increase access to education for the rural poor while at the same time address the issues of equity, quality and cost.

In many African countries, OER initiatives have taken off as a result of funding from the developed world, especially from the Hewlett Foundation. The COL OER for open schooling project in Namibia was not an exception (Ferreira & Gauthier, 2013), but a concern has been raised whether institutions will be able to continue after the funding has stopped. The White Paper for Post-School Education and Training has stated that there is a need to establish open and distance learning in South Africa (DHET, 2014:48). The White Paper further confirms the commitment of the South African government to financially support the development of quality OER (DHET, 2014). The establishment of an OER initiative at the University of South Africa, (UNISA) was guided by the support from both government and institutional management and aligned with UNISA's OER strategy (De Hart *et al.*, 2015).

A report by the Commonwealth of Learning (2012a) indicated that there are many visible OER initiatives and activities in higher education institutions in Africa with South Africa having the majority. The COL report further indicated that although there is no national OER policy in Namibia, the Namibian Open Learning Network Trust (NOLNeT) sees the opportunity of expanding ODL through OER. Bateman *et al.* (2012) on the other hand, has cautioned developing countries against assuming the role of being passive users of OER provided by generous developed countries, which might create the world of oppressors and the oppressed. This notion is supported by Paulo Freire in his theory of critical consciousness and the ability of adults to critically analyse situations that have influence on their lives.

### **2.8.3 Open Educational Resources within the Namibian Context**

The Namibian constitution makes provision for equal right to education and free primary education for all Namibians. Despite the fact that the Namibian government

has made efforts to increase access to education, the provision of quality education to the whole population still remains a challenge.

The government through ETSIP has undertaken to find ways of providing textbooks to learners in a cost-effective manner as well as to provide technical support for teaching and learning (Ferreira & Gauthier, 2013). Similarly, the National Development Plan 4 (NDP4) of 2012/13 to 2016/17 presented solutions to problems concerning lack of ICT infrastructure. The main objective of NDP4 for the education sector is to ensure that every Namibian learner receives quality learning materials at no cost (NDP4, 2012:20). Regarding accessibility to education, the government publication *Education for All* (EFA) stated clearly that in order to achieve the goal of education for all, there is a need to widen and ensure inclusive access to education and that requires not only the development of more educational institutions but education programmes that are open and freely accessible to all people (Government of Republic of Namibia, 2002).

In the intervening years since Namibia gained independence in 1990, the government has established many learning institutions including ODL institutions, namely, NAMCOL, NUST-COLL and UNAM-CODEL to provide flexible learning opportunities through ODL. The Commonwealth of Learning through the COL OER4OS project initiated in 2008, supported the national objectives in developing resources that can be accessed freely by both teachers and learners (Ferreira & Gauthier, 2013). This project comprised NAMCOL and the National Institute for Development (NIED), participating in a project through which OER in five Grade 10 subjects were developed. The OER content was developed in print and online format. The online format was developed on Moodle learning management system and was made available to the public for free (Ferreira & Gauthier, 2013). The contributions made by Namibian teachers to the OER community through the COL OER project for open schooling have raised the public image of the institution and country at large (Karipi, 2013). During the project, participants shared and adapted OER content with partners from other countries such as Lesotho, Botswana, Trinidad and Tobago, which enhanced their pedagogical innovation. According to Karipi (2013), the Namibian College of Open Learning's participation in the OER development project motivated the institution to develop its own OER policy and as a result, NAMCOL adopted the Notesmaster open source software to develop OER for secondary education. Taking into account the

challenges of providing quality, cost-effective learning resources, it is critical for a developing country like Namibia to utilise OER to its fullest as an alternative pedagogical approach for learning.

This study distinguishes between OER development and OER usage. Literature shows that it is not known whether OER developed by institutions are being used and who the users are (Hysten, 2017). Studies done to assess who the real users are of OER in institutions of higher learning, do not yield any results, as in many cases senior management do not have information concerning the involvement of faculty members in OER initiatives (OECD, 2007). The same situation can be true within Namibian ODL institutions. The researcher of this study, as part of the team that developed OER on Moodle platform, desired to find out whether the faculty members of NAMCOL, in this case, are aware of these resources and whether they are in actual fact, making use of the resources for teaching and learning. In addition, no information seems to be available concerning OER initiatives in the other two ODL institutions participating in this study, namely, NUST-COLL and UNAM-CODEL. That does not mean faculty members do not engage in OER activities either within their institutions or with other partners. This study focuses on the use of OER developed either internally or externally by faculty members or the use of OER that is freely available via the web.

## **2.9 THEORIES UNDERPINNING THE STUDY**

Various theories support OER as a model for technology-enhanced learning and have been deemed suitable to underpin this study. The theories that inform my understanding of the research problem are; Transformative Learning Theory, Heutagogy Learning Theory, Cognitive learning theory and Social learning theory, Social Constructivism Learning Theory, the Connectivism Theory of Siemens and Downes (2004), and the Diffusion of Innovations Model proposed by Rogers (2003). The researcher adopted these theories to form an integrated theoretical framework to foreground and support the use of OERs as digital pedagogical technology in enhancing teaching and learning.

### **2.9.1 Transformative Learning Theory**

The transformative learning theory provide a theoretical perspective of how adults

learn (Mezirow, 1991). The adults for the sake of this study refer to both faculty members and ODL learners who are in many cases adults. This study analyses transformative learning based on the features as reflected in the work of the four researchers, namely, conscientisation or consciousness-raising of Paulo Freire (1970), Jack Mezirow's perspective transformation, transformation development proposed by Larry Daloz, and transformative education proposed by Robert Boyd (Palmer & Bowman, 2014).

The notion of critical consciousness was raised by Paulo Freire while fighting for the liberation of the poor through literacy education in Brazil, Latin America. Freire advocates that transformative learning occurs when adults develop the ability to critically analyse, question and take action about political, cultural, social and economic situations that have influence on their lives (Darder, 2014:10). The main feature in Freire's theory is the action and reflection (praxis) between learners and their teachers that can foster self-emancipation. Freire believes that transformative learning is emancipatory and liberating. The application of critical consciousness in this study is influenced by an emancipatory belief, which promotes the liberation of the mind. In this study, critical consciousness focuses on the promotion and the liberation of the minds of the Namibian ODL institution faculty members from the oppression by historical beliefs and habits, which might prevent them from employing other ways of enhancing access to quality content at the cost of quality education.

If emancipation, as per the above interpretation, is about the appreciation of the variety of methodologies and promotion of new pedagogical approaches, a conventional textbook-based approach should not be regarded as the sole form of the knowledge base, and faculty members should be open to other forms of imparting knowledge such as the adoption of OER.

Freire, in his theory outlined in *Pedagogy of the Oppressed* (1970), illustrated that there is a perceived myth about education as a banking structure where teachers are considered depositors of information while learners are repositories of information (Bateman *et al.*, 2012). This study debunks the myth and advocates for an open pedagogy, which implies the involvement of the learner and the entire community in learning through collaboration (DeRosa & Robison, 2015). In this theory, Freire, suggests that for the realisation of true emancipation of the mind, knowledge

transmission should be multi-directional rather than merely uni-directional. In other words, Freire's theory supports this study by encouraging learner autonomy and interactiveness in learning which can be achieved by adopting OER-usage as an approach to learning.

Mezirow extended Freire's work and developed a theory of adult learning grounded in cognitive and development (Mezirow, 1991). His point of departure is that adults learn through reflection and critical self-reflection. Mezirow's theory focuses on perspective transformation, in other words, a change in the beliefs, assumptions, values that are acquired through life experiences (Yeboah, 2012). This study looks at this theory from the faculty members' point of view which is the main focus of this study. According to Mezirow, adults change their worldview based on situations that present themselves. Faculty members in ODL institutions get used to doing things in the same way which influences their view. Mezirow, in his theory, proposes that adults through critical self-reflection, can detect and re-evaluate key assumptions on which perceptions are created. Mezirow's perspective transformation and critical reflection have a direct influence on this study of perceptions of Namibian ODL institution faculty members on their use of OER. This study intends to promote self-reflection for faculty members to determine whether their beliefs, values, and attitudes which they acquire through their experiences remain valid (Mezirow, 1991). Self-reflection within ODL institutions is critical for the promotion of more flexible approaches such as the use of OER, to meet the demands of lifelong learning.

Unlike Freire and Mezirow, Daloz in his seminal work on guiding the learning of adult learners, emphasises development as the key to transformative learning (Daloz, 2012). His view is that adults construct a sense of their experiences based on the developmental movement in which they find themselves. This implies that when adults move into new developmental phases, they construct new meaning structures in order to be able to make sense of the situations (Khabanyane, Maimane & Ramabenyane, 2014). Daloz's theory fits in well with the promotion of open educational resources as an alternative for adult and distance learning within the digital developmental phase. With all the challenges facing education delivery and the need for more cost-cutting strategies to provide quality and equitable education, institutions need to construct new meaning structures that will help them to remain relevant.

Robert Boyd and Gordon Myers' (1988) work aligns with both Mezirow and Daloz. These researchers in their transformative education theory support the developmental perspective and also share the same sentiment with Freire on the importance of consciousness in adult learning. They, however, developed a different meaning for those strands based on a belief in the spiritually and holistic dimensions of life (Khabanyane *et al.*, 2014). Boyd in his view, states that adult learning is about becoming aware of unconscious aspects that have an influence in their daily lives. In other words, the experiences in life plays a significant influence in shaping the way adult perceive the world. The understanding of Boyd's principle is that adults do things unconsciously based on their emotional and spiritual beings that can have an influence on their views and perceptions.

This theory was chosen to underpin this study firstly because its belief in the liberation of a human mind which I think is key to the adoption of OER by faculty members. The use of OER requires individual faculty members to practice critical self-reflection in order to acknowledge and embrace change and benefits brought about by technological approaches such as OER. Secondly, this theory facilitates my understanding of the perceptions and attitudes of the faculty members as it provides an explanation on how emotions and spiritual beings can unconsciously influence the attitudes and perceptions of human beings.

### **2.9.2 Heutagogy Learning Theory**

Heutagogy learning theory is relevant to this study in that it promotes self-directed learning, which is at the core of open and distance learning. Heutagogy learning theory came into existence as a result of a steady criticism of the structure of educational systems from various educators and the urgent call for innovative ways of providing education (Robinson, 2010). Heutagogy is grounded in the concept of self-determined learning (Hase, 2013) and was developed as an expansion to andragogy<sup>2</sup>, or self-directed learning (Blaschke, 2012).

In this study, the term learner refers to anyone who studies through a distance mode, either at secondary or higher education levels. This study focuses on ODL institutions

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<sup>2</sup> **Andragogy is an alternative to the term pedagogy – a learner-focused approach for people of all ages.**

in Namibia, namely, NAMCOL, which offers secondary education as well as CODEL and COLL, which offer higher education through distance mode. Although heutagogy was not found to be fit for higher education due to its focus on the learner, there are some educators who have found it credible in providing a solution to what their learners are facing (Bhoryrub, Hurley, Neilson, Ramsay, & Smith, 2010; Blaschke, 2012). This study also finds heutagogy learning theory suitable as it provides the support for both higher education and secondary education level distance learners covered by this study. Heutagogy provides a learning framework that addresses the needs of students, learning in an ever-changing environment to become lifelong learners (Bhoyrub *et al.*, 2010).

Blaschke (2012:57) also argues that distance education can align well with heutagogy learning theory for its potential to apply emerging technologies. Secondly, central to the heutagogy theory is the promotion of a learner's autonomy or self-determined learning which is a feature of distance learning, an aspect this study is trying to address. Although this study is under the assumption that OER can address the issue of access and affordability of education, it is important to note that the andragogical approaches should remain core to the advancement of new innovations such as OER. In heutagogy, as in the andragogical approach, the teacher plays the role of a facilitator of a learning process by providing guidance and resources and surrenders ownership of the learning journey to the learner. The learner decides on what and how learning will take place (Hase & Kenyon, 2013; Mafenya, 2016). Hase and Kenyon (2013) proposed a pedagogical design, which means that the teacher's role should be to provide resources and the actual design be left in the hands of the learners themselves. The OER pedagogical approach under inquiry in this study is characterised by collaborative learning and continuous improvement of the learning environment through sharing of resources. Thus, if a heutagogical theory supports learning, higher education will be more accessible to a larger number of learners without undermining its quality (Nkuyubwatsi, 2016). The heutagogical learning theory applies to this study through its belief in principles of learner-centredness, learner-generated content and learner self-directedness. The use of OER can facilitate a paradigm shift from a teacher-centred approach to a situation where the learning is at the centre of a learner through e-tutor interaction (DeRosa & Robison, 2015). A learner-centered approach to teaching, exploration, and creativity play a critical role in

the success of OER adoption. This study assumes that if the faculty members within the ODL institutions adopt the use of OER, learners will take the responsibility of directing their own learning by engaging in the design and repurposing of OER for their own needs.

The researcher intends to explore the perceptions of faculty members on the use of OER, and how learner self-determined and self-directed learning through interacting with OER can be promoted. I argue that self-directed-learning may not be realised within the ODL institutions without the involvement of faculty members. Moreover, distance education has an ultimate goal to respond to the demands of work industries (ICDE, 2013). Taking a heutagogical approach to teaching and learning by exposing distance learners to open educational resources, provides opportunities for learners to develop self-determination, which is a requirement of the industry.

Furthermore, the heutagogy theory is based on the notion that learning takes place when learners are given opportunities to explore sources to develop their knowledge using a variety of search engines such as Wikipedia and Google Scholar (Blaschke and Hase 2014). Blaschke and Hase (2014:32) further indicated that the teacher has a role to play in providing possible resources and guiding learners to orientate themselves with the exploration process. In the context of this study, the Namibian ODL institution faculty members have a role to play in facilitating learning by providing guidance and support to learners. One major role of faculty members is to promote alternative ways of providing quality learning resources at a low cost to learners.

One of the benefits of using existing open educational resources is that they can be remixed or modified in order to suit a particular situation. Heutagogy encourages the creation of content by learners and teachers. The online environment provides a variety of tools that can be used to design, create and share content such as blogs and websites. It is in the interest of this study to explore the extent to which Namibian ODL institutions faculty members are engaged in the use and creation of OER for the benefit of distance learners.

The last key element of heutagogy learning theory analysed by this study is collaborative learning. This theory believes that teamwork promotes problem-solving skills and enhances knowledge reinforcement among learners (Dick, 2013). In other

words, the heutagogy learning theory promotes coaching and facilitation roles for a teacher instead of directing the learning path. Central to OER sharing and improvement is connectivity to networks. Heutagogy supports the aspect of connection via the internet to widen access and network with other experts across the globe. This theory further supports the sharing of information as a way of building learning communities and identifying collaboration opportunities (Blaschke & Hase 2014). The key aspects that makes OER an option for many institutions is the fact that they can be shared, used and re-used for free without any copyright fees (Butcher, 2015). Thus, the benefits of OER are foregrounded in their potential to foster self-directed learning and learner-centred approach while promoting facilitated learning. The same approaches are addressed by the heutagogy learning theory; hence this theory supports the objectives of this study.

### **2.9.3 Cognitive Learning Theory and Social Learning Theory**

Cognitive learning and social learning theories underpin this study by way of addressing the roles of faculty members in facilitating learning. The fundamental psycho-social issues that are addressed by this theory, developed by Albert Bandura (1977:1986), are among others, how learners learn, and how learning can be facilitated and reinforced (Terras, Ramsay & Boyle, 2013). This study tried to uncover challenges that prevent the advancement of open educational resources as a digital pedagogical approach, hence clarification was needed on psychosocial issues. In his social cognitive theory, Bandura (1977:1986) focuses on behavioural learning where people learn and construct knowledge and meaning through communication within their communities and via social media networks (Redmond, 2016:149). A core principle of Bandura's social cognitive theory is learning through watching the behaviour of others through modelling. This notion does not directly target distance learners, but the researcher finds it applicable to this study as it acknowledges the significance of facilitated learning by an adult. The skill of teachers, referred to as faculty members in this study, in facilitating learning determines the level at which learning takes place. It further explains how interactive resources in the form of videos, animations can be used as models to facilitate learning.

Bandura's theory refers to the concept of outcome expectations as a key to learning. This implies that learning takes place as a result of prior behavioural experiences. The

importance of outcome expectations in social cognitive theory is based on the fact that it helps individual learners take correct decisions for their actions (Zhou & Brown, 2015). Distance learners are characterised by a wealth of experience gained through earlier education and life experience, which makes them aware of the consequences of certain behaviour. In relation to this study, if open educational resources are correctly embraced, a learner-centered pedagogy could be enhanced and the expected outcome of distance learners could be increased.

Self-efficacy, explained by Bandura, reflects how individuals perceive their ability to successfully achieve their goals (Artino, Holmboe & Durning, 2012:77). Literature reveals that distance learners demonstrate higher self-efficacy than their counterparts in a conventional education setting and are likely to succeed due to their high levels of self-direction, self-discipline and self-motivation (Sagitova, 2014:273). The success of OER use in distance learning depends on the level of computer self-efficacy for both learners and facilitators (Botta & Anzaldi, 2013). In terms of Namibian ODL institutions there is the general assumption that all faculty members are well conversant in terms of computer self-efficacy. The situation, however, may be different with regard to learners. Open distance learners in Namibia come from different backgrounds in terms of their skills especially ICT skills. The researcher, however, maintains that OER has the potential to boost learner self-efficacy in general and in particular, computer self-efficacy.

Another concept used by Bandura to clarify the social cognitive theory is the aspect of goal setting as a key to successful learning. He asserts that goals reflect cognitive representations of expected, predicted or preferred results (Zhou & Brown, 2015:20). In distance learning, it is a prerequisite for faculty members to provide counselling in goal setting and value-orientation in order to ensure academic success (Owoyele, 2012). This concept brings an understanding to this study that the roles of faculty members are more extensive than just content dissemination. This further justifies their role in making OER a choice for enhancing learning and academic progress.

Social cognitive theory views self-regulation as the ability of students to self-monitor and keep track of their own behaviour and outcome. The inception of online learning has influenced the interest in self-regulated learning (Wong, Baars, Davis, Van Der Zee, Houben & Paas, 2018; Wigfield, Klauda & Cambria, 2011). One key aspect of

distance learning is the ability of the learner to pace and regulate his/her own learning. The openness in open distance learning also provides the flexible means of learning which includes learning through various channels such as online, video, radio and other emerging technologies. OER are mainly online resources which are meant to be reused and repurposed to suit any context. It is argued that if the use of open educational resources gives learners an opportunity to create, critique and share content between themselves and their e-tutors, that results in high self-regulated learning.

Social learning theory, developed by Albert Bandura in 1977 is an extension of cognitive learning theory. It is a key element for the educational landscape shift to open pedagogy which includes OER. Bandura combined two theories, namely, cognitive learning theory in which learning is influenced by psychological factors, and behavioural learning theory which adopts that learning based on individual's reaction to the environment (Giovazolias & Themelia, 2014). The social learning theory aligns with the study in terms of its influence on social online learning which is enabled by the availability of online infrastructure. OER are mainly online resources and the use thereof demands the use of social networks. This study, therefore, finds principles of Bandura's social learning theory applicable to OER environment. According to Hill, Song and West (2009:89), social learning is based on the construction of knowledge through engagement in activities and through human interventions. This study focuses on the online social interaction between learners and the faculty through the use of online open educational resources to facilitate cognitive collaborative learning. Although OER are known to be of good quality, the online environment and the amount of information available can pose a challenge to learners. That is why it is essential to establish social networks through which learners can engage with each other and with the faculty members.

Bandura's social learning theory encourages knowledge sharing and support among learners and teachers to ensure retention (McLeod, 2016). From the perspective of this study, online networks and platforms guarantee knowledge retention through the process of review and sharing of OER. Open educational resources have been developed by the Namibian College of Open Learning on Notesmaster learning management platform for secondary level education. The platform makes provision

for discussion forums and virtual classrooms for e-tutors and learners to collaborate. Thus, there is a link between social learning theory and the OER pedagogical approach, hence this study, aims to establish whether faculty members use the OER whether on Notesmaster or elsewhere to enhance social learning in ODL. Influenced by social learning theory, perceptions and understanding held by faculty members on how open educational resources are used at the Namibian ODL institutions was sought.

#### **2.9.4 Social Constructivism Learning Theory**

Although constructivism learning theory, just like behaviourism and cognitive theories, was developed before learning was influenced by technology, its belief in constructed learning and learner engagement becomes more relevant to a technology-enabled learning approach. The applicability of constructivism theory to this study is based on social constructivism proposed by Lev Vygotsky in his theory of Zone of Proximal Development (ZPD) developed between the years of 1896-1934. The zone of proximal development focuses on the difference that exists between what learners can achieve on their own and what they can achieve with the guidance of a knowledgeable teacher (Knestrick, 2012). Vygotsky's theory (1978) recognises the role of the teacher in facilitating learning within learners' zone of proximal development (Siyepu, 2013).

Although Vygotsky developed this theory prior to the era of technology, and although the theory speaks more for learners in a conventional system, this theory can be applied to any learning system fitting well in the ODL system where learning takes place in isolation and where guidance by a tutor is critical. Vygotsky in his ZPD theory promotes collaborative guided learning in which the use of open educational resources can be an answer. In other words, the role of Namibian ODL institution faculty members in ensuring that learners receive proper guidance to achieve their learning objectives, is embraced by this theory. Challenges presented by the ODL system such as time, isolation, financial constraints demand a high level of intervention by the teacher in order to place learners within their zone of proximal development. Open educational resources allow learners to collaborate with their peers as well as e-tutors for their creation and sharing thereof. Thus, the involvement of learners in the creation of OER operationalises the Vygotsky's theory of learning within the zone of proximal development (Shabani, Khatib & Ebadi, 2010).

This study applies both constructivism and social constructivism theories because they all maintain that learning is not acquired, but constructed through self-directed learning. The researcher, however, finds social constructivism more applicable due to its emphasis on the need for social interaction and tools such as computers to mediate collaborative knowledge construction (Mogashoa, 2014). Social constructivism, therefore, gives preference to the use of open educational resources and practices in which learners are constructively engaged with content, tools and services in the learning process (Hogan, Carlson & Kirk, 2015).

Social constructivism is applied in the context of this study to address the way distance learning is facilitated in Namibia. It promotes the full potential of technology in producing and disseminating resources (UNESCO, 2016). While the objectives of all ODL institutions in Namibia is to provide quality distance learning through different modes of delivery, including the provision of self-instructional materials and activities, the costs for the delivery and for development of learning resources keep rising. Open educational resources do not only reduce cost but also present an opportunity for learners to interact through the web (McGreal, 2017). Addressing the need for new approaches, Vygotsky in his social constructivism theory enforces a different teaching method whereby a teacher assumes a facilitating role as opposed to total control of what and how learners should learn. He emphasised the need for teachers to create a learning environment for learners with the support of various technologies. In other words, social constructivism theory implies a need for a paradigm shift in the way institutions operate for the purpose of embracing new innovative ideas. Faculty members of any institution are responsible for the developing, repackaging and regrouping of learning content so that learning can take place within a controlled environment. Given the context of this study, faculty members in order to take up a facilitating role, need skills and knowledge of how to integrate technology-based resources such as OER into their teaching (McKimm, 2007; Keengwe, 2018). Social constructivism learning theory, therefore, provides a ground on which to base my understanding of the faculty members' views on the use of the technology-enabled OER in teaching and learning.

### **2.9.5 Connectivism Theory**

It is the researcher's view that OER can be used to leverage open and distance

learning, however, the use of OER in a traditional teacher-centred approach might not result in open education. Other pedagogical models such as connectivism and constructivism need to be employed in conjunction with OER in order to enhance learner self-directedness (Hogan, Carlson & Kirk, 2015). Connectivism theory, created by George Siemens, directly speaks to the use of the internet and online resources for pedagogical purposes, hence the theory underpins this study. Connectivism learning theory addresses the importance of media in connecting people and enabling learning and sharing of knowledge through networks (Siemens, 2005; Goldie, 2016). The priority should be given to practices that keep learners actively engaged in their learning process through connected social networks.

A key feature of ODL is that there is a physical separation between the learner and the learning institution. The three ODL institutions, namely, NAMCOL, CODEL and COLL enrol a total number of about sixty thousand distance learners annually, which makes it impossible to have face-to-face contact on regular basis. The typical challenges of ODL vary from lack of communication, shortage of study materials and insufficient academic support that eventually leads to drop out (Wang, 2014). Though connectivism advances the use of online open educational resources to minimise distance learning challenges, the emphasis is placed on the guidance of a teacher and the teacher as a facilitator of online learning. In distance education, the responsibility lies more towards the learner, but in order to maintain the cognitive excellence, the presence of a teacher in online social networks should be maintained (Skrypnik, 2015). I argue that faculty members, be it, e-tutors, developers and coordinators of distance learning should remain present throughout the cognitive process of a distance learner which is supported by Pichette (2011) who recognised the role of a teacher in creating a conducive learning environment in which a learner can flourish as an essential in ODL institutions.

Connectivism theory further assists the researcher in understanding the importance of seeking the right information from the internet and connecting it to the right people. I believe that learners need assistance especially when it comes to selection of the correct information from the internet. McPherson & Nunes (2004) indicated that online tutoring includes directing learners to relevant resources for information. A faculty member should thus serve as a link between the learner and the institution to form a

network (Potter, 2016). As per connectivism, personal knowledge is contained in a network (Chatti, Jarke & Quix, 2010). The network feeds into the institution and back to the network for the benefit of an individual learner. Through this process, a learner remains current in the field through network connections. Being free to adapt, OER are continuously being reviewed and revised to suit individual communities through networking and adopting to ensure that learning is current and relevant (Goldie, 2016). Connectivism places emphasis on the flow of information and knowledge within the institution for its effectiveness. In Namibia, the ODL institutions are connected through the established body, the Namibian Open Distance Network Trust (NOLNeT), a network of ODL practitioners advancing OER usage within the institutions. If the use of ICT and OER could be enhanced to strengthen the link between ODL institutions in Namibia, the access to quality education would doubtless be increased. (Siemens & Downes, 2015). In other words, connectivism is key to the success of the integration of digital OER in teaching and learning hence, connectivism theory supports the objectives of this study.

#### **2.9.6 Diffusion of Innovations Theory**

OER is a considerably new pedagogical concept that is beginning to influence the education sphere. Central to this study is the use of technology in the pedagogical process of adopting OER for open distance learning. Rogers' Diffusion of Innovation Theory provides a framework for understanding how ODL institutions adopt OER for use by faculty members in their teaching. I argue that the success a new innovation in the institution depends on the engagement of those involved in adopting it. For an innovation such as OER to be used, it should be adopted by the institution as a pedagogical approach and be integrated within the teaching and learning practice. Although Rogers' theory was based on the studies done in the field of agriculture (Ayodele, 2012), it is applicable to this study as a technological innovation which requires the same process of adoption. Innovation, as described by Rogers (2003), is an idea that is perceived as new by individuals or units, and diffusion is the process in which an innovation is communicated through certain channels over time amongst the members of an institution, while adoption is a decision by an institution to fully utilise an innovation to reap its benefits. While recognising that OER is a new concept, especially within the Namibian education structure, the researcher is also aware of other institutions elsewhere who have tried to adopt OER (De Hart *et al.*, 2015).

Rogers (ibid) proposes four elements that influence the spread of any new innovation such as OER, namely, innovation itself, communication channels, time, and a social system.

Looking at the way communication channels are structured in education institutions, and the influence of bureaucratic structures, the chances of prolonged breakdowns of communications are always high. Such challenges can create uncertainty in many individuals, resulting in the rejection of an innovation. Although Rogers recognises the role of mass media in the communication process, he singled out the interpersonal relationships as key to the successful adoption of an innovation. Thus, for any innovation to be successfully adopted, the interactions between the source and the receiver are critical, (Rogers, 2003). The same sentiment can be attributed to the way OER as a new innovation is communicated to the faculty members and to the learners of any institution.

Time is another critical factor for any new idea to be accepted and adopted. Institutions often tend to rush implementations of new innovations resulting in rejection by individuals (Van de Ven, 2018). Patel (2015:419) concurred with Rogers, who alluded to the fact that new innovations require investing time, energy and resources and piloting a new idea before implementing it, increases the chance of its successful adoption. The OER concept was introduced in Namibia in 2008 by the Commonwealth of Learning. It was noted that the rate at which OER was being adopted was very slow, and thus the perceptions of faculty members regarding OER-usage within the ODL in Namibia was deemed necessary, particularly as faculty members are the driving force behind the adoption of any innovation in their institutions. Institutions of open and distance learning are usually organised in a way that different operational units are responsible for different functions such as material development, learner support, material distributions and so on. The implication thereof can be that the new innovations might be kept within a specific unit without other units being aware (Lane, 2012). Rogers (2003), in his theory, also emphasised the fact that the patterns in which organisation is arranged and the way adopters are categorised has a great influence on the way the diffusion of an innovation take place.

Apart from institutional adoption, individuals within the institutions play a central role in the adoption process. Rogers' model outlines a path through which individuals pass

before adopting or rejecting an innovation. The five stages of innovation-decision process are discussed in the table below.

**Table 2.1: Rogers’ 5 stages of the innovation adoption process (Rogers, 2003)**

<b>STAGE</b>	<b>DEFINITION</b>
Stage 1: Knowledge	During this stage, an individual has not yet been exposed to an innovation and is important to find out what and how the innovation works.
Stage 2: Persuasion	The individual becomes more closely involved and show interest to find out more about an innovation
Stage 3: Decision	During this stage, the individual weighs the pros and cons of an innovation and take a final stand on whether to reject or adopt an innovation.
Stage 4: Implementation	The individual put the innovation into practice as a trial. More information about the innovation can still be sourced.
Stage 5: Confirmation	At this stage, a final decision to adopt an innovation is made. Individuals become advocates of an innovation within the organisation.

The innovation-decision process clearly depicts how staff members of institutions are involved in the adoption of an innovation. For the sake of this study, staff members are the faculty members who are responsible for the instructional design of learning content in ODL institutions. The assumption of this study is that faculty members undergo the same steps as indicated to make a final decision about the adoption of OER in their institutions. This theory further implies that for the faculty members to embrace the OER concept, their institutions need to adopt the innovation as an alternative pedagogical approach. This study finds a close link between the diffusion of innovation theory and the use of OER by faculty members.

To round off this review of the literature, Table 2.2 give a brief summary of the theories underpinning the study.

**Table 2.2: Summary of the theories that underpin this study**

<b>Theory</b>	<b>Origin</b>	<b>Focus</b>	<b>Implication on this study</b>
Transformative	Jack Mezirow	Critical consciousness and self-	Open-mindedness, change of mind set, to

<b>Theory</b>	<b>Origin</b>	<b>Focus</b>	<b>Implication on this study</b>
Learning Theory	1978	emancipation  Pedagogy of the oppressed  Developmental transformation	embrace pedagogy open
Heutagogy Learning Theory	Stewart Hase & Chris Kenyon 2000  an expansion to andragogy	Based on self-determination  Promote lifelong learning  Promote learner-centred and learner's autonomy	Collaborative learning through the use of OER  Facilitated learning
Social Cognitive Theory and Social Learning Theory	Albert Bandura 1977-1986	Focuses on behavioural learning.  Goal setting, self-efficacy, and self-regulated learning  Learning through sharing	The involvement of learners in the creation of OER
Constructivism Learning Theory	Lev Vygotsky 1896-1934	Learning is not acquired but constructed through self-directed learning.  There is the difference between what learners can achieve on their own and what they can achieve with the guidance of -a teacher	Role of faculty members in facilitating teaching and learning
Connectivism Learning Theory	George Siemens & Stephen Downes  2005	Focuses on the use of internet for learning  Importance of connected networks and collaboration	Importance of connectivity in the use of OER

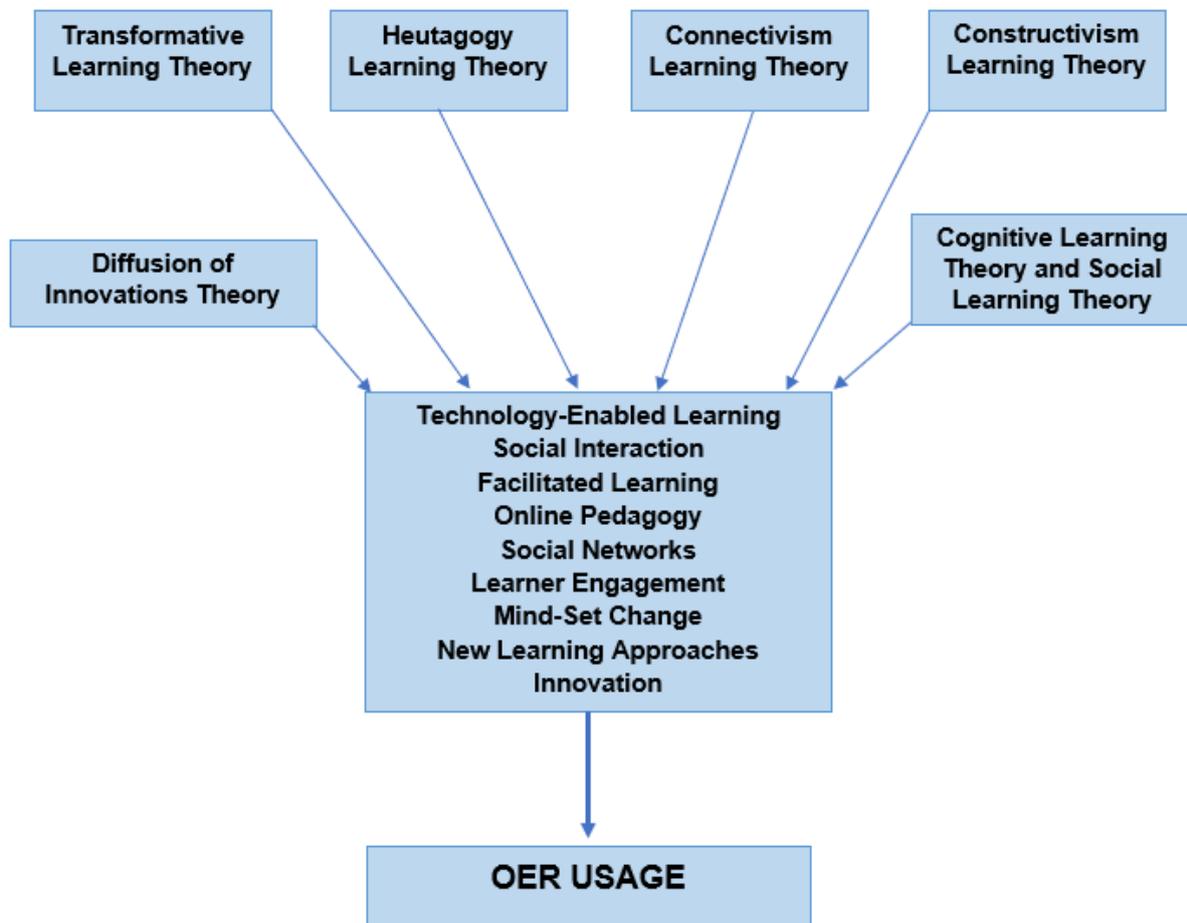
Theory	Origin	Focus	Implication on this study
Diffusion of Innovations Theory	Everett Rogers 2003	<p>Explain how new innovation spread through institutions</p> <p>Emphasises the importance of good communication structures</p> <p>Stages of diffusion</p>	OER adoption process

## 2.10 CONCEPTUAL FRAMEWORK

To present the conceptual framework of this study, it is important to clarify the meaning of the terms ‘theory’ and ‘concept’ as applied in this study. Imenda (2014: 186) defined ‘theory’ as a set of interconnected ideas, which construct a logical view for the purpose of explaining a specific phenomenon, while a ‘concept’ refers to the elements of theory which express the philosophical ideas within a theory. In the context of this study the two concepts were combined to design the conceptual framework for the study.

Furthermore, the conceptual framework is determined by its purpose (De Vos, Strydom, Fouche and Delport, 2005) and is mostly useful in cases where existing theories are not sufficient to create a strong ground for the study (Adom, Hussein & Joe, 2018). Equally, the conceptual framework allows the researcher to present a phenomenon in an integrated way (Adom *et al.*, 2018). In this study, the conceptual framework was designed to highlight the integrated theoretical framework that underpins the study and to accentuate worthiness of the topic under study. More importantly, the conceptual framework shows the conceptual interconnectedness and interrelatedness of the applied theories and how they support the use of open educational resources.

This study is underpinned by the following theories: Transformative Learning Theory, Heutagogy Learning Theory, Cognitive learning theory and Social Learning theory, Constructivism Learning Theory, Connectivism Theory of Siemens and Downes (2004) and the Diffusion of Innovations Model proposed by Rogers (2003).



**Figure 2.1: The integrated conceptual framework of the study**

## **2.11 CONCLUSION**

The concept of OER has been evolving over a number of years. There are various studies examined in this study that look extensively on the various aspects of OER. The literature reviewed in this chapter has shown extensive work done to promote the development and use of OER in various countries. The literature reviewed generally is in agreement that OER, if adopted as a pedagogical approach, have the potential to improve the quality of education and to increase access. The issue of cutting cost of educational materials has also been discussed in the literature. There are various studies which were examined that acknowledge the challenges that learners, faculty and institutions face regarding OER, with technological challenges being the biggest. Studies conducted in different countries have shown that OER is more appreciated in developed countries and there are more OER projects in developed countries than in

developing countries. Studies also referred to the dependency on external funding among developing countries that can hinder the sustainability of OER projects.

Several studies were found that deal with perceptions and attitudes of faculty members in conventional education system. There was, however, very little work done to analyse the perceptions of faculty members in ODL system. In addition, no literature was found that examines the OER within the context of the Namibian ODL system. This study aims to fill the gap in the literature by exploring the perceptions and views of the Namibian ODL institutions' faculty members on the use of OER.

Various learning theories that relate to the use of open educational resources in distance education system to underpin this study were examined. The choice of various theories was necessitated by the fact that open educational resources and the use thereof is a new concept and no theories have been developed in the field of OER. All the theories analysed depict similar principles in terms of the importance of a learner-centered learning approach, guided learning, social interactions and network connection between learner and educator, between learner and communities and between learner and learner. This study draws from each theory to develop an integrated conceptual framework used as a lens to interpret perceptions of faculty members of the Namibian ODL institutions in the use of open educational resources in teaching and learning. The theories adopted in this study form an appropriate integrated conceptual framework to answer the research question: *What are the trends in the scholarly literature about OER and what are the theory bases for the usage of OERs in teaching and learning?*

In the next chapter, the research methodology is presented.

## **CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY**

### **3.1 INTRODUCTION**

The study set out to explore the perceptions of the faculty members on the use of open educational resources in ODL institutions in Namibia. The integrated theoretical framework discussed in chapter two underpins the methodological approach and design of this study to facilitate the deep understanding of the phenomena through closely interaction with the participants. The theories enable the researcher to adopt the design that could provide an answer to the research questions and meet the research objectives. This chapter, comprising the research design and methodology, refers to the approach the researcher employs to combine different parts of the study in a logical order to address the research problem (Mertler, 2015). The chapter begins with a detailed description of the research paradigm which underpins the research (3.2) followed by the research approach (3.3), and the research design (3.4) deemed most appropriate for the research. Thereafter population and sampling, which includes a description of the research sites and the procedure followed for sampling, is found in 3.5. Data collection (3.6) explains the methods of collecting and includes the types of instruments used to collect data from the participants with data analysis being described in 3.7. Finally, clarification of the trustworthiness of the study (3.8) is followed by a discussion on ethical considerations (3.9) prior to the conclusion.

### **3.2 THE RESEARCH PARADIGM**

The term paradigm in research refers to the worldview that directs the researcher in a field of study (Kivunja, 2017). There are many types of research paradigms which maintain different views on the ontology (what is the reality?), and epistemology (how we find out about the reality) (Creswell, 2012). That means that it is critical for any researcher to understand the nature and the science of his/her study in order to choose an appropriate paradigm. The paradigm determines the methodology that should be employed to answer a particular research question.

Research paradigms are classified into five basic categories, namely: positivist, interpretivist, feminist, critical and post-positivist paradigms (Kivunya, 2017). In the field of education, positivist and interpretivist paradigms are commonly used (Taylor, 2013). This study being in the field of education, focuses on and differentiates between

the two paradigms for this study. The objective of a study and the research question determines the type of a paradigm that can be followed and the way the researcher perceives the reality or the truth (ontology), and how this truth can be discovered (epistemology) determines the approach that can be employed to answer the research question (Creswell, 2012). That means the research paradigm is the assumption that people have about the reality, which gives rise to a particular truth (Kawulich, 2015). This study is of a social science nature as it deals with human behaviour of participants in their natural settings, thus exploring the perceptions of faculty members on the use of open educational resources in ODL institutions in Namibia. The researcher therefore adopts an interpretivist paradigm for its relevance to this study.

The interpretivist paradigm believes that reality is in the minds of people and is constructed through social interactions (Creswell, 2008; Mertens, 2015). Based on this study, reality comes from individual's perceptions and experiences of using OER as a pedagogical approach. It further emphasises that reality is limited to a specific context and to a specific group and therefore cannot be generalised to form a common truth (Kawulich, 2015). The reality in this study is limited to the context of the ODL institutions in Namibia and only to faculty members who deal with instructional materials.

Interpretivist epistemological assumptions are that reality is created through interactions between the participants and the researcher and is based on the perceptions and experiences of the phenomenon (De Vos, Delpont, Fouché & Strydom, 2011). Human beings each have different views about the issues and every researcher has a perception of the reality that exists for a particular subject. The interpretivist researcher involves the participants to generate the research findings during the time of the inquiry (Guba & Lincoln, 1994) and to jointly create knowledge and make meaning out of it (Crotty, 1998). The interpretivist researcher tries to understand participants' experiences using their natural settings (Creswell, 2014). In the interpretivist paradigm, the researcher remains part and parcel of the inquiry and cannot maintain a detached position from the research process.

The interpretivist paradigm is thus biased in nature yet flexible and caring about accommodating personal views (Bhattacharjee, 2012). It adopts a more personal and flexible research structure (Edirisingha, 2012) which is open to seizing meanings in

human interaction (Black, 2006) and creating an understanding of what others perceive as reality (Harrington, 2014).

The positivist paradigm, on the other hand, is underpinned by rigidity and sees reality as objective and verifiable (Taylor & Medina, 2013). On the epistemology or the nature of reality, the positivist paradigm holds that knowledge exists and can be testified with empirical data independently from how the researcher might feel about the data (Taylor & Medina, 2013). On the ontology or nature of existing reality, the positivist paradigm believes that there is only one reality that exists and the researcher tries to discover and confirm that reality. The interest of the positivist researcher does not influence the findings, unlike in the interpretivist paradigm where the researcher's own interest is considered as part of the research findings (Dudovskiy, 2018). That means, the positivist paradigm separates the researcher from the findings.

The purpose of this study was to explore the perceptions of faculty members on the use of OER. To achieve this aim, I needed to become part of the research by getting involved in the activities of the participants through a prolonged relationship. As such, the positivist paradigm not suitable for this study since it embraces more quantitative methods, is objective towards reality, and sees the researcher as an external observer who controls the research process (Creswell, 2012), although I acknowledge that both paradigms are important in providing means of producing knowledge and both have limitations as well as strengths (Taylor & Medina, 2013). The interpretivist paradigm believes that there is meaning in the perceptions of the people towards the phenomenon under study and is best explored through a qualitative approach as it depends on the views and experiences of the participants to generate findings. Thus, the interpretive paradigm with a qualitative approach was found to be most suitable for this study as I aimed to explore of the use of OER as perceived by distance learning faculty members in a natural setting.

Both research paradigms acknowledge the existence of reality. The difference between them is that positivists emphasise an objective reality while interpretivist paradigm emphasises subjectivity and participation of the researcher in the research process. Looking at the research objectives of this study and the constructivism theory underpinning this study, a qualitative inquiry is adopted. It is the ontological and epistemological position of the researcher that informs the choice of the paradigm for

this study and thus the approach.

### **3.3 THE RESEARCH APPROACH**

The aim of this research study was to explore the views of faculty members of the Namibian ODL institutions on the use of OER. As indicated above, this study employs interpretivism within the qualitative research approach. Qualitative research refers to all-inclusive, subjective, self-discovery processes used to interpret, describe and develop a theory on a particular phenomenon (Gray, 2013). Based on that, my aim was to create meaning of the phenomenon from the views of the people within the natural settings (Creswell, 2014).

Furthermore, knowledge is viewed as authentic and valid if obtained through the participants' own voices (Mackenzie & Knipe, 2006), hence my main interest was to gain deep understanding of the phenomenon through listening to the real voices of the participants. The views and experiences of participants are important in this study and the use of a qualitative approach is consistent with the theoretical perspective (constructivist) employed in this study, which maintains that reality is socially constructed (Taylor, 2014). In addition, qualitative research entails an in-depth examination of characteristics or properties of a phenomenon to better understand or explain it (De Vos, Delpont, Fouché & Strydom, 2011). Meaning, I sought the experiences on the use of OER from the views of the participants and did not to rely on my own knowledge of the phenomenon (Creswell, 2014). Additionally, the assumption was that participants of this study are familiar with the OER concept within the context of this study and therefore could be probed for their views regarding the use of OER as an alternative pedagogical approach in teaching and learning. Moreover, it was presumed that the faculty members being studied live the experiences and realities of using OER in open distance learning institutions in Namibia, hence the knowledge resides in their views.

Furthermore, qualitative researchers aim to study the situation as it evolves (Patton, 2015). This was achieved by collecting data from the participants at their offices where they experience the phenomenon under study (Creswell, 2012), without exercising control over the behaviour of the participants or manipulating the setting (McMillan & Schumacher, 2014). In addition, the data on the views and experiences of faculty

members on the use of OER were collected through face-to-face interviews, while non-participant observations and documents analysis were used to ensure triangulation of data. In that way, I was able to gain insight from the perspective of the involved faculty members on how they perceive the use of OER in open and distance learning. The use of face-to-face interviews, enabled me to collect raw information by interacting directly with the participants and observing their behaviour within the context of their own environment and understanding the context in which they work. (Creswell 2014). In this study, the data collection took place at three different institutions, specifically at the offices of the selected faculty members or at convenient venues as arranged by the participants themselves. The data collection process was prolonged for a period of 3 months (May-July 2019) with the purpose of allowing sufficient time for engagement with the participants.

This study was guided by the principle that there is are multiple realities (Creswell, 2009). Participants with different background on the phenomenon were purposefully selected to give multiple meanings. This was done under the assumption that part-time faculty members might have different views on the use of OER as compared to the views of the full-time faculty members. Besides, the experiences of the instructional designers in the use of OER might be different from that of the programme developers.

Yin (2013) emphasised that qualitative researchers aim to explain events as they present themselves and not only to record them in a diary. As part of this study, new concepts have been explained as they emerged in order to produce a new understanding about the phenomenon.

One key feature of the qualitative approach is the fact that the researcher plays multiple roles (Welman, Kruger & Mitchell, 2005). In this study, I solely collected, recorded and analysed the data. Welman *et al.* (2005), however, argued that double roles in qualitative research can lead to bias in data collection. To address that concern, the voices of the participants were recorded using a smart phone and the transcripts were returned to the interviewees for verifications.

The qualitative approach therefore, allowed me to explore and intensely investigate the views of the faculty members on the use of OER in Namibian ODL institution. The

subsequent section outlines the case study design employed to facilitate collection of data for this study.

### **3.4 THE RESEARCH DESIGN**

A case study provides a comprehensive examination of a single phenomenon and in so doing delivers a unique illustration of real people in real situations, that is, from an insider viewpoint. A multiple institutional case study method was chosen as research design for this study to draw participants from diverse backgrounds, for the purpose of getting different views to strengthen the research. Creswell (2009) indicated that a multiple case study are more applicable for qualitative studies as it allows the researcher to explore contemporary issues (Yin, 2013) and an opportunity to explore a certain phenomenon looking through more than one lens. In the case of this study, the use of a multiple case study ensures that data are sourced from different backgrounds on the same phenomenon for the purpose of understanding aspects from different viewpoints. The general goal of a multiple institutional case study is developing a full understanding of each case as possible (Creswell, 2009).

There are several reasons why a case study design was chosen. One main advantage of using a case study is the fact that it allows the researcher to limit the number of participants to a maximum of eight per unit and to focus on a specific function of the institution (Willis, 2014). Another reason considered for this study, is that case study allows the researcher to engage the participants in their real working environment in which the researcher becomes part of the process (Wargo, 2014), using a range of data collection techniques over a prolonged period of time (Creswell, 2009).

The use of a multiple institutional case study for this study, gave me the chance to explore the views of faculty members regarding an alternate pedagogy of instruction using OER. Through a case study, the scope of analysis can be narrowed, and attention can be given to the phenomenon under study with a small number of participants (Willis, 2014). In this study, the case is bounded within specific ODL institutions in Namibia (NAMCOL, CODeL, COLL, and) focusing on a few faculty members per institution that deal with instructional design.

Furthermore, I found the case study design more advantageous for this study as it enabled the answering of the how and why questions (Yin, 2013). Although the main

research questions focused on how faculty members use OER in teaching and learning, it was important to find out why and how in order to get in-depth contextualised information about the phenomenon. The prolonged engagement between participants and I gave me the confidence and trust in the data.

### **3.5 POPULATION AND SAMPLING**

There are three publicly-funded open and distance learning institutions in Namibia, namely, Namibian College of Open Learning (NAMCOL), the Centre for Open, Distance, and eLearning (CODeL) at the University of Namibia and the Centre for Open and Lifelong Learning at the Namibian University of Science and Technology (COLL). This study focuses on the use of Open Educational Resources in ODL. The Paris OER Declaration of 2012, urged all publicly-funded institutions to develop and use OER for teaching and learning, hence the population of this study consisted only of the three institutions. The ODL institutions accommodate large groups of faculty members who are responsible for various academic functions within their institutions. This study, however, limited the population to the faculty members, both full-time and part-time, positioned in the teaching and learning of functional units. These are programme developers, distance education coordinators, instructional designers, academic support officers and part-time tutors and lecturers. The faculty members titles differ from one institution to another.

#### **3.5.1 Description of Research Sites**

##### **3.5.1.1 The Namibian College of Open Learning (NAMCOL)**

The Namibian College of Open Learning is a state-owned institution established through an Act of Parliament, Act 1, 1997. NAMCOL provides flexible distance learning opportunities for Namibian out-of-school youth by offering Grade 10 and 12 to those no longer in the conventional system as well as tertiary programmes in various fields of studies. Face-to-face tuition is provided as well as self-instructional learning materials to enable learners to study on their own. Multimedia content is developed to supplement print-based materials and are released in different formats such as radio, video and online platforms. For NAMCOL, the faculty members that form part of this study include, programme developers, distance education coordinators and part-time tutors.

### 3.5.1.2 University of Namibia-Centre for Open Distance and eLearning (CODEL)

The Centre for Open, Distance and eLearning (CODEL) was established in 2016 as a merger between the initial Centre for External Studies (CES) and the Centre for eLearning and Interactive Multimedia. The Centre was created to support the delivery of open and distance learning and to facilitate blended learning. In other words, CODEL serves as an education hub for both print and digital learning materials to ensure wider access and flexible learning opportunities for all. CODEL is responsible for the conversion of the conventional learning materials to open and distance learning materials both in print and online. The staff at CODEL are mainly instructional designers responsible for the development of open and distance learning materials in collaboration with the faculty subject matter experts. In addition, CODEL appoints part-time lecturers who are responsible for the facilitation of courses through open and distance mode. In many cases, full-time lecturers of the university serve as CODEL lecturers under a part-time contract. This study focuses on the full-time instructional designers as well as the part-time lecturers in order to discover their perception regarding the use of OER in teaching and learning.

### 3.5.1.3 The Namibian University of Science and Technology-Centre for Open and Lifelong Learning (COLL)

The Centre for Open and Lifelong Learning is a distance education centre for the Namibian University of Science and Technology mandated to design and deliver open and distance learning on behalf of the university. COLL serves as an extension of NUST, to provide learning opportunities through diverse programmes and methodologies. COLL staff comprise instructional designers and academic support staff. Part-time lectures are used to facilitate online and print for open and distance courses. Both full-time and part-time staff formed part of this study.

**Table 3.1: An overview of research sites**

<b>Site</b>	<b>Mode of instructions</b>	<b>Number of full-time faculty members</b>	<b>Number of part-time faculty members</b>	<b>Number of students</b>
NAMCOL	Face-to-face contact sessions Distance Online learning through Moodle LMS	114	1 266 tutors and e-tutors	47 000
CODEL	Blended learning - use of face-to-face teaching and eLearning, as well as distance education eLearning – learning conducted via electronic media,	42	8 x student support coordinators based in different faculties are responsible for the recruitment of Part-time lecturers for CODEL	6 000
COLL	Face to face tutorials Vacation school Blended learning - use of face-to-face teaching and eLearning	41	272 part-time lectures and e-facilitators	1985

### **3.5.2 Sampling Procedure**

A sample is a small group of participants selected to represent the entire research population (Cherry, 2017). According to Richards and Schmidt (2010), the selected group of participants should be as representative as possible. Sampling involves decisions about whom to select, what setting, and what to observe (Terre Blanche, Durrheim & Painter 2006).

The most used sampling technique in qualitative research is purposive sampling. Purposive sampling allows the selection of participants who can provide in-depth information that is required to answer the research question (CIRT, 2017). Crossman (2018) identified seven types of purposive sampling, namely, maximum variation, homogeneous sampling, typical case, extreme case, critical case, total population

sampling, as well as expert sampling. For the purpose of this study, homogeneous purposive sampling was used to select the participants. Homogeneous sampling is used when participants with specific characteristics are required for the study (Etikan, Musa & Alkassim, 2016). The participants for this study share the same traits in terms of their jobs and years of experience; therefore, the main characteristic that makes the sample of this study homogenous is the involvement of participants in the design of instructional material. Criteria for selection was subjectively generated to determine whom to select to form part of the sample. That means, not all individuals in the population had chances of being selected for the study.

This study involved twenty-four (n=24) participants in total. That is fifteen (n=15) full-time faculty members, five (n=5) per institution, plus nine (n=9) part-time lecturers, three (n=3) per each institution. This study purposively targeted full-time faculty members such as programme developers, distance education coordinators, instructional designers, academic support officers due to their direct involvement in the design and development of the instructional content. The study further focused on part-time faculty members such as lecturers and tutors who are responsible for the delivery of the content whether through online or face-to-face methodology. Only participants who met the following specific criteria were included in this study:

- Three part-time faculty members from each institution, involved in teaching and learning and have been with the same institution for not less than one year.
- Five full-time faculty members from each institution, responsible for teaching and creating learning resources.

Due to the nature of the subject under study and fact that the OER concept is new within the ODL sphere in Namibia, I decided to include all faculty members dealing with teaching and learning, totalling to twenty-four participants to ensure that sufficient information required for the study is provided. In addition, I was under the assumption that the purposefully selected participants are knowledgeable and able to provide sufficient data about the phenomenon under study. Only positions, roles and number of years of experiences determined the eligibility of participants for selection.

### **3.6 DATA COLLECTION**

Data collection involves the establishment of a systematic way of gathering information on the field under study for the purpose of answering the research question (Kabir, 2018:202). Scholars propose three main methods for collecting qualitative data, namely, interviews, observations and document analysis (Creswell, 2014; Gill, Stewart, Treasure & Chadwick, 2008; Yin, 2009) This study therefore, deemed it appropriate to subscribe to what is recommended and adopt interviews, non-participant observation and document analysis as methods for collecting data.

In addition, multiple methods are recommended for qualitative data collection for triangulation purposes. Triangulation involves the combination of more than one method to collect data in order to increase the quality of data and subsequently to enrich the quality of the research findings (Guion, Diehl & McDonald, 2011). It is believed that combining more rigorous methods in collecting data provide more complete findings than using one approach (Creswell, 2008). In this study, methodological triangulation was adopted whereby different data collection methods from the same approach were used (Heale & Forbes, 2013). The methods were used to complement each other for the purpose of strengthening the validity of the findings. For example, through interviews, participants' emotions could be construed while observations expose the physical behaviour of the participant (Creswell, 2013).

#### **3.6.1 Data Collection Instruments**

##### **3.6.1.1 Interviews**

Interviews are essential sources of case study information, primarily used to gather detailed data that is difficult to obtain through questionnaires (Gill, Stewart, Treasure, & Chadwick, 2008; King, & Horrocks, 2010; Patton, 1990; Yin, 2013;) and allow the researcher to gain insight of the life experiences and views of the participants. Conducting interviews is the most straightforward and direct approach of collecting detailed information for a particular phenomenon (Barret & Twycross, 2018). Individual face-to-face interviews with the participants at their institutions were selected in order to elicit contextual information about the phenomenon under study.

Gill *et al.* (2008) identified three types of interviews, namely, unstructured, structured and semi-structured. Structured interviews are used to collect quantitative data, while unstructured and semi-structured are commonly used to collect qualitative data. In this

study, semi-structured interviews were used and questions were formulated and an interview guide was developed. An interview guide or schedule provides a high degree of objectivity and uniformity in the questioning but also allows the researcher to probe further for clarification (Alshenqeeti, 2014:40; Tong, Sainsbury & Craig, 2007). In this study, interviews, non-participant observation as well as document analysis were used to collect data, but interviews happened to yield the most data for this study due to its flexibility in allowing participants to shed as much information as they can (Creswell, 2008).

Three ODL institutions were covered by this study which apply different policies and strategies with regard to the use of OER. The interview guide questions focused on the following main areas: whether faculty members in ODL institutions in Namibia are empowered in creating and using OER in facilitating learning; views of faculty members regarding the benefits of OER in teaching and learning; successes and challenges regarding the use of OER in teaching and learning by faculty members; strategies/framework/OER design to improve faculty members proficiency regarding the use of OER at ODL institutions (see Appendix I).

Creswell (2013:160) proposed that for interviews, open-ended questions that allow broad understanding of the phenomenon should be formulated. In this study, the term open educational resources (OER) was reflected in each question to direct the responses of the participants and ensure that all information provided is relevant to the use of OER. Faculty members, however, who were selected for interviews were in the best positions to respond to the questions and provided valuable data for this study.

The use of interviews is a very powerful exercise that enabled the successful soliciting of rich data sufficient to answer the research question. Apart from interviews, non-participant observations and document analysis were also conducted.

#### 3.6.1.2 Non-participant observations

Non-participant observation is the approach of observing individuals or groups of people without getting involved in their activities (Thompson, 2016). Observations also allows for clarification, confirmation and/or repudiation of information recorded in the interviews (Creswell, 2007). According to Creswell (2013), non-participant

observations require the observer to use all senses such as touch, smell, hearing and taste. The purpose of observing is to see, to hear and to make sense of what is happening (Patton, 2015). In this study, I utilised some of my senses without getting involved in the activities of the participants (McMillan & Schumacher, 2014).

Non-participant observation can be either structured or non-structured. In this study, a structured observation was applied whereby an observation checklist containing the list of activities to be observed was designed. This is in line with what is recommended by scholars that observation and activities to be observed need to be well articulated (Creswell, 2013; Patton, 2015). The checklist for observation of the full-time faculty members focused on material development process in relation to types of material developed, copyright license used, types of OER developed, while the checklist for part-time faculty members focused on how content is arranged, the type of communication used for learning, as well as how OER is shared with learners (see Appendix J).

Non-participatory observations for the full-time faculty members were conducted immediately after the interview period. Although it was impossible to observe the full material development process, relationships between instructional designers and the course teams, channels of communications as well as development schedules were observed. Observations for part-time lectures and tutors were conducted during their facilitation sessions. During observation, I noted the date and time, participants observed, the type of activities participants were engaged with, setting description, interactions as well as the personal judgements made during observations.

Creswell (2014), however, submits that qualitative research is an emergent process and it cannot be entirely prescribed beforehand. In this study, modifications regarding the planned non-participant observations had to be made. Due to the nature of work and different ways of operating at the institutions, the data collected through non-participant observations was very limited.

### 3.6.1.3 Document analysis

Document analysis involves a systematic process of evaluating and reviewing documents both digital and print-based (Bowen, 2017:27). It also entails the interpretation of documents by the researcher to give voice and meaning around the

problem being investigated (Priya & Viswambharan, 2015). Creswell (2013) added that analysis of relevant documents is a powerful tool of data collection in qualitative research. Moreover, documents analysis can provide supplementary information that can contribute valuably to the knowledge base (Bowen, 2017). This study adopted document analysis for the purpose of triangulation and validating information data gathered through interviews and observations.

Specific documents appropriate to this study, such as policies and strategic plans of the institutions were analysed in conjunction with the interviews and observation to provide evidence necessary to meet the objectives of the study. The list of relevant documents required for this study was forwarded to the heads of the institutions for permission to access the documents. The following documents were sampled as the main source of information for this study and to form a foundation for information elicited during the interviews and the observations:

- Institutional ODL policies,
- Institutional based OER policies,
- Material development guidelines,
- Learner/student support guidelines.
- Learning management systems such as Moodle and Notesmaster and;
- Faculty members' lesson plans.

I designed a document review guideline to focus the review on issues relevant to the phenomena under study (see Appendix K). As this study investigated the views of the faculty members of the Namibian ODL institutions on the use of OER in teaching and learning, document analysis focused on policies for adoption of OER by the institutions, evidence of the use of OER in teaching and learning, evidence of OER development by institutions, training of faculty members on OER, OER policies as well as guidelines/strategies in place to guide the OER use within institutions. During the analysis, the researcher searched for relevant information based on the pre-defined themes.

### **3.6.2 Data Collection Procedures**

Once ethics approval had been granted by UNISA to conduct research, written permission to carry out the research was requested from all heads of institutions. For CODeL and COLL, permission to conduct interviews, non-participatory observations and document analysis was requested through the rectors' offices (Appendices A-F).

The researcher contacted participants to schedule appointments to interview them. The institutional timetables for tuition sessions for the sampled participants was used to schedule times to visit the participants, confirming time slots and venues convenient to them. All sampled participants were asked to sign a form indicating that they consented to participate voluntarily in the research. The researcher used a consent form to explain the research process to enable the participant to make an informed decision whether or not to take part in the study (Shahnazarian, Hagemann, Aburto, & Rose, 2017). Consent was also required from participants to record the interviews (Appendices G & H).

The researcher conducted face-to-face interviews with each of the participants. The semi-structured interview guide consisting of pre-determined questions, drawn up prior to the interviews, was used to guide the interview. Interviews were recorded to ensure that accurate information was documented, thus capturing all relevant information offered by interviewees. Interviews allowed me to elicit more information from participants about the subject on a personal basis and make conclusions based on their reactions (Sutton & Austin, 2015). In addition, probing ensured that clarification was gained if any information was unclear. The face-to-face interviews lasted for about 45 minutes per participant.

In this study, non-participatory observations were conducted whereby was able to observe the way the participants conduct their daily activities with regard to the use of OER. Non-participatory observations were conducted for both full-time and part-time faculty members and the main purpose for observations was to verify the information obtained through interviews. Observations and interviews were scheduled for the same period. The full-time participants were observed in their offices while the part-time time participants were observed during contact sessions. Both online and face-to-face facilitations were observed.

I obtained the timetables for tuition sessions from the faculty members who form part of this study and was thus able to observe one session for each participant to ascertain how faculty members use OER for teaching and learning, the success and challenges they face regarding the use of OER in teaching and learning, and faculty members' proficiency regarding the use of OER.

I sat in on one session for not less than 30 minutes for each participant in order to see how faculty members use OER in their teaching and how they guide their students on learning resources to use. Without interfering in the development process, I was able to observe faculty members responsible for the development of resources to find out how open educational resources are integrated.

Specific documents appropriate to this study, such as policies and strategic plans of the institutions were sampled and analysed to provide information needed to support information gathered from interviews and observations in an attempt to answer the research questions.

I analysed relevant documents such as institutional ODL policies, institutional-based OER policies, material development guidelines, learner/student support guidelines, learning management systems such as Moodle and Notesmaster and faculty members' lesson plans, using a document checklist (see Appendix K).

### **3.7 DATA ANALYSIS**

Burnard, Gill, Stewart, Treasure & Chadwick (2008) propose two main approaches to analysing qualitative data, namely, using a deductive and/or an inductive approach. A deductive approach involves using a structure or predetermined framework to analyse data. With the inductive approach, on the other hand, the framework for analysis is derived from the data itself. Guided by the Integrated Conceptual Framework applied in chapter 2, and because of no prior knowledge about the phenomenon under investigation, this study adopted an inductive approach to analyse data from interviews, allowing themes and subthemes to emerge from the data itself (Creswell 2013; Henning, Van Rensburg & Smit, 2013; Patton, 2002).

Creswell (2007) stipulated that data collection, analysis, recording and interpretation

are interrelated processes and should take place concurrently. In this study, the analysis of qualitative data was done concurrently with the data collection process (Creswell, 2012). I studied the tape recordings of data obtained using semi-structured interviews. The data were organised and then transcribed. Transcription of data included listening to the recorded voices and creating the word document by recording verbatim what the participant said (Maree, 2011). Hasemnezhad (2015:60) claimed that data analysis is a rigorous exercise, hence the transcribed data were interrogated several times in order to make sense of the participants' responses to the interview questions. In order to bring out the meaning from the participant responses, short phrases were generated and were used as the codes. Coding involves creating tags for data which relate to the particular point (Elliott, 2018:2854).

After coding, data were organised into categories. Categories were formed by combining similar codes (McMillan & Schumacher, 2014). Different colour highlighters were used to mark similar categories of data. Categories were labelled to give rise to themes. Creating themes or patterns involves finding categories which are closely related in terms of meaning of data (McMillan & Schumacher, 2014). In order to establish the themes, the relationship between the views and experiences of the participants regarding the use of OER were carefully examined. Similar views were then grouped together as themes and sub-themes.

Data were analysed by carefully studying the themes and identifying how each is related to the other and compared to a literature review to validate or refute the finding as well as answer the research question (Thorne, 2000). Nevertheless, for the document analysis and observations, data were analysed based on the interview questions and predetermined themes which had emerged from the interviews. In order to ensure the credibility and trustworthiness of the data, transcripts were returned to the participants for verification purposes.

This exercise of member checking was also done to ensure that all ideas were captured as meant. Finally, I combined the responses to facilitate the interpretation of the participants' perceptions of the use of OER in teaching and learning in ODL institutions in Namibia.

### **3.8 TRUSTWORTHINESS**

Lincoln and Guba (1985) spoke of ensuring the trustworthiness of qualitative research and later indicated that this trustworthiness involved credibility, transferability, dependability, and confirmability. This study employed several strategies to ensure trustworthiness.

#### **3.8.1 Credibility**

Credibility in research refers to the confidence in the truthiness of the findings and whether enough justification was given for any deviations (Connelly, 2018). The following strategies were used in this study to ensure credibility of the data:

*Prolonged engagement:* One of the main strategies of ensuring credible research findings is prolonged engagement between the researcher and the participants (Creswell, 2012). With being part of one of the institutions being investigated, it made it easier to establish a prolonged engagement with the participants, way before the study. During the study, just before data collection, I made it a point to physically meet individual participants in order to know them better and to establish a favourable rapport with the participants.

*Detailed description of the phenomenon:* According to Shenton (2004) credibility of data is enhanced when a detailed description of phenomenon is given. I gave a detailed description of Open Educational Resources in Chapters 1 and 2, what they are, their benefits to distance learning system, and why it was decided to examine the perceptions of faculty members on the use of OER. The detailed description serves to assist the future reader to compare the findings against the phenomena under study.

*Triangulation:* Another key strategy used in this study to ensure the credibility of data is the use of triangulation. Shenton (2004) indicated that using different methods in collecting data helps the researcher to exploit the benefits of each method. Data for this study were collected using interviews, observations and document analysis. Apart from triangulation of data collection tools, other types of triangulation, namely, triangulation of data sources as well as multiple theories were employed in this study to enhance the credibility of the findings (Heale & Forbes, 2013). The data were sourced from different participants within each institution. That is, from those who are involved in the development of learning materials, such as instructional designers, programme developers and programme managers, as well as those who are

responsible for the delivery of the programmes. Different data sources assisted in comparing data similarities and identifying discrepancies in data. In addition, multiple theories adopted by this study were used to test the findings.

*Member checks:* Creswell (2007) maintains that using participants to verify their responses is one way of ensuring the accuracy of the data. In this study, the transcribed data were sent back to the participants via email in order for them to verify whether the transcripts correspond to what they said and whether what was captured, reflected their own views. Participants confirmed receipt of the emails and those who offered areas of clarification did so via emails. The researcher ensured that input from the participants was worked in before further analysis could be done.

*Preliminary visits:* Lincoln and Guba (1994) maintain that credibility of the data can be increased when there is a prolonged engagement between the researcher and the participants. In this study, after visiting the heads of the institutions to discuss the modalities of the study, I secured individual appointments with the participants. Several visits to each participant were made to discuss the ethical issues of the study and to schedule the date of the interview. The visits prior the interviews served to build a rapport with the participants and to explain the details of the study.

### **3.8.2 Transferability**

Transferability involves the replicability of the findings to other situations, be it similar phenomena, similar situation or similar populations (Shenton, 2004). Scholars advanced arguments and counter arguments with regard to the generalisability of the qualitative findings (Creswell, 2014; Shanton, 2004; Yin, 2009). Yin (2009) maintains that case study findings can be repeated to a different case provided that methodological processes of the case study are well elaborated. To ensure the transferability of the data, the researcher included detailed descriptions of the context of the study, the sites, participants as well as the methodology used to collect data.

### **3.8.3 Dependability**

Shenton (2004) states that dependability of data is ensured when the findings can be repeated in similar studies. Silverman (2016) argues that the ever-changing social settings makes it difficult to predict dependability of the research findings. Lincoln and Guba (1994) stress that dependability and credibility are closely related and both can

be achieved through overlapping methods. Further, the researcher is expected to provide sufficient information for the reader to determine whether the researcher as well as the study were dependable (Ryan, Coughlan & Cronin, 2007). In this study dependability was maintained by providing detailed information about the research design as well as the details of the data gathering process for those who wish to repeat the same study to be able to elicit similar results (Shenton, 2004).

#### **3.8.4 Confirmability**

According to Shanton (2004) and Anney (2014), the researcher ensures confirmability by maintaining the objectivity of the data. Ryan *et al.* (2007) suggest that confirmability can be achieved when credibility, transferability and dependability are maintained. In this study, confirmability was ensured through triangulation of data and through a detailed justification of the research process. To alleviate any bias, verbatim quotes from participants supported the findings as a true reflection of the views and experiences of the faculty members of the Namibian ODL institutions and not the researcher's own perceptions. Furthermore, the findings were compared to the reviewed literature about the use of OER in teaching and learning, as outlined in Chapter 2.

Confirmability implies that the findings of the study are based on the real responses of the participants and not on the preconceptions of the researcher (Creswell 2004). Thus, readers who follow the study can draw similar conclusions by following the audit trail. The creation of an audit trail means that a detailed description of the transparent manner in which data were collected and how the process of data analysis was carried out (Lincoln & Guba, 1985:318) can be confirmed. In this study, a database made up of hand-written field notes taken during the interviews as well as completed observation schedules are kept. The recorded interviews as well as the transcribed interviews are stored in individual electronic files named interview recordings and interview transcriptions respectively and hardcopy interview transcriptions are filed. This means that readers or other researchers can review the evidence (Yin, 2003).

### **3.9 ETHICAL CONSIDERATIONS**

Honesty and integrity are an integral part of the research. This is done to recognise and protect the rights of human subjects (Creswell, 2013). Research ethics entails principles and values that any researcher should abide by when conducting a research study (Patton & Cochran, 2002). Ethical clearance (certificate, number 2018/05/16/44944748/16/MC) was given by UNISA in order to conduct research and written permission to conduct the research study in Namibian institutes of higher education was obtained from all heads of institutions, namely, Dr Herold Murangi of NAMCOL, Dr Hileni Kapenda of UNAM and Mr Moss Garde of NUST. In addition, all participants of the study were given a consent form to sign that indicate their willingness to voluntarily participate in a study but also to withdraw their participation at any time with no consequences.

Anonymity and confidentiality were maintained throughout the study by not revealing actual names of the participants. For the purposes of reporting, participants were assigned a specific code, e.g P12, to ensure anonymity and to ensure confidentiality, the researcher made an affirmation that participants' responses would only be used for academic purposes and for further research. The researcher also made sure that all sources cited in the study are listed under references.

### **3.10 CONCLUSION**

In this chapter, the researcher gave a detailed account of how the research was conducted, which included a description of the interpretivist paradigm on which the research was based. The reason for the choice of approach and research design was clearly explained. The sampling techniques and the size of the sample were outlined and this chapter further described the different tools used to collect data. The data analysis procedure was also briefly explained. An explanation of how trustworthiness of the findings were ensured, and finally, this chapter discussed how the researcher maintained the research ethics throughout the study.

## **CHAPTER 4: DATA ANALYSIS, INTERPRETATION AND PRESENTATION OF FINDINGS**

### **4.1 INTRODUCTION**

The research design and the methodology used for this study was discussed in Chapter 3. This chapter presents the analysis of the data collected through interviews, observations and document analysis in support of the research questions. The first part of this chapter describes the profiles of the participants (4.3). The second part presents the findings from interviews conducted with faculty members of the three open distance learning institutions (4.4), namely, Namibian College of Open Learning (NAMCOL), the University of Namibia Centre of Open Distance and eLearning (CODeL) and the Namibian University of Science and Technology Centre of Open learning (COLL), as well as findings obtained from non-participatory observations and document analysis. This study collected data on the perceptions of faculty members of the ODL institutions in Namibia on the use of open educational resources in teaching and learning.

### **4.2 PARTICIPANT DEMOGRAPHICS**

The sample for this research study consisted of 24 participants. These participants were drawn from all three institutions which form part of the research study. This study focused on three public open and distance learning institutions, namely, the Namibian Open College of Open Learning (NAMCOL), the University of Namibia Centre for Open, Distance, and eLearning (CODeL), the Namibian University of Science and Technology Centre for Open and Lifelong Learning (COLL). CODeL and COLL are departments within conventional universities while NAMCOL is a stand-alone distance education institution. The participants for this study comprise faculty members who are involved in teaching and learning. These are programme developers, distance education coordinators, instructional designers, academic support officers and part-time tutors and lecturers. This study deemed it fit to collect demographic data of the participants in aspects such as gender, age, highest qualifications and the number of years the participant had spent with the institutions as well as their roles in teaching and learning. Generally, although the titles differ from one institution to another, all participants are involved in teaching and learning, and being responsible for either

arranging learning materials, developing content, providing tuition or both. The demographic information can be useful when scrutinising the participants' views regarding the phenomenon. Participants demographics are discussed in groups as per their institutions and are referred to as P1 to P24 for the purpose of anonymity.

#### **4.2.1 NAMCOL Participants**

Participants from the Namibian College of Open Learning included five full-time faculty members and three part-time tutors. Full-time staff consisted of one eLearning programme developer for tertiary programmes, one eLearning programme developer for open schooling, a Deputy Director for curriculum and material development, one programme developer for tertiary programme print materials and one distance education coordinator for tertiary programmes. The part-time participants consisted of three tutors, one for tertiary programmes and two for open schooling. The participants consisted of two males and six females. Their ages varied between 36 to 53 years. One participant has a PhD. qualification, two have master's degrees and five have bachelor degrees. In terms of years working at NAMCOL, the least was 3 years while the most was 16 years. The majority have been with the institution between 6 and 10 years. The full-time faculty members' role is mainly to develop self-instructional learning materials both print and online. The distance education coordinator provides learner support to students in terms of coordinating programmes and providing academic support to both students and tutors. NAMCOL part-time tutors offer face-to-face tuition to both secondary and tertiary level learners, provide online tutoring, mark assignments and provide academic support to learners on a continuous basis.

#### **4.2.2 CODEL Participants**

A total of eight participants was selected from CODEL. All five full-time participants from CODEL are instructional designers. Two are on a managerial level. The participants consisted of four males and one female, ages ranging between 35 to 59 years. The longest-serving participant who has been with UNAM for 21 years, started at the Centre for External Studies (CES) before the merger in 2016, as indicated in Chapter 3. The newest participant has only been with CODEL for four months. The majority have been with CODEL for not less than six years. Their roles as instructional designers are to guide the development of distance learning materials, both print and online and support the delivery of open distance learning at CODEL. The part-time

faculty members consisted of one female and two males. They are aged between 38 and 41 years of age. Part-time faculty members, who are mainly full-time university lecturers, provide part-time lecturing to distance students. Face-to-face classes are offered once per semester for semester courses and twice per year for modules. They also provide online support to students. One participant has a PhD while the rest have Master's degrees.

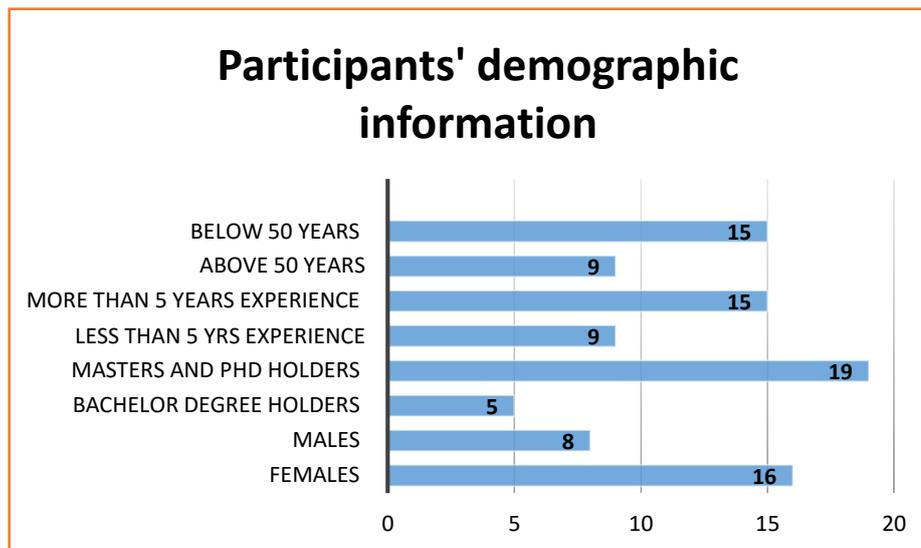
#### **4.2.3 COLL Participants**

The participants from the Centre for Open and Lifelong Learning comprised two academic support officers, three instructional designers and two part-time lecturers. All were female with participant ages ranging between 34 to 55 years with the majority being between 38 to 44 years. One participant had a PhD and seven had Master's degrees. Participants have between two to 16 years of experience with the majority having worked from four to six years at COLL. The academic support officers provide online support to distance education lecturers and provide student support in terms of arranging vacation schools. Instructional designers are responsible for the design of both print and online distance education courses. Although subject matter experts from the university faculties provide content, instructional designers ensure that the content is developed in line with distance education principles and assist subject matter experts in uploading the content onto Moodle, the learning management platform. Each instructional designer is responsible for a specific online course and ensures that lecturers are trained on how to provide online support to students. The part-time lecturers are responsible for providing face-to-face vacation classes, writing learning materials for students with the assistance of instructional designers and conducting the assessments. Table 4.1 below offers a summary of demographic information.

**Table 4.1: Summary of participant demographic information**

Participant	Gender	Age	Highest Qualification	Experience	Roles
<b>NAMCOL participants</b>					
P1	Female	53	MEd	13 years full time	Create online OER content on Notesmaster LMs
P2	Male	53	MEd	16 years full time	Oversee the development of material development, both print and online for both secondary and tertiary programmes
P3	Female	40	BEd Hons	8 years full-time	Coordinate curriculum and material development of tertiary programmes
P4	Female	46	BEd Hons	6 years full time	Develop online material for tertiary programmes on Moodle platform
P5	Female	52	BEd Hons	3 years full time	Coordinate the delivery of tertiary programmes and provide academic support to tutors and learners
P6	Male	52	BEd Hons	6 years part-time	Provide face-to-face tutoring to grade 12 learners accounting
P7	Female	36	BEd Hons	4 years part-time	Provide face-to-face tutoring to business studies grade 12 learners
P8	Female	53	PhD	6 years part-time	Tutor-marker both face-to-face and online courses.
<b>CODeL Participants</b>					
P17	Male	42	MEd	8 years –full time	Supervise the unit responsible for material development both print and online
P18	Male	59	MEd	15 years full time	Responsible for print-based ODL material development
P19	Female	53	MEd	6 years full time	Responsible for print-based ODL material development, and instructional design
P20	Male	54	MEd	21 years	Responsible for print-based

Participant	Gender	Age	Highest Qualification	Experience	Roles
				full time	ODL material development, and instructional design
P21	Male	36	MEd	4 months full time	Supervise instructional design work for both online and print-based courses
P22	Male	41	PhD	4 years part-time	Tutor-marker. Conduct vacation school once per semester
P23	Female	35	MEd	2 years	Tutor marker. Provide online facilitation and face-to-face tuition.
P16	Male	40	MBA		Tutor marker
<b>COLL participants</b>					
P9	Female	34	MEd	2 years full-time	Supervise instructional design work
P10	Female	49	MEd	5 years full-time	Instructional design of distance materials
P11	Female	35	MEd	2 years full-time	Provide academic support to lecturers and students Coordinate vacation schools
P12	Female	49	MEd	2 years full-time	Provide academic support to ODL students and lecturers. Coordinate vacation school.
P13	Female	55	MEd	14 years full-time	Supervise instructional design for both print and online courses
P14	Female	38	MEd	8 years part-time	Tutor-marker Conduct face-to-face sessions once per semester
P15	Female	44	PhD	6 years part-time	Tutor-marker Provide face-to-face contact sessions.
P24	Female	40	MEd	5 years Part-time	Tutor-marker Conduct face-to-face sessions once per semester



**Figure 4.1: Graphical representation of the participants' demography**

### 4.3 PRESENTATION OF FINDINGS FROM INTERVIEWS

This study was informed by the following main research questions:

1. What are the trends in the scholarly literature about OER and what are the theory bases for the usage of OERs in teaching and learning?
2. To what extent are faculty members empowered to use OER in their classes?
3. What are the perceptions and attitudes of faculty members regarding the benefits of using OER in facilitating learning?
4. What are the successes and challenges faced by faculty members regarding the use of OERs in teaching and learning?
5. What strategies/OER design can improve faculty members' proficiency regarding the use of OER at ODL institutions?

This study identified six broad themes from the data provided through interviews, namely: 1) OER awareness, 2) use of OER, 3) views of faculty members, 4) benefits of OER 5) challenges in the use of OER and 6) strategies to promote OER usage. Similar views were grouped into categories and presented as such. This next section presents views and opinions as voiced by the participants themselves.

### 4.3.1 Theme 1: OER Awareness among Faculty Members

When participants were asked whether they are aware of the OER concept, many of them explained by defining OER based on their understanding. Participants further explained when and how they came to know about OER. Three sub-themes emerging from this theme are definitions, training and self-taught.

#### 4.3.1.1 OER definitions by faculty members

All participants interviewed, apart from two, have an idea of the term OER. They could define OER in their own words based on how they understand the term. However, two participants, P16 and P24, did not know anything about OER and could not offer any views. This study identified two groups of responses within this sub-theme. The first group comprised those who were uncertain about defining OER and the second category comprises those who could define OER correctly. Apart from these groups, some participants preferred not to give definitions although they indicated that they were aware of the OER concept. The first group, which the researcher refers to as 'doubtful' provide definitions such as:

*“OER are there for everyone to use for free, you don't need to subscribe, and you don't need to go the library to get permission to use OER. No permission required.” (P5).*

The similar definition was given by P12: *“OER is online resources like Moodle at NAMCOL”*. Another participant in this group referred to OER as free courses that can be used for free. His definition was:

*“OER are materials that can be used as stand-alone or integrated into the course, developed by other people.” (P18).*

P14 on the other hand, defined OER as any free journals that are free online: *“These are journals which are free, which are open. OER are free resources.” (P14).*

Only one participant in this category indicated that OER are free in terms of cost, but could also not elaborate further. *“Yes, they are available online. I understand they are resources online for free in terms of cost.” (P15).* One participant referred to software such as panopto and libGen as OER. *“I am not sure whether panapto is OER, maybe I don't know what these are. Maybe like libGen.” (P23).*

UNESCO (2012) defines OER as any educational content available in the public domain that is free to copy, adapt and share for free. None of the above definitions refer either to the public domain or to Creative Commons (CC) licences, which raises the point about the level of awareness among faculty members. Defining OER without reference to the way they are published or to Creative Commons licences under which OER are released, does not make OER different to any other online resource. The researcher compared the responses to the demographic information of the faculty members and realised that the level of awareness could be linked to the years of experience at the institution and the status of employment. All faculty members in this category are those who are employed on a part-time basis or have been with institutions for less than four years. For example, P5 has been with NAMCOL for 3 years while P12 has been at COLL for only 2 years. Other examples are P15 and P14 who have been with COLL for 15 and 8 years respectively but on a part-time basis. P23 has been at CODEL for 2 years as a part-time lecturer. Based on my own experience as a faculty member, it is possible for faculty members who are new and not directly involved in material development not to have in-depth knowledge of OER. Secondly, it requires training interventions for one to acquire deep understanding of the difference between OER and any other open online content. The qualifications and age of the participants did not influence their responses.

The majority of the participants belong to the second category and they demonstrated a clear understanding of the OER concept. Faculty members who are full-time employees of their institutions and have been with the same institutions for more than 5 years fell into this category. This group defined OER correctly as:

*“OER is resources freely available to use, but not all free resource are OER. OER are released under CC license that enables you to use them as is, or to adapt to meet your curriculum requirements or share.” (P1).*

*OER are teaching materials in the public domain under CC licenses.” (P19).*

*OER are existing courses that have been written in such a way that they cater to masses for free. They have licenses that indicate how it can be used or adapted.” (P11).*

The definitions given above are similar to the definitions given by UNESCO (2012). To make the difference between other free online resources and OER, P1 cautioned that not all free online resources are OER, as it was alluded to by participants in the first category. The conclusion that this study made is that the experiences and the roles of the faculty members within the institution impact on their level of OER awareness.

#### 4.3.1.2 Training

One objective of this study is to ascertain whether faculty members of the ODL institutions in Namibia are capacitated in the use of OER in teaching and learning. Participants were asked how and when they became aware of the OER concept and whether they received training on how to integrate OER in teaching and learning. This study discovered that very few faculty members received basic training on how to use OER as a pedagogical approach. The few who had received training, were mainly those who took part in the Commonwealth of Learning (COL) OER project for open schooling for 2008. The COL OER project for open schooling was aimed to develop OER in Grade 10 and 12 subjects on the Moodle platform and it involved NAMCOL programme developers as well as subject matter experts who were teachers from schools in Namibia. P3 was one of the participants of the COL OER project. She therefore confirmed by saying:

*“Yes, I am aware since 2008. I was part of COL OER for open schooling. I developed English grade 10 and 12 in Moodle.”*

Some participants indicated that they attended training interventions which included training of OER. It was clear from the findings that COL played a very significant role with regard to OER promotion in Namibia.

*“I am aware of a number of years now, 3 to 4 years. I came to know more when I attended the workshop on OER offered by COL at UNAM in 2018.”*  
(P21).

Another one said:

*“I attended workshops on OER, one in Botswana, DEASA conference in Swaziland, COL workshops and at UNISA.”* (P20).

Apart from formal training, participants indicated that they have attended conferences and presentations where OER was discussed.

*“I attended an ODL conference arranged by NOLNeT where OER was discussed in 2012.” (P20).*

P1, who is an eLearning programme developer, was the only participant who indicated to have gone through intensive training through various interventions. As a result, she trains others on how to integrate OER in teaching and learning. Her response was:

*“Yes, officially the COL for the open schooling project was the first training I have received. I have also attended two technology-enabled learning workshops, by COL and OER was part of it. Personally, I have done various short courses. I did short MOOC online on OER. I completed a certificate in Creative Commons online offered by CC.”*

The findings above confirm what is indicated in the literature that the general awareness of OER has increased as from 2012 onward (Allen & Seaman, 2016). It was further indicated that in Namibia many teachers were trained during the COL OER project in 2008 (Ferreira & Gauthier, 2013), but some attended other courses to ensure their professional development.

#### 4.3.1.3 Self-taught

This category discusses participants who came to know OER through their studies, those who read about the concept by themselves as well as those who heard about the concept through interaction with other people.

*“I became aware in recent years. I studied ICT in education in 2008 and I was aware since then, although I came to realise the differences in 2014. Only when I started to know the licences.” (P9)*

P5, P8, and P11 all indicated that they were self-taught. Their direct responses were:

*“I heard about it 5 years ago when I was at NUST.” (P5).*

*“No formal training, self-learn.” (P8).*

*“No training on OER, apart from self-train and the Master’s I did, I also did learn free online courses at Future learn.” (P11).*

Based on the responses above, it became clear that OER is a new concept in Namibia and faculty members are in the process of understanding it and learning its use through various interventions, although in many cases, participants slowly learnt about OER through their work and developed the skills to use it themselves.

Under this theme, the level of OER awareness among the faculty members, and whether the faculty members receive any training on the integration of OER in teaching and learning was discussed. The understanding of the OER concept is key to facilitate the use thereof. This study revealed that although the majority of participants have a general understanding of OER, there are those who have a misconception about the concept. This study further found out that faculty members were passionate to learn more about OER, have attended workshops or have taken the initiative to learn about OER independently.

#### **4.3.2 Theme 2: The Use of OER by Faculty Members**

The crux of this study is to find out whether faculty members of the ODL institutions in Namibia use OER in teaching and learning. Therefore, the interviews focused on how faculty members use OER. The term ‘use’ as per this study entails faculty members’ ability to utilise the free accessible resources in the development of learning content to freely access or make existing OER available for students as course materials, thus replacing expensive textbooks. The results showed that faculty members have different ways of using OER, depending on their roles. Three out of twenty-two (24) faculty members interviewed indicated that they do not use OER at all. P15 indicated that she does not see a need for OER as the university already has written materials for students. She said:

*“I don’t think I really need them, there are many other materials. I don’t use OER in my development. No need for it.” (P15).*

P18 added: *“I have not used OER because I am not involved in writing.”* One faculty member indicated that she lacks knowledge about different OER licences, hence she opts not to use them. The same faculty member referred to the fact that institutions

make a profit out of the learning materials, which makes it difficult to use OER if you are not well-informed with regard to OER licences. Her direct response was:

*“We as instructional designers lack capacity and we are not confident in advising our writers to use OER. Also, we sell our study guides to students. OER licenses do not allow us to make business with our books. That’s why we are sceptical to advise our writers to use OER, because we benefit from our book sales.”*

Apart from three faculty members who do not use OER, the rest of the participants indicated that they use OER in one way or another. Four categories informed this theme, namely, the use of OER in material development, the use of OER as additional resources for students and writers, the use of OER for personal use and the use of OER in the classroom.

#### 4.3.2.1 The use of OER in material development

Programme developers, instructional designers and lecturers/tutors are responsible for the development of learning resources. When asked how they use OER, programme developers of the Namibian College of Open Learning indicated that OER forms part of their material development. *“As an institution, we develop OER and use it in our development.”* (P2). P1 also reinforced the statement by saying:

*“I have been using OER in course development both for print and online since 2009. Currently, I am using OER to create our own OER on Notesmaster. Now I use OER to create own OER on Notesmaster.”*

The Notesmaster is a learning management platform on which OER for secondary level is developed. It contains Grade 10 and 12 subject content OER and is made available for all to access for free.

Although creative commons licences allow OER to be shared, adapted and distributed for free, there are limitations in some CC licenses. OER under CC-BY-SA can only be shared under the same license, while CC-BY-ND restricts users in modifying any resource released under that license. Faculty members who were aware of the implications of the CC licences, exercised caution when using OER in development. This was confirmed by P9, an instructional designer of COLL in her response:

*“We do use OER here since 2017 when I came here; we use OER for development. We recommend them to our faculties. We single them out based on their licences and be careful not to infringe copyright. We do discourage writers to use the material before making sure the type of licenses.”*

In support of P9’s comment about the OER licences, P13 also from COLL stated that: *“I use OER in my development only to share, and not to modify, or adapt, not for commercial use.”* Although one part-time lecturer (P22) indicated having developed OER for students, I was not convinced whether the lecturer understood what OER really are. The same lecturer’s definition for OER was:

*“I think OER are those resources available online and are accessible without payment, or you can access them through your institution's subscription.”*

When asked whether he uses OER, the same lecturer pronounced:

*“I use them and I also produce them. I publish a lot and some of my publications are accessible to students. I also refer my students to them. Some of them I download and put them on Moodle.” (P22).*

It is based on these responses that I conclude that faculty members perceive OER as any resources that can be accessed without payment. This assumption can result in copyright infringement by faculty members if they use any online content as OER. This study reveals the assumption, so it is important to ensure faculty members’ perceptions on the use of open educational resources is the correct one.

#### 4.3.2.2 The use of OER as additional resources for students and writers

Faculty members who deal with students and learners directly such as part-time lectures and those who supervise lecturers, indicated that their use of OER is more on an advisory level. Some refer students to OER websites for them to search by themselves. Some advice lectures to incorporate OER as part of their content preparation for students.

*“I just refer students to OER websites when I was developing CECD at NAMCOL.” (P12).*

*“I share OER I get from websites to others, that is how I use OER.” (P13).*

*“I do encourage my writers to include in their materials.” (P20).*

*“I have been using OER for the past few years. I train lectures on how to use OER. Lectures are not aware and very reluctant to use them. I do recommend OER to them to include in their learning content.” (P19).*

This study found out that although faculty members are aware of OER, there is no formal arrangement or policy of how OER should be used. Faculty members themselves decide to use or not to use OER and there was no clear understanding of whether OER materials were indeed developed. At the end of the day, students do not benefit from the wide range OER available on the web in terms of accessing learning resources for free, which means that the purpose of OER in enhancing teaching and learning cannot be realised.

#### 4.3.2.3 The use of OER for personal use

Open educational resources offer the freedom to modify and remix for free without fear of copyright infringement. Many faculty members, therefore, take advantage and use OER for personal use, either for their studies or for their presentations at conferences. The following faculty members use OER in their private capacity:

*“I normally use it on a private basis. When I do private tutoring, I use OER because they are not protected, I use OER when I search for information.” (P4).*

*“I use OER for my own studies. We got a link for the Open University of Botswana where we can access those resources.” (P5).*

*“I use OER for my own studies to read through them.” (P6).*

*“Yes, I use them when I prepare for presentations, in a personal capacity, not in my work.” (P8).*

For the researcher, the above statements demonstrate a casual use of OER by faculty members. In other words, faculty members access OER for individual use but do have the capacity to use OER do so for pedagogical purposes.

#### 4.3.2.4 OER use in class

Two faculty members indicated that they use OER as part of their teaching. One is a Grade 12 tutor who uses Notesmaster as a teaching tool. This tutor, however, indicated that due to lack of access to the internet, the use of Notesmaster is limited to twice per week when the internet is provided through the computer laboratory at the NAMCOL centre. Notesmaster contains free videos, animations and audio explanations of abstract content. Learners with internet access can use Notesmaster as a learning resource without payment.

*“I use OER in my classroom. Especially Notesmaster. I don’t use it frequently because of internet. I use it twice a week in the computer lab.” (P7).*

Another faculty member, who uses OER for teaching, emphasised the need to contextualise the resources to suit the content and the context:

*“I use OER in my teaching but I have hardly found any OER which is relevant in my context, there is always a need to adapt. Sometimes I adapt them pedagogically by presenting as it is and explains how that relates to the context.” (P17).*

Connectivity is one of the major challenges facing developing countries such as Namibia. The tutor, however, makes an effort to use the available computer lab to ensure that open educational resources are utilised by learners. However, I get the impression that there are faculty members who are willing to use OER more often, regardless of the situation.

#### **4.3.3 Theme 3: Faculty Members’ Perception of the Use of OER**

The majority of faculty members were positive about the use of OER for teaching and learning irrespective of whether they use OER or not. Few faculty members expressed reservations about how the use of OER affects the academic integrity of the institutions. They pointed out limitations that prevent OER’s advance as a leading pedagogical innovation, especially in Namibia. Categories for this theme are access, cost cutting, quality, copyright laws, lack of awareness by tutors as well as institutional policies and attitudes, each of which are discussed below.

#### 4.3.3.1 Access and sharing

The fact that OER are accessible for free cannot be overstated. Faculty members expressed their excitement about the potential of OER to bridge the educational gap. *“OER is a way forward, a change agent that can narrow educational divide that we have.”* (P13). OER brings in global learning, where the potential of OER to promote equity, especially in distance education, was stated in the literature by Willems and Bossu (2012) and Bliss and Smith (2007). Apart from the educational gap, OER can bridge the distance gap. Students can link to the global world through the adaptation and sharing of OER, particularly as OER can be accessed anywhere and everywhere.

*“OER is nice because are accessible everywhere. Provide flexibility to students and they are bridging the distance gap. Student can link to others globally through OER.”* (P9).

The same view was shared by P23 that OER can uplift institutions through the sharing of content:

*“I think it is good because in the world that is increasingly becoming one. And knowledge is available all over is important that such platform exist are available so that even Namibians can share their materials to others who don't have anything, through that they market themselves.”*

The faculty members show appreciation for the potential OER has to solve the problem of access to learning resources for ODL students. In many cases, the scope of knowledge of distance education students is limited to what they receive from their institutions in the form of study materials. Distance education students in many cases live all over the country in areas far removed from library resources. With the increased use of smart phones and availability of internet data bundles, students could access quality resources at home through mobile networks. If OER pedagogy is embraced, more can be achieved in terms of access to quality free learning resources.

The development of content is simplified by OER. Faculty members realised that with OER there is no need to re-invent the wheel. One faculty member put it this way:

*“OER are vital in the sense that they are free, you get content from others and you can rework the content to suit you or to suit the kind of a student you have.”* (P4).

In other words, the time spent in the development of ODL content can be reduced if OER are used. A wider variety of resources from a range of sources can be made available to students instead of the usual one study guide per course.

P21 added:

*“Is my conviction that if the use of OER is taken in secondary schools, education will solve the problems of shortage of books. For high education as well, OER provides extra resources for references.”*

Access and sharing benefits of OER are the main reason why the OER pedagogy is being harnessed (McKerlich, Ives & McGreal, 2013). In Namibia, the biggest challenge faced in schools is the shortage of textbooks (EFA, 2002). The views expressed in this study support OER use for teaching and learning both for secondary and tertiary level programmes.

#### 4.3.3.2 Cost-cutting

The cost of study materials remains the highest inhibiting factor in education. When asked about their views regarding the use of OER, faculty members did not hesitate to point out cost as the main reason why institutions should adopt OER. P10 stated:

*“OER can change the stereotype, traditional way of having a huge budget for learning resources.”*

In addition, OER developed as supplementary sources can broaden the scope of content given to learners without having to pay for them. P1, who is a developer of OER on the Notesmaster platform, indicated:

*“OER are good additional, complementary to textbooks. It opening up access because many times students drop out because they can’t afford textbooks”.*

The statement of P1 indicates that OER at NAMCOL is developed as supplementary sources and not the main learning resources for learners. Based on that, I am left to believe that although OER is made available to learners through Notesmaster platform, NAMCOL still provides other learning materials at a fee to learners. The OER on Notesmaster however, provide a large pool of resources for the secondary level learners in the country.

#### 4.3.3.3 Quality

The quality of OER has been debated by many faculty members in studies conducted in other institutions in other parts of the world. This study also contributes to the debate, as faculty members of the ODL institutions in Namibia have different views about the quality of OER. Participants referred to OER as being of good quality:

*“OER is of good quality, as they have been peer reviewed by many people.” (P20).*

*“The institution should change their mind-set and realise that OER is not of inferior quality. That quality of OER is of the same quality as any other resources.” (P13).*

*“Management needs to be convinced about the power of OER. Management believes in money for quality.” (P10).*

I construe the faculty members' views as a step in the right direction, because if faculty members see value in OER, the adoption process will be smooth.

Two faculty members offered advice regarding the quality of OER. P10 suggested that institutions need to appoint teams responsible for organising appropriate OER for each course. P1 who is the main advocate for OER, directed that OER need to be evaluated before use:

*“I can admit that not everything available on the internet is necessary of good quality, thus why OER need to be evaluated.” (P1).*

The responses above have indicated that although OER are regarded as of good quality, it is important for any institution to ensure that OER conform to the quality assurance standard of the institution.

#### 4.3.3.4 Copyright laws

Although OER are not subjected to copyright laws, the fact that they too are released under certain licences makes it difficult for those who are not conversant with copyright-related regulations to use them. Faculty members indicated that there is a need to educate students about copyright laws. One of them stated:

“OER has a lot of advantages for students, you can view the resources. The risk is that copyright issues should be sorted out.” (P5).

One faculty member felt that, with content available on the internet, there is no more need to take ownership of content:

*“Everything today is on the internet; we cannot claim that is ours. Is difficult to make claims on knowledge because almost 99 percent of content is found on the internet. What claims can you make about the content that you might have put it differently, but the idea is the same.” (P2).*

The statement made by P2 has an implication for the future of exclusive rights on content developed during the 21<sup>st</sup> century. That view makes more sense in situations where knowledge is generated through public funding.

#### 4.3.3.5 Lack of awareness by part-time lecturers/tutors

This study found that the level of OER awareness is low among part-time faculty members compared to full-time ones. Part-time lecturers or tutors play a critical role in ODL institutions as they are the ones who have direct contact with students through face-to-face contact sessions or online. Nine part-time faculty members were interviewed in this study, three from NAMCOL, three from CODEL and three from COLL. Although some part-time faculty members had an idea about OER, especially from NAMCOL, their usage of OER in teaching was very limited.

When asked about their views on OER, full-time faculty members expressed concern about the awareness of the part-time faculty members:

*“In general, is very good to use, especially if learners are encouraged. Is very useful materials, but tutors are not aware.” (P6).*

*“OER are useful, we need to sensitise lectures about OER. We should stop assuming that lecturers are aware of OER.” (P19).*

ODL institutions cannot function without the part-time faculty members. The findings, however, showed a valid concern about the fate of the part-time faculty members regarding their involvement in the use of OER.

#### 4.3.3.6 Institutional policies and attitudes

In terms of the availability of OER policies, this study established that apart from the Namibian College of Open Learning, ODL institutions who formed part of this study, do not have approved OER policies in place. Some faculty members from CODEL and COLL were aware of draft policies that still need to go through editing processes before approval. Institutions, however, have other policies that guide the teaching and learning, including academic writing and publications. Faculty members expressed concern about the current fate of OER, particularly with OER publications which are not considered in the same light as research publications. P17 stated that although he is very positive about the use of OER in teaching and learning, he felt that much has to be done to offer incentives to the contributors:

*“I feel that there is not much incentive for people to contribute to the pool. OER are not considered as peer-reviewed publications as per our policies ... There are no incentives as in research for example. Our promotions are highly geared towards publications only. Our publication policies are geared towards peer-reviewed publications.”*

In support, P8 stated:

*“For me is a good thing, what is bad about it is a fact that as academics we don't trust each other's work. I know that academics don't use them, they prefer to use books that are edited. Some institutions don't want scholars to cite OER.”*

Faculty members felt that institutions should change their mind-set with regard to local content and content developed internally. There seems to be preference for foreign developed content rather than locally developed content.

*“However, our institutions have to be supportive of this. They always go for high impact journals and some of these high impact journals if you publish in them even your own article you won't access it. So the open educational resources become the best even though we need to have a shift in mind-set so that we can actually start talking about them.” (P22).*

The view of P22 was confirmed by P17 by saying:

*“There are sometimes misconceptions that OER are for poor institutions who do not have resources and they need to beg to find resources done by others.”*

Apart from institutional policies, faculty members expressed concern about national regulations. In Namibia, for institutions of higher learning to offer courses, they have to be accredited by the Namibia Qualifications Authority (NQA) and all courses should be registered on the National Qualification Framework (NQF). Faculty members have a fear of whether an OER course will be evaluated for registration on the NQF:

*“Our NQF is a challenge in itself because NQA does not recognise short courses, OER are regarded as short courses, who will give you credit on your short course, those issues should be ironed out first.” (P11).*

She further demanded that National OER policy should be developed to guide all stakeholders in education.

It appears there are various challenges caused by lack of institutional OER policies. As much as faculty members recognise the benefits of OER and show willingness to contribute and use OER, the lack of guiding policies makes OER advancement problematic.

#### **4.3.4 Theme 4: Faculty Members’ Perception of the Benefits of OER**

Theme 4 is discussed based on the following sub-themes a) benefits of OER for faculty members, b) for students and c) for the institutions in general. Different categories are discussed in the sub-sections.

##### **4.3.4.1 Benefits of OER to faculty members**

Both lecturers, tutors and material developers found OER beneficial in their work. They singled out time and cost as the most valuable benefit that OER has to offer. To programme developers and instructional designers, OER are the solution. P9 in her response indicated that:

*“To me as ID [instructional designer], OER it makes my work faster, easier. It helps to create the content faster, and up to date content.”*

*“No cost involved, as a developer, you don’t need to apply copyright. OER are easy to access.” (P4).*

*“OER provide freedom because of the licences attached to it to use content without restrictions, it gives me the freedom to share, freedom to use and integrate relevant OER in the curriculum.” (P13).*

Material development is a very lengthy process, and in many cases, much time is spent in trying to get copyright permission. Sometimes, owners refuse to give copyright or they request huge amounts of money for just a small piece of work. That causes institutions to end up using limited or low-quality resources. If OER are embraced, time will be saved. Any resource under CC licence offers certain freedom for re-use without copyright permission. The only requirement for all OER is the acknowledgement of the original author. P2, commented on this by saying:

*“In material development, it helps a lot, you don’t need to run around looking for copyright. Copyright is expensive, compared to OER. It saves a lot of development time for institutions.”*

OER are the only materials one can use without any fear of infringing copyright. As P8 put it:

*“You don’t need to reinvent the wheel; we spent a lot of time writing. They can save time money and resources.”*

One good advantage of OER is the ability to share and re-use. The quality of OER keeps increasing as more people access and improve on it. P4 emphasised this aspect and said:

*“You are able to share with others; you can reuse, remix. We are able to get knowledge from other institutions. You can get materials from other institutions.”*

The same view was given by P13:

*“To me, OER provides freedom because of the licences attached to it to use content without restrictions, it gives me the freedom to share, freedom to use and integrate relevant OER in my curriculum.”*

Quality resources mean quality teaching. P17, who is the head of eLearning at CODEL stated that:

*“If I am a lecturer, using OER helps me to improve quality of my teaching, makes me more efficient because I do less in terms of developing content from scratch.”*

Because OER are developed anywhere in the world, it makes them broad in terms of the context. Students can increase global exposure through OER engagement. P17 alluded to that stating:

*“OER also enriches my teaching because when I find a resource from elsewhere, it also brings contextual knowledge from where it was developed, which I might not have dealt with. It diversifies knowledge that I engage with students.”*

Although full-time faculty members were thrilled about the benefits that OER can offer, they were cognisant of the fact that their part-time counterparts were not on par.

P9 alluded:

*“Lecturers discourage student to only use OER. Lecturers are not trained in OER.”*

Some part-time lecturers were very hesitant to give their views regarding the benefits of OER. Their views were:

*“Is more for instructional designers.” (P15).*

*“I don’t know.” (P14).*

Faculty members see the potential of OER to lessen their workload and make their work more effective and more flexible. The views of the faculty members, however, were more geared towards the use of OER for the material development and not as an alternative resource for learning. Faculty members indicated that it is crucial that lecturers and tutors are capacitated on OER usage.

#### 4.3.4.2 Benefits of OER to students

This study considers students as the main beneficiaries of OER. The responses from participants in this study attested to that:

*“For students, it opens up an ocean of knowledge, brings them leverage to learn before registration.” (P4).*

*“It closes the knowledge gaps, it cuts cost and increases access to resources, and it increases equity.” (P21).*

P2 shared the same view.

*“In terms of learners, with OER learning can become affordable, education, in general, need to be for free. We need to find ways of making it more affordable, and OER has the ability to do that.”*

The quality of knowledge depends on the ability of the students to access quality learning resources. P17 who stated that without OER, the quality of the course offered to students will be poor; however, with access to OER developed by countries advanced in technology, students are faced with a global view:

*“If I have to use the resource without OER, my student knowledge will be limited to local content only. More contributors to OER are the global north. Students will have a global view of the subjects.”*

Others who shared the same sentiments were P23 and P18, their responses were as follows:

*“Students are exposed to material of the same kind from all over, easier for them to do research. Help them to do comparisons.” (P23).*

*“Students can be exposed to worldwide knowledge and facts.” (P18).*

The greatest challenge in distance learning is the transactional gap that exists between the learner and the institution. The benefit in the use of OER lies in their availability on the internet. Students do not need to travel to libraries or to institutions to access resources, they are easily accessible from multiple devices. Faculty members who were interviewed in this study confirmed the benefit of OER through connectedness.

*“Accessibility, anywhere anytime any place, connectedness. You can read what others are saying.” (P3).*

*“OER are portable, you can carry all the books on a handset, a cell phone.” (P9).*

Contrary to what others feel about the benefit of OER to students, some faculty members felt that there is a need to increase awareness from top to bottom for students to reap the benefits of OER. She stated:

*“If management doesn’t know the power of OER, how will the students know?”*

Although the faculty members showed their excitement about the use of OER, and the potential of OER to advance free education to all, the hard reality that presented itself is the fact that students of the ODL institutions in Namibia were not yet aware of the benefits of OER. Faculty members, however, felt that students would only become aware of OER once the top management of the institutions buy in to the idea of adopting an OER pedagogy.

#### 4.3.4.3 Benefits of OER to institutions

Apart from benefits to students and faculty members, participants of this study spelled out benefits for institutions that embrace OER. The two main categories that are underscored under this sub-theme are high reputation and cost saving.

##### 4.3.4.3.1 Category 1: Reputation

Contributors to OER are, in many cases, attached to institutions, making both the contributor and the institution prevalent. P17 stated:

*“As a contributor, OER can enhance my profile if I have a resource that would be used across the world, obviously my name would be widely known for that.”*

Regarding the institution, P17 had this to say:

*“OER can uplift the image of the institution. Enhance the ranking of the university because of the wide awareness it creates, when it creates own OER courses and put it out there.”*

Supporting the previous view, P18 and P19 added:

*“Institutions can become popular and international as it caters for the interest of the whole world.” (P18).*

*“Institutions have an opportunity to enhance learning materials.” (P19).*

The similar view was shared by P1 adding the aspect of inclusiveness:

*“If the institution applies open education movement, it enables the institution to open up education, open up access to wider communities, thus, enabling us to meet our vision and mission. It also boosts the reputation of the institution both nationally as well as internationally.”*

P23 indicated that OER provides a platform for disseminating research findings locally and globally. She stated that:

*“OER provide platforms for researchers within the institution to share their local research with the international world and benefit a larger group of people.”*

Similarly, P22 reiterated the fact that OER increase contextualised content which is difficult to find. He said:

*“The issue of knowledge and context is quite key. OER allow our own articles and our own information to be made available out there, which are suitable to our own context.”*

The views of faculty members, imply that if institutions embrace the use of OER and develop policies to guide the way OER should be adopted, the reputation of both the institutions as well as the contributors will be enhanced, both locally and internationally.

#### *4.3.4.3.2 Category 2: Cost saving*

Institutions can make huge cost savings if OER pedagogy is advanced. Faculty members, through this study, attested to that. P4 referred specifically to printing costs and stated that:

*“Institutions will have a minimum cost of printing.” (P4).*

Material development cost is one of the biggest cost drivers in ODL institutions where students receive pre-packs of materials at enrolment.

*“Institutions can cut developmental costs. The process of development will become shorter.” (P20).*

Although P10 supported the view of cost-saving by institutions, she raised the concern about the risk of losing revenue generated through book sales, stating that:

*“Institutions can save material development money, OER can be uploaded on online platform for free. But the institution will lose the profit.”*

The responses above imply that faculty members find OER beneficial to themselves, their students as well as to their respective institutions, but are hesitant about revenue loss.

#### **4.3.5 Theme 5: Challenges in the Use of OER**

In spite of the benefits of OER, faculty members listed various challenges that in their view, can inhibit the advancement of OER within the institutions. The emerged categories within this theme are overdependence, poor quality, lack of understanding, connectivity challenges, lack of policies as well as lack of time and skills.

##### **4.3.5.1 Overdependence**

One faculty member felt that if people start using OER, they will not see the necessity of creating original work, which might result in the diminishing of content. She indicated that the protection of intellectual property and the incentives from exclusive rights encourage people to create more and more content. Her reaction was:

*“OER may create over-dependence, people will not be innovative anymore, and because of OER people will depend on other people work, just adapt. Collaborative writing can be a challenge.”*

The researcher's view is that the OER concept involves re-purposing and re-mixing of content. It is difficult to find OER which fits the context without the need to modify it. If the OER is modified to contextualise it, it becomes new knowledge. So, everybody who uses OER does in fact make a contribution. That means, everybody who uses OER improves the content for the next user.

##### **4.3.5.2 Poor quality**

Many faculty members alluded to quality as one of the challenges associated with OER. Due to the fact that OER are in the public domain with the limited restriction on their use, their quality could be compromised. P8, P19, and P22 expressed their concerns about the OER quality.

P8 indicated that she cannot trust OER as a scholar. She warned other scholars to be alert about the authenticity of the OER content. She stated that:

*“Trust, for an academic is to be alert. If you get something from OER, you should not just take it from there. Read with caution, to ensure that, what you get, is what you need.”*

*“OER can be of poor quality. Quality is a concern.” (P19).*

*“There are some people who take advantage of OER and just put material which does not make academic significance and can be misleading.” (P22).*

In the researcher’s opinion, the limitations in the understanding of OER by faculty members affect their opinions. The researcher believes that because the material is under exclusive rights, does not make it of good quality. OER quality can be equated to any other resource, provided that both have gone through quality assurance processes such as reviews.

OER are developed under specific contexts and therefore do not suit any context. Faculty members were concerned about the time needed to contextualise OER. They stated:

*“Findings relevant to materials is a challenge. A lot of materials found are generated by experts all over but rarely things that are more relevant in terms context. You spend a lot of time looking for relevant OER.” (P23).*

*“OER need adaptations and contextualisation, you don’t get exactly what you want.”(P20).*

*“OER are developed for a specific context. Not all OER are usable as is. Many need to be contextualised to suit your particular context.” (P1).*

Based on the views expressed above, faculty members lack the skill to search for OER. It is important to note that OER are searched through advanced Google search engines or through specific repositories. To contextualise OER should be easier as OER is not subjected to plagiarism. OER can be used as is without any fear of plagiarism, since the authors have already given permission to re-use and change their work through the open licencing.

#### 4.3.5.3 Lack of understanding

Throughout this study, faculty members have raised concerns about the level of understanding of OER among the wider communities of the institutions. From the my point of view, faculty members who formed part of this study were in a better position to understand the OER concepts and the benefits it brings to the education system. This study, however, realised that not all selected faculty members had a good understanding of OER as a concept. For the institutions to succeed in adopting OER as an educational approach, the entire institutional population should be educated about the benefits OER can offer.

The faculty members acknowledged the lack of understanding as one of the major challenges preventing OER usage within institutions. They expressed their concerns in the following manner:

*“People may not understand OER, it can be a new technology to them.” (P4).*

*“Lack of knowledge, people don’t understand the value of openness.” (P17).*

*“Culture, people tend to think that if something is open then is low quality. Is a perception that the cheaper the low quality? Ignorance, people are not aware.” (P21).*

*“Is difficult to change the way of doing things. There is always resistance. Lack of knowledge.”e (P18).*

One faculty member expressed fear for the fact that OER licences are open, and the moment one’s work is released under CC licences, one will never be able to reclaim it.

*“Open licencing cannot be revoked, so no control over your work.” (P9).*

The statement above indicates that faculty members suffer from a fear of the unknown. The mind-set is that what you have developed belongs to you and if someone wants to benefit from it, then permission should be granted.

#### 4.3.5.4 Connectivity challenges

Connectivity was one of the major challenges that faculty members pointed out. They emphasised the challenges that distance students already face in terms of remoteness

and isolation from institutions. Faculty members strongly felt that it will be very expensive to students to access OER given the fact that even those who may have access to the internet, might not have smart devices to access OER. Their expressions were:

*“Access to the internet and devices, regional centres do not have access. Students in rural areas have to travel and pay to go to towns for access.” (P12.)*

*“Lack of connectivity for students, such students might not much benefit from OER.” (P17).*

*“The biggest challenge is the availability of Internet connectivity and data. Accessibility.” (P5).*

*“Access to a computer, internet connections, affordability of devices, costly for ordinary people.” (P3).*

*“There is no money to provide devices to learners to have access to resources, unavailability of internet and low bandwidth makes difficult to provide a wide range of resources. Another challenge will be a connectivity issue. Rural areas are very vast and people are scattered. People will still need to travel to get access.” (P2).*

The views above imply a complete paradigm shift in the way institutions operate. With the adoption of OER, huge amount of funds needs to be allocated to technological infrastructure to ensure equitable access for all students.

#### 4.3.5.5 Lack of policies

Lack of institutional policies was regarded to be a stumbling block in the advancement of OER. Faculty members considered the policy as a guiding principle for all institutions. They all felt that if there were policies in place, issues of incentives, copyright ownership, loss of profit and academic integrity would be ironed out.

*“Policy guidelines on incentives. It will be helpful to adopt OER if there are policy guidelines on recognition and incentives.” (P17).*

It will require management of institutions to change their mind-set in terms of profit making from the book sales.

*“Money from the sale of study guides will be lost, changing the mind-set of people in power will be a challenge.” (P10).*

In defence, P2 reiterated the fact that public institutions are required to generate their own revenues in order to sustain their programmes. Selling books to students is one of the main revenue-generating exercises for institutions.

*“The biggest challenge for us is the fact that we make money from our books. It is very difficult to convince management to convert our books to OER. We are required to make money for ourselves.” (P2).*

He further expressed concern about the mind-set of having a book for each subject, especially in secondary education. According to him, the notion of a ‘textbook for each subject’ syndrome created a loophole in the publishing industry, compelling publishers to produce expensive textbooks for each subject.

*“There is a belief that a textbook should be there. The thing of using textbooks will prevent OER to be used as everyone wants to sell their own books. We believe that there should be a source of specific information. We always think we must provide a book for a student to master the course.” (P2).*

Apart from lack of policies, it is unclear to the faculty members what will happen if the OER pedagogy is embraced, in terms of income from the study guide sales as well as the publishing world. Faculty members, however, believed that with the change in mind-set, the point will be reached where publishers and OER authors can work together for a common goal of providing access to cheaper, but quality learning resources.

#### 4.3.5.6 Lack of time and skills

Faculty members especially those who are involved in teaching secondary level learners indicated that there is no time to connect to OER during the contact sessions. The technological skills of tutors were also in doubt.

*“It takes time to connect to the internet and a period is only one hour long. I don’t get time to use them within one hour.” (P6).*

In addition, P1 indicated lack of time for the developers. Her reference was on the time spent for the development of OER on Notesmaster platform for Grade 10 and 12 content. Subject matter experts are appointed to provide content while the programme developer, who is a full-time faculty member, is responsible for the instructional design and quality check of all notes developed before they are published. The process seems to be very lengthy:

*“Lack of time to develop OER, developers don’t have time, because they are part-time, and they do have their own full-time jobs.”*

She further expressed her concern about the level of technological skills of part-time developers:

*“Although we say no need to re-invent the wheel, the challenge we experience when we develop online content is the skills to use technologies by developers. How to search and identify quality OER is a challenge.” (P1).*

Both tutors and developers who lack technological skills to operate the digital technology are appointed on a part-time basis. Thus, there seems to be a consistency of views regarding the need to empower part-time faculty members to ensure that their skills are well developed.

#### **4.3.6 Theme 6: Strategies to Promote OER Usage**

Faculty members proposed different strategies that can be employed to promote the use of OER in teaching and learning in Namibian ODL institutions. Three main categories highlighted under this theme are OER advocacy, technology enhancement, and policy implementation.

##### **4.3.6.1 OER advocacy**

Faculty members believed that the advocacy of OER needs to be strengthened to make more people aware of the benefits OF OER. They suggested that training interventions through workshops need to be put in place to ensure that all faculty members are all on par regarding the use OER:

*“Workshops for faculties, they need to change their mind-set, especially with regard to freedom that is brought by ICT. Training on OER and all 21st pedagogies. Motivation, people need to introduce to the integration of OER.” (P9).*

*“People need to be educated through social media. Institutions should train their people. Students need to be made aware.” (P4).*

*“There is a need for more workshops and conferences, teaching and learning division should sensitise the whole university.” (P20).*

One faculty member suggested awareness creation through participation:

*“Create awareness and train people, give lecturers an opportunity to create OER themselves.” (P13).*

P13 further stated that because of lack of knowledge, people who are resistant to join the OER movement are the same ones who are using OER for their own gain, and they do not want to give credit to the authors. According to her, a lot needs to be done to make people understand so that they can also share their own work for free for the benefit of Namibian education.

*“People are not willing to share and let their work go for free. So awareness creation is a key. We need to create a better world for our children, in terms of education to all. Is training and teaching to convert academics to the global course.”*

P17 indicated that there is too much focus on individuals that prevent sharing. In other words, society where we live does not promote the culture of sharing, we believe in the advancement of own ideas. On the other hand, OER promotes equality in terms of education. It is difficult for the nation to embrace OER because no one believes in sharing. His point was:

*“Sensitise people to share as they do on a daily basis using social media. Address the education culture of competitiveness, the focus on the individual, and even ranking learners in school does not promote sharing. More education is required to address that issue.”*

Faculty members suggested that the first line of training should be focused on the institutional management of:

*“Campaign, creation of awareness, training, management need to be convinced first.” (P10).*

On the contrary, P2 felt that training should focus on part-time tutors and lecturers who are the implementers of education in the institutions.

*“We don’t have a big challenge in understanding OER in our institutions, but we are not the trainers we need to make our part-time staff understand, because administrators understand the use of OER, but they are not the one to use them.” (P2).*

P11 had a different strategy:

*“We should start to practice what we preach. We can’t advocate for OER if we are silently against it. Or if we don’t trust it but we should openly say it.”*

P21 extended advocacy to all stakeholders in education:

*“We should advocate it, leaders in education such as National Institute for Education Development (NIED), Programmes and Quality Assurance (PQA), the council of high education and all stakeholders should advocate.” (P21).*

P19 and P3 stressed that seeing is believing.

*“Provide clear examples of good quality OER, to prove that not all OER are of poor quality.” (P19).*

*“Sharing success stories from all walks of life.” (P3).*

P17 referred to the way OER advocacy is currently being conducted. According to him, people do not get the information about OER relevant to their needs. If information was correctly packaged, the right information would reach the right people. For example, managers need to know about the benefits of OER for students and for the institutions in general, while developers need to know more about the different OER licences.

*“I think we should simplify the knowledge about OER, knowledge doesn’t travel far because we don’t package it correctly to suit the audiences, promote awareness by making sure that different people receive the information relevant to them.” (P17).*

Faculty members in this study suggested that there is a need for a coordinated effort to embark on the advocacy of the OER concept among the whole education system in Namibia.

#### 4.3.6.2 Technology enhancement

Faculty members regarded technology enhancement as a key to the advancement of OER. They proposed different strategies to solve the problem of technology in the country and within institutions. The ability of institutions to provide connectivity to students differs from one institution to the next. Faculty members were more specific about their own institutions.

*“In the case of NAMCOL, we should make OER available to our students through the provision of data.” (P5).*

*“UNAM should go the NUST way. I saying so, because NUST has provided gadgets to its distance students. UNAM has to do the same, provide the devices to students. UNAM should strike some deals with MTC for modems to access the internet.” (P22).*

P3 and P11 proposed cheaper internet for students.

*“Making internet affordable to students will solve the problem. Increase access and hardware for students.” (P11).*

P23 suggested offline OER.

*“Maybe having OER availed in platforms that do not require online accessibility.”*

It is clear from the voices of the faculty members that there are existing efforts in some institutions to provide internet access to all distance students. The findings imply that if OER is to be adopted, all ODL institutions will be obliged to make provision for each student to access internet.

#### 4.3.6.3 Policy implementation

Faculty members believed that if institutions develop policies to guide the use of OER, most of the challenges would be eliminated. They suggested that OER policies should be separated from the ICT policies to be able to stand out and be implemented.

*“Policy issues, including national OER policy. It should be separate policy and not together with ICT policy.” (P21).*

Faculty members suggested that if OER-enabled pedagogy was applied, the learner-centred approach could be used to facilitate OER creation by students. That could only be possible if there is a policy in place.

*“If we can apply OER-enabled pedagogy, in order to promote the use and creation OER. Learner-centeredness can be used to include the creation of own knowledge using OER. That will only be possible if people attitude towards the use of technology change. Now they regard it as extra work. If the policy is in place.” (P18).*

One faculty member expressed concern about the way institutions deal with distance students. Sometimes distance students are regarded as inferior to their full-time counterparts. As a result, institutions demand lesser efforts from distance students compared to the full-time ones. In so doing, students do not make any effort to search for more resources for their learning rather using what they receive. The faculty member put it this way:

*“I think we generally need to up our game with distance learning so that we improve quality. If we improve quality, and we demand more from our distance learners, they will be able to have the hunger to access these OER. We should treat the distance students the same as the full-time students.” (P22).*

Faculty members believed that without institutional policies, the adoption and use of OER in teaching and learning will remain a dream.

## 4.4 NON-PARTICIPANT OBSERVATIONS

Non-participatory observations were conducted for the purpose of enriching the data and to authenticate the data collected from interviews. For the purpose of non-

participant observation, a deductive approach was applied by pre-defining themes based on the research questions. This approach assisted in establishing the extent to which faculty members are involved in the use of OER in their respective jobs. During observations, notes of important information were taken which were further analysed to fit into themes and allowed for the comparison of findings from both sources.

Non-participant observations were conducted to support the views expressed through interviews. The observations included activities of the full-time faculty members as well as the face-to-face contact sessions conducted by part-time faculty members. The purpose was to witness the processes followed during material development and then to see how part-time faculty members facilitate learning using the content developed. This study focused on OER, which are digital in nature, hence the observations included the development of the digital online materials. The institutions that formed part of this study utilise Learning Management Systems (LMSs) as platforms for course delivery, which meant that digital activities could be observed.

The following themes for observation of the material development process were pre-defined: type of OER developed, how OER are used, copyright use and the interactions between part-time and full-time faculty members. For observation of part-time faculty members, three themes were identified, namely, the type of communication used, either face-to-face, video conferencing or online discussion forums, how content is arranged for learners and how tutors make use of OER during tuition. The analysis for the non-participant observations was done per the institution.

#### **4.4.1 NAMCOL**

The Namibian College of Open Learning (NAMCOL) is a stand-alone distance learning institution where all courses are offered through the distance mode of delivery. At NAMCOL, faculty members responsible for material development are referred to as programme developers. As a supervisor of the NAMCOL team of programme developers, I found it convenient to conduct non-participatory observation at NAMCOL.

Although only four programme developers were selected to participate in this study, there are seven programme developers for open schooling and four for tertiary programmes at NAMCOL. Two programme developers out of the eleven are eLearning developers and are responsible for the instructional design and

maintenance of the eLearning platforms, namely, Notesmaster for secondary level and Moodle for tertiary programmes. Other programme developers coordinate the development of content for both print and online courses.

#### 4.4.1.1 Material development

NAMCOL has an approved OER policy in place which guides the material development process. Video lessons are uploaded on the NAMCOL websites and also broadcast on EDU TV, a television channel dedicated for educational broadcasting on the national broadcaster, the Namibian Broadcasting Cooperation (NBC). These resources cover all Grade 10 and 12 subjects. Radio lessons are developed and aired on various radio stations across the country and in addition, content notes, animations, quizzes and interactive content is uploaded onto Notesmaster, open source software hosting OER, and is available to anyone with internet access.

At this stage, OER resources are developed for secondary level subjects only and not for tertiary programmes. The video and radio lessons are also uploaded and integrated within the Notesmaster platform for public access. OER are made available to learners as supplementary resources to enhance print-based materials.

OER form the basis for material development at NAMCOL. OER are used to develop both OER and copyright protected materials based on the specific OER licence requirements. Programme developers ensure that OER is used and incorporated within materials to save copyright fees. All resources on Notesmaster are published under the Creative Commons licence, CC-BY-SA. The print-based materials developed for learners are published as 'All rights reserved', exclusive to NAMCOL.

#### 4.4.1.2 Interactions between part-time and full-time faculty members

It was observed that programme developers work closely with part-time writers and editors. There was no interaction between tutors and programme developers. Unlike COLL and CODEL, I observed a complete separation of duties between the material development team and the facilitating team at NAMCOL but there was continuous interaction between programme developers and their course teams, mainly done through emails and telephone communication. These course development teams are responsible for the content development of both print and online materials. The eLearning programme developer has scheduled training interventions for selected tutors across the country, if funds allow. The planned training focused on how to

access OER on Notesmaster. There was evidence of similar training conducted in the previous years.

#### 4.4.1.3 Observations of part-time faculty members

The non-participant observations were conducted at Jetu Jama Centre situated at NAMCOL head office. This centre provides special Pre-Entry to Tertiary Education (PETE) project, meant to prepare students for entry to any tertiary qualification of their choice. Students at PETE receive more tuition than the ordinary NAMCOL learners who attend at other tuition centres across the country.

The observation was done with more tutors including those who formed part of this study. In terms of OER and the use of technology in general, I found that although provisions were made for data projectors, there were no projectors fitted in most classes. Tutors carried laptops to classes but no indication was made to the use of laptops. There was no evidence of the use of technology during PETE classes. In many cases, tutors explained content, wrote notes on the board and learners interacted by asking and answering questions. In addition, no reference was made to the existence of OER on Notesmaster during the observations.

#### 4.4.2 CODeL

CODeL is part of the University of Namibia providing distance education opportunities to students and it coordinates all distance education activities at the university. The CODeL full-time faculty members involved in teaching and learning and who took part in this study, include the eLearning coordinator, four instructional designers, from which only three participated, and the head of eLearning. The instructional designers coordinate the development of ODL materials both print and online under the supervision of the eLearning coordinator. The head of eLearning manages the eLearning support services at CODeL. The non-participant observations were done concurrently with interviews, meaning, that more time was spent in the office of the faculty members before and after the interview. This was done to observe the activities the faculty member was engaged in and to elicit the information as stipulated in the non-participant observation checklist. A maximum of two days were spent with each faculty member for both interviews and observations.

#### 4.4.2.1 Material development

Observations took place in an office where the activities of the instructional designer were observed. I found that the organisational structures and the roles of both CODEL and COLL are very similar. As such, focus was given to activities where the two institutions differ in their operations. To date, CODEL has developed print materials for about 542 distance education courses as well as about 40 online courses with content developed in Moodle; however, no OER materials have been developed at CODEL.

Writers share OER among themselves and these are incorporated in their teaching materials. All material is published under the copyright of the university and this applies to both print-based as well as online content. Faculty members, those with OER knowledge, explained that they use their own initiative to provide links to OER resources on Moodle for students to use as reference materials. The evidence of the types of OER could not be obtained through this study.

#### 4.4.2.2 Interactions between part-time and full-time faculty members

In terms of the interaction between full-time and part-time faculty members, CODEL instructional designers are in continuous interaction with writers and online facilitators. Online facilitators receive training on how to facilitate online and how to develop online content on Moodle. The adaptive release approach is used to allow content to be developed simultaneously with facilitation. Writers of print-based materials communicate with instructional designers via emails and telephones. Students, who experience technical problems with access to Moodle and how to navigate the LMS, visit CODEL offices to obtain support on a daily basis.

#### 4.4.2.3 Observations of part-time faculty members

In the case of this study, it was not able to ascertain prior to the scheduled observations what lecturers would be doing during the face-to-face sessions. As a result, lecturers were either busy showing videos to students or giving a test, and some were discussing research topics with students. There was no actual facilitation during the time slotted for observations. As a result, the data collected through CODEL interviews and documents were primarily used to inform the findings for this study.

### 4.4.3 COLL

The Centre of Open and Lifelong Learning (COLL) is part and parcel of the Namibian University of Science and Technology (NUST). COLL provides open and flexible distance education programmes for NUST. The centre is run by a director, deputy director, instructional design coordinators, instructional designers, academic support officers, student support officers, as well as administration staff. The non-participant observations focused on the faculty members who were selected for interviews, namely, two coordinators for instructional design and technology, two academic support officers and one instructional designer. Both coordinators and instructional designers are responsible for the development of course material. Academic support officers supervise the part-time lectures who are facilitators of learning.

#### 4.4.3.1 Material development process

Instructional designers confirmed that COLL does not have an OER policy in place that guides them on OER development. The activities of COLL instructional designers are very similar to those of CODEL. However, non-participant observations of full-time faculty members was not as practical as it was envisaged as faculty members do not have allocated times for specific activities. It was difficult to observe the activities of the instructional designers due to the fact that materials are developed by course teams consisting of external writers and editors. The information contained in this section was gathered during the interactions with faculty members during the interview period.

The instructional designers' roles are to do the quality checks and to ensure that material is developed in line with distance learning methodologies and principles. The writers for print materials send the content to the instructional designers via email while online content is developed on Moodle for instructional designers to access. It seems that, although it could not be ruled out, COLL material developers use OER in their development, but they do not develop any OER content for students. Instructional designers identify OER websites and share the links online with the material developers and with students as part of reference materials. Although Moodle is an open source platform, all materials developed by COLL, print and online, are published under the copyright formality 'all right reserved'. Students are provided with login credentials to access Moodle, but access to Moodle was restricted to this study.

#### 4.4.3.2 Interactions between part-time and full-time faculty members

It was observed that COLL instructional designers spent most of their time interacting with writers, facilitators and students. Instructional designers are responsible for ensuring that there is continuous web presence and tutors engage students throughout the course. Although the observation did not discover any evidence of OER usage through the interaction between the full-time and part-time faculty members, a continuous engagement between instructional designers and part-time faculty members was observed through emails, telephones and through WhatsApp communications. Each instructional designer is responsible for the coordination of a specific online course, which includes performing quality checks on the course and ensuring that all links are functional. Instructional designers assist facilitators in creating online communities through formal introductions at the beginning of each course. In addition, instructional designers conduct synchronous online orientation sessions meant for lecturers and students to familiarise themselves with the Moodle platform. Instructional designers monitor the work of the online facilitators and provide feedback on a continuous basis. In addition, instructional designers provide technical assistance to distance students continuously.

#### 4.4.3.3 Observations of part-time faculty members

The part-time faculty members refer to tutors and lecturers who are responsible for the facilitation of distance learning. This can be face-to-face or online. The distance education students attend vacation schools arranged by COLL academic support officers. There are two vacation schools for each yearly course and one vacation school for each semester course. At COLL most of the lecturers who facilitate learning are full-time lecturers of the university. The vacation school was held at the NUST campus in Windhoek during the last week of April 2019. Based on the predefined themes, very insignificant information was obtained through non-participatory observations. The purpose was to investigate the integration of ICT and the use of OER in teaching and learning. It was observed that lecturers did not make any reference to OER during the sessions. It was however, observed that lecturers integrate ICT in their teaching. Students presented their work using their own laptops and PowerPoint presentations. Lecture halls were all fitted with data projectors and white boards. Face-to-face students have access to Moodle for their tutorial letters,

extra materials and for submission of their assignments. Assignments are marked online on Moodle

Observation is defined as an 'attempt' to observe events as they occur in their natural setting (Flick, 2006; 2010). It is not a given that observations yield results. In some cases, while attempting to observe, the situation does not allow one to obtain the anticipated results. However, the observations were meant to add to the interview data either through corroborating the data or refuting it.

#### **4.5 DOCUMENT ANALYSIS**

Document analysis is a systemic technique used to review and analyse both print-based and digital material to gain a deep understanding of the research phenomena (McMillan & Schumacher, 2010). Considering the purpose of this study, documents were selected that could potentially shed greater clarity on the questions this study was trying to answer.

This study investigated the perceptions of faculty members of the ODL institutions in Namibia on the use of open educational resources. However, it is vital to mention here that the documents identified for analysis in Chapter 3 differed from the ones obtained from the institutions. Documents such as institutional ODL policies, OER policies, and faculty members' lesson plans were difficult to obtain from all institutions. It was thus decided to include the Namibian ICT policy for education and the NOLNeT ODL policy, which was developed to facilitate collaborative partnerships among the Namibian ODL institutions and ensure effective ODL delivery in the country.

The researcher scanned through the documents to find information that related to the research phenomenon. Data with similar meanings were organised into categories. Categories generated from documents were compared to the predefined themes for easy interpretation. The aim was to corroborate findings across data in order to maintain objectivity and to reduce the possibility of bias that can result from one source of data. Predefined themes, emerging from the interview data, were used in document analysis, as was done in non-participant observations.

The following documents (see Table 4.2) were analysed with the intention of creating an understanding of the perceptions of faculty members on the use of OER in ODL in Namibia.

**Table 4.1: Document analysis**

Institution	Documents analysed
National documents	Namibian ICT Policy for Education (2007)
	NOLNeT ODL Policy (2016)
NAMCOL	House Style Manual (HSM) (2017)
	eLearning Policy and Strategy (2015)
	OER Policy (2014)
	NAMCOL Strategic Plan (218/2019)
	Assessment Policy (2017)
	Guidelines for Tutors (2013)
UNAM-CODEL	Assessment Policy (2013)
	Policy on Academic Integrity (2016)
	UNAM draft eLearning Policy (2018)
	UNAM Teaching and Learning Policy (2012)
NUST-COLL	Assessment Policy (2011)
	eLearning Policy (2009)
	Final Yearbook Part 1 general (2019)
	Final Year Book Part 9 COLL (2019)
	COLL House Style Manual (HSM) rebranded (2016)

This part of this study aims to present the main themes that emerged from document analysis.

#### **4.5.1 Theme 1: Reference to Open Educational Resources**

Two documents, namely, NAMCOL OER policy and NOLNeT ODL policy have reference to open educational resources. The NOLNeT ODL policy defines OER as teaching and learning materials available freely on-line for use by instructors, students and self-learners (NOLNeT ODL Policy, 2016). The NOLNeT ODL policy highlights OER as a focus area and states that the Namibian government ratified the UNESCO 2012 OER declaration, and therefore, it subscribes to the principles of that declaration. The policy further justifies the need for the development of institutional OER policies and extensive awareness creation of OER among faculty members.

Open educational resources are defined in the NAMCOL OER policy as resources and materials used to support education that may be freely accessed, reused, modified and shared by anyone (NAMCOL OER policy, 2014). The development of NAMCOL OER policy was as a result of yet another COL initiative to facilitate the development of OER policies for all open schools of COL member states, as per UNESCO 2012 OER Declaration. All the other documents reviewed under this study did not in any way refer to open educational resources.

#### **4.5.2 Theme 2: Adoption of OER by the Institutions**

It was indicated earlier that OER is a relatively new concept in Namibia. One of the objectives of the NOLNeT ODL policy is to promote OER development and research. At the time of this study, no research study had been conducted in this specific area in Namibia. Equally, the only development of OER this study was able to identify was the OER for open schooling developed by NAMCOL, highlighted in the previous chapters. None of the listed documents indicated any adoption of OER in any other institution, apart from NAMCOL through its OER policy. As a public institution, NAMCOL subscribes to the philosophies of the UNESCO 2012 Paris OER declaration and undertakes to publish and to produce OER as part of its core business and then release these under open licences. NAMCOL adopts the OER licence under Creative Commons Share Alike (CC-BY-SA) for the release of its all OER (NAMCOL OER Policy, 2014). According to the policy, the NAMCOL Board of Governance has been mandated to decide on a case-by-case basis which resources are published as OER.

#### **4.5.3 Theme 3: Use of OER in Teaching and Learning**

The NAMCOL House Style Manual (HSM), which outlines the development process of distance learning resources, indicates how OER should be integrated into teaching and learning at NAMCOL. NAMCOL creates a national OER repository of locally authored content of high quality, which is engaging, relevant and freely accessible to all Namibian educators and learners (NAMCOL HSM, 2017). The content developed includes interactive quizzes, notes, audio and video which are embedded on the Notesmaster platform for learners to access. Contrary to what the HSM articulates, the NAMCOL guidelines for the tutors' document, which guides the facilitation of learning and spells out the duties of the facilitators, did not make any reference to the integration of OER in teaching and learning. There was no evidence of the use and

integration of OER in teaching and learning from other documents reviewed in this study.

#### **4.5.4 Theme 4: Training of Faculty Members on OER**

Training is one of the prerequisites for the successful adoption of OER in an institution. The documents reviewed in this study referred to training of technological aspects rather than training on the creation or use of OER. The data obtained from the reviewed documents indicated the need for training of faculty members on ICT-related aspects. The earliest document, the NUST eLearning policy (2010) indicated training of faculty members in the technical and instructional use of eLearning technology as one of its objectives, while the UNAM teaching and learning policy (2013) emphasised ICT integration into higher education, as well as capacitation of students on how to use it. Thereafter, the NAMCOL eLearning policy (2015) focused on skilling all staff members involved in eLearning with necessary skills needed in the development and delivery of eLearning while the NOLNeT ODL policy (2016) indicated a need for capacitating more people in ODL in the country. The UNAM draft eLearning policy (2019) has as its objective training lecturers on ICT-usage for teaching and learning and the NAMCOL strategic plan framework (2018/2019) indicates that it hopes to achieve 20% additional tutors and learners trained on how to access the Notesmaster OER platform.

Interestingly, although many documents focused on ICT and technological skills training, apart from the NAMCOL Strategic Plan and OER Policy, no other documents reviewed under this study referred to training of faculty members on OER.

#### **4.5.5 Theme 5: Guidelines in place for the Development of Learning**

##### **Materials**

Institutions develop distance education materials in print formats that are given to students upon registration and in addition, some institutions develop and upload OER as resources. Distance learning materials are developed differently from conventional materials. The House Style Manuals (HSMs) reviewed in this study outlined various processes and procedures followed to ensure that materials meet certain quality standards. NAMCOL HSM outlined processes followed for both the print-based and OER. For OER to be published, four peer reviewers need to edit and give their approval before the programme developer on eLearning can publish the note for the

public to access (NAMCOL HSM, 2018). The HSMs contain check lists for writers, editors and instructional designers to use when evaluating materials during the development process. COLL and CODEL have adopted a Commonwealth of Learning distance material development template to ensure quality and consistency.

#### **4.5.6 Theme 6: Learner Support Strategies**

For any ODL institution to thrive, learner support services need to be sound. The materials and learning resources are integral components of any learner support services in an ODL system. This study analysed documents to examine the type of learner support offered by the Namibian ODL institutions. Through NOLNeT, the ODL institutions' objectives include the establishment of effective learner support systems that can facilitate the adoption of innovative methodologies and sharing of best practices between the institutions (NOLNeT ODL Policy, 2016). The policy further indicated that institutions should encourage the creation and use of OER to enhance ODL delivery.

UNAM provides student-oriented teaching principles with emphasis on interactive reflective and creative learning strategies (UNAM Teaching and Learning Policy, 2013). According to the UNAM Teaching and Learning Policy, UNAM faculty members embrace heterogeneous approaches in learning support which include online audio and video conferencing as well as face-to-face learning facilitation to allow reflective learning. NAMCOL on the other hand, has committed to support learners and tutors by providing devices to access digital resources (NAMCOL eLearning Strategy, 2015). COLL, through its eLearning policy, undertakes to ensure that for any course to be offered online, all students should access to computers with internet (NUST eLearning Policy, 2010).

#### **4.5.7 Theme 7: OER Benefits**

Open educational resources can widen access to study opportunities through the provision of free-of-charge self-study digital and print-format materials (NOLNeT ODL Policy, 2016). OER enables its stakeholders, including learners, to reap the benefits and to develop capacity while at the same time becoming part of the emerging global OER networks as active participants rather than passive consumers (NAMCOL OER Policy, 2014). Although other documents did not refer to OER benefits, the benefits of eLearning resources and the use of ICT in education were emphasised.

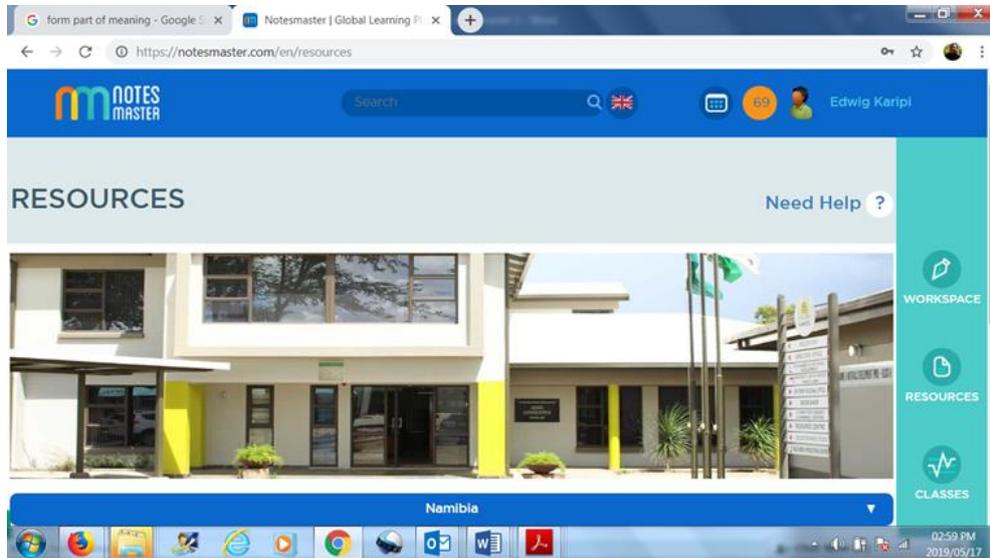
The University of Namibia recognises that eLearning contributes to the upliftment of the academic profile of the institution (UNAM draft eLearning Policy, 2018). UNAM through its policy indicated that the use of eLearning requires a student-centred learning approach to enable even distance learners to interact directly with their instructors, as opposed to conventional one-way delivery. eLearning has the potential to enhance the quality of education by affording students opportunities to gain international experiences (UNAM draft eLearning Policy, 2018). NUST, on the other hand, recognises that a blended learning approach provides flexible learning opportunities, allowing students and lecturers to enjoy different modes of education delivery (NUST eLearning Policy, 2010)

#### **4.5.8 Analysis of Learning Management Systems (LMSs)**

The aim of this analysis was to validate the findings from other sources. Both institutions indicated that they were using Learning Management Systems (LMSs) to facilitate online learning. As expected, access to all institutions' LMSs were restricted. The only LMS which was open and accessible was the Notesmaster platform used by NAMCOL for hosting open schooling OER. The Moodle platform used by CODEL and COLL was protected for exclusive use by students and staff members.

The researcher logged into the Notesmaster to examine the type of OER resources developed by NAMCOL. The Notesmaster is open source software tailored for the development of content for the Namibian Junior Secondary Certificate (JSC) and the Namibian Senior Secondary Certificate Ordinary Level (NSSCO) syllabi. The platform was designed to facilitate the online creation and presentation of learning materials in a structured environment using national syllabi as a framework. The notes are developed to address specific syllabus objectives. NAMCOL has developed OER notes for various subjects such as JSC English, Accounting, Life Science, Physical Science, Mathematics, Geography, History, and Entrepreneurship as well as NSSCO English, Biology, Economics and History. Interactive content in the form of quizzes, animations and videos are developed to facilitate learner engagement. Apart from notes that NAMCOL developed, Notesmaster allows any teacher to create a group for a specific purpose and then create and share notes to members of the group. Notes developed by groups are not published for the public to access. To ensure the quality of OER content, notes are only published after being peer-reviewed and approved by a minimum of five people. Other teachers anywhere in the world can access

Notesmaster and can re-use, re-mix and re-purpose the content to suit their own situations for free without having to pay copyright fees. All notes on Notesmaster are published under a CC-BY-SA licence.



**Figure 4.2: Notesmaster Namibia interface (Source: www.Notesmaster. Namibia (2019))**

The main features of the platform seen on the right-side of the screen are the workspace, resources and classes. The workspace is used for the development of content, while the resources area contains all content which has been developed and uploaded. Resources are divided into the field of studies, subjects and syllabi. Syllabi are arranged according to topics and objectives. Notes are then developed under each objective. Classes are meant for anyone who wish to create a class group for the purpose of developing and sharing information.

#### **4.6 CONCLUSION**

This chapter presented the analysis and presentation of data from interviews, non-participant observations and document analysis. The findings were presented under themes and categories as emerged through the data collection process and based on the research questions. Based on the issues raised by the participants, six broad themes were developed for this study, namely OER awareness, use of OER, views of faculty members, benefits of OER, challenges in the use of OER and strategies to promote OER usage.

The findings from both interviews, non-participant observation and document analysis showed consistency regarding the phenomenon under study, meaning that responses from the interviews corresponded well with what was observed as well as what was revealed through document analyses. In that way, triangulation of data was enhanced. Although it emerged that faculty members from NAMCOL, in comparison to their counterparts from CODEL and COLL, have more knowledge of OER and there is an approved OER policy at NAMCOL, the conclusion is that faculty members of the Namibian ODL institutions, including NAMCOL, do not use OER in teaching and learning for the cost-benefit of the ODL learner. The next chapter presents a discussion and interpretation of the findings.

## **CHAPTER 5: DISCUSSION OF FINDINGS AND CONCLUSIONS**

### **5.1 INTRODUCTION**

Chapter 4 presented the empirical findings of the study aimed to investigate the perceptions of faculty members of the Namibian ODL institutions on the use of OER in teaching and learning. Data were obtained through interviews and other sources of data collection such as non-participant observations and document analysis.

Literature reviewed stated that no formal findings are available in sub-Saharan Africa on the creation, organisation and use of OER (Bateman *et al.*, 2017), but the literature emphasised the potential of OER to support the developing countries' Sustainable Development Goals (SDGs) (McGreal, 2017). In this chapter, a discussion of findings is done in line with the broad themes identified in the analysis as well as the research questions outlined in Chapter 1. The discussion of the findings also invokes the literature reviewed in Chapter 2.

### **5.2 DISCUSSION OF FINDINGS**

The main question this study tried to answer was:

*To what extent,, do faculty members of Namibian ODL institutions use OER, and what strategies/OER design can be developed to empower faculty members regarding the usage of OER?*

To respond to the question, the study applied the reflections from the literature review and theoretical framework (Chapter 2), and empirical results (Chapter 4), to develop a discussion of findings. The findings are discussed based on the sub-questions in the subsequent sections.

#### **5.2.1 Sub-Question 1: What are the trends in the scholarly literature about OER and what are the theory bases for the usage of OER in teaching and learning?**

A discussion of the integrated theoretical framework on which this study is grounded was presented in Chapter 2. The justification for developing an integrated theoretical approach was to support the study through various learning theories that relate to the use of open educational resources (OER) and open distance learning (ODL). Theories that were discussed, namely, the transformative learning theory of Mezirow (1991),

the heutagogy learning theory proposed by Hase and Kenyon (2010), the cognitive learning theory and social learning theory, the social constructivism learning theory (Vygotsky 1978 & Bandura, 1977), the connectivism theory of Siemens & Downes (2004), and the Diffusion of Innovations Theory of Rogers (2003), highlighted the importance of a learner-centred learning approach, guided learning, social interactions and network connections between learner and educator, between learner and communities and between learner and learner (*cf.* 2.9.6). Although the reviewed theories did not speak directly to the use of open educational resources, the insights gained through the theories endorse the use of media and the world wide web to enable learning through sharing of information (Siemens, 2005; Goldie, 2016), which has implications on the use of digital OER (*cf.* 2.9.5).

The *transformative learning theory of Mezirow* (1991) was applied to this study based on its belief in self-emancipation and liberation of the mind. This study revealed the views and the appreciation of faculty members regarding the use of OER as a new digital pedagogical innovation that can be leveraged to reduce educational barriers and promote access to quality learning resources. Based on the findings of this study, faculty members appeared to have liberal and emancipatory minds regarding the adoption of the OER concept. Those faculty members with good understanding of OER showed high appreciation of OER as a form of instruction which promotes multi-directional transmission of knowledge. In other words, faculty members were in agreement that there is need for self-reflection in terms of existing values and beliefs in order to allow new approaches to learning.

The emphasis of the transformative learning theory is on development using critical self-reflection. Daloz (2012) believed that adults make sense of their experiences based on the stage of development in which they find themselves. That was true in the case of this study. Faculty members indicated that ODL institutions cannot continue operating in the vacuum but should follow trends and appreciate the new technologies such OER. Faculty members in particular, indicated that with the increasing demand for education, OER can be adopted to accommodate more students and to provide them with the same quality in terms of learning resources.

The emphasis of the *heutagogy learning theory proposed by Hase and Kenyon* (2010), speaks to the application of emerging technologies to advance lifelong learning

(Blaschke, 2012). There is evidence from this study that institutions are trying to keep up with the demands posed by the ever-changing technology in order to remain relevant. It was revealed by faculty members that in order to remain relevant, it is vital to integrate the use of OER into teaching and learning. However, to ensure the access to and use of OER by students, institutions need to widen access to technology including provision of internet data and smart devices. Faculty members further indicated that there are existing cases within the institutions where students are given smart devices as part of their enrolment packages.

The heutagogy learning theory further demands that the pedagogical design be left in the hands of the learner with the assistance of a teacher (Hase & Kanyon 2013). In this study, the instructional design remains the responsibility of the faculty members and all learning activities, are designed and developed beforehand, uploaded onto the learning platform for the students to access. That is contrary to learner-generated content and learner self-directedness that the heutagogy theory advocates. Based on the results of this study, there was no evidence of student involvement in the pedagogical design process. Open educational resources on the other hand could not be promoted without the students' involvement. For the OER to be effective, students need to indicate the relevance of the OER to their learning.

*The Cognitive Learning Theory and Social Learning Theory* (Bandura, 1977) focuses on the how learning is enforced through facilitation (Terras *et al.*, 2013). The focus of this study is on facilitation through the use of OER. Unfortunately, in this study, the part-time faculty members who are responsible for facilitation of learning did not have much knowledge about the use of OER as an alternative pedagogical approach. Bandura, in his theory, further emphasises that knowledge is constructed through communication via social media networks (Redmond, 2016). This means that Bandura recognises the importance of internet connectivity to facilitate online learning. The findings of this study indicated that there are serious challenges within the ODL institutions in Namibia with regard to connectivity that have a deterring effect on the advancement of OER.

In cognitive learning theory and social cognitive theory, Bandura refers to concepts such as outcome expectations, self-efficacy, goal setting, self-directedness and self-regulation as main features within adults that drive their learning (Artino *et al.*, 2012;

Owoyele, 2012; Zhou & Brown, 2015). In other words, Bandura promotes learner-centred approach in learning. The use of open educational resources requires students and facilitators to portray similar attributes. This study revealed that faculty members recognise the need for more flexible environments within institutions that allow facilitators and students to practise more flexible open pedagogical approaches such as OER. In addition, this study recognised that there are established learning management platforms within the institutions, such as Moodle and Notesmaster meant to promote social collaborative learning. There was, however, no evidence of sharing of OER between students or between students and tutors.

*Constructivism and social constructivism theories (Vygotsky 1978)*, focuses on a learner-centred approach to learning and learner autonomy. This study applied these theories to support the construction of knowledge through collaborative development of OER using social networks. The findings of this study indicated that the use of OER within ODL institutions in Namibia is very limited. The result further indicated that the part-time faculty members who are the facilitators of learning do not have sufficient knowledge about OER, and as a result, do not play any significant role in guiding collaborative construction of knowledge by students through the use of OER. Although both theories focused more on learning, faculty members who were the respondents in this study could confirm that learners were not aware of the OER concept. The faculty members in this study, however, displayed positive views regarding the role that OER can play in facilitating learner-centredness. The findings also indicated that there is an attempt from NAMCOL to use OER in teaching and learning, although awareness among facilitators of learning is still low.

Hogan *et al.* (2015) stated that the constructivism learning theory gives emphasis to practices that constructively engage students with content, tools and services. The findings of this study further revealed that the shortage of technological hardware and software within the institutions poses the greatest challenge for students to advance in the use of OER. On the other hand, this study found out that despite the usage of OER, which is still at its infant stage in developing countries like Namibia, both institutions have LMSs in place that allow students and tutors to collaborate and engage. This advancement indicates that institutions are moving towards the realisation of self-directed learning and learner autonomy.

*Connectivity theory developed by Siemens and Downes (2004)* addresses the importance of sharing knowledge through mediated networks and the significance of the presence of a teacher in online networks (Siemens, 2005; Skrypyk, 2015). The findings of this study align with the connectivism theory which encourages the use and sharing of open educational resources. Faculty members share OER among themselves for use in course development. In addition, faculty members indicated that OER are uploaded onto the platforms for students to access. However, faculty members were convinced that students were not aware of the OER concept, meaning that the OER tend not to be accessed and thus students miss the opportunity to use and adapt OER for their projects, as well as accessing supplementary resources to enhance their learning. And all this is for free without requiring to apply for copyright permission. The same applies to the OER developed on the Notesmaster platform for NAMCOL learners. Connectivism theory advances the importance of internet connections (Chatti *et al.*, 2010) and the findings have shown that the Namibian ODL institutions are still challenged with internet connectivity.

This study showed a positive relationship between *the Diffusion of Innovation Theory* and the findings. The Diffusion of Innovation Model was developed by Rogers (2003) to illustrate how the introduction of a new innovation moves through the structures of an institution in order for it to be fully adopted. Rogers' theory identifies important factors such as time, innovation itself, communication channels as well as the nature of the institution that can influence the rate at which an innovation can be adopted. The findings of this study correspond to what this theory believes. Faculty members indicated that the same factors have limiting effects on the rate at which the OER concept is spreading through their institutional structures. Faculty members felt that there is a need for sufficient time for institutions to achieve the appropriate readiness for the OER adoption to be realised. Furthermore, faculty members were under the opinion that if the adoption is rushed, the results might be more adverse. In relation to what Rogers called innovation itself, faculty members felt that OER is a new concept and it has many dimensions with regard to licences which need to be well understood before any adoption could be effected. Based on the findings of this study, it emerged that many faculty members did not have deep insight of the extent of OER. From the views given by faculty members, this study further concluded that the diffusion and appreciation of OER within the institutions is taking a bottom-up approach. That

means, the awareness of OER is more evident on the lower and middle levels of the institutional hierarchies with very little knowledge about the concept at the higher levels. In addition, part-time faculty members who facilitate learning, were hardly aware of the OER concept which indicates that there are communication breakdowns within the institutions.

Another focus of Rogers' model is the stages through which any faculty member has to go before fully adopting an innovation. In this study, the result indicated that faculty members were at different stages when it comes to the OER adoption process. This study found that many faculty members were not yet exposed to the OER concept, but they showed their willingness to find out and know more. Some faculty members appeared to know but they lacked the detailed information about the OER concept and the necessary skills and confidence to use these resources. Some faculty members, especially instructional designers and programme developers, were way ahead with information about OER and indicated their readiness to adopt OER as an alternative pedagogical approach.

### **5.2.2 Sub-Question 2: To what extent, if any, are faculty members empowered to use OER in their classes?**

This question solicited information about the level of OER awareness and competencies of the faculty members. Understanding of the OER concept lies in the way it is defined, and for the purpose of this study, two OER definitions were adopted, namely COL and UNESCO definitions. (*cf.* 4.3.1.1) Both definitions placed emphasis on the open licencing of OER. As stated in the literature, OER awareness is far lower in Africa than in other areas (Shigeta *et al.*, 2017). The findings presented in Theme 1, (*cf.* 4.3.1.1) showed differences in understanding of the OER concept by faculty members based on the way they defined it. Although all faculty members, who attempted to define OER, were under the impression that they in fact know what open educational resources are, there were variations in terms of the way they interpreted the concept. Many faculty members referred to OER as open online resources that are free to download. Some referred to subscription fees instead of copyright fees. Others referred to free permission without mentioning copyright permission (*cf.* 4.3.1.1).

A review of the literature placed emphasis on the presence of the teacher in online social networks (Hogan *et al.*, 2015; McGreal, 2017; Mogashoa, 2014; Skrypnyk, 2015), which implies the involvement of faculty members in ensuring the use of OER by students (*cf.* 2.4). Some faculty members demonstrated high enthusiasm about the availability of OER and they were positive about the use of OER as a pedagogical approach, irrespective of whether they were aware or not. Meaning that, in this study the lack of awareness among faculty members did not affect their perception about the use and value of OER (Rolfe, 2012:9).

Although this study was conducted in three different institutions with faculty members having different backgrounds with regard to OER, this study shows a homogenous trend apropos when they became aware of the OER concept (*cf.* 6.4.1.2) It seems that there was little or no knowledge of OER within Namibian ODL institutions earlier than 2008. Confirming this finding, literature indicated that awareness of OER has steadily increased between the years 2012 and 2016 (Allen & Seaman, 2016). Some faculty members learnt about OER when they became part of the COL OER for open schooling project in 2008 or when they attended workshops conducted by COL where OER was discussed.

In terms of formal training, the findings indicated that very little or no training has been conducted to capacitate faculty members in the integration of OER in teaching and learning. Although institutions and NOLNeT have organised various interventions where OER form part of the training, the faculty members were not confident enough with regard to the dimensions of OER, especially integrating OER in teaching and learning. Apart from NAMCOL, where OER development is taking place, the findings were unable to indicate whether any other institutions (CODeL and COLL), train their faculty members in-house on OER. For NAMCOL, the results showed that training of faculty members was done in-house by the eLearning programme developer, in line with what is indicated in the College Strategic Plan that 20% of NAMCOL tutors, developers and learners would be trained on Notesmaster by 2018/2019 (NAMCOL Strategic Plan, 2015-2019) (*cf.* 4.5.4). COL and UNESCO (2011) in their OER guidelines for higher education, emphasised the importance of capacity building of faculty members in the OER implementation process.

Self-learn came out as one way that faculty members came to know about OER. Some faculty members indicated that they train themselves through reading or through Massive Open Online Courses (MOOCs) (*cf.* 4.3.1.3). In other words, OER provide opportunities for professional development without institutions having to find the relevant funds. That speaks to what Bossu and Willems (2017) suggest that OER-based courses can be used to fill the gap in times where funding for further studies is almost non-existent and universities are struggling to support their faculty members in professional development.

### **5.2.3 Sub-Question 3: What are the perceptions and attitudes of faculty members regarding the benefits of using OER in facilitating learning?**

The aim of this sub-question was to provide information regarding the way perceptions and attitudes of faculty members regarding the benefits of using OER in teaching and learning. Dr Kofi Annan (cited in Kisirkoi & Kamanga, 2018) advocated for well-equipped teachers and quality open universities with access to modern technologies. For the purpose of organising the findings to this research sub-question, two separate questions were formulated with the findings being discussed under the subsequent headings.

#### **5.2.3.1 How do faculty members use OER in teaching and learning?**

This section discusses the views of faculty members regarding the different ways OER is used within the ODL institutions. In open and distance learning and in the context of this study, teaching and learning includes the development of self-instructional learning materials with an embedded teacher's voice to facilitate self-directed learning. Faculty members explained different ways in which they engage with open educational resources. Faculty members used OER for material development, as additional resources for students and writers, in the class room and for personal use. However, this study found one case where a faculty member did not see value in the use of OER to replace what the university already provides for students (*cf.* 4.3.2). This finding aligns with McCrea (2012) who referred to 'textbook syndrome' for those who still believes in the power of textbooks. However, Pérez-Peña (2012) emphasised the need for a mind-set change towards transformation in education.

A faculty member pointed out the negative impact OER can have on the revenue generated by the institutions through sales of learning resources to students. The

argument was that the adoption of OER can result in the loss of income by an institution based on the fact that in ODL, students receive self-instructional materials developed to facilitate self-learning. Materials are given to students at registration for a fee. There is however, no evidence that money made from the sales of learning materials represent any profit making as the cost to develop the materials should also be considered. The literature presents a different view by stating that institutions would make huge savings from the development cost if OER are adopted (Rolf, 2012; COL, 2017). In other words, institutions using OER saved on the costly process of material development, time as well as copyright fees (*cf.* 4.3.2.1).

The findings of this study show that OER is used in the development of materials by the Namibian College of Open Learning. Consequently, NAMCOL faculty members have been using existing OER to develop materials for their teaching since 2009 on a number of LMS platforms (*cf.* 4.3.2.1). This finding is consistent with the literature (Tuomi, 2013), which states that OER enables developers to adapt and contextualise existing material and learning programmes. Furthermore, this study found that the COL OER project for open schooling created a foundation for NAMCOL to continue with the same project after COL funding was withdrawn. Whilst the results indicated that development is taking place and platforms have been created to avail OER to the public, the document analysis and the observations done in this study did not show any evidence of guidelines for the integration of OER as part of the NAMCOL teaching and learning practice (*cf.* 4.5.3). The assumption this study makes is based on what Chen and Panda (2013) referred to as challenges faced by institutions by assuming costs at the end of external projects. Apart from the development costs, the institution has to cater for the cost of hardware, software, connectivity as well as costs for media to distribute OER. Similarly, literature substantiates that institutions find it difficult to sustain the funded OER project after funding has been withdrawn (Wiley, 2007). This can be true in the case of the Namibian College of Open Learning.

The situation differed at CODeL and COLL in terms of material development. Although faculty members indicated that eLearning is part of their responsibilities as instructional designers, there was no indication of OER development. The content development is mainly done by subject matter experts who are contracted on part-time basis under the supervision of full-time instructional designers. Although it was indicated that OER are recommended for use by content developers during training

interventions, this study could not establish any evidence of OER used in the development process. Furthermore, there were no guidelines regarding the use of OER being in place within the institutions. Moreover, faculty members stressed that they have observed the reluctance of part-time faculty members regarding the use of OER, which can have a detrimental effect on the success of OER adoption. The inability of teachers to leverage free resources can hamper students' independent learning (Livingston & Condie, 2006; Luo and Murray, 2018).

In the absence of clear guidelines on the use of OER, findings established that faculty members from CODEL and COLL use OER as additional resources for students or for content developers (*cf.* 4.3.2.2). Based on the findings, OER websites are listed and uploaded onto the learning management system, Moodle as additional reading. The idea is to widen the scope of the learning resources accessible to students and to enhance quality of education. As stated in the literature, OER repositories can provide a wide range of resources for students to access for additional information regarding specific topics and the quality of education can thus be enhanced (Masterman, 2016; Wright & Reju, 2012). However, the findings of the current study did not indicate how the OER websites were organised and whether the OER provided were relevant to the needs of students. As dictated in the literature (Gurrel, 2012), it does not make academic sense to upload loads of websites which are not relevant to student needs. In addition, such a scenario has the ability to overwhelm students and lecturers given the fact that there are millions of websites containing OER. This was a concern raised by McCrea (2012) who indicated that digital OER can be overwhelming, and if not properly coordinated, students can become frustrated.

Some faculty members indicated that although institutions might not have policies in place for OER to be adopted as an instructional approach, the freedom offered by OER is worth exploiting, thus, using OER for personal and private interventions. Faculty members find OER useful for use as part of presentations, assignments as well as when they do private tutoring outside their institutions, which means that faculty members have found OER beneficial, within and outside their official duties. Consequently, if the status quo persists, it can have an implication of creating a habit of using OER developed by others without making any effort to contribute to the OER pool. This is mostly in view of the absence of institutional OER policies to guide OER development and use within the institution. Bateman *et al.* (2012) cautioned against

the tendency by the developing countries of assuming the role of being passive users of OER provided by developed western countries, particularly as literature has indicated that there are more OER initiatives in developed countries compared to Africa and other developing countries (McGreal, 2017).

Lastly, faculty members aired their views regarding the use of OER in the classroom. The objective of this study will not be achieved if OER do not reach the classrooms or hands of students for which they are intended. Part-time faculty members responsible for the facilitation of face-to-face sessions for NAMCOL learners indicated their failure to integrate OER during the face-to-face sessions arranged by NAMCOL during school holidays. As stated in the literature, OER allows teachers to include a wide range of content in their lessons and enable different ways of transferring information to learners (Farrow *et al.*, 2015). In stark contrast, both tutors indicated that they face serious challenges with regard to time and connectivity. The time given to each session is one hour and according to one tutor, allocated time is insufficient to include connecting to internet and navigating through the platform to access OER on Notesmaster.

#### 5.2.3.2 What are the views, perceptions and attitudes of faculty members regarding the benefits of using OER in teaching and learning?

Literature highlighted the benefits of OER in terms of prompting equitable access to education, improving quality of education, and reducing the cost of education for students (Butcher, 2012; Grodecka & Sliwowski, 2014; Willems & Bossu, 2012). The purpose of highlighting OER benefits was to show how others have benefited from the use of OER. This section focuses on the perception of faculty members of the benefits of using OER in teaching and learning in the ODL system. When asked about their perception on the benefits of using OER in teaching and learning, faculty members displayed positive attitudes towards the use of OER in the distance education system. Among others, faculty members indicated access, cost cutting, quality and boosted reputation of institutions as some significant benefits that OER can offer in the ODL system.

##### 5.2.3.2.1 *Increasing access and sharing of learning resources*

Although students did not form part of this study, it was deemed fit to ask views of faculty members on their perceptions of the benefits of OER, especially for students

as distance students in the ODL institutions in Namibia. The findings of this study could be used to facilitate mind-set change towards the use of OER and in return, lessen the sky-rocketing educational costs for distance students. This study's assumption was that if faculty members regard OER as beneficial to students, the adoption thereof could be easily considered by the institutions.

The findings of this study, in line with others (see Hodgkinson-Williams & Arinto 2017), revealed positive views towards the adoption of OER for use in teaching and learning in ODL institutions in Namibia. Moreover, faculty members showed their willingness to share their resources with others if the use of OER becomes an integral part of the teaching and learning process. Faculty members showed more appreciation for the fact that OER are freely accessible to all. The point was, given the scarcity of learning resources in the country and the implication of cost thereof, access to learning resources remains a major challenge, especially in ODL where learning takes place anywhere removed the physical institutions (cf.4.3.3.1), aligning with literature which states that OER has a potential to promote equitable access to education (Willems & Bossu, 2012). As this study incorporated the teaching of secondary level learners, faculty members felt that education at that level should be free, and OER is a one way of making education more affordable and more equitable to all. The same sentiment was shared by Bossu and Brown (2012), who stated that OER give learners opportunities to share knowledge with other learners and to interact with content at any time anywhere. Faculty members felt that the use of OER can bridge both educational and distance gaps. Based on their views, OER allow students to access relevant and current information from anywhere in the country or the world without having to travel to the institution. Similarly, students can access a wide range of content which can enrich their knowledge and broaden their scope of learning. As a result, students are empowered to produce quality research papers.

On the contrary, some faculty members did not hesitate to express their doubt about the fact that students do not yet seem to have been alerted to the benefits of OER. They maintained that there is a serious need to launch a top-down awareness campaign within institutions regarding OER and their benefits. Based on the faculty members' views, it does not help to educate students on the use of OER if the heads of the institutions are not informed.

Both instructional designers from CODEL and COLL, as well as programme developers from NAMCOL, showed their excitement regarding the use of OER in material development. Several scholars indicated in the literature that the use of OER has brought various benefits to offer in material development (Butcher, 2012; Mishra, 2017; Tuomi, 2013), which is in line with what this study revealed. In this study, instructional designers and programme developers indicated that the OER movement has brought a breakthrough to development of learning programmes and materials. The free content can be integrated into existing materials or adapted to suit the context. Instructional designers and programme developers felt that OER gave them freedom to share content with their teams of writers and editors, thus encouraging collaborative development, which result in high quality content (*cf.* 4.3.3.1).

Furthermore, developers and designers found that using OER makes work easier, faster and cheaper. In other words, with OER, there is no need to re-invent the wheel as existing OER can be adapted and used instead of developing courses from scratch, all which saves time and money. Similarly, faculty members responsible for curriculum development indicated that there are even available curricula, which are released under CC licences for other institutions to adapt. This means that institutions are provided with an opportunity to offer quality programmes based on international standards.

The views of tutors and lecturers (part-time faculty members) indicated that although the majority were not well acquainted with the OER concept, and apart from the one who did not find OER useful, their views concerning the benefits of OER were no different to those of the full-time faculty members. Tutors and lecturers of the Namibian ODL institutions believed that if OER are adopted as an instructional approach, the teaching and learning could become more easily facilitated as well as interesting for both tutors and students. One benefit that lectures singled out was that with OER, a tutor can provide wider information to students, thus enriching their knowledge and thus improve the quality of teaching with OER use. Faculty members echoed similar views regarding the ability of OER to enrich teaching and learning with content from different contexts allowing students to engage with diversity of content. Tutors and lectures acknowledged that using OER shortens time needed to develop activities for students, as existing quality interactive OER can be adapted for use. In other words, OER increase their efficiency and effectiveness. In support of these findings, Farrow

*et al.* (2015), indicated that OER expose teachers to more content to choose from and enable them to use different formats to deliver the content.

Literature highlighted the benefits of OER in terms of prompting equitable access to education, improving quality of education, and reducing the cost of education for students (Butcher, 2012; Grodecka & Sliwowski, 2014; Willems & Bossu, 2012). The literature cited also indicated how faculty members as well as students elsewhere in the world perceived the use of OER (*cf.* 2.3). In terms of awareness and attitude of faculty members, the reviewed literature indicated a positive attitude among faculty members irrespective of their levels of awareness (Mishra & Singh, 2017:426; Rolfe 2012).

#### 5.2.3.2.2 *Cutting educational costs*

In terms of the benefits of OER to institutions, the views of the faculty members of this study were consistent with the reviewed literature that OER development and use by institutions have a benefit of reducing cost and increase the student intake (Bliss, 2013; Wiley & Green 2012; Petrides, 2011). Faculty members indicated that harnessing OER can result in major cost cutting with the OER movement assisting in reducing the huge budgets for sourcing expensive learning resources from publishers. Moreover, the material development costs, printing costs as well as material distribution costs could be reduced (*cf.* 4.3.3.2). Institutions allocate large funds for developers of material and printing companies so that study materials are printed and packed into packs to be distributed to ODL students at enrolment points.

In line with the findings of this study, if OER is adopted to replace printed textbooks and study material, huge amounts of money could be saved and diverted to technical infrastructural development. Although there was a feeling of uncertainty with regard to the profits made through study material sales, faculty members predominantly felt that the adoption of OER could be more profitable as more students could be accommodated, a point confirmed by Hodgkinson-Williams and Paskevicius (2012), who indicated that OER usage will result in high student enrolment, thus, ensuring sustainability. Ultimately, faculty members felt that there are more benefits in the use of OER than drawbacks.

The findings specifically referred to the shortage of textbooks in Namibian schools, and suggestions were made that if the government adopt OER, the problem of

textbook shortage would be something of the past. (*cf.* 4.3.3.2). Textbooks are especially expensive and this tends to affect education in the rural schools and is connected with the high drop-out of students due to the unaffordability of textbooks. In the literature, Lwoga, (2012), McGreal (2017) and Mtebe and Raisamo, (2014) expressed similar views regarding the potential of OER to cut textbook cost especially for the rural poor. Likewise, Butcher (2012) maintains that the fact that the use of OER can reduce the cost of duplication and distribution of materials, and enable quality learning materials to reach many people who need them.

One main cost that hampers the development of content is the copyright fees. NAMCOL programme developers indicated that with OER available online, there is no need to identify copyright owners and there is also no need to request permission, which could be very expensive and time consuming. In many cases, institutions tend to use low quality content due to unaffordability of copyrighted content.

#### *5.2.3.2.3 Enhancing quality of education*

Although the previous sections have already mentioned the benefits of OER, this section tries to point out how some benefits of OER can potentially increase the quality of education.

The findings of this study are in line with the literature in terms of the quality of OER. In principle faculty members believed that OER are of good quality just like any other resources. This finding is supported by Misra (2014), who stated that there is no difference between OER-based courseware and the traditional textbooks in terms of quality. It is important to mention that the difference between OER and copyrighted materials is the open licencing, under which OER are published. Faculty members in this study concur with the literature by recognising the potential of OER to bridge the gap between the poor and the rich (Grodecka & Sliwowski, 2014), enhancing equitable quality education (*cf.* 4.3.3.1). From the perspective of material development, faculty members noted that OER provide a vast array of rich information from different contexts which developers can include in the learning materials. Learning materials such as self-instructional study guides are given to distance students for self-learning and thus, the inclusion of OER which offer multi-contextualisation of the content, has the ability to boost the quality of learning.

Faculty members indicated that the quality of teaching is enhanced if facilitators can adapt content from other contexts to suit their own environment without having to request copyright permission. Even the time spent in preparing for the lesson is reduced if OER is used and re-used. As a result, more content will be shared with students and in return, quality of learning is improved (*cf.* 4.3.3.1). The same sentiment was shared by Bossu and Brown (2012).

Furthermore, it was noted that the quality of education is enhanced when more students access quality learning resources for free (*cf.* 4.3.3.2). On the contrary, however, the concern was expressed about the perception among institutions that anything for free is associated with poor quality. As a result, OER are regarded as of inferior quality within the institutions and in many cases, academics are not allowed to cite from OER in their research papers, which is contrary to the literature which advocates for a mind-set change towards openness in publishing (Pérez-Peña, 2012; Torres, 2013).

It was further stressed in this study that OER have the potential to enhance the quality of student research if institutions allow open publishing of academic papers for students to access quality, local content for free (*cf.* 4.3.4.2). In other words, faculty members dealing with teaching and learning within institutions see the potential of OER in enhancing the quality of education and at the same time, reducing cost for students. This study and other studies done elsewhere, confirmed the positive perception of faculty members regarding the quality of OER. For example, faculty members from the study done by Hilton *et al.* (2013) indicated that OER are of equal or better quality than textbooks and learners using OER perform on par with those using textbooks.

#### *5.2.3.2.4 Institutional reputation*

It was indicated in this study that OER promote open education movement which if applied, can open up education to wider communities, making institutions meet their objectives (*cf.* 4.3.4.3.1). Faculty members felt that the adoption of OER has huge benefits as the institutions that develop OER and share to the wider spectrum will gain both local and international recognition. Moreover, institutions gain recognition because OER learning materials are extensive and of high quality compared to the limited textbooks that institutions usually subscribe to. In other words, OER can

elevate the ranking of the institutions (*cf.* 4.3.4.3.1). Furthermore, findings indicated that if faculty members of an institution contribute to the OER pool, both their profiles as well as their institutions' profile will be promoted. As stated in Karipi (2012), NAMCOL's image was boosted internationally through their involvement in the COL OER for open schools' project. Similarly, McGreal (2017) indicated that Athabasca University in Canada is a well-known leader in OER, followed by other Canadian universities, making Canada a top contributor to the OER movement.

Another view expressed in this study was the fact that publishing research findings as OER provides a platform for local research to reach the international world and as a result, benefit a large number of people. This finding is in line with the view expressed by COL (2013) that traditional research journals prevent research findings reaching the wider population. Moreover, faculty members felt that the adoption of OER by an institution will allow local contextual articles to be more accessible, rather than stored as library files collecting dust. This finding implies that academics within the institutions of higher learning are compelled to publish their research articles with traditional closed journals in order to be recognised and to qualify for academic incentives such as promotions.

Literature, however, showed that attitude does not always result in changed behaviour (McLeod, 2014). In the study conducted by Mishra and Singh (2017), the positive attitude towards OER did not reflect an increased use of OER in teaching and learning. In this study, the same scenario surfaced as faculty members, although excited about the potential benefits that OER can bring to the institutions, indicated at the same time that they do not use OER in their teaching. This finding however, excludes the faculty members of the Namibian College of Open Learning who indicated and showed evidence of OER usage in the development of materials (*cf.* 4.3.2.1).

#### **5.2.4 Sub-Question 4: What are the challenges regarding the use of OERs in teaching and learning by faculty members of Namibian ODL institutions?**

This study indicated from the beginning that the OER concept is relatively new, especially within the Namibian context. Faculty members in this study identified several challenges that could affect the effective implementation of OER as a pedagogical approach in open distance learning within the Namibian institutions.

Faculty members identified overdependence, poor quality, lack of understanding, copyright laws, connectivity challenges, lack of policies as well as lack of time and skills as the main challenges that can hinder the adoption of OER by institutions. It is worth mentioning here that although challenges seem to be more than benefits, faculty members were under the impression that challenges do not necessarily mean impossibilities but rather hurdles that need to be overcome before any success can be attained.

#### 5.2.4.1 Overdependence of institutions on OER

Although it was mainly a view of one faculty member, it was important to highlight this finding, based on its uniqueness. It was indicated that OER can create a culture of over-dependence whereby institutions will no longer engage in the development of new content. (*cf.* 4.3.5.1). It was felt that adopting OER might result in institutions assuming the role of being passive consumers of content developed by others, as indicated earlier by Bateman *et al.* (2012:9) who warned against becoming users and not developers. On the other hand, using OER developed by others can encourage the authors to release their own content as OER for others to access. Moreover, it can also be assumed that the more the faculty members use OER from the developed world, the more they realise that sharing has more benefits to the country in terms of advancement. The developed countries gain more publicity through sharing their information for free. Faculty members in this study (*cf.* 4.3.3.4), felt that much more needs to be done to build a culture of openness and sharing of content among institutions of higher learning in order to accept that exclusive rights to information exists in the 21<sup>st</sup> century where all information is available on the world wide web.

#### 5.2.4.2 Poor quality of OER

With regard to the quality, the views expressed in this study showed mixed feelings regarding the quality of OER. In as much as the faculty members viewed OER as of equal or better quality than the copyrighted resources, they indicated that the fact that OER are free of charge and they can be accessed and re-purposed by many people, could mean that their quality can be misleading. The literature reviewed in Chapter 2 also shared negative views about the quality of OER (Bliss, Hilton, Wiley & Thanos, 2013; Clements & Pawlowski, 2012). Furthermore, faculty members felt that OER need careful selection and adaptation in order to suit the environment, especially if

OER is to be included in the research papers, which higher education students are often required to consult for research purposes.

Some faculty members (*cf.* 4.3.5.2), felt that as not all OER have gone through peer editing, some content out there for the public to use might not be of the necessary standard and therefore lacks academic truthfulness. This finding is in line with what is indicated in the literature that OER need systematic evaluation to assess their effectiveness (De Vries, 2013). In the event of publishing newly developed material, a faculty member expressed the need for peer review of OER by many people to ensure quality.

In addition, the findings indicated that the quality of OER is perceived as poor when they do not suit the intended context. Faculty members were of the opinion that OER need to be contextualised and rarely used as is, thus taking more time compared to local restricted content. Moreover, most of the OER available were developed by and for the western world (Gurrel, 2012), rather than for developing countries, which makes OER searches more difficult by users from other parts of the world.

#### 5.2.4.3 Lack of awareness

The findings revealed that in all three institutions, including NAMCOL, there are wide gaps between full-time and part-time faculty members with regard to the awareness of OER. Full-time faculty members expressed concern that as long as the part-time faculty members are the custodians of facilitation of learning and are not knowledgeable about the OER concept, the adoption of OER by institutions is unlikely to happen. This finding showed the disparity between full-time and part-time faculty members with regard to their level of understanding of the OER concept. It appears that the capacity building interventions are more geared towards the full-time faculty members in terms of OER. In the researcher's view, part-time tutors and lecturers form part and parcel of any ODL institution establishment. Due to the large numbers of students that ODL institutions accommodate, they depend fully on the services provided by part-time faculty members as facilitators of learning. For any ODL institution to achieve its objectives, part-time faculty members should be capacitated. Although the reviewed literature focused on conventional institutions of higher education and therefore referred to training of full-time faculty members, Willems and Bossu (2012), indicated that OER courses provide alternative free training to

capacitate faculty members. Professional development training should be available to part-time faculty members in the ODL environment so that their awareness and understanding of OER is developed which would facilitate the adoption of OER pedagogy.

Awareness creation is key for the OER adoption process to run smoothly. The concern was not only for the lecturers and tutors alone, but the general institutional members including the management of their institutions. The lack of knowledge among the general staff members can have a delaying effect in OER adoption by the institutions. In addition, the Diffusion of Innovation Theory suggests that for any innovation to be successfully adopted, the interactions between the source and the receiver are critical, (Rogers, 2003). In other words, there is a need for prolonged interaction between the faculty members with knowledge about the OER concept and the general institutional staff and management in order to facilitate proper diffusion of the concept. However, Van de Ven (2018) stressed that sufficient time should be given for the new innovation to be accepted.

A need to educate both lecturers and learners about copyright laws (*cf.* 4.3.3.4) was also highlighted. Based on faculty members' views, there are limitations with regard to the Creative Commons under which OER are published, which needs to be well understood, especially before any OER re-purposing can be done. Faculty members thus felt incompetent to deal with all dimensions of OER, which also led to the issue of ownership and restrictive access to content created by the academics within the institutions. Faculty members in this study were under the impression that in this era where knowledge is obtained through the internet, and in many cases OER are used, there is no need for academics to claim ownership and to restrict the use of their content under the shield of copyright law. Similarly, in many cases academics use institutional funds and time to produce content for which they claim ownership. Given the fact that institutions are publicly funded, it makes sense to suggest that those resources should be released as OER. These views tie in with literature which indicates that ownership of content developed while in employment of the public institution, needs to be clarified (Kurelovic, 2016).

#### 5.2.4.4 Institutional policies and attitudes

This study revealed that a major factor which could impede the use of OER by the ODL institutions is the lack of institutional OER policies (*cf.* 4.3.3.5). Apart from NAMCOL where OER policy has been approved and implemented, other institutions participating in this study did not have approved OER policies at the time. This finding is consistent with what Kurelovic (2016) stated, that lack of implementation policies at institutional level creates a major limitation for the adoption of OER. Although the institutions have other policies in place that guide teaching and learning, faculty members felt that the lack of institutional OER policies makes it difficult for the harnessing of OER within the institution.

It was felt that OER publications are not considered on par with other research publications and OER publications did not qualify for incentives like research publications do. Consequently, faculty members felt discouraged to fully engage with the OER movement (*cf.* 4.3.3.5). In the literature, the issue of incentives was articulated by McCrea (2012) who suggested that institutions should think of shifting some of the savings gained through the use of OER to give incentives to developers. In addition to the incentives, faculty members raised another concern regarding the attitudes of academics within institutions. It seems that OER are viewed as resources for poorly funded institutions that do not have resources to develop their own. It seems faculty members feel that, in the absence of policies, their engagement in OER matters is not valued by the top management of their institutions. Existing literature alluded to the fact that in many cases, senior management do not have information concerning the involvement of faculty members in OER initiatives (OECD, 2007). With regard to CODEL and COLL, there are mixed views regarding OER within the institutions and there are at present, no guiding principles to follow. Thus, the implementation of OER policy and the adoption of OER by the institutions remain key.

Concern about the lack of a national OER policy to direct other stakeholders in education, especially the National Qualification Authority (NQA), was also raised. According to the faculty members, it seems pointless for institutions, especially higher education institutions, to adopt OER and offer OER courses which will not be recognised by the national bodies. The faculty members therefore felt that if OER has to be adopted within the institutions, the national bodies which deals with quality of programmes, should be in accord.

It emerged from this study that in 2014 NAMCOL implemented an OER policy. The NAMCOL OER policy was part of the documents this study reviewed for data collection and triangulation (*cf.* 4.5.2). Based on the policy, NAMCOL commits to be responsive to the call by UNESCO Declaration of 2012 to release publicly-funded resources as OER. The policy listed multimedia resources such as video, audio and online resources to be released as OER. NAMCOL chose to release all OER content under a specific Creative Commons licence, namely, CC-BY-SA that allows others to use, re-use and repurpose and distribute the materials under the same licence. As stated in the policy, the NAMCOL management and Board of Governance do have a right to indicate which content should be released under the OER licence. Moreover, this study found out that in learning management systems such as Notesmaster for secondary level learners and Moodle used by tertiary students, OER are developed and used for secondary level education offered by NAMCOL to Grade 10 and 12 distance learners only. However, this study did not find any OER content developed for NAMCOL tertiary students. The policy did not stipulate how OER should be integrated in teaching and learning and whether OER are adopted as a pedagogical approach by NAMCOL. In addition, NAMCOL part-time tutors indicated that although they were aware of the OER resources developed by NAMCOL, they do not integrate OER in their teaching. It appears that NAMCOL, just like institutions without policies, is facing implementation challenges in terms of ensuring that OER are fully integrated in teaching and learning. That is in line with the report by COL (2017:5) that countries are facing challenges regarding OER policies and commitment by management of institutions to take the OER initiatives forward.

#### 5.2.4.5 Connectivity

The reviewed literature indicated that the Namibia's telecommunication networks are linked to South Africa, ensuring its high standard (Sherbourne, 2010). The result of this study, however, showed the opposite. Faculty members indicated that internet coverage within the country is very poor and the bandwidth is generally low. The same view was expressed by Cooney (2017), who claimed that the low bandwidth and the lack of internet access remain a major challenge in Africa. Correspondingly, the views in this study indicated that in the institutions, internet connectivity remain the major challenge, especially to distance students. Although OER can be in any format, even as print, this study focused on the use of OER as a digital pedagogy, meaning that,

the focus is on the internet-based OER. Faculty members claimed that the situation in Namibia makes it difficult for all students to have access to internet resources. (cf. 4.3.5.4). Apart from the low internet bandwidth, distance students are also scattered all over the vast country, which makes it difficult for them to reach towns with internet coverage. Furthermore, faculty members indicated that currently students depend on their own internet data bundles or through the provision of internet in the institution libraries and resource centres around the country. If OER usage becomes a reality, more funds need to be provided to make provision for wider internet access throughout the country.

In addition to internet, faculty members also highlighted the lack of smart devices as a challenge. Not all students carry devices that can allow fast downloading of resources for effective use. The situation dictates that institutions might need to provide devices to students as part of their learning package in order to warrant the successful implementation of OER. The same opinion was expressed by Cheawjindakarn, Suwannatthachote and Theeraroungchaisri (2012), who stated that access to internet is the determining factor for institutions to decide on the appropriateness of technology.

Connectivity is also one of the main challenges affecting the integration of digital OER in teaching and learning especially at NAMCOL centres around the country. One challenge faced by NAMCOL tutors is the limited availability of the computer laboratory with internet for learners, which resulted in learners accessing computers only twice per week. Correspondingly, the non-participant observations done at NAMCOL revealed that there were no facilities in the class rooms at NAMCOL Jetu Jama centre, such as smart boards and projectors, to facilitate the use of technology in the classrooms. The same challenges including skills and access to technology have been highlighted in the literature (Cobo, 2013; Phalachandra & Abeywardena, 2016).

#### 5.2.4.5 Lack of time and skills

Literature advocated that the use of OER reduces teaching and preparation time (Ihrke, 2013). In this study, the findings revealed the opposite (cf. 4.3.5.6). Faculty members indicated lack of time as a factor that prevents their integration of OER in their teaching. Faculty members, who are tutors, felt that there is not enough time to connect to the internet during the one-hour long session. Distance students have

limited time for contact sessions per year. On the other hand, tutors are expected to complete the syllabi during those face-to-face sessions. Part-time faculty members from NAMCOL, where OER have been developed, indicated that although they are aware of the resources, the reality on the ground does not allow them to integrate ICT during contact sessions.

In addition to teaching time, NAMCOL programme developers also indicated that the development of OER takes more time than expected. This is mainly due to the fact that part-time content experts are used as developers of OER on the Notesmaster platform. Those part-time subject matter experts do not have time as they are employed full-time by the Ministry of Education as formal school teachers. Equally, tutors and developers lack technological skills. Moreover, faculty members indicated that it takes time for part-time developers to search for suitable OER and re-purpose them correctly due to limited skills. Ferreira and Gauthier (2013) indicated that Namibian teachers who took part in the COL OER project in 2008, were not well skilled in technology and some did not even have an email address at the time. That report confirmed the level of technological skills among the Namibian teachers in general.

#### 5.2.4.6 Relevance

The issue of relevance was also indicated in this study as a challenge to the effective use of OER in the classroom. At CODEL, faculty members alluded to the fact that it takes time to search for the relevant OER and in many cases one has to first re-purpose the content before use. As emphasised by Gurrel (2012:38), although OER are considered to be of good quality, they can only be suitable if they address the needs of the learner. Generally, the findings of this study did not differ from the findings of studies done elsewhere, where challenges such as connectivity, hardware, skills and time were cited (Ferreira & Gauthier, 2013; Phalachandra & Abeywardena, 2016). In other words, if tutors are unable to access OER, it is not possible to assume that learners on their own have the capacity to access these resources. Literature indicated that OER are developed with resources and time, but their utilisation is very limited due various challenges faced by institutions (COL, 2017; Rolf, 2012).

In addition, the same faculty member indicated that though the quality of OER is generally high, there is a need for OER evaluation for their relevancy to the purpose. Moreover, the faculty member specified a need for institutions to establish teams

responsible for evaluation and re-packaging OER for each course. The same view was corroborated by the reviewed literature (DeVries, 2013; Butcher, 2015).

#### **5.2.5 Sub-Question 5: What strategies/OER design can be developed to improve faculty members' proficiency regarding the use of OER at ODL institutions?**

Throughout this study, faculty members indicated that there is a lack of OER awareness among stakeholders especially tutors and lecturers, students and institutional top managements (*cf.* 5.3.4.3). Other barriers to OER adoption mentioned in this study were, lack of technological know-how (*cf.* 5.3.4.6) as well as lack of institutional policies to guide the adoption (*cf.* 5.3.4.4). Faculty members proposed several strategies such as sensitising institutional management to secure their buy-in thus changing the mind-set and open up for 21<sup>st</sup> century pedagogies that include OER. This strategy would then begin with policy implementation.

The need for OER institutional policies was expressed in the NOLNeT ODL policy (NOLNeT 2016). Moreover, the national ICT policy directed that higher education institutions should receive more ICT support for the purpose of cascading the skills to the students (Shafika, 2007). Based on the results of this study, it seems that the objectives of the national policies were partly achieved, especially regarding the development of institutional OER policies and the advancement of ICT for students. This study therefore, has a reason to presume that it is due to the lack of OER policies within the institutions that so many challenges are been experienced regarding the adoption of OER. Faculty members in this study did not only call for the development of OER policies, but emphasised the need for the separation between ICT policy, eLearning policy and OER policy. Based on past experiences, institutions tend to merge all aspects into one ICT policy, which results in some aspects being overshadowed. In addition, faculty members felt that for institutions to fully adopt OER as a pedagogical approach, management of institutions need to have a full buy-in.

The study revealed that in order to ensure that OER is fully adopted and used within higher institutions and in ODL, a number of issues should be addressed. Workshops and conferences, which focus on the importance of openness and the benefits of OER should be scheduled for both faculty members, full and part-time, as well as students.

Within such interventions, students would be orientated on the benefits of OER right at the beginning of their academic journey and thus be skilled to make use of them throughout their academic journeys. Ensuring that developing countries do not become passive users of OER, within workshops and professional development training, examples of good quality OER can be provided. Working in collaboration, faculty members should be encouraged to develop their own OER which could be published on open access. To highlight developments of OER-use in the country, institutions should share success stories (*cf.* 4.3.6.1). The list of the strategies above contains similar strategies as outlined in the literature (Peñolaza, 2015).

In terms of connectivity, faculty members in this study proposed that institutions have options to provide students with internet access on top of what is being offered currently if the OER digital pedagogy should be adopted. This contradicts the literature which states that the Namibian Education and Training Sector Improvement Plan (ETSIP) has made provision for ensuring ICT access to all learners and teachers and ensuring that ICT is part of the basic education curriculum (ETSIP, 2007). This study focused on both basic education offered by NAMCOL as well as tertiary education. The documents analysed in this study also indicated that ICT training and provision form an integral part of higher education and training (NOLNeT ODL Policy, 2016; NUST eLearning policy, 2009). The findings emphasised that there is a need for increasing access to digital learning resources by students in Namibia. Studies done outside Namibia however, showed similar situations where students do not have internet access outside the university campuses, preventing them from exploring available resources during self-study (Cooney, 2017).

A suggestion emerging from this study was the development of offline OER sites. Faculty members felt that one way of making OER accessible is to build versions of offline websites which can be accessed without internet. This study considers offline OER less effective as it limits the selection of content available compared to the internet-based selection where different websites can be searched to provide various information on the same topic (*cf.* 4.3.6.2).

### **5.3 SYNTHESIS OF RESEARCH FINDINGS**

#### **5.3.1 Sub-question 2: To what extent are faculty members empowered to use OER in their classes?**

This study revealed that the majority of the faculty members had a superficial understanding of the OER concept, although not confident to give details in terms of different licences under which OER are released. Very few faculty members had deep insight of the OER concept. The definitions that faculty members provided were a clear indication that their knowledge about OER was limited. The findings clearly showed a gap between level of awareness of part-time faculty members and that of their full-time counterparts. The part-time faculty members were the lecturers and tutors who facilitate learning through online platforms or face-to-face sessions but had not been exposed to any training or interventions in OER. The finding further differentiated between the numbers of years' faculty members were employed by the institutions. It emerged that those who have been employed at the institutions longer had better knowledge of OER than those with less experiences within the institutions.

#### **5.3.2 Sub-question 3: What are the perceptions and attitudes of faculty members regarding the benefits of using OER in facilitating learning?**

The findings on the perceptions about the use of OER formed the base of this study. Generally, faculty members, with more or with little knowledge about OER showed positive perceptions about OER. Regarding the potential of OER to widen access to education, faculty members recognised the value of OER in increasing the variety of the learning resources for students to choose from. In addition, faculty members appreciated the potential of OER to alleviate access challenges that limit educational opportunities for many Namibian learners. Moreover, faculty members commended OER as a solution to the time-consuming process of content creation and the fact that OER offer opportunities for collaborative development of content that enable more people to critique and perfect the content (cf. 4.3.3.1).

In terms of how faculty members use OER, the findings indicated that faculty members use OER in different ways, such as, for material development, as additional resources, for personal use and for students in class (5.3.2). This study found out that the only institution that uses OER for material development was the Namibian College of Open Learning. None of the faculty members from other two institutions indicated that they

had developed OER for their institutions. NAMCOL faculty members indicated that they develop OER on Notesmaster for secondary education learners, utilising existing OER. The NAMCOL OER policy indicated that all multimedia resources developed for open schooling are released as OER under CC license CC-BY-SA.

OER are used as additional resources for students and uploaded as part of the additional reading materials for students on their learning platforms. Instructional designers also share OER with the subject matter experts who are responsible for the content development of distance learning materials. However, lecturers and tutors from the same institutions did not refer to any involvement in the uploading or the accessing of OER on the learning management platforms (cf. 4.3.2.2). One can conclude that instructional designers share OER on the platforms for students to use without the knowledge of the facilitators.

The use of OER for personal purposes indicated that OER are used for conference presentations, private training as well as for private studies. Faculty members indicated that OER are free to use and can be adapted to suit any environment. In that way, faculty members found it easier and safer to use OER from the internet for demonstrations and for incorporation in assignments (cf. 4.3.2.3).

There was little evidence of the successful integration of OER within the classroom. The faculty members from NAMCOL, where OER are available on Notesmaster, indicated to have attempted to use OER in class but with little or no success (cf. 4.3.2.4). There are concerns about access to the internet or the time constraints, but NAMCOL learners are encouraged to access the Notesmaster independently. This finding implies that there is scant difference between the institutions in terms of the use of OER for the benefit of the distance learner. Whilst learners did not form part of this study, the assumption made from the findings was that, if tutors find it difficult to integrate OER, learners on their own will not succeed.

### **5.3.3 Sub-question 4: What are the successes and challenges faced by faculty members regarding the use of OER in teaching and learning?**

Regarding the benefits that OER can offer, this study revealed that the adoption of OER by an institution could be considered a cost cutting strategy. Students cannot afford textbooks and if institutions provide textbooks to students, they are often of low

quality due to the prices of the high-quality prescribed textbooks. The OER adoption has the potential to make education more affordable to many students and institutions.

The study further indicated challenges regarding the use of OER. It came out clear from this study that the quality of OER remain debatable. Although the faculty members were positive about the quality of OER, there was concern about the perceptions of the rest of the institutional members regarding the quality of OER. Faculty members felt that the institutional management did not trust the OER for academic use, thus prohibiting students and other academics from OER use. It appears there is a need to convince the managers to change their perceptions about OER.

Faculty members did not shy away from the fact that they lacked insight about the copyright laws in general, as well as the Creative Commons licences that govern OER, and they encouraged all academics to acquire the necessary knowledge about copyright and OER. It was argued that scholars do not share their content based on the belief that they have exclusive rights, while forgetting that knowledge is available for free on the internet. Faculty members in this study believed that if people were educated about copyright laws, the adoption of OER would become a reality (*cf.* 4.3.3.4).

Concerns were expressed about part-time faculty members regarding OER. This study concluded that full-time faculty members were aware of the fact that their part-time counterparts were not on par regarding the knowledge of OER. They emphasised in this study that part-time faculty members need more training interventions to enlighten them and encourage them to integrate OER in their activities.

Institutional policies were as yet not OER inclusive or OER specific. Furthermore, there are no platforms within the institutions to promote OER. The existing practices within the institutions of higher learning do not consider OER development as an academic activity and therefore, OER contributions are not considered for academic incentive schemes. In addition, institutions discourage the use of OER in research, thus preventing academics from citing OER authors. There are no policies that guide OER publications for academics. Based on this finding, it is obvious that there is a lack of understanding of what it means for the resource to be called OER. OER is a concept

that is meant to differentiate between copyrighted materials and those released under an open licence.

OER benefits were indicated at NAMCOL where OER are developed. Faculty members were positive about the perceived benefits of OER, access to the volume of free content available. With the existence of OER, institutions do not need to re-invent the wheel and found that using existing OER reduced the time spent on content development and saved copyright fees. Other OER benefits included possible increased student enrolment, availability of quality learning resources from other parts of the world, reduced printing and distribution costs as well boosting reputational status for institutions.

Institutions do not seem to be ready for full adoption of OER. The greatest challenge is the lack of internet access by distance students, particularly as digital OER are internet dependent and thus success of the OER adoption depends on access by students. If students cannot benefit from the freedom that OER offer, then the adoption of OER by institutions has no meaning. Given the current situation, institutions need to undergo a paradigm shift in order to make provision for complete access to internet for students.

A further challenge preventing the adoption of OER was the lack of institutional policies (*cf.* 4.3.3.5). CODEL and COLL did not have OER policies in place and their eLearning policies did not make any references to the adoption and use of OER. On the other hand, although NAMCOL has an OER policy in place to guide the development and the use of OER in the institution; however, the guidelines for tutors did not make any reference to the integration of OER in teaching and learning. In other words, NAMCOL tutors were not informed on the OER policy and the implementation thereof. It was however, clear in this study that the material development process at NAMCOL is guided by the OER policy, but that it still needs to be cascaded down to all faculty members.

#### **5.4 CONCLUSION**

The preceding chapter highlighted the views of the faculty members as recorded through interviews, as well as the data collected from document analysis and non-participant observations. This chapter discussed the findings based on the literature

review and the theoretical framework applied in the study. The findings were discussed within the framework of the main research question as indicated in Chapter 1, namely, to what extent, if any, are faculty members of Namibian ODL institutions use OER, and what strategies/OER design can be developed to empower faculty members' proficiency regarding the usage of OER? The research question was intended to reveal whether open educational resources are used to widen access to education, to close the education gap as well as to reduce the cost for education for the benefit of distance education students. In addition, the summary of the main findings was presented in this chapter.

Generally, the findings of this study are consistent with the results of other studies analysed in the literature. The main finding of this study revealed that faculty members of the Namibian ODL institutions do not use OER which could have an educational and a cost benefit for the Namibian learners. Results show that although faculty members have a general understanding of the concept, the real benefits of OER is unstated. This study further revealed that faculty members of the ODL institutions in Namibia are not at the same level when it comes to the awareness of OER. Some faculty members are well-informed about the concept and understand all the dimensions of OER. Some had an idea of the concepts but did not know the details involved in OER but some little or no knowledge. This study further discovered that the experiences of the faculty members as well as the job status played a role in their views and perceptions. Faculty members with more years of experiences and those who are in full-time positions were more advanced in terms of their knowledge of OER. Other demographic information such as age and qualifications did not have any influence in the findings of this study.

The main findings showed that faculty members use OER for purposes rather than then the ones listed above. The findings showed mixed and inconsistent views from faculty members regarding the use of OER. The challenges that were experienced range from lack of policies, lack of awareness, connectivity challenges as well as lack managerial support. Moreover, this chapter highlighted the link between the findings and the theoretical framework and literature reviewed in Chapter 2.

The subsequent chapter presents the OER design recommended for adoption by the institutions in order to address challenges raised in the study. The proposed model is

based on the theoretical framework (*cf.* Chapter 2) and on the findings of the empirical research (*cf.* Chapters 4 and 5).

## **CHAPTER 6: THE OER DESIGN PROPOSED FOR THE ADOPTION OF OER WITHIN THE ODL INSTITUTIONS IN NAMIBIA**

### **6.1 INTRODUCTION**

This study was informed by the OER initiatives in the country and more specifically the OER development at the Namibian College of Open Learning. In addition, escalating costs of education have impacted the access to education of the Namibian population. The aim of the study was to investigate the views of those involved in the design of teaching and learning resources using open educational resources (OER) as an alternative to textbooks for the purpose of reducing educational costs and widening access to education.

The study provided a deep insight of the views of the faculty members and the challenges faced by those institutions that limit their abilities to embrace OER successfully. The study further facilitated the understanding of how faculty members within the institutions foster OER even though institutions are not yet ready to fully adopt the concept. In this chapter I propose the OER design to facilitate the smooth adoption of OER by the Namibian ODL institutions.

### **6.2 THE RESEARCHER'S INTENTION WITH THE FINDINGS**

The final aim of the study was to propose strategies/OER design to improve faculty member proficiency on the use of OERs at ODL institutions. The faculty members who formed part of this study proposed several strategies that can be employed to improve the proficiency level within the institutions, such as, policy implementation, connectivity enhancement, management buy-in and strengthening of advocacy. The strategies create a framework for the development of an OER design advocating the adoption of OER within the Namibian education system. This framework would include the presentation of the research findings at various platforms such as conferences, both locally and internationally, which will create awareness about the findings and inspire others to carry out similar studies elsewhere.

Secondly, as a member of one of the institutions investigated, it makes it mandatory to ensure that the proposed OER design has been accepted. To achieve that, I plan to use existing forums such as NOLNeT committees to take the management of the

institutions through the proposed design and to share the findings of this study. Being an employee of NAMCOL, I will attempt to ensure that the NAMCOL OER policy is fully implemented by arranging interventions to share the findings and the recommendations of this study with the relevant faculty members. I will try to put in place monitoring and evaluation strategies to ensure that the recommendations of this study are effected by NAMCOL.

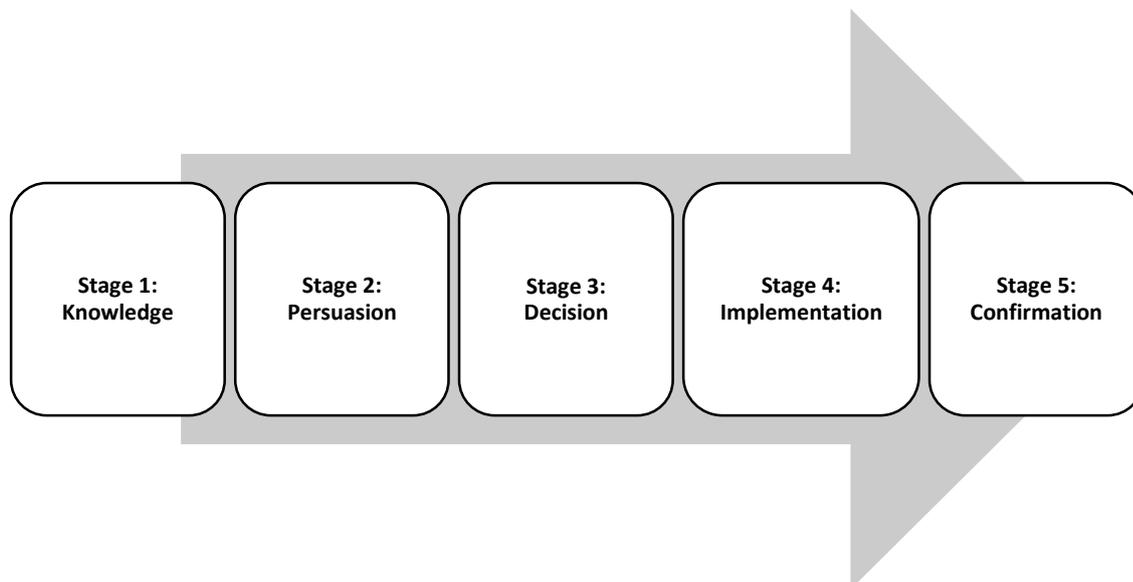
Furthermore, it was mentioned in this study that there is a need for a 'practice what we preach' culture for the success of OER. As part of this study, I have purposefully reviewed articles published in open journals under Creative Commons licences that provided insight about the phenomenon. It is therefore my ultimate goal to write an article based on the findings of this study and publish it in the open journal for others to access and re-use for free.

The benefits of OER speak loudly, based on the findings of this study. It is also an intention to influence the whole education system to embrace OER and to make education free for the Namibian child. In other words, sharing the findings of this study to various stakeholders in education will promote the use of OER in the entire education system.

This chapter, therefore, presents the proposed OER design for the adoption of the OER pedagogy.

### **6.3 THE OER DESIGN PROPOSED FOR THE ADOPTION OF OER WITHIN THE ODL INSTITUTIONS IN NAMIBIA**

The findings of this study suggested a need for an OER design to facilitate the smooth adoption process of the OER concept. To support the findings of this study, Rogers' Diffusion of Innovation Model was found applicable. Rogers suggested various stages that institutions go through before the decision to adopt the innovation can be reached. Based on Rogers' model the following stages are identified:



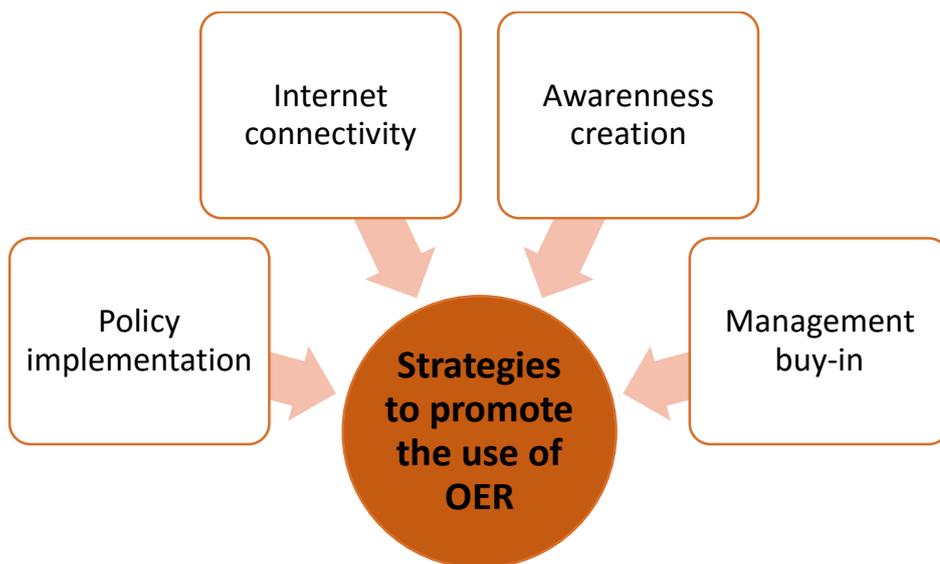
**Figure 6.1: Rogers' five stages of the innovation adoption process (Rogers, 2003)**

Rogers' model indicates the stages through which individuals pass before adopting or rejecting an innovation. The first stage is *Knowledge* where exposure to the innovation is vital in order to understanding how it works and its possible benefits. *Persuasion* is the stage at which the individual is persuaded to become involved and thus interest in the innovation deepens. At the third stage, *Decision*, the individual weights up the pros and cons and makes a decision about adoption or rejection. Stage 4, *Implementation*, is the importance stage where the innovation is trialled and it is here where more information is gained through a hands-on approach. *Confirmation* is where a final decision is made for adoption and individuals advocate for the innovation (Rogers, 2003).

Roger' five stages of innovation were applied in the development of the OER design proposed in this study to facilitate the OER adoption process by the Namibian ODL institutions.

### 6.3.1 The Conceptual Framework for the Proposed OER Design

The purpose of a conceptual framework is to make the findings more meaningful and to enhance the practicality and accuracy of the research study (Adom *et al.*, 2018). The main objective of this study was to ascertain the perception of the faculty members on the use of OER in the ODL institutions in Namibia. To achieve the objective, the research questions were designed to cover various aspects of OER such as the level of awareness, the use of OER by faculty members, the benefits and challenges as well as the strategies that can be employed to promote OER use within institutions. Various challenges were identified and strategies to overcome them were proposed. For the purpose of the proposed OER design, only the main strategies were considered. These strategies form the conceptual framework that guided the development of the OER design (Figure 6.2) emanating from the findings of this study.



**Figure 6.2: The conceptual framework for the proposed OER design**

This conceptual framework for the proposed OER design comprises policy implementation, internet connectivity, awareness creation and management buy-in, all of which are discussed below.

#### 6.3.1.1 Policy implementation

A policy is a document that contains principles and values that guide the institution in the attainment of set objectives. An Open Educational Resources policy guides the

creation, use and support of OER within particular institutions. Policy implementation in this study refers to the process of operationalising the policy document for the purpose of achieving the set policy objectives. The lack of OER implementation policies within the institutions was identified as a major limiting factor for the successful adoption of OER. This study observed many inconsistencies in the views of faculty members from institutions with no OER policies in place. Faculty members seemed unsure of how OER could be harnessed to benefit the students. The existing policies analysed, including eLearning policies, did not make any reference to the existence of OER. This means that despite knowledge of OER by individual faculty members, there is a need for a mandatory policy to direct firstly, the adoption of OER by the institutions, and secondly, to guide the instructional decisions in terms of the use of OER.

#### 6.3.1.2 Internet connectivity

Internet connectivity brings the unmatched potential to bridge the educational gap and advance skills for the globalised economy (UNESCO, 2015). UNESCO further indicated that it is the governments' responsibility to ensure that the country is technologically in line with all other countries by equipping the country with skills to survive in the digital era through the empowerment of teachers and students in the use of technology. In the context of this study, internet connectivity refers to the ability of students and tutors to connect to the internet with high bandwidth to allow access and downloading of resources. The internet plays an important role in the successful implementation of OER pedagogy. Generally, institutions prioritise the access to technology with programme offering done through blended learning with some courses offered online. In contrast, the findings strongly indicated that distance students do not have equal access to technology, which in the context of this study, creates a barrier to the effective use of OER.

#### 6.3.1.3 Awareness creation

Lack of awareness among the faculty members was identified as a stumbling block in the adoption of OER. Faculty members demonstrated low levels of awareness in terms of the details of OER as a concept. Awareness creation in the context of this study refers to the interventions purposefully arranged to create and increase awareness of OER among the faculty members in order to enable the smooth OER adoption process within the institution.

#### 6.3.1.4 Management buy-in

Management buy-in in this study, refers to the willingness of the institutional management teams to support the adoption of OER as a pedagogical approach. It is commonly perceived that in most cases, the management of institutions takes time to process new ideas, thus preventing quicker adoption of innovations. In the current study, it seems the institutional managements do not place enough emphasis on the OER concept and hence the use of OER was not considered as an alternative instructional methodology. Management, in this context, includes all senior staff in the managerial positions including the institutional governance body. The need for the managerial buy-in was also necessitated by the lack of policies that exists in the institutions. Policy implementation is a managerial function; thus, the lack thereof indicates a gap in institutional managerial involvement.

#### **6.3.2 The OER Design proposed for the adoption of OER within the ODL institutions in Namibia**

The purpose of the OER design, Figure 6.3, is to address the challenges, as identified through the study, and ensure the systematic adoption of the OER concept within the Namibian ODL institutions. The proposed OER design was guided by my own experience as a manager responsible for supervision of the material development process at the Namibian College of Open Learning and being instrumental in the development of the OER at NAMCOL. Secondly, the literature review discussed in chapter 2 provided the lens through which the design can be viewed. Specifically, the OER design borrows from the Diffusion of Innovation theory proposed by Rogers (2003). Further, the development of the OER design was guided by the empirical findings discussed in chapter 4 and 5. The findings of this study implied a gap in the way institutions use OER and several strategies were proposed to address the challenges. The proposed strategies form the base on which the OER design was developed.



**Figure 6.3: The OER design proposed for the adoption of OER within ODL institutions in Namibia (Karipi, 2019)**

The proposed OER design is developed to propose a top-down approach for the OER adoption process. The top-down approach was preferred for this model to allow the innovation to diffuse faster and to ensure that the concept is aligned with the strategic objectives of the institutions. The top-down design creates an opportunity for the innovation to be communicated through the existing channels, which can have an impact on the adoption rate by the individuals. An innovation such as OER needs a higher level of interrogation for its success, hence the top-down approach is more applicable especially during the first stage.

The design creates an extension to Rogers' theory, which was mainly developed for the individual adoption of innovation. Ayodele, (2012) identified a gap in Rogers' theory and suggested a need to investigate how the same theory can be applied in an

organisation. This study customised the same theory to make it applicable to the adoption of OER in Namibian ODL institutions.

The design takes into account the fact that the institutions differ in size, complexity and culture, which can have an impact on the rate at which the innovation process diffuses through the structures, as well as on the success thereof (Truong & Nkhoma, 2018). The proposed OER design opposes Rogers' model in the sense that it is universal, meaning, it is applicable to any institution irrespective of its financial standing or social system. This study proposed that institutions go through three stages to experience an adoption process, namely, *knowledge*, *institutional readiness* and *OER adoption*. The OER design, just like Rogers' model, recognises the factors that influence the rate of adoption such as time, communication channels as well as financial standing of the institution.

### **Stage 1: Knowledge**

Based on Rogers' theory, the knowledge stage refers to the time an individual has no or very little information about the new innovation. Stage 1 in the proposed design includes both first and second stages of Rogers' theory, which means that it also includes those who want to learn more about the innovation. This inclusion is justified by the range of views that faculty members showed and their different levels of awareness of OER.

The current OER design differs from Rogers' model in the sense that it focuses on the whole organisation and not on individuals. During the Stage 1, the institution is informed of the advent of the new innovation, which in this case is the OER concept. However, it requires the full support of senior management including the governing boards. The decision to develop a policy to guide the adoption of OER should be taken at this level. Management should be clear and should weigh the benefits and challenges that OER adoption might bring to the institutions. The next step is to ensure the development of the OER policy stipulating clear objectives on how the OER concept should be adopted.

The most critical step is the creation of awareness among all stakeholders including students. At this stage, there is a need to educate and encourage all future users about the value of the innovation (Blome, 2010). Rogers (2003) suggested that at this stage

it is important to involve a group of individuals who are the users of the innovation. Lack of awareness of the OER concept was an obvious challenge among faculty members, more specifically the part-time faculty members. The involvement of part-time faculty members in the awareness creation interventions are therefore regarded as critical for the success of this model. The suggested interventions for part-time faculty members are among others, workshops, training as well as conferences and seminars. Student awareness is also crucial as without their involvement at the initial stage, the adoption is likely to fail. The current situation portrays the image of poor involvement of both tutors and students in OER activities. This design makes it a priority to engage students early in the adoption process in order to ensure that their different learning needs are catered for. That makes more sense in the use of OER pedagogy where the active participation of students is a key.

## **Stage 2: Institutional Readiness**

The term institutional readiness in this context is used to describe the period when the institution makes preparations to adopt the innovation. Based on the study findings, institutions do not seem to be ready to adopt OER as an alternative pedagogical approach. The evidence was highlighted in challenges such as lack of technological skills among faculty members, lack of technological infrastructure for students as well as the absence of implementation policies. This stage requires the preparedness in terms of skills, infrastructure as well as policy implementation. It important to mention that time should be taken into account in order to avoid rushing through this process.

This stage is compared to Stage 3 of Rogers' model where decisions are taken and the innovation is critically evaluated. The proposed OER design suggests that policy implementation paves the way for all other activities at this stage. Through the process of policy implementation, the innovation is communicated to all involved parties and their respective responsibilities are outlined. Policy implementation brings about two important steps, namely, skills development and technology enhancement. Faculty members responsible for teaching and learning should be capacitated in terms of OER creation and integration. The involvement of all full-time and part-time faculty members is critical at this stage. The current findings indicated a 'skills gap' among faculty members. There was also inconsistency between what faculty members indicated they knew and what they were able to do in terms of OER.

Technology enhancement refers to strategies to increase internet access for students. Although institutions have policies in place regarding ICT integration, faculty members pleaded for the improvement and augmentation of internet access for distance students for the success of OER. Due to the nature of the distance learning system, this study proposes a 'one student, one device' approach to ensure that students are equipped with smart devices with internet connectivity.

The last step in this stage is decision making. Rogers placed emphasis on the interpersonal relationship between the receiver and the sender as key to successful communication and as such, communication channels are critical at this stage. Institutional bureaucratic structures can have a negative impact on the speed of communication; hence, this design proposes horizontal communication between management, staff and students in order to achieve a collective decision regarding OER adoption. The decision making at this stage should involve all parties and this is the time to decide whether the innovation is feasible or not. The institution takes a final stand on whether to adopt or reject after considering its benefits versus challenges. The proposed design has placed emphasis on the involvement of students at this stage. If students feel that there are more challenges than benefits, the OER adoption process could be disregarded.

### **Stage 3: OER implementation**

The OER implementation stage comprises the adoption itself, OER creation and the use of OER by the institution. Based on the investigation done through this study, none of the three institutions has reached this stage.

Although the case of NAMCOL differed in term of readiness, the findings showed that there is a need for a more systematic approach to ensure successful implementation of OER. The findings indicated that NAMCOL showed more success with regard to the integration of OER in the material development process, but in terms of integration of OER in the classroom, little has been achieved. There seem to be a casual arrangement with part-time tutors on the use of OER and ICT in general, and no guidelines specifically for tutors guiding the integration of ICT and OER in teaching and learning was in evidence. That identifies a loophole in the OER implementation process. This stage compares to Stages 4 and 5 of Rogers' model and represents the

final phase where the innovation can be tested. Testing can be done through piloting with a small group of students.

The current design suggests that the implementation should start with both creation of OER by both faculty members and by students, thus encouraging the use of OER to replace textbooks, which tend to be expensive, an issue which often impacts student access to education. This OER design is proposed as a vehicle to facilitate the OER adoption by the three ODL institutions covered in this study, as well as by any other institution which may find it of use.

#### **6.4 CONCLUSION**

In the current fluctuating and uncertain economy, the demand for education continues to rise. ODL institutions have been forced to undergo a paradigm shift in how they view and offer education in order to accommodate the increasing number of students. Institutions can only achieve this by employing approaches that can increase equitable access to education without increasing cost. The use of open educational resources, as a new concept, that provides quality learning resources to students, an alternative pedagogical approach is indeed an option for the Namibian distance learner.

Where there is a will, there is a way.

The aim of this chapter was to present the proposed OER design for the ODL institutions based on a conceptual framework informed by the findings of the study. The final chapter brings the study to a close, offering a summary, reflection on the process of research, recommendations for practice and suggestions for further research.

## CHAPTER 7: SCHOLARLY REFLECTIONS ON THE RESEARCH

### PROCESS AND RECOMMENDATIONS FROM THE STUDY

#### 7.1 INTRODUCTION

This study explored the views of those involved in the design of teaching and learning resources on the use of open educational resources as an alternative to textbooks for the purpose of reducing educational cost and widening access to education and through that, the study provided the insight into the views of the faculty members and the challenges that limit institutions' abilities to embrace OER successfully. The study further facilitated the understanding of how faculty members within the institutions foster OER even though institutions are not yet ready to fully adopt the concept.

This final chapter brings the study to a close, offering an overview (7.2), a summary of the critical findings (7.3), contributions to the body of knowledge (7.4) and the limitations and delimitations of the study (7.5). Thereafter, reflections on the process of the research is offered (7.6) as well as recommendations for policy and practice and suggestions for further research (7.7), before offering a final word (7.8).

#### 7.2 OVERVIEW

**Chapter 1** presented the overview of the study, the problem statement, and then the theoretical framework on which the study is grounded. Research questions and research aims and objectives were outlined. Chapter one further justified the adoption of the research design and methodology that guided the study. Research and ethical considerations pertaining to the study were delineated. The significance of the study was briefly described as well as limitations of the study. Finally, important concepts that were used throughout the study were defined in this chapter.

**Chapter 2** presented a review of the relevant literature. The literature reviewed was mainly based on the OER concept, the benefits of OER, the challenges experienced in the use of OER as well as the strategies to promote the use of OER in teaching and learning. The legislative framework of OER use within the context of Africa and Namibia in particular, was discussed. The evidence of existing research in the field of open educational research was created, the gaps in the existing literature were identified and the potential of future research to fill the gaps was highlighted.

In the second half of the chapter, the integrated theoretical framework which underpins the study and formed a blueprint on which the study was built, was presented. The purpose of this chapter was to conduct a review of the broad learning theories underpinning the use of open educational resources as an alternative pedagogical approach to increase access to education and to enhance self-directed learning. The theories that were discussed were the Transformative Learning Theory, Heutagogy Learning Theory, Cognitive Learning Theory and Social Learning Theory, Constructivism Learning Theory, Connectivism Theory of Siemens and Downes (2004) and the Diffusion of Innovations Theory proposed by Rogers (2003). The applicability of the learning theories was evaluated and linked to the findings.

**Chapter 3** discussed the research design and methodology employed to examine the use of OER by faculty members in the Namibian open and distance learning institutions. The interpretivist paradigm on which the study was based was argued. The explanation was given to justify the chosen approach to the study. The identification of a study population and the research sites were described. Sampling methods were explained and the data collection tools and procedures were outlined. In addition, the procedure followed in data analysis was defined. This chapter further addressed trustworthiness issues and ethical considerations.

**Chapter 4** presented the analysis of the interviews of faculty members, the non-participant observations and the document analysis from the three distance learning institutions in Namibia. Interpretation of findings were organised in themes emanating from recurring patterns in the analysis of data. Data presentation, analysis and interpretation were done in relation to the research objectives and for the purpose of providing answers to the research questions and sub-questions

**Chapter 5** discussed the research findings based on the research questions outlined in Chapter 1. The findings were matched with the literature reviewed in Chapter 2. The linkage between the findings and the theoretical framework was done in this chapter to establish a relationship between theory and practice. Important aspects that were raised throughout the study were consolidated into main research findings.

**Chapter 6** presented the proposed OER design for adoption by the ODL institutions to ensure smooth adoption of the OER concept.

### **7.3 SUMMARY OF THE CRITICAL FINDINGS**

The major findings were identified and important aspects were highlighted in Chapter 5. This section of Chapter 7 highlights the critical issues that informed the development of the OER design to facilitate the use of OER in the Namibian ODL institutions.

This study produced five key findings:

1. Faculty members of the three ODL institutions do not use open educational resources as a pedagogical approach to reduce costs and to promote self-directed learning.
2. The part-time faculty members, who are the facilitators of learning, have a low proficiency use of OER for teaching and learning
3. There are no institutional OER policies in COLL and CODEL to guide the OER activities within the institutions.
4. There is no sufficient infrastructure within the institutions to support the use of digital OER by students
5. Faculty members are willing to embrace and integrate OER as part of the instructional practice

The successful use of OER depends on whether it brings changes in the education system in terms of access, quality and cost. Based on the results of this study, to date there has been no significant improvement resulting from the use of OER by faculty members. In other words, OER is still a new concept in Namibia and institutions have yet to consider it as an alternative form of instruction. The study however, produced evidence of OER-use for various purposes within the institutions.

Secondly, the majority of faculty members within the ODL institutions are part-time lecturers and tutors. Those faculty members play a critical role in the success of any ODL system as facilitators of learning. In this study, the part-time faculty members portrayed the lowest levels of awareness of the OER concept. None of the part-time faculty members indicated having successfully integrated OER in teaching and learning for the benefit of distance learners.

Thirdly, the operations and systems of any institutions are as good as the policies that guide their implementations. This means that institutions will not be able to implement any new system without good guiding policies. It should also be understood that faculty members will only use OER in teaching and learning if the institution adopts the concept as an alternative pedagogical approach. One key factor that this study brought to the fore is the lack of OER implementation policies within the institutions of higher learning. The lack of OER policies within CODEL and COLL creates a vacuum in terms of direction regarding OER implementation. As a result, faculty members displayed fear, doubts and concerns regarding the adoption of OER by the institutions. Although the existence of policies excludes the Namibian College of Open Learning, the findings regarding the integration of OER in teaching and learning at NAMCOL were similar to the other two institutions without policies. NAMCOL was unable to achieve much regarding taking OER to the hands of the learners.

Fourthly, open educational resources can be digital or print. This study however, focused on digital OER due to the nature of the ODL system. Distance students are known to be scattered all over the country and it is difficult to reach them all. It is therefore advantageous to provide digital content which can be accessed at any time and place. Having said that, it is important to note that the success of OER depends on the provision of technological infrastructure for students, which includes the use of smart devices with high bandwidth internet connectivity. This study revealed that institutions do not cater for distance students in terms of the access to internet. There is no provision made for students to have equal access to online resources including OER.

Lastly, the perception of the faculty members on the phenomenon shows the value they attach to it. Faculty members showed positive attitudes towards OER throughout the study, which indicated that they place much value on what OER can offer to themselves, their students and to the institutions in general. This study however, concluded that institutions need to invest in educating faculty members more about the OER concept.

#### **7.4 CONTRIBUTION TO THE BODY OF KNOWLEDGE**

The aim of this section is to indicate how the findings of this study add to the value of the existing body of knowledge. This study was the first of its kind to investigate the use of OER in the Namibian public ODL institutions. This study makes the following contributions to the body of knowledge based on the objectives set for the study (cf. 1.5):

- This study revealed a gap in the literature about the views of the ODL faculty members on the use of OER in the distance education system. Many studies done concentrated on other aspects of OER rather than the use (De Hart, 2015). This study fills that gap by providing the analysis of the views brought by faculty members regarding the use of OER in distance education institutions in a developing country. In terms of the theories, the researcher did not find any theory that could speak directly to the use of open educational resources; hence the study adopted an integrated theoretical framework by combining different theories that support the use of multimedia and technology enabled learning to underpin this study (cf. 2.9.5). The findings of this study were unique in the sense that they were based on the dynamics of the open and distance learning system, which many studies have not yet considered.
- The ODL faculty members in this study depicted positive views regarding the potential of OER to moderate distance learning challenges. This study revealed that awareness does not necessarily mean understanding (cf. 5.3.1). The faculty members of the Namibian ODL institutions demonstrated that they were aware of the concept OER while at the same time the findings suggest that the understanding of the OER concept among the faculty members was low. Based on the understanding of many faculty members, OER is any resource that can be accessed through the internet which gives the impression that the dimensions of OER are not known. This study thus, clarifies the difference between accessible online content and open educational resources.
- This study further fills the gap that exists in the literature about the importance of capacity building for distance education tutors and lectures. Studies that were conducted often focus on the training of full-time faculty members. In this study, the part-time faculty members were considered critical to the operations of the

distance education institutions. The part-time faculty members in this study demonstrated slight knowledge of the OER concept compared to their full-time counterparts. It was also clear that the same faculty members did not receive any form of training regarding the use of OER.

- The views of the faculty members regarding their involvement in the OER activities make a significant contribution to the existing literature. In the context of Namibia, there was no research available indicating how OER are used within the education system. This study indicated various activities in which faculty members engage with OER rather than for pedagogical purposes. Rogers' Diffusion of Innovation Theory indicated that the adoption of any innovation is a process. This study showed that the process of OER adoption has started within the Namibian ODL institutions, with the Namibian College of Open Learning taking the lead but it still has to work through the various stages in order to accomplish full implementation.
- A different view regarding the perception towards the OER quality emerged from the study. The faculty members in this study suggested a need to change the institutional policies regarding academic publications and incentives. Faculty members felt that institutions tend to recognise contributions to closed publications while contributions to OER publications are regarded as non-academic, thus discouraging those who want to create and publish OER. This attitude shows lack of understanding of the OER concept among institutional management. In reality, there is no difference in quality between the article which is published under the OER licence and the one that is copyrighted.
- Another finding which other studies have failed to address was the caution given by faculty members regarding the potential of OER to create over-dependence. Faculty members felt that the presence of OER might lead to institutions not creating new knowledge but just recycling OER. That view corresponds with the idea proposed by Paul Freire with his pedagogy of the oppressed (Bateman *et al.*, 2012). Although Freire referred to the situation where a passive learner receives information from an active teacher, the theory was applied to underpin the findings of this study.

- The main contribution this study presents to the body of knowledge is through the proposed OER design for adoption by the ODL institutions to ensure smooth adoption of the OER concept (*cf.* 6.3.2).
- Finally, the potential of this study to inform further research cannot be overemphasised. This study forms a foundation on which more areas of OER inquiries within the Namibian context can be built. The knowledge created through this investigation adds value and widens the scope of knowledge regarding the perceptions and views of faculty members on the use of OER in the distance education context. Moreover, the findings of this study can play an important role in the Namibian institutions of distance learning future plans and operations.

## **7.5 LIMITATIONS AND DELIMITATIONS OF THE RESEARCH STUDY**

According to Simon (2011), limitations can be defined as shortcomings of the research findings that a researcher could not control. This section presents limitations within which the findings of this study were confined. Although the objectives of the study were achieved within the applied paradigm, design and theoretical framework, there were challenges and limitations that were experienced throughout the study.

The way the ODL institutions operate posed a challenge to the study especially when it came to collecting data through non-participant observations. ODL institutions do not offer face-to-face sessions throughout the year. Contact sessions were arranged at specific times based on the academic calendars of the institutions. The three institutions arranged their tuition sessions at different times of the year. Secondly, not all sessions were used for facilitation, some sessions were used for student counselling and attending to other research-related matters which limited the extent of the non-participant observations.

Secondly, the access to the online resources was a challenge. Both COLL and CODEL use the Moodle platform as their learning management system. It was not possible to access Moodle, as the system was encrypted for the use of students and tutors only. NAMCOL on the other hand, uses Moodle for tertiary programmes and Notesmaster for secondary level programmes, which were both accessible for the study.

This study focused only on the three institutions, namely, NAMCOL, COLL and CODEL, which does not mean there are no other ODL institutions in the country. The selected institutions are the only publicly-funded ODL institutions in Namibia, and based on the ratification of the Paris OER Declaration of 2012, all publicly-funded institutions are encouraged to contribute to the OER movement. That means, the findings of this study may not be generalised to other institutions in Namibia and beyond.

There was a very limited scope in terms of the suitability of the participants. Although participants were all willing to be part of the study, and have done so voluntarily, some participants of this study had little knowledge about the subject. Their responses therefore, were mostly based on what they think and not on what they have experienced. Some information was also not relevant to the topic and could not be included in the findings.

I am an employee of the Namibian College of Open Learning (NAMCOL) and have been involved in material development which includes OER. This can influence the objectivity of the findings due to the preconceived ideas on the perception of the NAMCOL faculty members regarding the use of OER. However, I applied the same methods to collect data from all three institutions in order to maintain objectivity.

Open Educational Resources is a new concept, and in Namibia, this study is the first of its kind to investigate the perception of the faculty members in the ODL institutions about the use of OER. There is no available literature on the use of OER in ODL in Namibia. Most of the literature reviewed was based on studies conducted in other countries and in many cases, they were studies done within a conventional education system.

The study was delimited to fit the defined scope (Ave, 2013). One of the factors that delimited this study was the number of participants. Only eight faculty members per institutions were purposively selected to be respondents in this study in order to ensure easy data handling by the researcher. Only those faculty members who deal with material development for teaching and learning were included in this study. The study further selected only those full-time and part-time faculty members who have been with the institution for not less than one years, based on the assumption that newly appointed faculty members would not provide sufficient data as required to achieve

the objectives of this study. The study was further delimited to the perceptions of the faculty members on the use of OER in ODL institutions in Namibia. This study did not cover ODL institutions outside the Namibian borders, although literature reviewed was used to reflect on the use of OER in other parts of the world.

## **7.6 REFLECTIONS**

This section presents the scholarly reflections, highlighting the lessons learnt through this research in the area of methodology, theory and practice.

### **7.6.1 Reflection on the Methodology**

This study aimed to explore the views of the faculty members of the Namibian ODL institutions on the use of OER in teaching and learning. To achieve that, I employed the case study design approach. The focus of the study was on the three public institutions; hence the multiple institutional case study method was more appropriate. Using the case study allowed me to obtain views from different contextual lenses on the same phenomenon. The institutions however, presented different dynamics in terms of their operations and programme offerings. The COLL and CODEL institutions operate under conventional universities, hence I was required to obtain permission through the offices of the vice-chancellor of the universities. The third institution, namely, NAMCOL, is stand-alone ODL institution which is headed by a director.

I started with the preparations to collect data towards the end of 2018. The process involved writing letters to the heads of the institutions to obtain permission to collect data, and identifying potential participants for the study. To obtain permission, the ethical clearance certificate was required plus the approved proposal of the study. Permission was only granted in October 2018. It was then important to meet the heads of CODEL and COLL to discuss the modalities of my study and to familiarise myself with the operations of those institutions. Securing appointments with heads of institutions was a challenge due to their busy schedules but ultimately, the heads of the departments, namely, CODEL and COLL were very helpful and assisted in identifying the participants for my study based on my proposal. Permission was also granted by the NAMCOL director to conduct research within the institution. The identified participants were willing to take part in the study on a voluntary basis and this is total was 24 participants, eight from each institution. However, it was not possible to access all the documents I initially planned to analyse. The heads of the

ODL institutions, however, assisted in providing the available relevant documents for analysis, which fulfilled the requirements of my study.

Data collection was a very intensive process as it involved three different methods, namely, interviews, non-participant observations as well as document analysis. Due to the differences in systems within the institutions, the data collection took much longer than expected, which hindered my schedule set for the whole study. Data collection was planned for the period from April through to the end of July 2019. The advantage gained in taking longer than expected was the chance to engage more with the institutions which gave me the opportunity to get to know the participants better.

As universities start their academic year in February/March, I had to wait for the universities to officially begin their academic activities. However, I started visiting individual participants early in the year with the aim of getting to know the participants, explain my study and to secure the interview dates in April 2019. Many participants eventually agreed to take part, but some withdrew due to the limited knowledge about the subject. This meant that I had to request additional names to replace them. In May 2019, I officially applied for three weeks of leave from work to focus on collecting data. It was challenging to conduct interviews and immediately do observations. But as May was the month when COLL and CODEL offer face-to-face sessions to distance students, it was the ideal opportunity. If I had missed this period, the next sessions were only planned for August 2019.

Data collection was demanding. Technology was my friend in that modern cell phones have a recording app which was used to record each interview which was immediately transferred onto my laptop for safety. I made files for each participant's recording with the name and institution for safekeeping of data. To secure data, I made several files of the participants' voices and stored them on my computer. Each file was labelled with the real name of the participant and the institution and by being methodical, no data were lost. However, the process of data transcription proved to be overwhelming especially as each hour interview took many hours to transcribe. As it was inconvenient to take notes during interviews as I needed to remain focused on questioning and interaction with the participant, notes were made after each interview, an issue that might have been overcome if a research assistant was appointed. In

many cases, interviews had to be shifted to accommodate other urgent matters which came up.

I consider my experience during the time I was conducting interviews and doing observations very enriching and time well-spent. This study taught me unforgettable lessons. In terms of data collection, it would have been far easier if data collection had occurred mid-year when all academic activities at all institutions are in full swing, instead of starting immediately at the beginning of the academic year. Although this study yielded a lot of information and the objective of the study was achieved, I am under the impression that due to the nature of the study, the data could have been richer if a greater number of participants had been sampled. I also think in the future, if a similar study is to be conducted which involves a new innovation such as OER, a pilot study needs to be conducted to establish what and whom to include in the study. In the current study, participants were in many cases willing to take part in the study, while knowing that their knowledge in the phenomenon under study was limited.

### **7.6.2 Reflection on the Conceptual Framework**

The theories that underpin this study were discussed in Chapter 2 with the conceptual framework being presented at the end of the same chapter. I opted to integrate theories to develop a conceptual framework through which the findings of this study can be viewed as well as to inform the development of the intervention model proposed for this study. This study explored the use of OER in teaching and learning, which is a new concept especially in Namibia, hence, developing a theoretical/conceptual framework was a challenge in this study. Theories applied in this study therefore, do not directly address the use of OER, but provide an integrated framework that support the use of open pedagogy. Many theories applied to this study were advantageous in ensuring that different lenses are provided through which the phenomenon can be understood. In this study, each theory focuses on a different concept, which made the integration of theories a more powerful tool.

The theories focused on concepts such as technology-enabled learning (*Social constructivism learning theory*), social interaction (*Connectivism learning theory*), facilitated learning (*Social constructivism theory*), online pedagogy (*Heutagogy learning theory*), social networks (*Social cognitive theory and social learning theory*), learner engagement (*Heutagogy learning theory*), mind-set change (*Transformative*

*learning theory*), new learning approaches and innovation (*Diffusion of innovation theory*) and was particularly effective in this study. The integrated framework supported the interpretation of the findings and positioned this study in the existing body of knowledge and has offered the structure for the intervention model.

### **7.6.3 Reflection on the development of the proposed OER design**

The development of the OER design was my way of contributing to the body of knowledge and to fill the knowledge gap that was identified by a review of the literature. My contribution took form of a proposed OER design that will scaffold institutions in working towards adopting OER as a valuable tool in ODL. It is clear that without proper adoption of the innovation by the entire institution, OER usage by faculty members will not be realised. Faculty members throughout this study revealed that there are various challenges such as lack of institutional policies, lack of buy-in from management of institutions, lack connectivity as well as lack of awareness. Similarly, my aim of conducting this study was not only to explore perceptions of faculty members' views regarding the use of OER, but to come up with strategies that can be used to address the situation. Thus, my proposed OER design is aimed to change the status quo for the better.

I adopted the Diffusion of Innovation Model proposed by Rogers (2003) to create a framework for my OER design. Through the design, I suggest that, for institutions to embrace the new innovation such as OER, the management team should commit themselves to the adoption process. The top-down approach in this case was deemed more appropriate for the purpose of accelerating the adoption process. I realise that the adoption of the new design would be easier if management of institutions were part of the study. However, being part of one of the institutions, and through the existing networks, I position myself at the centre to facilitate the successful implementation of the proposed design.

But most importantly, what this research has given me personally is the opportunity to experience the wealth of OER articles published in the open journals under open licenses which I could access and cite in this study. In contrast, I found it very disheartening to search for information and not be able to access it due to copyright and closed publishing issues and thus see the value of Open Educational Resources.

## **7.7 RECOMMENDATIONS**

The aim of this study was to explore the views of the faculty members of the ODL institutions on the use of OER and to design a framework to promote the use of OER as an alternative pedagogical approach. The findings depicted various deficiencies within the institutions that hinder the effective use of OER by faculty members. This study drew from the strategies proposed by the faculty members to advance recommendations for the purpose of fostering OER adoption by the individual institutions.

### **7.7.1 Recommendations for Policy Development and Implementation**

Institutional policies play an important role in guiding and enforcing consistency in the operation of the institution. Secondly, institutions adopt and implement instructional approaches based on the benefits that the approach offers. In the context of this study, the assumption is that the institution adopts OER as an alternative pedagogical strategy in order to reap its benefits. The findings of this study however, revealed serious shortcomings in terms of policy. Apart from NAMCOL, the other two institutions, namely, CODeL and COLL did not have approved OER policies in place. As a result, faculty members felt that some practices within the university are discriminatory against OER; for example, the academic incentive policy. Similarly, at NAMCOL, it seems there is a deficiency in the implementation of OER. The findings pointed to a gap between the development and the integration of OER as part of facilitation of learning.

On the other hand, the views of the people influence the value they attach to the concept, and that would determine the efforts they give to ensure the success of its adoption. In this study, the faculty members put a lot of value on the benefits they perceive OER can offer and they indicated their willingness to embrace the concept. The lack of institutional policies creates a barrier in the way faculty members use OER. On that basis, the following recommendations are proposed:

- The management teams of the two institutions (CODeL and COLL) need to acknowledge and prioritise the importance of policy for the successful adoption and implementation of OER.
- OER should form part of the content development for students to cut the development costs.

- The policy should provide guidelines on the type of the learning resources and the courses which should be made OER.
- The policy should include the incentives to encourage academics to contribute to the OER repositories.
- There is a need for top-down approach to fast track the adoption process.
- Institutions should consider benchmarking with similar institutions in other regions to ensure best practice.
- NAMCOL should ensure the implementation strategies for the OER policy are in place for the integration of OER to take place.

### **7.7.2 Recommendations for the Creation of Awareness and Enhancing the Proficiency of Faculty Members on the Use of OER**

Although this study established evidence of OER activities at the Namibian College of Open Learning, and despite the fact that faculty members have gone through various interventions in the country and abroad, a gap was identified in the faculty members' proficiency regarding the OER concept. This study investigated the faculty members' perception about the use and harnessing of OER as an alternative instructional approach to widen access while at the same time reducing the cost of learning resources. For that, deep insight of the phenomenon was required. The findings revealed that the level of awareness varies from one faculty member to another and also from one institution to another. The low level of awareness and proficiency was more evident among the part-time faculty members who are responsible for facilitation of learning. Faculty members from CODEL and COLL also showed lower levels of awareness and proficiency compared to the NAMCOL faculty members. The literature on OER reviewed in Chapter 2 stresses the importance of awareness creation and training of faculty members on the OER concept and its benefits to guarantee the successful implementation of OER. This study suggests the following recommendations with regard to theory and practice:

- Institutions should develop awareness campaign strategies to ensure proper dissemination of information to all staff members regarding OER.

- Research-based evidence needs to be established to inform the training interventions for faculty members on OER creation and integration.
- All staff members, old and new, should be sensitised and inducted on the OER policy.
- Institutions should utilise the power of social media to create awareness for OER within the institutions.

### **7.7.3 Recommendations for the Use of OER by Faculty Members**

In the context of this study, the effective use of OER should result in increased access to education by students and reduction in the cost of the learning materials. Despite the fact that faculty members indicated their use of OER in the development of content, as extra resources, there was no evidence of OER-use as an alternative to textbooks for learning. Results showed efforts being made at NAMCOL to avail OER for open schooling learners, but the findings revealed that NAMCOL learners still depend on the study guides they pay for at enrolment. OER are not used as a main source of information, but rather as optional extra resources.

The challenges that surfaced were among others: loss of profit from study material sales, relevance of OER to the curriculum, lack of time, lack of skills. A lot is need to be done to promote the use of OER for the benefit of students at all three institutions. This study therefore advances the following recommendations: Faculty members should:

- engage with the development of OER content for specific courses to create OER repositories,
- engage in OER-related research within and outside the institutions,
- attend training interventions to learn more about the dimensions of OER,
- encourage collaborative development of content to enhance the skills of OER integration,
- promote the use of OER by students as part of their research projects,
- showcase and avail own OER creations for other to re-use, and

- publish own articles in the open-access journals.

#### **7.7.4 Recommendations for addressing Institutional Preparedness**

The findings of this study pointed to the unpreparedness of the institutions in respect of OER adoption. One of the limiting factors faculty members identified in this study was the lack of connectivity and the lack of smart devices for students (*cf.* 4.3.5.4). Observations indicated that there were no basic facilities at NAMCOL to facilitate the use of technology-based resources in the class rooms. It was also stated that part-time tutors and lecturers lack basic skills to exploit technology. OER being a technology inclined approach, their adoption is highly influenced by the level technology advancement.

This study therefore offers the following recommendations to ensure institutional readiness:

- The institutions should invest in the technological infrastructure such as computer hardware and increased bandwidth in order to increase access for distance students.
- Collaborative agreements between institutions need to be strengthened to ensure sharing of resources, such as libraries and computer labs, especially in the regions.
- Institutions should consider including smart devices with internet bundles as part of student packages provided upon registration.
- Concerted efforts are needed to encourage part-time faculty members to embrace technology and open educational resources.
- Training in technology-enabled learning should be part of the induction programmes for part-time faculty members.
- The recruitment of part-time faculty members should include technological proficiencies.

### **7.7.5 Recommendations for NAMCOL**

The findings highlighted dissimilarities between NAMCOL and the other two institutions, namely, CODEL and COLL. The findings showed that NAMCOL is a step ahead in terms of OER activities. Regarding the awareness and understanding of OER, NAMCOL faculty members demonstrated a higher knowledge of the OER concept compared to their counterparts from CODEL and COLL. This study also established that NAMCOL was the only institution with an OER policy in place and with an existing OER repository for open schooling. The findings however, revealed some deficiencies regarding the use of OER at NAMCOL. It appears NAMCOL learners do not benefit from the OER developed for them on Notesmaster. The findings depicted a mismatch between the NAMCOL learner support and the material development functional operations that demands harmonisation. In order to address the above listed shortcomings, this study recommends the following:

- OER policy should be made available to all faculty members, both full-time and part time, so that they can familiarise themselves with the content.
- OER awareness campaigns should be geared towards tutors and learners.
- Training of part-time tutors should include OER integration.
- Increased internet access for tutors and learners at tuition centres.
- Show case already developed OER on Notesmaster for tutors to model
- Include tertiary programmes in the OER implementation plan.
- Create an OER library using existing OER for tertiary students to access.
- NAMCOL should make it a priority to provide basic facilities such as data projectors and smart boards for part-time faculty members to use during face-to-face sessions.

### **7.7.6 Recommendations for the Way Forward**

It takes an effort and determination to implement and maintain a specific instructional approach in any institution. It takes motivation and application to implement a technology-enabled approach. This involves major investment in terms of skills, finances as well as physical resources. The findings showed evidence of investment

by NAMCOL with the aim of fostering OER for secondary education. There was however, not much done in CODEL and COLL regarding the adoption of OER. Several challenges that were perceived to prevent the adoption and implementation of OER within the institutions were highlighted in this study. The findings, however, indicated the enthusiasm and readiness of faculty members to adopt and use OER in teaching and learning to lessen educational cost for Namibian students. As a result, this study proposed an OER design (*cf.* 6.3.2), to address the identified challenges and to promote the adoption of OER by ODL institutions. This study further recommends that the institutions, namely, NAMCOL, CODEL and COLL should adopt the proposed OER design in order to attain the smooth OER adoption and implementation process.

#### **7.7.7 Recommendations for Further Research**

This study investigated the use of OER as an alternative pedagogical approach to reduce cost of education and to enhance self-directed learning in ODL institutions. This study created a picture of the views of faculty members in the Namibian ODL institutions on the use of OER. The findings revealed that OER is perceived as a powerful alternative pedagogical approach that can be successfully adopted for the benefit of distance students. The areas of further research could include:

- a) This study was delimited to publicly-funded ODL institutions only. Similar studies could be conducted to include private ODL as well as conventional higher education institutions.
- b) The benefits of OER are geared more towards students. A study could be conducted to determine the views of students on the use of OER.
- c) This study focused on three institutions, which are dynamically different. There is a need to carry out individual studies focusing on each institution, taking into account specific dynamics of that institution.
- d) A follow-up study should be conducted to determine how best these institutions could use the existing collaborative networks to jointly adopt OER as an alternative instructional practice.
- e) The challenges identified in this study permit further research focusing on how effective institutions address them. For example, a study should be carried out

to assess the skills of part-time faculty members on the use of technology, and or the views of institutional management on the adoption of OER.

## 7.8 A FINAL WORD

In conclusion, conducting research is a demanding exercise and at the same time exciting and rewarding. Secondly, support from all stakeholders is prerequisite for the successful attainment of the degree. This includes family, friends, colleagues and most importantly, supervisors. This journey has been a rewarding one, one in which I have gained immensely and hopefully, in the future, my journey will continue with me giving back from what I have learnt.



## REFERENCES

- Adom, D., Hussein E.K. & Joe, A. 2018. Theoretical and Conceptual Framework: Mandatory Ingredients Of a Quality Research. *International Journal of Scientific Research* 7(1):438-441 January 2018 with 295,962. Retrieved date, 24/08/2019 from: <https://www.researchgate.net/publication/322204158>.
- Akyuza, S. & Yavuza, F. 2017. Digital Learning in EFL Classrooms. *7th World Conference on Educational Sciences, (WCES-2015)*, 05-07 February 2015, Novotel. Athens Convention Center, Athens, Greece. Balikesir University, Necatibey Education Faculty.
- Allen, E. & Seaman, J. 2014. Opening the Curriculum: *Open Educational Resources in U.S. Higher Education*. Creative Commons Attribution 4.0 International License. Pearson. Retrieved date, 20/08/2018 from: <https://www.onlinelearning survey.com/reports/openingthecurriculum2014.pdf>.
- Alshenqeeti, H. 2014. Interviewing as a Data Collection Method: A Critical Review. Newcastle upon Tyne, United Kingdom. Retrieved date June, 6. 2017 from: <http://www.sciedu.ca/journal/index.php/elr/article/view/4081>.
- Anney, V.N. 2014. Ensuring the quality of the findings of qualitative research: Looking at trustworthiness criteria. *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS)* 5(2): 272-281. Scholarlink Research Institute Journals, 2014 (ISSN: 2141-6990). Retrieved date 22/09/2019 from: <https://pdfs.semanticscholar.org>.
- Artino, A.R., Holmboe E.S. & Durning S.J. 2012. Academic self-efficacy: from educational theory to instructional practice. *Med Teach* 34(3):240-4. Retrieved date, May, 20. 2018 from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3540350>.
- Aspin, D., Chapman, J., Hatton, M., & Sawano, Y. 2012. Lifelong learning. 2nd international hand book of lifelong learning. *Springer International Handbooks of Education*. Retrieved date, July, 02. 2018 from: [https://books.google.com.na/books?id=7po5f6F\\_qU0C&pg=PA396&lpg=PA396&dq](https://books.google.com.na/books?id=7po5f6F_qU0C&pg=PA396&lpg=PA396&dq).
- Atkins, D.E., Brown, J.S. & Hammond, A.L. 2007. A Review of the Open Educational Resources (OER) Movement: Achievements, Challenges, and New Opportunities. *Report to the William and Flora Hewlett Foundation*. Retrieved date, June, 04. 2017 from: <https://www.hewlett.org/wpcontent/uploads/2016/08>.
- Ave, J. 2013. Explain how to write research questions, hypothesis, delimitations, limitations, definitions, and study titles. Retrieved date, March, 20. 2017 from: <http://www.youtube.com/watch?v=TONPYZy17V8>.

- Ayodele, A.F. 2012. A critical analysis of the Diffusion of Innovation Theory. *Odinakadotnet*. Retrieved date May, 05. 2018 from: <https://odinakadotnet.wordpress.com/2012/09/22/a>.
- Bandura, A. 1977. Social learning theory. Englewood Cliffs, NJ: Prentice Hall.
- Barret, D & Twycross, A. 2018. Data collection in qualitative research. *Evid Based Nurs*: first published as 10.1136/eb-2018. Retrieved date, 20/08/2019 from: <https://ebn.bmj.com/content/ebnurs/21/3/63.full.pdf>
- Bateman, P., Lane, A, & Moon, B. 2012. An emerging typology for analysing OER initiatives. The Open University, Walton Hall, Milton Keynes, MK7 6AA United Kingdom.
- Bhattacharjee, A. 2012. Social Science Research: Principles, Methods, and Practices. University of South Florida, Textbooks Collection. 3. Retrieved date, May 19. 2017 from: [http://scholarcommons.usf.edu/oa\\_textbooks/3](http://scholarcommons.usf.edu/oa_textbooks/3).
- Bhoryrub, J., Hurley, J., Neilson, G.R., Ramsay, M. & Smith, M. 2010. Heutagogy: An alternative practice-based learning approach. *Nursing Education in Practice*, 10(6), 322-326.
- Black, I.R. 2006. The presentation of interpretivist research. ResearchGate. Retrieved date, 4/2/2018 from: <https://www.researchgate.net/publication/240260184>.
- Blaschke, L.M & Hase, S. 2014. Heutagogy: A Holistic Framework for Creating Twenty-First-Century Self-determined Learners. Retrieved date June 03. 2018 from: <https://www.researchgate.net/publication>.
- Blaschke, L.M. 2012. Heutagogy and Lifelong Learning: A Review of Heutagogical Practice and Self-Determined Learning. *The International Review of Research in Open and Distance Learning*. Retrieved date, 02/09/2019 from: <http://www.irrodl.org/index.php/irrodl/article/view/1076>.
- Bliss, T.J., Hilton, J. Wiley, D. & Thanos, K. 2013. The cost and quality of open textbooks: Perceptions of community college faculty and students. *First Monday*, 18(1-7) <https://journals.uic.edu/ojs/index.php/fm/article/view/3972/3>
- Bliss, T J and Smith, M. 2017. A Brief History of Open Educational Resources. In: Jhangiani, R S and Biswas-Diener, R. (eds.) Open: The Philosophy and Practices that are Revolutionizing Education and Science. Pp. 9–27. London: Ubiquity Press. DOI: <https://doi.org/10.5334/bbc.b>. License: CC-BY 4.0
- Bliss, T.J., Robinson, T.J., Hilton, J. & Wiley, D. 2013. An OER COUP: College teacher and student perceptions of open educational resources. *Journal of*

*Interactive Media in Education*, 17(1), 1–25.

- Blome, W. 2010. Organizational Challenges to Implementing Attachment-Based Practices in Public Child Welfare Agencies: An Example Using the Circle of Security® Model. Retrieved date, July 28. 2018 From: <https://www.researchgate.net/publication/233466893>.
- Bossu, C. & Brown, M. 2012. Do Open Educational Resources represent additional challenges or advantages to the current climate of change in the Australian higher education sector? *Proceedings of the 29th Annual Conference of the Australasian Society for Computers in Learning in Tertiary Education (ASCILITE 2012)*. Bull University of Southern Queensland.
- Bossu, C. & Willems, J. 2017. OER based capacity building to overcome staff equity and access issues in higher education. Retrieved date, August, 20. 2018 from: <http://2017conference.ascilite.org/wp-content/uploads/2017/11/Concise-BOSSU.pdf>
- Botta, C.M. & Anzaldi, V. 2013. The role of self-efficacy and internal locus of control in online learning. *Journal of e-Learning and Knowledge Society*, 9(3). *Italian e-Learning Association*. Retrieved date, April 3, 2018 from: <https://www.learntechlib.org/p/148257/>.
- Bowen, G. 2017. Document Analysis as a Qualitative Research Method. *Qualitative Research Journal*, vol. 9, no. 2, pp. 27-40. DOI 10.3316/QRJ0902027.
- Boyd, R.D., & Myers, G.J. 1988. Transformative education. *International Journal of Lifelong Education*, 7(4), 261-284.
- Burnard, P., Gill, P., Stewart, K., Treasure, E. & Chadwick, B. 2008. Analysing and presenting qualitative data. Retrieved date, May 07. 2017 from: <http://stc.uws.edu.au/CRproj/Presenting%20Qual%20Data.pdf>
- Butcher, N. 2012. Exploring the Business Case for Open Educational Resources. Retrieved date, April, 30. 2017 from: <http://oasis.col.org/bitstream/handle/11599/57/pub>.
- Butcher, N. 2015. A Basic Guide to Open Educational Resources (OER). Retrieved date, June, 20. 2017 from: <http://unesdoc.unesco.org/images/0021/002158/215804e.pdf>.
- Chatti, M.A, Jarke, M. & Quix, C. 2010. Connectivism: the network metaphor of learning. *Int. J. Learning Technology*, 5(1). Retrieved date, March, 12. 2018 from: <https://pdfs.semanticscholar.org/ee44/d8bc46ed2e98b53fe0da161a3d91518ce02f.pdf>.

- Cheawjindakarn, B., Suwannathachote, P & Theeraroungchaisri, A. 2012. Critical Success Factors for Online Distance Learning in Higher Education: A Review of the Literature. *Creative Education*. 3, Supplement, 61-66. Published Online December 2012 in SciRes (<http://www.SciRP.org/journal/ce>) Retrieved date May, 11. 2017 from: [https://file.scirp.org/pdf/CE\\_2013011708490517.pdf](https://file.scirp.org/pdf/CE_2013011708490517.pdf).
- Chen, Q. & Panda, S. 2013. Needs for and utilisation of OER in distance education: A Chinese survey. *Education Media International*, 50(2). Retrieved date, July, 30. 2018 from: <http://www.tandfonline.com/doi/abs/10.1080/09523987.2013.795324>.
- Cherry, K. 2017. What is a sample? Retrieved date, May, 20. 2017 from: <https://www.verywell.com/what-is-a-sample-2795877>.
- Chilisa, B. 2011. *Indigenous Research Methodologies*. Thousand Oaks: Sage
- CIRT, (2017). *Qualitative Sampling Methods*. Retrieved date, May, 13. 2017 from: [https://cirt.gcu.edu/research/developmentresources/research\\_ready](https://cirt.gcu.edu/research/developmentresources/research_ready).
- Clements, K.I. & Pawlowski, J.M. 2012. User-oriented quality for OER: Understanding teachers' views on re-use, quality and trust. *Journal of Computer Assisted Learning*, 28(1), 16-20.
- Cobbold, C. 2015. Solving the Teacher Shortage Problem in Ghana: Critical Perspectives for Understanding the Issues Department of Arts and Social Sciences Education. College of Education Studies, University of Cape Coast, Ghana. *Journal of Education and Practice*, 6(9). [www.iiste.org](http://www.iiste.org). ISSN 2222-1735 (Paper) ISSN 2222-288X (Online).
- Cobo, C. 2013. Exploration of Open Educational Resources in Non-English Speaking Communities, *The International Review of Research in Open and Distributed Learning*, Vol 14, No. 2, retrieved date March, 11. 2018 from: <http://www.irrodl.org/index.php/irrodl/issue/view/56>.
- COL, 2012a. Survey on Governments' Open Educational Resources (OER) Policies. *Open Educational Resources (OER) for Open Schooling Teachers' Guide*. Retrieved date, May, 05. 2017 from: [http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/COL\\_2012b](http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/COL_2012b).
- COL, 2013. *Open Educational Resources: Innovation, Research and Practice*. Retrieved date, May 09. 2017 from: [https://oerknowledgecloud.org/sites/oerknowledgecloud.org/files/pub\\_PS\\_OER-IRP\\_web.pdf](https://oerknowledgecloud.org/sites/oerknowledgecloud.org/files/pub_PS_OER-IRP_web.pdf).
- COL, 2017. *Open Educational Resources: Global Report 2017*. <http://oasis.col.org/bitstream/handle/11599/2788/2017>.

- Connelly, L.M. 2016. Understanding Research. Trustworthiness in Qualitative Research. Retrieved date, 14/08/2019 from: <https://pdfs.semanticscholar.org/b467/089d0422a83fe1d5715d837dd39d9fce4e7c.pdf>.
- Cooney, C. 2017. What Impacts do OER Have on Students? Students Share their Experiences with a Health Psychology OER at New York City College of Technology. *International Review of Research in Open and Distributed Learning*. 18(4), 58.
- Creswell, J. W. 2007. Qualitative inquiry and research design: Choosing among five approaches (2nd Edition). Thousand Oaks, CA: Sage.
- Creswell J.W. 2008. Educational research: Planning, conducting, and evaluating quantitative and qualitative research. Upper Saddle River, NJ: Pearson/Merrill
- Creswell, J. 2009. Research Design: *Qualitative, Quantitative, and Mixed Methods Approaches (3rd Edition)*. London: Sage.
- Creswell, J.W. 2012. Qualitative inquiry and research design: Choosing among five approaches: Thousand Oaks, CA: Sage.
- Creswell, J. 2013. Qualitative, quantitative and Mixed Approaches. *Research Design (4th Edition)*. Thousand Oaks, CA: Sage.
- Creswell, J. W. 2014. Research Design: *Qualitative, Quantitative and Mixed Methods Approaches (4th Edition)*. Thousand Oaks, CA: Sage.
- Crossman, A. 2018. Understanding Purposive Sampling. An Overview of the Method and Its Applications. Retrieved date 13/05/2019 from: <https://www.thoughtco.com/purposive-sampling-3026727>.
- Crotty, M.1998. Foundations of social research: *Meaning and Perspective in the Research Process*. p.256. SAGE. London Thousand Oaks New Delhi. Retrieved 23/09/2018 from: <https://seminariodemetodologiadelainvestigacion.files.wordpress.com/2012/03>.
- Crozier, H. 2018. Promoting Open Access and Open Educational Resources to faculty, the serials librarian, 74:1-4, 145-150, DOI: 10.1080/0361526X.2018 . 1428470.
- Daloz, L. (2012). Mentor: *guiding the journey of adult learners*. 2nd edition. Retrieved date August 04. 2017 from: <https://searchworks.stanford.edu/view/9955272>
- Darder, A. 2014. Conscientização: Freire and the Formation of Critical Awareness. Loyola Marymount University. *Reading for Freire & Education Workshop*. Retrieved date, February, 20. 2018 from: [https://www.newcastle.edu.au/data/assets/pdf\\_file/0020/153029/](https://www.newcastle.edu.au/data/assets/pdf_file/0020/153029/).

- De Hart, K.L., Chetty, Y.B. & Archer, E. 2015. Uptake of OER by Staff in Distance Education in South Africa. *International Review of Research in Open and Distributed Learning*, 16 (2). <https://doi.org/10.19173/irrodl.v16i2.2047>.
- De Vos, A.S., Strydom, H., Fouché, C.B. & Delpont, C.S.L. 2005. *Research at Grass Roots; for the social sciences and Human services Professions (3rd ed.)*, Pretoria, Van Schaik.
- De Vos, A. S., Delpont, C., Fouché, C. B., & Strydom, H. 2011. Research at grass roots: A primer for the social science and human professions. Pretoria: Van Schaik Publishers.
- De Vries, I. 2013. 2nd World Conference on Educational Technology Researches – WCETR2012. *Evaluating open educational resources: Lessons learned*. Retrieved date September, 11. 2017 From: <https://oerknowledgecloud.org/sites/oerknowledgecloud.org/files/1-s2.0-S1877042813010422-main.pdf>.
- Demitar, P. 2010. Open Educational Resources and Open Access in Higher Education in Macedonia. Retrieved date, April 06. 2017 from: <https://oerknowledgecloud.org/sites/oerknowledgecloud.org/files/macedonia.pdf>.
- Department of Higher Education and Training (DHET), 2014. White Paper for Post-School Education and Training. *Building an expanded, effective and integrated post-school system*. DHET: Pretoria.
- DeRosa, R & Robison, S. 2015. Pedagogy, Technology, and the Example of Open Educational Resources. Retrieved date, February, 13. 2018 from: <https://er.educause.edu/articles/2015/11>.
- Dick, B. 2013. Crafting learner-centred processes using action research and action learning. In S. Hase & C. Kenyon (Eds.), *Self-determined learning: Heutagogy in action*. Bloomsbury. Academic: London, United Kingdom.
- Dudovskiy, J. 2018. The Ultimate Guide to Writing a Dissertation in Business Studies: *A Step-by-Step Assistance*. January 2018 edition. Retrieved date, 28/08/2019 from: <https://research-methodology.net/about-us/ebook/>.
- Edirisingha, P. 2012. Interpretivist and Positivism (Ontological and Epistemological Perspective). *Research paradigms and approach*. Retrieved date May, 22. 2017 from: <https://prabash78.wordpress.com/2012/03/14/es>.
- EFA, 2002. Education for all. Government of the republic of Namibia. Retrieved date, 28/08/2019, from: [https://planipolis.iiep.unesco.org/sites/planipolis/files/resources/namibia\\_efa\\_npa.pdf](https://planipolis.iiep.unesco.org/sites/planipolis/files/resources/namibia_efa_npa.pdf).

- Elliott, V. 2018. Thinking about the Coding Process in Qualitative Data Analysis. *The Qualitative Report*, 23(11), 2850-2861. Retrieved date, 16/08/2019 from: <https://nsuworks.nova.edu/cgi/viewcontent>.
- Etikan, I., Musa, S. & Alkassim, R.S. 2016. Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*. Vol. 5, No. 1, 2016, pp. 1-4. doi: 10.11648/j.ajtas.20160501.1.
- ETSIP, 2007. Education and Training Sector Improvement Programme. Planning for a Learning Nation. *Programme document: phase (2006 -2011)*.
- Farrow, R., Pitt, R., de Los Arcos, B., Perryman, L.-A., Weller, M. & McAndrew, P. 2015. Impact of OER use on teaching and learning: Data from OER Research Hub (2013–2014). *British Journal of Educational Technology*, 46: 972–976. doi: 10.1111/bjet.12310.
- Farrow, R., De los Arcos, B., Pitt, R and Weller, M. (2016). Who are the Open Learners? A Comparative Study Profiling Non-Formal Users of Open Educational Resources. *European Journal of Open, Distance and E-Learning*, Volume 18: Issue 2. Institute of Educational Technology. The Open University, United Kingdom. DOI: <https://doi.org/10.1515/eurodl-2015-0013>.  
<https://content.sciendo.com/view/journals/eurodl/18/2/article-p49.xml>
- Feldstein, A., Martin, M., Hudson, A., Warren, K., Hilton, J. & Wiley, D. 2012. Open textbooks and increased student access and outcomes. *European Journal of Open, Distance and eLearning*. Retrieved date, March 05. 2018 from: <http://www.irrodl.org/index.php/irrodl/article/view/3111/4216>.
- Ferreira, F. & Gauthier, C. 2013. *Open Schooling with Open Educational Resources: Opening doors, creating opportunities*. Commonwealth of Learning, Vancouver.
- Flick, U. 2006. *An introduction to qualitative research*. London: Sage.
- Flick, U. 2010. *An introduction to qualitative research*. 4th edition, London: Sage.
- Fong-Yee, D & Normore, A.H. (2013). The Impact of Quality Teachers on Student Achievement. Retrieved date, March, 04. 2018 from: <http://digitalcommons.fiu.edu/cgi/viewcontent.cgi?article=1054&context=sferc>.
- Freire, P. 1970. *Pedagogy of the Oppressed*. London: Penguin.
- Freitas, D. 2012. Fostering social inclusion through open educational resources (OER). *Distance Education*, 33(2), 131–134.
- Gill, PW, Stewart, KF, Treasure, E & Chadwick, B. 2008. 'Methods of data

- collection in qualitative research: Interviews and focus groups', *British Dental Journal*, vol. 204, pp. 291 - 295. <https://doi.org/10.1038/bdj.2008.192>.
- Giovazolias, T. & Themelia, O. 2014. Social Learning Conceptualization for Substance Abuse: Implications for Therapeutic Interventions. Department of Psychology, University of Crete, Rethymno, Greece. Retrieved date March 08. 2018 from: <https://ejcop.psychopen.eu/article/view/23/html>.
- Goldie, J.G.S. 2016. Connectivism: a knowledge learning theory for the digital age? *Medical Teacher*, 38(10):1064-1069.
- Government of Republic of Namibia. 2002. Education for All: National Plan of Action 2002-2015 Retrieved date, February, 22. 2018 from: [http://planipolis.iiep.unesco.org/sites/planipolis/files/ressources/namibia\\_efa\\_npa.pdf](http://planipolis.iiep.unesco.org/sites/planipolis/files/ressources/namibia_efa_npa.pdf).
- Gray, D.E. 2013. Theoretical perspectives and research methodologies. *Doing Research in the real world*. Retrieved date, May, 9. 2017 from: <https://pdfs.semanticscholar.org/>
- Grodecka, K. & Sliwowski, K. 2014. Open Educational Resources. *Mythbusting Guide*. Retrieved date, March, 30. 2017 from: <http://mythbusting.oerpolicy.eu/>.
- Guba, E.G, & Lincoln, Y.S. 1989. Fourth generation evaluation, Newbury Park: Sage, 1989.
- Guba, E.G., & Lincoln, Y.S. 1994. Competing paradigms in qualitative research. In N.K. Denzin & Y.S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105-117). Thousand Oaks, CA: Sage.
- Guion, L.A., Diehl, D.C. & McDonald, D. 2011. Triangulation: Establishing the validity of qualitative studies. FCS6014, Department of Family, Youth and Community Sciences, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Retrieved date, 02/9/2019 from: <https://dokumen.tips/documents>.
- Gurrel, S.M. 2012. Measuring the Technical Difficulty in Reusing Open Educational Resources with the ALMS Analysis Framework. Brigham Young University Provo. Retrieved date, February, 13. 2018 from: <https://scholarsarchive.byu.edu/cgi/viewcontent.cgi?article=4471&context=etd>.
- Harrington, R. 2014. Social Integration following a stroke: Understanding meaning and process in older people. A thesis Doctor of Philosophy. Bournemouth University. Retrieved date, February, 15. 2018 from: <http://eprints.bournemouth.ac.uk/>.

- Harris, D.N. & Sass, T.R. 2011. Teacher training, teacher quality and student achievement. *Journal of Public Economics*. Volume 95, Issues 7–8, August 2011, Pages 798-812.
- Hase, S. & Kenyon, C. 2013. Self-determined learning: Heutagogy in action. London: Bloomsbury.
- Hase, S. 2013. Learner defined learning. In S. Hase & C. Kenyon (Eds.), *Self-determined learning: Heutagogy in action*. London: Bloomsbury.
- Hashemnezhad, H. 2015. Qualitative Content Analysis Research: A Review Article. *Journal of ELT and Applied Linguistics*, 3 (1).
- Hassall, C & Lewis, D. 2016. Institutional and technological barriers to the use of open educational resources (OERs) in physiology and medical education. *Article in AJP Advances in Physiology Education*. December 2016. ResearchGate.
- Heale, R. & Forbes, D. 2013. Understanding triangulation in research. Retrieved date, January, 04. 2017 from: <http://ebn.bmj.com>.
- Helsper, E.J. & Reisdorf, B.C. (2016). The emergence of a "digital underclass" in Great Britain and Sweden: changing reasons for digital exclusion. *New Media & Society*. ISSN 1461-4448. Retrieved date, May, 05. 2018 From: <https://pdfs.semanticscholar.org/b1e0/c045f44cc94507d18ff906eef12c7d63d2f4.pdf>.
- Henning, E., Van Rensburg, W. & Smit, B. 2013. Finding your way in Qualitative Research, (9th ed). Pretoria: Van Schaik.
- Hill, A. R., Song, L & West, R.E. 2009. Social Learning Theory and Web-Based Learning Environments: A Review of Research and Discussion of Implications, *American Journal of Distance Education*, 23(2), 88-103, DOI: 10.1080/08923640902857713.
- Hilton, J. 2016. Open educational resources and college textbook choices: A review of research on efficacy and perceptions. *Educational Technology Research and Development*, 1(18). Retrieved date, March, 04. 2018 from <http://link.springer.com/article/10.1007/s11423-016-9434-9/fulltext.html>.
- Hilton, J., Gaudet, D., Clark, P., Robinson, J., & Wiley, D. 2013. The adoption of open educational resources by one community college math department. *The International Review of Research in Open and Distance Learning*, 14(4), 37–50.
- Hodgkinson-Williams, C. & Arinto, P. B. 2017. Adoption and impact of OER in the

Global South. Cape Town & Ottawa: *African Minds, International Development Research Centre & Research on Open Educational Resources*. DOI: 10.5281/zenodo.1005330.

Hodgkinson-Williams, C. & Paskevicius, 2012. The role of postgraduate students in co-authoring open educational resources to promote social inclusion: a case study at the University of Cape Town. *Distance Education*, 33(2), 253-269. DOI: 10.1080/01587919.2012.692052.

Hoey, E.M. & Kendrick, K.H. 2016. Conversation Analysis. *Research Methods in Psycholinguistics: A Practical Guide*. Wiley Blackwell. Retrieved date October, 20. 2017 from: <https://www.researchgate.net/publication/306037543>

Hogan, P., Carlson, B.R. & Kirk, C. 2015. Open Educational Practices' Models using Open Educational Resources. Retrieved date, March, 12. 2018 from: <https://commons.nmu.edu/cgi/viewcontent>.

Hoosen, S., Butcher, N., Hornsby, D. & Ngugi, C. 2012. Strengthening and Sustaining the African Higher Education and Research Space (AHERS) through Information and Communications Technology, Open and Distance Learning, and Open Educational Resources. *Report prepared for the African Development Bank*. Retrieved date, January, 14. 2018 from: <http://oro.open.ac.uk/33977/1/OER>.

Hylén, J. 2017. Open Educational Resources: Opportunities and Challenges. OECD's Centre for Educational Research and Innovation Paris, France Retrieved date, 02/9/2019 from: <http://www.oecd.org/education/ceri/37351085.pdf>.

ICDE, 2013. Open and Distance Education Policy Briefing. Retrieved date, June, 22. 2017 from: <https://www.icde.org/assets/>.

Ihrke, R. 2013. Why We Must Recreate the Wheel. Teacher leadership. Edutopia. <https://www.edutopia.org/blog>.

Illowsky, B.S., Hilton, J., Whiting, J and Ackerman, J.D. 2016. Examining Student Perception of an Open Statistics Book. *Open Praxis*, vol. 8 issue 3, pp. 265–276 (ISSN 2304-070X).

Ikahihifo, T.K, Spring, K.J, Rosecrans, J and Watson, J. (2017). Assessing the Savings from Open Educational Resources on Student Academic Goals. *International Review of Research in Open and Distributed Learning*. Volume 18, Number 7.

Imenda, S. 2014. Is there a Conceptual Difference between Theoretical and Conceptual Frameworks? University of Zululand, Faculty of Education,

Department of Mathematics, Science and Technology Education, P/Bag x1001, KwaDlangezwa, South Africa. Retrieved date, 26/08/2019 from: <https://pdfs.semanticscholar.org/4b40/2748598965cf7618a6a7ba7f416782f27ca2.pdf>.

Jacobi, R. & Van der Woert, N. 2012. Trend report: Open Educational Resources. Drawn up by the Special Interest Group Open Educational Resources. [www.surfspace.nl/media/bijlagen/artikel-697-ee18ac0f1441bb158e6122818f5f589e.pdf](http://www.surfspace.nl/media/bijlagen/artikel-697-ee18ac0f1441bb158e6122818f5f589e.pdf).

Johnson, A. M., Jacovina, M. E., Russell, D. E., & Soto, C. M. 2016. Challenges and solutions when using technologies in the classroom. In S. A. Crossley & D. S. McNamara (Eds.) *Adaptive educational technologies for literacy instruction* (pp. 13-29). New York: Taylor & Francis. Published with acknowledgment of federal support.

Kabir, S.M.S. 2018. Methods of data collection. *Basic Guidelines for Research: An Introductory Approach for All Disciplines, Edition: Book Zone Publication*, Chittagong-4203, Bangladesh, pp.201-275. ResearchGate.

Kanwar, A., Kodhandaraman, B. & Umar, A. 2010. Toward sustainable open education resources: A perspective from the global south. *American Journal of Distance Education*, 24, 65–80. doi:10.1080/08923641003696588.

Kapenda, H.M., Kanyimba, A.T., Claassen, P. and Mbulu K.P. 2016. UNAM Research Report. Retrieved date, March, 13. 2017 from: <http://www.unam.edu.na/sites/default/files/newsletter/unam>.

Karipi, E. 2013. Developing OER: The Perspective of the Teachers from Namibia. In Ferreira, F. & Gauthier, C. 2013. *Open Schooling with Open Educational Resources: Opening doors, creating opportunities*. Commonwealth of Learning, Vancouver.

Kaur, C & Yip Ping, C. 2009. Open Access Initiatives in Academic Libraries: Challenge to the User. Universiti Tunku Abdul Rahman, Malaysia. Meeting: 105. Library Theory and Research.

Kawulich, B. 2012. Selecting a research approach: Paradigm, methodology and methods. 51-61. Retrieved date, March 20. 2018 from: <https://www.researchgate.net/publication/257944787>.

Kay, J. & Bacsich, P. 2016. Report on lifelong learning programmes in Namibia. Retrieved date, April 09. 2018 from: <http://poerup.referata.com/wiki/Namibia#Overview>.

Keengwe, J. 2018. Handbook of Research on pedagogical Models for next

generation Teaching and Learning. A volume in the Advances in Educational technologies and Instructional Design (AETID).

Kenyon, C. & Hase, S. 2010. Andragogy and heutagogy in postgraduate work. *In T. Kerry (Ed.), Meeting the challenges of change in postgraduate higher education*, London: Continuum Press.

Khabanyane, K.E., Maimane, J.R. & Ramabenyane, M.J. 2014. A Critical Reflection on Transformative Learning as Experienced by Student-Teachers during School-Based Learning. *Mediterranean Journal of Social Sciences*. MCSER Publishing, Rome-Italy. Retrieved date, May, 07. 2018 from: <https://pdfs.semanticscholar.org/1213/c1b4f540c80f4e46f41fcd691c74a8101084.pdf>.

Kim, B.W., Lee, W.G., Lee, B.R. and Shon, J.D. 2015. Influencing Factors in OER Usage of Adult Learners in Korea. *International Review of Research in Open and Distributed Learning*. Volume 16, Number 2. Retrieved date, July, 5. 2018 from: <https://files.eric.ed.gov/fulltext/EJ1061116.pdf>.

King, N. & Horrocks, C. 2010. Interviews in qualitative research Thousand Oaks, CA.: Sage.

Kipsoi, E.J., Chang'ach, J.K. & Sang, H.C. (2012). Challenges Facing Adoption of Information Communication Technology (ICT) In Educational Management in Schools in Kenya. From: <https://pdfs.semanticscholar.org/885a/87c62e33c94a53682e2bcbef56b2fc08f876.pdf>.

Kisirkoi, F and Kamanga A. 2018. Continuous Teacher Professional Support for Effective Implementation of Basic Education Curriculum Framework. Retrieved date: 08/08/2019 from: <https://www.researchgate.net/publication/329958634>.

Kivunja, C. 2017. Understanding and Applying Research Paradigms in Educational. *International Journal of Higher Education* 6(5).

Knapper, C. & Cropley, A. J. 2014. Higher Education and the Promotion of Lifelong Learning. London: Kogan Page.

Knestrick, J. 2012. The Zone of Proximal Development (ZPD) and Why It Matters for Early Childhood Learning. *Teach. Learn. Grow*. The education blog. Category, Early Learning.

Kohan, N., Arabshahi, K.S, K.S., Mojtahedzadeh, R., Abbaszadeh, A., Rakhshani, T and Emami, A. 2017. Self- directed learning barriers in a virtual. *Advanced Journal list Help. Journal ListJ Adv Med Educ Profv.5* (3).

- Kortemeyer, G. 2013. Ten Years Later: Why Open Educational Resources have not noticeably affected higher education, and why we should care, EDUCAUSE Review. Retrieved date, March 11. 2018 from: <http://www.educause.edu/ero/article/>.
- Kurelovic, E.K, 2016. Advantages and Limitations of Usage of Open Educational Resources in Small countries. : Retrieved date, 2/9/2019 from: <https://www.researchgate.net/publication/299283814>.
- Lane, A. 2008. Widening participation in education through open educational resources. In *T. Iiyoshi & M. S. Vijay Kumar (Eds.), Opening up education: The collective advancement of education through open technology, open content and open knowledge (pp. 149–163)*. Cambridge, MA: MIT Press.
- Lane, A. 2012. HEA/JISC Open Educational Resources case study: pedagogical development from OER practice.
- Lawrence, C. 2018. Evaluating the Effectiveness of Adopting Open Educational Resources in an Introductory American Government Course. Retrieved date, 8/06/2018 from: <https://www.tandfonline.com/doi/full/10.1080/15512169.2017.1422739>.
- Lincoln, Y.S & Guba, E.G. 1985. *Naturalistic inquiry*, Beverly Hills: Sage.
- Livingston, K. & Condie, R. 2006. The impact of an online learning program on teaching and learning strategies. *Theory into Practice*, 45(2), 150–158. Retrieved date, June, 02. 2018 from <http://www.tandfonline.com/doi/abs/liz.masterman@it.ox.ac.uk>.
- Lwoga, E. 2012. Making learning and Web 2.0 technologies work for higher learning institutions in Africa. *Campus-Wide Information Systems*, 29(2), 90–107. doi:10.1108/10650741211212359.
- Lynch, T. 2014. Writing up your PhD Qualitative Research. Independent Study version. English Language Teaching Centre. University of Edinburgh. Retrieved date, August, 20. 2017 from: <https://www.ed.ac.uk/files/atoms/files/>.
- Mackenzie, H. 2013. The effects of online courses with multimedia in learners' perceived satisfaction and effectiveness of e-learning. *A Dissertation Degree of Doctor of Philosophy College of Education and Human Development University of Louisville*. Louisville, Kentucky.
- Mackenzie, N., & Knipe, S. 2006. Research dilemmas: Paradigms, methods and methodology. *Issues in Educational Research*, 16(2), 193-205.
- Mafenya, N.P. 2016. Effective assessment in open distance and e- learning: using

- the signature courses at the University of South Africa as a model for future practice. Retrieved date, May, 08.2018 from:  
<http://uir.unisa.ac.za/bitstream/handle/10500/21905/thesis>.
- Makhoe, M. 2010. The suitability of OER in Open Distance Learning. Retrieved date, June, 20. 2018 from: <http://uir.unisa.ac.za/handle/10500/3713>.
- Maree, J.G. 2015 Research on life design in (South) Africa: a qualitative analysis. *South African Journal of psychology*, 45(3), 332-348. Sage. Retrieved date, March, 20. 2017 from:  
<http://journals.sagepub.com/doi/abs/10.1177/0081246314566785>.
- Masterman E, 2016. "Bringing Open Educational Practice to a Research-Intensive University: *Prospects and Challenges*" *The Electronic Journal of e-Learning* Volume 14 Issue1 2016, (pp31-42).
- McCrea, B. 2012. 4 Challenges for OER in Higher Education. Retrieved date, May 07. 2018 from: <https://campustechnology.com/articles/2012/06/26/4-challenges-for-oer-in-higher-education.aspx>.
- McGill, L. 2014. Open Educational resources, Learning, and Teaching considerations. *Open Educational resource Infokit*. Retrieved date, February 10. 2017 from: <https://openeducationalresources.pbworks.com/w/page>.
- McGreal, R., Kinuthia, W and Stewart M. (2014). Open Educational Resources: Innovation, Research and Practice. Retrieved from:  
[http://oasis.col.org/bitstream/handle/11599/486/pub\\_PS\\_OER-IRP\\_web](http://oasis.col.org/bitstream/handle/11599/486/pub_PS_OER-IRP_web).
- McGreal, R. 2017. Special Report on the Role of Open Educational Resources in Supporting the Sustainable Development Goal 4: Quality Education Challenges and Opportunities. *International Review of Research in Open and Distributed Learning* Volume 18, Number 7.
- McKerlich, R. & Ives, C. & McGreal, R. 2013. Measuring Use and Creation of Open Educational Resources in Higher Education, *The International Review of Research in Open and Distance Learning*, 14(4).  
<https://doi.org/10.19173/irrodl.v14i4.1573>.
- McKimm, J. 2007. Facilitating learning: Teaching and learning methods. Retrieved date, March, 16. 2028 from: <https://faculty.londondeanery.ac.uk/e-learning/small-group-teaching>.
- McLeod, S. 2014. Attitude and behaviour. Retrieved date, February, 4. 2018 from:  
<https://www.simplypsychology.org/attitudes.html>.
- McMillan, J. & Schumacher, S. 2010. Research in education: evidence-based inquiry

- (7th ed.). Boston: Pearson.
- McMillan, J. & Schumacher, S. 2014. *Research in Education: Evidence-Based Inquiry*, (7th ed). Harlow: Pearson.
- McPherson, M. & Nunes, M.B. 2004. The Role of Tutors as an Integral Part of Online Learning Support. Retrieved date, March 06.2018 from: [http://www.eurodl.org/materials/contrib/2004/Maggie\\_MsP.htm.l](http://www.eurodl.org/materials/contrib/2004/Maggie_MsP.htm.l).
- Mertler, C. A. 2015. *Introduction to educational research* Thousand Oaks, CA.: Sage.
- Mertens, D.M. 2015. Philosophical assumptions and program evaluation. Retrieved 02/09/2018 from: <http://www.spaziofilosofico.it/wp-content/uploads/2015/02/Mertens1.pdf>.
- Mezirow, J.1991. *Transformative Dimensions of Adult Learning*. San Francisco: Jossey-Bass, Sage.
- Ministry of Information and Communication Technology, 2008. *Namibian Information Communication Technology policy in Education*. Retrieved date, 4/05/2018 from: <https://www.researchictafrica.net/countries/namibia/NMICT>.
- Mishra, S. & Singh, A. 2017. Higher education faculty attitude, motivation and perception of quality and barriers towards OER in India. Retrieved date, February, 20. 2019 from: <http://oasis.col.org/bitstream/handle/11599/2808/2017>.
- Mishra, S. 2017. *Promoting use and contribution of open educational resources* Commonwealth Educational Media Centre for Asia. New Delhi. Retrieved date, July, 24. 2018 from: [https://cemca.org.in/ckfinder/userfiles/files/CEMCA\\_OER%20Monograph.pdf](https://cemca.org.in/ckfinder/userfiles/files/CEMCA_OER%20Monograph.pdf).
- Misra, P.K. 2014. Online training of teachers using OER: Promises and potential strategies. Retrieved date: 8/8/2019. From: <https://openpraxis.org/index.php/OpenPraxis/article/view/155/128>.
- Mogashoa, T. 2014. *Applicability of Constructivist Theory in Qualitative Educational Research*. University of South Africa. College of Education Department of Curriculum and Instructional Studies. 0003 Unisa, South Africa. Retrieved date, August, 05.2017 from: <http://www.aijcrnet.com/journals/ Vol 4 No 7 July 2014/7.pdf>.
- Möwes, D. 2008. *Open and distance learning in Namibia: Country report submitted to the Advocacy Workshop on Distance Education and Open Learning, held in Mauritius from 10-11 April 2008*.
- Mtebe, J.S & Raisamo, R. 2014. *Challenges and Instructors' Intention to Adopt and*

- Use Open Educational Resources in Higher Education in Tanzania. *IRR ODL*. Retrieved date, September, 12. 2018 from: <http://www.irrodl.org/index.php/irrodl/article/view/1687/2771>.
- Murangi, H. V. 2017. Managing student transition from conventional to open schooling: a case study of Namibia. Submitted in partial fulfilment of the requirements for the degree Philosophiae Doctor Department of Education Management and Policy Studies Faculty of Education University of Pretoria.
- NDP4, 2012. Namibia's Fourth National Development Plan. Changing Gear towards Vision 2030". Windhoek. Retrieved date 11/03/2018 from: [https://www.npc.gov.na/?wfb\\_dl=37](https://www.npc.gov.na/?wfb_dl=37).
- National Planning Commission, 2006. Republic of Namibia. Office of the president.
- Ndlovu, S. 2013. Community Development Projects and Food Security: The case of Zanyokwe Irrigation Project Eastern Cape Province, South Africa. Retrieved date, 6/12/2018 from: <https://core.ac.uk/download/pdf/145053379.pdf>.
- Ngatjizeko, B. 2014. The status of Open and Distance Learning in Namibia. Africa and the Mediterranean Regional Focal Points Meeting. Ebene City, Mauritius. Retrieved date, 13/08/2019 from: <http://oasis.col.org/bitstream/handle/11599/878/Namibia>.
- Nkuyubwatsi, B. 2016. Activating and nurturing the investment of heutagogical resources for equity and quality in self-determined, open, online and distance learning. The Centre for Learning Technologies and Innovation. Retrieved date, June, 30. 2017 from: <http://oasis.col.org/bitstream/handle/11599/2631/PDF?sequence=4>.
- NOLNeT, 2016. National Open & Distance Learning Policy of a Quality Research. Windhoek, Namibia.
- Notesmaster Namibia, (2019). Namibian Open Educational Resources Platform.
- NUST, 2009. NUST eLearning policy. Namibian University of Science and technology.
- Nyandara, Z.I. 2012. Challenges and Opportunities of Technology Based Instruction in Open and Distance Learning: A Comparative Study of Tanzania and China. *Proceedings and report of the 5th Ubuntu Net Alliance annual conference, pp. 130-145.*
- OECD, 2007. Giving Knowledge for Free. The Emergence of Open Educational Resources.
- OER Africa, 2014. OER in teacher education: reflections from the OER Africa

- teacher education network. Retrieved date, 05/09/2019 from: <https://www.oerafrica.org/system/files/9810/201403-oer-teacher-education-final.pdf>
- OER Congress. 2017. 2nd OER world Congress. *Background document*. Retrieved date, February, 21. 2017 from: <http://www.oercongress.org/>.
- Onaifo, D. 2016. Alternate Academy: Investigating the Use of Open Educational Resources by Students at the University of Lagos in Nigeria. The University of Western Ontari. *Electronic Thesis and Dissertation Repository*. 4086. Retrieved date, may 22. 2018 from: <https://ir.lib.uwo.ca/etd/4086/>.
- Orr, D., Rimini, M. & Van Damme, D. 2015. Educational Research and Innovation. Open Educational Resources. A Catalyst for Innovation.
- Owoyele, J.W. 2012. Goal-Setting, Value-Orientation and Learning Styles as Predictors of Undergraduates' Academic Achievement in Distance Learning System: Implications for Policy and Counselling. *British Journal of Arts and Social Sciences ISSN: 2046-9578, Vol.4 No.1 (2012) ©British Journal Publishing, Inc. 2012*. Retrieved date, March, 23. 2018 from: <http://www.bjournal.co.uk/BJASS.aspx>.
- Ozdemir, O., Hendricks, C. 2017. Instructor and student experiences with open textbooks, from the California open online library for education (Cool4Ed). *J Comput High Educ*. DOI 10.1007/s12528-017-9138-0.
- Palmer, G.A. & Bowman, L. 2014. "The Application of Transformative Learning Theory to Online Teaching," *Adult Education Research Conference*. Retrieved date, January, 24. 2018 from: <http://newprairiepress.org/aerc/2014/papers/62>.
- Patel, H. 2015. Factors Influencing Technology Adoption: A Review. Retrieved date, October, 03. 2018 from: <https://www.researchgate.net/publication/273140050>.
- Patton, M.Q. 1990. *Qualitative evaluation and research methods*. Thousand Oaks, CA.: Sage.
- Patton, M.Q. 2002. *Qualitative Evaluation and Research Methods, (3rd ed)*. Newbury Park, CA: Sage.
- Patton, M.Q. 2015. *Qualitative Research and Evaluation Methods: Integrating theory and practice, (4th ed)*. Thousand Oaks CA: Sage.
- Patton, M.Q. & Cochran, M. 2002. A Guide to using Qualitative Research Methodology. Retrieved date, 14/08/2019 from: [https://evaluation.msf.org/sites/evaluation/files/a\\_guide\\_to\\_using\\_qualitative\\_research\\_methodology.pdf](https://evaluation.msf.org/sites/evaluation/files/a_guide_to_using_qualitative_research_methodology.pdf).
- Peñolaza, M. 2015. OER strategies and best practices as success factors in Open

- Access initiatives in higher education. *Open Education Global Conference*. Retrieved date, October, 12. 2018 from: <https://conference.oeconsortium.org>.
- Pérez-Peña, R. 2012. Top Universities Test the Online Appeal of Free. *The New York Times*. Retrieved date, August 09. 2018 from <http://www.nytimes.com/2012/07/18/education/top-universities-test-theonline-appeal-of-free.htm>.
- Petrides, L., Jimes, C., Middleton-Detzner, C., Walling, J., & Weiss, S. 2011. Open textbook adoption and use: *Implications for teachers and learners*. *Open Learning*, 26(1), 39–49.
- Phalachandra, B., & Abeywardena, I.S. (2016). Open Educational Resources in the Commonwealth 2016. S. Mishra & I.S. Abeywardena (Eds.). Burnaby, Canada: Commonwealth of Learning.
- Pichette, P. 2011. Connectivism: Teaching and Learning. Retrieved date, March, 13. 2017 from: <http://etec.ctlt.ubc.ca/510wiki/>.
- Potter, C. 2016. Why Faculty Advising Matters. Retrieved date, September, 11. 2017 from: <https://www.insidehighered.com/views>.
- Priya, K.R. & Viswambharan, A.P. 2015. Documentary analysis as a qualitative methodology to explore disaster mental health: insights from analysing a documentary on communal riots. 16(1) 43-59. Retrieved date, July, 13. 2017 from: <http://journals.sagepub.com/doi/abs/10.1177/1468794114567494>.
- Redmond, B.F. 2016. Overview of Social Cognitive and Self-Efficacy Theories. Retrieved date, January, 26. 2018 from: <https://wikispaces.psu.edu/display/PSYCH484/7>.
- Richards, J.C., & Schmidt, R. 2010. *Dictionary of Language Teaching & Applied Linguistics* (4<sup>th</sup> Edition.). London, England: Longman.
- Roberts, L.D., Howell, J.A., Seamen, K., Gibson, D.C. 2016. Student Attitudes toward Learning Analytics in Higher Education: “The Fitbit Version of the Learning World”. Retrieved date, August, 15. 2018 from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5165240/>.
- Robinson, K. 2010. Sir Ken Robinson: Bringing on the learning revolution! *TED Talk*. Retrieved date, September, 25. 2018 from: [http://www.ted.com/talks/sir\\_ken\\_robinson\\_bring\\_on\\_the\\_revolution.html](http://www.ted.com/talks/sir_ken_robinson_bring_on_the_revolution.html).
- Rogers, E.M. 2003. *Diffusion of Innovations*, 5<sup>th</sup> Edition. New York: Simon & Schuster.
- Rolfe, V. 2012. Open educational resources: staff attitudes and awareness. *Research in Learning Technology*. 20, 2012. Retrieved date, July, 04. 2017

from: <https://files.eric.ed.gov/fulltext/EJ973804.pdf>

- Ryan, F., Coughlan, M. & Cronin, P. (2007). Step-by-step guide to critiquing research. Part 2: qualitative research. *British Journal of Nursing*, 16(12), 738-744.
- Sabadie, J.M.L., Muñoz, J.C., Punie, Y., Redecker, C & Vuorikari, R. (2014). OER: A European policy perspective. *Journal of Interactive Media in Education*. 2014(1), DOI: Retrieved date, January, 27. 2018 from: <http://doi.org/10.5334/2014-05>.
- Sagitova, R. 2014. Students' self-education: learning to learn across the lifespan. Available online at [www.sciencedirect.com](http://www.sciencedirect.com). ScienceDirect, ERPA.
- Sener, J. 2014. Using the Seven Futures framework for improving educational quality. Retrieved date, 5/11/2018 from: <http://www.ementor.edu.pl/eng/article/index/number/53/id/1084>.
- Shabani, K., Khatib, M. & Ebadi, S. 2010. Vygotsky's Zone of Proximal Development: *Instructional Implications and Teachers' Professional Development*. Vol. 3, No. 4; December 2010. [www.ccsenet.org/elt](http://www.ccsenet.org/elt).
- Shafika, I. 2007. Survey of ICT and Education in Africa: *Namibia Country Report*. InfoDev ICT and Education Series. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/10702>.
- Shahnazarian, M.S.W., Hagemann, M.S., Aburto, M. & Rose, S. 2017. Informed Consent in Human Subjects Research. *Office for the Protection of Research Subjects (OPRS)*. Retrieved date, January, 27. 2017 from: <https://oprs.usc.edu/files/2017/04/Informed-Consent-Booklet-4.4.13.pdf>.
- Shenton, A.K. (2004). Strategies for Ensuring Trustworthiness in Qualitative Research Projects. Retrieved date, February, 09. 2017 from: <https://www.researchgate.net/publication/228708239>.
- Sherbourne, R. & Stork, C. 2010. Namibian Telecommunication Sector Performance Review. Towards Evidence-based. *ICT Policy and Regulation*. Volume TWO, Policy Paper 7.
- Shigeta, K & Koizumi, M., Saka, H, Tsuji, Y, Inaba, R, & Hiraoka, N. 2017. A survey of the awareness, offering, and adoption of OERs and MOOCs in Japan. *Open Praxis*, vol. 9 issue 2, April–June 2017, pp. 195–206 (ISSN 2304-070X) 2017 *Open Education Global Conference Selected Papers*.
- Siemens, G. 2004. A learning theory for the digital age. Retrieved from retrieved date, March, 25. 2017 from:

<http://www.elearnspace.org/articles/connectivism.htm>.

- Siemens, G. 2005. Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning*, 2(1), 3-10.
- Siemens, G. & Downes, S. 2015. Krist2366, "Connectivism," in Learning Theories. Retrieved date, March, 02.2018 from: <https://www.learning-theories.com/connectivism-siemens-downes.html>.
- Silver, L. 2009. Pure potential: The impact of open educational resources. Open and distance learning.
- Silverman, D. (2016). Qualitative research. Thousand Oaks, CA: Sage.
- Simon, M.K. 2011. Dissertation and scholarly research: Recipes for success (2011 Ed.). Seattle, WA, Dissertation Success, LLC. Retrieved date, January, 27. 2017 from: <http://dissertationrecipes.com/wpcontent/uploads/2011/04/AssumptionslimitationsdelimitationsX.pdf>.
- Siyepu, S. 2013. The zone of proximal development in the learning of mathematics. Fundani Centre for Higher Education Development, Cape Peninsula University of Technology, South Africa.
- Skrypnik, O. 2015. Roles of Course Facilitators, Learners, and Technology in the Flow of Information of a CMOOCs. University of South Australia, 2University of Edinburgh, Scotland. <http://www.irrodl.org/index.php/irrodl/article/view/2170/3347>.
- Stansbury, M. 2015. Three legitimate reasons why faculty aren't using OER. Retrieved date, May. 12. 2018 from: <http://www.ecampusnews.com/top-news/faculty-using-oer-376>.
- Sukon, K.S., Boojihawon, D.K., Gatsha, G., Shireen, B. & Panchoo, S.B. 2012. Promoting critical knowledge, skills and qualifications for sustainable development in Africa: How to design and implement an effective response through education and training systems. *Triennial on Education and Training in Africa (Ouagadougou, Burkina Faso)*. Retrieved date, August, 13. 2018 from: <http://oro.open.ac.uk/32167/1/>.
- Sutton, J. & Austin, Z. 2015. Qualitative Research: Data Collection, Analysis, and Management. Retrieved date, February 12. 2017 from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4485510/pdf/cjhp-68-226.pdf>.
- Sutton, J. 2015. Qualitative Research: Data Collection, Analysis, and Management. Retrieved date, 27/08/2019 from:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4485510/>.

- Taylor, P.C. 2014. Contemporary Qualitative Research Toward an Integral Research Perspective. Handbook of Research on Science Education. Retrieved date, March, 23. 2017 from: <https://www.routledgehandbooks.com/doi/10.4324/9780203097267.ch3>.
- Taylor, P. & Medina, M. 2013. Educational research paradigms: From positivism to multiparadigmatic. Retrieved date, February, 12. 2017 from: <https://www.researchgate.net/publication/264196558>.
- Terras, M., Ramsay, J. & Boyle, E. 2013. Learning and Open Educational Resources: a psychological perspective. *E-Learning and Digital Media Volume 10, Number 2*, 2013. [www.wwwords.co.uk/ELEA](http://www.wwwords.co.uk/ELEA).
- Terre Blanche, M, Durrheim, K and Painter, D. eds. 2006. Research in practice: Applied methods for the social sciences, 2nd edition. Cape Town: UCT.
- Thakrar, J., Wolfenden, F. & Zinn, D. 2009. Harnessing Open Educational Resources to the Challenges of Teacher Education in Sub-Saharan Africa. *International Review of Research in Open and Distance Learning*. Volume 10, Number 4. Retrieved date, 3/2/2018 from: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.854.7111&rep=rep1&type=pdf>.
- Thompson, K. 2016. Non-Participant Observation. Retrieved date, 27/08/2019 from: <https://revisesociology.com/2016/04/01/non-participant-observation>.
- Thorne, S. 2000. Data analysis in qualitative research. *Evidence Based Nursing*. Retrieved date, March, 12. 2017 from: <https://ebn.bmj.com/content/3/3/68>
- Tong, A., Sainsbury, P. & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*, 19(6), 349-357.
- Torres N.P.M. 2013. Embracing openness: The challenges of OER in Latin American education, *Open Praxis*, Vol. 5., No. 1, p. 81-89, OI:10.5944/openpraxis.5.1.33.
- Truong, N. & Nkhoma, M. 2018. The Influences of Perceived Innovativeness on Customer Satisfaction. The Case in mid-range Boutique hotels. Retrieved date, October, 12. 2018 from: <https://www.researchgate.net/publication/328288866>.
- Tuomi, I. 2013. Open Educational Resources and the Transformation of Education. *European Journal of Education*, 48(1).
- UNAM, 2016. University of Namibia annual report. [http://www.unam.edu.na/sites/default/files/newsletter/unam\\_annual\\_report2016](http://www.unam.edu.na/sites/default/files/newsletter/unam_annual_report2016)

[web\\_0.pdf](#).

UNESCO and COL, (2016). Open Educational Resources: Policy, Costs and Transformation. Retrieved from:

<https://unesdoc.unesco.org/ark:/48223/pf0000244365>.

UNESCO, 2002. Open and Distance Learning: Trends, Policy and Strategy considerations.

UNESCO, 2015. Broadband “the missing link” in global access to education.

Retrieved date, October, 17. 2017 from: <https://en.unesco.org/news/broadband-%E2%80%9C-missing-link%E2%80%9D-global-access-education>.

UNESCO, 2016. Study on international collaboration on Open Educational Resources (OER). Commissioned study prepared under a consultant contract for UNESCO.

UNESCO. 2012. Paris OER Declaration. Paris, France: *World OER Congress*.

Retrieved date, March, 11. 2017 from: [http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/Events/Paris%20OER%20Declaration\\_01.pdf](http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/Events/Paris%20OER%20Declaration_01.pdf)

University: Prospects and Challenges. University of Oxford, UK.

Van De Ven, A.H. 2018. The Process of Adopting Innovations in Organizations:

Three Cases of Hospital Innovations. Retrieved date, February, 25. 2017 from:

<https://www.nap.edu/read/1860/chapter/10>.

Vygotsky, L.S. 1978. Mind and society: The development of higher psychological processes. Cambridge, MA: Harvard University Press.

Wang, H. 2014. Challenges for Distance Education. A cultural analytic perspective

on asynchronous online courses in Sweden. Retrieved date, July, 12. 2018

from: <http://lup.lub.lu.se/luur>.

Wargo, W.G. 2014. Case Study Method in Qualitative Research for Masters and

Doctoral Graduates evaluation and consulting. Retrieved date, February, 11.

2017 from: <http://www.academicinfocenter.com/case-study-method-in-qualitative-research.html>.

Welman, C., Kruger, F. and Mitchell, B. 2005. Research Methodology (3<sup>rd</sup> Edition).

Cape Town: Oxford University Press.

Weller, M., De los Arcos, B., Farrow, R., Pitt, B & McAndrew, P. (2015). The Impact of OER on Teaching and Learning Practice. Institute of Educational Technology,

Open University (United Kingdom). Retrieved from:

<https://www.researchgate.net/publication/284717357>.

Wigfield, A., Klauda, S.L. & Cambria, J. 2011. Influences on the Development of

- Academic Self-Regulatory Processes from: *Handbook of Self-Regulation of Learning and Performance* Routledge. Retrieved date, April, 03. 2018 from: <https://www.routledgehandbooks.com/doi/10.4324/9780203839010.ch3>.
- Wiley, D. 2007. On the Sustainability of Open Educational Resource Initiatives in Higher Education. *Paper commissioned by the OECD's Centre for Educational Research and Innovation (CERI) for the project on Open Educational Resources*. [www.oecd.org/edu/oer](http://www.oecd.org/edu/oer).
- Wiley, D., & Green, C. 2012. Why openness in education? In D. G. Oblinger (Ed.), *Game changers: Education and information technologies*. Educause. Retrieved date, March, 25. 2017 from: <https://library.educause.edu/resources/2012/5/chapter-6-why-openness-in-education>.
- Willems, J and Bossu, C. 2012. Equity considerations for open educational resources in the globalization of education. Retrieved date, March, 05. 2018 from: <https://www.tandfonline.com/doi/abs/10.1080/01587919.2012>.
- Willis, B. 2014. The Advantages and Limitations of Single Case Study Analysis. Retrieved date, March, 29. 2017 from: <http://www.e-ir.info/2014/07/05>.
- Wright, C.R. & Reju, S.A. 2012. Developing and Deploying OERs in sub-Saharan Africa: Building on the Present. IRRR ODL. Retrieved date, January, 15. 2019 from: <https://oerknowledgecloud.org/sites/oerknowledgecloud.org/files/1185-9610-1-PB.pdf>.
- Wong, J., Baars, M., Davis, D., Van Der Zee, T., Houben, J & Paas, F. 2018. Supporting Self-Regulated Learning in Online Learning Environments and MOOCs: A Systematic Review. Pages 356-373 | Published online: 15 Nov 2018.
- Yeboah, A.K, 2012. "Factors that Promote Transformative Learning Experiences of International Graduate-Level learners". Graduate Theses and Dissertations. Retrieved date, February, 25. 2018 from: <http://scholarcommons.usf.edu/etd/4113>.
- Yin, R.K. 2009. Collecting case study evidences. Retrieved date, 2/09/2019 from: [http://euroac.ffri.hr/wp-content/uploads/2010/06/Yin\\_2009\\_Case-Studies\\_Data-collection.pdf](http://euroac.ffri.hr/wp-content/uploads/2010/06/Yin_2009_Case-Studies_Data-collection.pdf).
- Yin, R.K. 2013. Case study research: *Design and methods*. Thousand Oaks, CA.: Sage.
- Zaid, A.Y & Alabi, A.O. (2020). Resources (OER) initiatives in Nigerian Universities. *The Journal of Open, Distance and e-Learning*. Retrieved from:

<https://www.tandfonline.com/doi/full/10.1080/02680513.2020.1713738?scroll=top&needAccess>.

Zhou, M & Brown, D. 2015. Educational Learning Theories. *Education Open Textbooks*. Retrieved date, February, 20. 2017 from: <https://oer.galileo.usg>.

# APPENDICES

## Appendix A: NAMCOL Request permission to conduct research



### APPENDIX A: Request for permission to conduct research at NAMCOL

E Karipi

Box 70003

Khomasdal

9000

Contact No: +264811492943

The Director  
Namibian College of Open Learning  
Namibia  
9000  
Tel: (+264) 61 2079111

**Dear Dr Murangi**

I, Edwig Karipi am doing research under the supervision of Dr. A.S. Mawela a lecturer in the Department of Curriculum and instructional studies towards a D Ed at the University of South Africa. We are inviting you to participate in a study entitled **“The perceptions of the faculty members of Namibian open distance learning institutions on the use of open educational resources”**. The aim of the study is to explore to how faculty members of Namibian ODL institutions use OER, and what strategies/framework/OER design can be developed to empower faculty members’ proficiency regarding the usage of OER.

Your institution has been selected because the study focuses on the use of OER in open and distance learning, which is their core function. This study further assumes that open educational resources are part and parcel of your institutional eLearning

strategy. The study will require the participation of the academic staff, both full-time and part-time from your institution who will form part of the sample. The total of five (n=5) full-time and three (n=3) part-time faculty members of your institution will be selected for this study.

The researcher requests that you identify one of the Area coordinators to assist in identifying the full-time and part-time faculty members to form part of this study. Participating in this study is voluntary and participants are under no obligation to consent to participation. Participants will be given the consent form to read and sign before participating. They are at liberty to can withdraw at any time and without giving a reason. There are no attached promises or benefits for the participants and participation in the study is voluntary. The researcher does not anticipate any harm or negative consequences for you as a participant in this study. However, if any unforeseen harm or negative consequences may take place, such, will be reported to the relevant stakeholders such as UNISA Ethics Committee and the circuits through a written report. Participants names will not be recorded anywhere and no one will be able to connect participants to the answers you give. Answers will be given a code number or a pseudonym and participants will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. A report of the study may also be submitted for publication, but individual participants will not be identifiable in such a report

The researcher will collect data from the participants through face-to-face interviews, documents analysis, and non-participatory observations. Document analysis of the material development processes as well as non-participatory observation tuition sessions will be arranged and agreed upon with the participants. Time slots for interviews will be agreed upon with individual participants in order to ensure that office work is not disturbed. Participation in the study is voluntary, and those that are willing to participate will be required to sign an informed consent letter. The researcher also needs your permission to access the following documents for analysis as part of data collection:

- E-learning policy,
- OER policy/strategy,
- Intellectual Property policy,

- Learner support policies
- Institutional/divisional strategic plans
- Material development guidelines

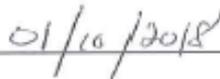
Hard copies of participants' answers will be stored by the researcher for a period of five years in a locked cupboard/filing cabinet at the supervisor office for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. If necessary, hard copies will be shredded and/or electronic copies will be permanently deleted from the hard drive of the computer through the use of a relevant software programme. I believe that this study will be of great benefit to your institution because it may provide insights that may enable your institution to devise strategies that can be used to improve the level of the faculty members' proficiency in the use of OER in teaching and learning for the purpose of increasing access to quality education. Upon completion of my studies, I intend to submit copies of my thesis to all NOLNeT libraries for use by other researchers and students. I will also send soft copies to those participants via email as per their request.

This study has received written approval from the Research Ethics Review Committee of the CEDU research ethics, Unisa. A copy of the approval letter can be obtained from the researcher if you so wish. If you would like to be informed of the final research findings, please contact Mrs. Edwig Karipi at +264811492943 or email [karipi@namcol.edu.na](mailto:karipi@namcol.edu.na). The findings are accessible for three years. Should you have concerns about the way in which the research has been conducted, you may contact Dr. AS Mawela at 0124294381 or email: [mawelas@unisa.ac.za](mailto:mawelas@unisa.ac.za)

Hoping that you find this in order.

Yours sincerely

  
\_\_\_\_\_  
Edwig Karipi

  
\_\_\_\_\_  
Date

## Appendix B: NAMCOL Approval letter



Private Bag 15008, Katutura, Windhoek  
Tel: + 264-61-320 5111, Fax: + 264-61-216 987  
[www.namcol.edu.na](http://www.namcol.edu.na)

10 October 2018

Ms E Karipi  
P O Box 70003  
Khomasdal  
**WINDHOEK**  
Namibia

### RE: REQUEST TO CONDUCT YOUR RESEARCH AT NAMCOL

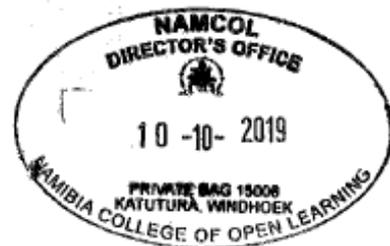
Your letter dated 10 October 2018 concerning the above subject matter is hereby acknowledged with gratitude.

I have the pleasure to inform you that your request to conduct a study on *"The perceptions of the faculty members of Namibian Open Distance Learning institutions on the use of Open Educational Resources" at the Namibian College of Open Learning (NAMCOL)* is considered positively. You are further requested to submit a copy of your thesis to NAMCOL upon completion of your study.

I wish you all the best with your academic career.

Yours sincerely,

  
Dr. H V Murangi  
DIRECTOR



### TAKING EDUCATION TO THE PEOPLE

#### Board of Governors:

Mr. Justin Ellis (Chairperson) | Dr. Hertha Pomuti (Deputy Chairperson) | Ms Mahanaim Nghisheefa | Mr. Hofini Ipinge | Mr. Ash T. Uwanga |  
Ms. Venomunjo Kauaria | Ms. Charlotte Keyter | Mr. Kennedy Urkhob | Dr. Heroldt V. Murangi - Chief Executive Officer (CEO) |  
Ms Sanet Steenkamp - Permanent Secretary | Mr. J. Ebab - Company Secretary | Mr. Conny Samaria - Staff Representative

## Appendix C: UNAM-CODEL Request permission to conduct research



### APPENDIX A: Request for permission to conduct research at UNAM-CODEL

E Karipi

Box 70003

Khomasdal

9000

Contact No: +264811492943

The Director  
Research and Development  
University of Namibia  
(+264) 61 206 3111

**Dear Dr Kapenda**

I, Edwig Karipi am doing research under the supervision of Dr. A.S. Mawela a lecturer in the Department of Curriculum and instructional studies towards a D Ed at the University of South Africa. We are inviting you to participate in a study entitled **“The perceptions of the faculty members of Namibian open distance learning institutions on the use of open educational resources”**. The aim of the study is to explore to how faculty members of Namibian ODL institutions use OER, and what strategies/framework/OER design can be developed to empower faculty members’ proficiency regarding the usage of OER.

Your institution and specifically the Centre for Open, Distance and eLearning (CODEL) department has been selected because the study focuses on the use of OER in open and distance learning, which is their core function. This study further assumes that

open educational resources are part and parcel of your institutional eLearning strategy. The study will require the participation of the academic staff, both full-time and part-time from your institution who will form part of the sample. The total of five (n=5) full-time and three (n=3) part-time faculty members of your institution will be selected for this study.

The researcher requests that you identify one of the Distance Education Coordinators to assist in identifying the full-time and part-time faculty members to form part of this study. Participating in this study is voluntary and participants are under no obligation to consent to participation. Participants will be given the consent form to read and sign before participating. They are at liberty to can withdraw at any time and without giving a reason. There are no attached promises or benefits for the participants and participation in the study is voluntary. The researcher does not anticipate any harm or negative consequences for you as a participant in this study. However, if any unforeseen harm or negative consequences may take place, such, will be reported to the relevant stakeholders such as UNISA Ethics Committee and the circuits through a written report. Participants names will not be recorded anywhere and no one will be able to connect participants to the answers you give. Answers will be given a code number or a pseudonym and participants will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. A report of the study may also be submitted for publication, but individual participants will not be identifiable in such a report

The researcher will collect data from the participants through face-to-face interviews, documents analysis, and non-participatory observations. Document analysis of the material development processes as well as non-participatory observation tuition sessions will be arranged and agreed upon with the participants. Time slots for interviews will be agreed upon with individual participants in order to ensure that office work is not disturbed. Participation in the study is voluntary, and those that are willing to participate will be required to sign an informed consent letter. The researcher also needs your permission to access the following documents for analysis as part of data collection:

- E-learning policy,
- OER policy/strategy,

- Intellectual Property policy,
- Learner support policies
- Institutional/divisional strategic plans
- Material development guidelines

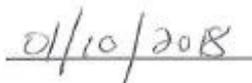
Hard copies of participants' answers will be stored by the researcher for a period of five years in a locked cupboard/filing cabinet at the supervisor office for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. If necessary, hard copies will be shredded and/or electronic copies will be permanently deleted from the hard drive of the computer through the use of a relevant software programme. I believe that this study will be of great benefit to your institution because it may provide insights that may enable your institution to devise strategies that can be used to improve the level of the faculty members' proficiency in the use of OER in teaching and learning for the purpose of increasing access to quality education. Upon completion of my studies, I intend to submit copies of my thesis to all NOLNeT libraries for use by other researchers and students. I will also send soft copies to those participants via email as per their request.

This study has received written approval from the Research Ethics Review Committee of the CEDU research ethics, Unisa. A copy of the approval letter can be obtained from the researcher if you so wish. If you would like to be informed of the final research findings, please contact Mrs. Edwig Karipi at +264811492943 or email [karipi@namcol.edu.na](mailto:karipi@namcol.edu.na). The findings are accessible for three years. Should you have concerns about the way in which the research has been conducted, you may contact Dr. AS Mawela at 0124294381 or email: [mawelas@unisa.ac.za](mailto:mawelas@unisa.ac.za)

Hoping that you find this in order.

Yours sincerely

  
\_\_\_\_\_  
Edwig Karipi

  
Date

## Appendix D: UNAM-CODEL Approval letter



### CENTRE FOR RESEARCH AND PUBLICATIONS

Office of the Pro-Vice Chancellor: Research Innovation and Development

UNIVERSITY OF NAMIBIA, Private Bag, 13301 Windhoek, Namibia

340 Mandume Ndemufayo Avenue, Pioneers Park, Office D090 ☎ +264-61-2064624 ✉ [research@unam.na](mailto:research@unam.na) Fax+264-61-206 4624

29 October 2018

Dear Ms Edwig Karipi

#### PERMISSION TO CONDUCT RESEARCH ACTIVITIES AT THE UNIVERSITY OF NAMIBIA (UNAM)

Your application to conduct research at UNAM entitled: "The perceptions of the faculty members of Namibian open distance learning institutions on the use of open educational resources" was considered based on ethical evaluation from your institution. Hence, permission is hereby granted with the following conditions:

1. During the course of your research activities at UNAM, you will observe the required procedures, norms and ethical conduct in accordance with the relevant Research Policies and Guidelines. If unsure, please consult the Centre for Research and Publications at UNAM for guidance. Any deviations and amendments to the original documents submitted (i.e. research proposal, interview guide, consent forms, etc.) must be submitted again for approval, before the research activities can commence.
2. The results of the findings will be shared with the PVC: Research, Innovation and Development, and the Centre for Research and Publications, before they are disseminated or published in the public domain.
3. Upon completion, a copy of the Research Report must be lodged with the UNAM Library for our records.
4. Proper, full acknowledgements of the University of Namibia and all participants /respondents shall be done in the Research Report and any subsequent publications arising from this research.

If you are agreeable to the above conditions, please sign and date a copy of this letter and return it to the Centre for Research and Publications (Email: [research@unam.na](mailto:research@unam.na)). If you have any queries, do not hesitate to contact the Centre for Research and Publications.

Wishing you all the best with your research.

Yours sincerely

Dr. Hileni M. Kapenda

I accept and agree to all the conditions

Edwig Karipi

Full Name and Surname

Signature

29/10/2018

Date

## Appendix E: NUST-COLL Request permission to conduct research



### APPENDIX A: Request for permission to conduct research at NUST-COLL

E Karipi

Box 70003

Khomasdal

9000

Contact No: +264811492943

The Registrar  
Namibian University of Science and Technology  
Namibia  
9000  
Tel: (+264) 61 2079111

**Dear Mr. Garde**

I, Edwig Karipi am doing research under the supervision of Dr. A.S. Mawela a lecturer in the Department of Curriculum and instructional studies towards a D Ed at the University of South Africa. We are inviting you to participate in a study entitled **“The perceptions of the faculty members of Namibian open distance learning institutions on the use of open educational resources”**. The aim of the study is to explore to how faculty members of Namibian ODL institutions use OER, and what strategies/framework/OER design can be developed to empower faculty members' proficiency regarding the usage of OER.

Your institution and specifically the Centre for Open and Lifelong Learning (COLL) department has been selected because the study focuses on the use of OER in open and distance learning, which is their core function. This study further assumes that

open educational resources are part and parcel of your institutional eLearning strategy. The study will require the participation of the academic staff, both full-time and part-time from your institution who will form part of the sample. The total of five (n=5) full-time and three (n=3) part-time faculty members of your institution will be selected for this study.

The researcher requests that you identify one of the Instructional designers to assist in identifying the full-time and part-time faculty members to form part of this study. Participating in this study is voluntary and participants are under no obligation to consent to participation. Participants will be given the consent form to read and sign before participating. They are at liberty to can withdraw at any time and without giving a reason. There are no attached promises or benefits for the participants and participation in the study is voluntary. The researcher does not anticipate any harm or negative consequences for you as a participant in this study. However, if any unforeseen harm or negative consequences may take place, such, will be reported to the relevant stakeholders such as UNISA Ethics Committee and the circuits through a written report. Participants names will not be recorded anywhere and no one will be able to connect participants to the answers you give. Answers will be given a code number or a pseudonym and participants will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. A report of the study may also be submitted for publication, but individual participants will not be identifiable in such a report

The researcher will collect data from the participants through face-to-face interviews, documents analysis, and non-participatory observations. Document analysis of the material development processes as well as non-participatory observation tuition sessions will be arranged and agreed upon with the participants. Time slots for interviews will be agreed upon with individual participants in order to ensure that office work is not disturbed. Participation in the study is voluntary, and those that are willing to participate will be required to sign an informed consent letter. The researcher also needs your permission to access the following documents for analysis as part of data collection:

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- Learner support policies
- Institutional/divisional strategic plans
- Material development guidelines

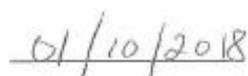
Hard copies of participants' answers will be stored by the researcher for a period of five years in a locked cupboard/filing cabinet at the supervisor office for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. If necessary, hard copies will be shredded and/or electronic copies will be permanently deleted from the hard drive of the computer through the use of a relevant software programme. I believe that this study will be of great benefit to your institution because it may provide insights that may enable your institution to devise strategies that can be used to improve the level of the faculty members' proficiency in the use of OER in teaching and learning for the purpose of increasing access to quality education. Upon completion of my studies, I intend to submit copies of my thesis to all NOLNeT libraries for use by other researchers and students. I will also send soft copies to those participants via email as per their request.

This study has received written approval from the Research Ethics Review Committee of the CEDU research ethics, Unisa. A copy of the approval letter can be obtained from the researcher if you so wish. If you would like to be informed of the final research findings, please contact Mrs. Edwig Karipi at +264811492943 or email [karipi@namcol.edu.na](mailto:karipi@namcol.edu.na). The findings are accessible for three years. Should you have concerns about the way in which the research has been conducted, you may contact Dr. AS Mawela at 0124294381 or email: [mawelas@unisa.ac.za](mailto:mawelas@unisa.ac.za)

Hoping that you find this in order.

Yours sincerely

  
\_\_\_\_\_  
Edwig Karipi

  
Date

## Appendix F: NUST-COLL Approval letter



**NAMIBIA UNIVERSITY  
OF SCIENCE AND TECHNOLOGY**

13 Storch Street  
Private Bag 13388  
Windhoek  
NAMIBIA

T: +264 61 207 2118  
F: +264 61 207 9118  
E: registrar@nust.na  
W: www.nust.na

**Office of the Registrar**

03 October 2018

Ms Edwig Karipi  
P O Box 70003  
Khomasdai  
Windhoek  
NAMIBIA

Dear Ms Karipi

**RE: CONSENT TO CONDUCT YOUR RESEARCH WITH THE NAMIBIA UNIVERSITY OF SCIENCE AND TECHNOLOGY STAFF AND STUDENTS**

Your email received and the letter from Dr A S Mawela, Department of Curriculum and Institutional Studies, University of South Africa, has reference.

Approval is hereby granted for you to conduct the research on "*The perceptions of the faculty members of Namibian open distance learning institutions on the use of open education resources*" in the Namibia University of Science and Technology. Any information gathered during the research is to be used for the purpose of the study only and must be treated as confidential. The results of the study should be shared with the University. Individual information of staff and students will not be made available, nor will biographical information of students be made available in such a way that individual students can be identified.

You are advised to contact the Director: Center for Open and Lifelong Studies, Dr Delwaline Möwes, to compile a list of possible respondents to your data collection instrument.

I wish you all the best with your research.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'M. Garde', written over a light blue horizontal line.

**Mr Maurice Garde  
REGISTRAR**



CC:

Director: COLL  
Deputy Vice-Chancellor: Academic Affairs  
Assistant Registrar

## **Appendix G: Participant information letter**

10 April 2018

The perceptions of the faculty members of Namibian open distance learning institutions on the use of open education resources

DEAR PROSPECTIVE PARTICIPANT

I, Edwig Karipi am doing research under supervision of Dr. A.S. Mawela a lecturer in the Department of Curriculum and Instructional studies towards a D Ed at the University of South Africa. We are inviting you to participate in a study entitled,

The perceptions of the faculty members of Namibian open distance learning institutions on the use of open education resources

WHAT IS THE PURPOSE OF THE STUDY?

The aim of the study is to explore to what extent, if any, are faculty members of Namibian ODL institutions use OER, and what strategies/framework/OER design can be developed to empower faculty members' proficiency regarding the usage of OER. This study is expected to collect important information that could assist your institution to come up with new strategies to enhance access to quality learning resources which are of no cost to students as well as to empower the faculty members on the use of OER in teaching and learning. So, this study will be beneficial to both yourself as a faculty member and the institution as a whole.

WHY AM I BEING INVITED TO PARTICIPATE?

You are invited because of your direct involvement in the development and use of teaching and learning materials in which open educational resources are part of.

I obtained your contact details through the Namibian Open Learning Network Trust (NOLNeT) to which all staff members of open and distance learning institutions in Namibia belong. This study consists of 24 faculty members, 8 from each institution, namely, NAMCOL, NUST-COLL and UNAM-CODEL.

#### WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?

The study involves interviews in which you will be required to give your perception, experiences and challenges regarding the use of open educational resources as a way of saving educational cost in your institutions. The following questions will form part of the interview guide:

- To what extent, if any, are faculty members trained / empowered to use OER in their classes?
- What are the views, perceptions and attitudes of faculty members regarding the benefits of using OER in facilitating learning?
- What are the success and challenges regarding the use of OERs in teaching and learning by faculty members of Namibian ODL institutions?

The interview will be recorded by the researcher. Apart from the interview, you will be expected to complete a semi-structured questionnaire aimed to respond to the above questions. The questionnaire will also require you biographical data. Your name is optional. Each interview and questionnaire will take about 30 minutes to complete.

#### CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?

Participating in this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. It will be appropriate to write your

name on the questionnaire in case you might want to withdraw your participation after the completion of the questionnaire.

ARE THERE ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?

There is no anticipated risk for participating in this study.

WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?

Your name will not be recorded anywhere and no one will be able to connect you to the answers you give. Your answers will be given a code number or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Your answers may be reviewed by people responsible for making sure that research is done properly, including the transcriber, external coder, and members of the Research Ethics Review Committee. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records. The findings of this study might be submitted for publication on journals or presented in conferences, but individual participants will not be identifiable in such publications and platforms.

HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?

Hard copies of your answers will be stored by the researcher for a period of five years in a locked cupboard/filing cabinet in the office of the researcher for future research or academic purposes. Electronic information will be stored on a password protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. The researcher will destroy the data by shredding the hard copies and permanently deleting the electronic data after five years.

## WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

There will be no any form of incentive for participating in this study.

## HAS THE STUDY RECEIVED ETHICS APPROVAL

This study has received written approval from the Research Ethics Review Committee of the Department of Curriculum and instructional studies at Unisa. A copy of the approval letter can be obtained from the researcher if you so wish.

## HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

If you would like to be informed of the final research findings, please contact the researcher, Ms E Karipi, at [karipi@namcol.edu.na](mailto:karipi@namcol.edu.na)

Should you require any further information or want to contact the researcher about any aspect of this study, please contact Ms E Karipi, at +264811492943, or +264613205208, email: [karipi@namcol.edu.na](mailto:karipi@namcol.edu.na)

Should you have concerns about the way in which the research has been conducted, you may contact my supervisor, Dr S.I Mawela at

Tel:

012 429 4381

Email: [mawelas@unisa.ac.za](mailto:mawelas@unisa.ac.za)

Thank you for taking time to read this information sheet and for participating in this study.

Thank you.

---

Signature

A handwritten signature in black ink, appearing to be 'Edwig Karipi', written in a cursive style. The signature is positioned below the 'Signature' label and above a horizontal line.

---

**Edwig Karipi**

**Appendix H: Participant consent form**

**CONSENT TO PARTICIPATE IN THIS STUDY**

I----- (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read and understood the study as explained in the information sheet.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

I agree to the recording of the interview.

I have received a signed copy of the informed consent agreement.

Participant Name and Surname

----- (please print)

**Participant Signature**----- **Date**-----

Researcher's Name and Surname

Edwig Karipi

A handwritten signature in black ink, appearing to be 'Edwig Karipi', written over a horizontal line.

Researcher's signature - \_\_\_\_\_ Date -----

## Appendix I: Interview Guide

### INTERVIEW GUIDE

Starting time of Interview: \_\_\_\_\_

Date: \_\_\_\_\_

Ending time of Interview: \_\_\_\_\_

Interviewer: \_\_\_\_\_

Interviewee: \_\_\_\_\_

1. Gender- female
2. Age-
3. Your highest qualification-
4. Indicate the number of years you have been with the Institution
5. Indicate whether you are full-time or part-time faculty member
6. Briefly explain your role in teaching and learning. Please elaborate on what you do on daily basis concerning ODL.
7. Are you aware of Open Educational Resources (OER)? If yes, when did you become aware and how?

8. How do you define OER?
9. Do you use OER? How and for how long?
10. Did you receive any training about how to integrate OER in teaching and learning?
11. Who offered the training?
12. Explain the type of training you have received which include OER, what exactly have you learnt regarding OER, is definitions, licences, how to access or what?
13. Does your institutions has an OER policy in place, or any other policy that include OER?
14. What are the strategies/guidelines in place that guide your teaching and learning activities? These are general policies and guidelines.

## **Appendix J: Observation checklist**

### OBSERVATION CHECKLIST

In the process of collecting data, I will observe the following processes and activities:

Material development process in relation to:

–

Type of material used, whether print or online

–

Type of copyright licence used

–

Type of OER developed

–

How OER are being shared with learners and with other faculty members

–

Interactions between tutors and developers

-

Tutoring sessions will be observed to see the following:

–

What type of communication used, face to face or video conferencing/ online discussion forums

–

How content is arranged for learners

–

How tutors make use of OER during tuition

**Appendix K: Document analysis guideline**

**DOCUMENT ANALYSIS GUIDELINES**

Name of the institution-----

Name of the document -----

1. Reference to Open Educational Resources -----

2. Adoption of OER by the institutions

-----

3. Use of OER in teaching and learning

-----

4. Development of OER

-----

5. Training of faculty members on OER

-----

6. OER policy issues

-----

7. Guidelines/strategies in place to guide the development of learning materials

-----

8. Learner support strategies

---

9.OER benefits

---

10.OER challenges

---

11. Teaching and learning strategic plans

---

**Appendix L: Proof of editing**

**EDITING SERVICES**

To whom it may concern

This letter serves to confirm that editing and proofreading was done for

Edwig Karipi

The Perception of Faculty Members of Namibian Open Distance Learning Institutions  
on the Use of Open Educational Resources

Doctor of Philosophy in Education

Curriculum Studies

University of South Africa

**Supervisor:** Dr. A.S. Mawela

**Co-supervisor:** Prof. M.M Van Wyk



Cilla Dowse

10 September 2019

Cilla	Dowse	Rosedale	Farm
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Programme on Editing Principles and Practices:	Free		State
University of Pretoria 2009			<a href="mailto:cilla.dowse@gmail.com">cilla.dowse@gmail.com</a>
			Cell: 084 900 7837