

DEVELOPING A FRAMEWORK
FOR
OPEN ACCESS TO KNOWLEDGE
IN NIGERIA

Olukunle Rotimi Ola

LL.B. University of Benin

WIPO-UNISA Specialisation in Intellectual Property

LL.M. University of South Africa

Thesis submitted in fulfilment of the requirement of the degree of Doctor of Philosophy

THOMAS MORE SCHOOL OF LAW, AUSTRALIAN CATHOLIC UNIVERSITY

June 2016

TABLE OF CONTENTS

DEDICATION	xv
LIST OF ABBREVIATIONS.....	xvi
ACKNOWLEDGEMENTS.....	xxii
DECLARATION OR SIGNED STATEMENT OF AUTHORSHIP AND SOURCES.	xxv
ABSTRACT.....	xxvi
PART I: THE FUNDAMENTALS OF OPEN ACCESS.....	1
CHAPTER 1 THE TAPESTRY OF OPEN ACCESS	2
1. INTRODUCTION.....	2
1.1 What Is The Aim Of This Thesis?.....	2
1.2 Why Is This Thesis Important?.....	2
1.3 Research in Context.....	3
1.3.1 Background.....	3
1.4 The Meaning of Open Access.....	5
1.5 Budapest Bethesda & Berlin (BBB) definition.....	7
1.6 Fundamentals of OA	8
1.6.1 An Old Tradition	9
1.6.2 A New Technology.....	10
1.6.3 Public Good.....	10
1.6.4 Quality	10
1.6.5 Delivery	11
1.6.6 Barriers.....	11
1.6.7 Focus.....	11
1.6.8 Potential Benefit.....	11
1.6.9 Area of Operation.....	12
1.6.10 Exploitation	12

1.6.11	Nexus to IP Rights	12
1.6.12	Who Pays the Bills?	13
1.7	Barriers to OA	13
1.7.1	Legal.....	13
1.7.2	Price	14
1.7.3	Technical	15
1.8	Major Stakeholders.....	15
1.9	Strategies to Achieving OA	16
1.9.1	Self-Archiving (Green Road).....	16
1.9.1.1	Origin of Self-Archiving.....	17
1.9.1.2	Rationale of Self-Archiving	17
1.9.1.3	Self-Archiving Strategies.....	18
1.9.1.4	Open Archive Initiative.....	20
1.9.1.5	Open Access Mandate.....	20
1.9.1.6	How Open Access Mandate works.....	21
1.9.2	The Gold Road.....	22
1.10	Strategies in Action	23
1.11	Focus of the Research	24
1.12	Motivation	25
1.12.1	The Position in Nigeria	25
1.12.2	Professor's Frustration.....	28
1.12.3	Personal Frustration	28
1.13	Aims & Objectives	30
1.14	Research Question	30
1.15	Assumptions and Point of Departure	30
1.16	Research Methodology.....	31
1.17	Chapter Structure	32
CHAPTER 2: THEORIES OF OPEN ACCESS		35

2.	OBJECTIVES.....	35
2.1	Introduction.....	35
2.2	Knowledge Development Process.....	36
2.2.1	The Publishing Industry.....	37
2.2.2	Guerrilla.....	39
2.3	Social.....	41
2.3.1	Ubuntu.....	41
2.3.2	Koinonia.....	42
2.3.3	Sharing: A Social Responsibility.....	43
2.3.4	Give And It Shall Be Given Unto You.....	45
2.4	Economic.....	46
2.4.1	Global Inequality-Greed.....	46
2.4.2	Adam Smith (1723-1790).....	47
2.4.3	Karl Marx (1818-1883).....	47
2.4.4	Economic Realities versus Imperatives for Free.....	48
2.4.5	Higher Subscription Fees & The Internet.....	48
2.4.6	OA Will Adversely Affect Traditional Publishing.....	50
2.4.7	OA Is Not A Viable Publishing Business Model.....	50
2.4.8	Rivalrous Against Non-rivalrous.....	51
2.5	Legal.....	52
2.5.1	Aaron Swartz.....	53
2.5.2	Edward Snowden.....	53
2.5.3	The Law is an Ass.....	54
2.5.4	Information Legal Structure & Compliance.....	56
2.5.5	Law Reforms.....	58
2.5.6	Alternative to Legal Reform.....	59
2.6	Political.....	61

2.6.1	SOPA & PIPA.....	62
2.6.2	FASTR.....	63
2.7	Knowledge Is Not An End In Itself It Is A Means To An End	64
2.8	Conclusion.....	65
PART II: THE NIGERIAN CONTEXT: OPEN ACCESS.....		67
CHAPTER 3: FRAMEWORK FOR OPEN ACCESS IN NIGERIA.....		68
3.	OBJECTIVES.....	68
3.1	Introduction	69
3.2	Creativity.....	70
3.2.1	Iyoba	70
3.3	Nigeria.....	71
3.4	English Copyright Act 1911	72
3.4.1	Open Access and Folklore/Traditional Knowledge.....	73
3.5	The Copyright Act, 1970.....	74
3.6	The Copyright Act 1988.....	75
3.6.1	Works Eligible for Copyright under the Act	77
3.6.2	Conferment of Copyright	77
3.6.3	Powers of a Copyright Owner	78
3.6.4	Infringement of Copyright	78
3.6.5	Court Convictions.....	79
3.7	NIGERIAN COPYRIGHT COMMISSION.....	80
3.7.1	Establishment	80
3.7.2	Strategies.....	81
3.7.3	Public Enlightenment.....	82
3.7.4	Rights Administration	82
i.	Copyright (Reciprocal Extension) Regulation 1972.....	83
ii.	Copyright (Security Devices) Regulation 1999	83

iii.	Copyright (Video Rental) Regulations 1999.....	83
iv.	Copyright Notification Scheme	83
v.	Copyright (Optical Disc) Regulation 2006	83
vi.	Copyright (Collective Management Organisation) Regulations 2007	83
vii.	Copyright (Levy on Materials) Order 2012	83
3.7.5	Enforcement.....	83
3.8	THE FUTURE OF COPYRIGHT IN NIGERIA.....	84
3.8.1	Internet Treaties	85
3.8.2	TRIPS & Flexibilities.....	85
3.9	Open Access And The Future Of Copyright Law	86
3.9.1	Copyright and Open Access.....	86
3.9.2	Changing the Default from Closed to Open	86
3.10	The Current Legal, Regulatory and Policy Frameworks for Open Access in Nigeria.....	89
3.11	Federal Ministry of Health.....	91
3.11.1	National Institute for Medical Research.....	93
3.11.2	National Agency for Control of AIDS	94
3.12	Federal Ministry of Agriculture	94
3.13	The Federal Ministry of Education	96
3.13.1	Nigerian Educational Research Development Council.....	97
3.13.2	National Universities Commission (NUC)	98
3.14	The Federal Ministry of Science and Technology	100
3.14.1	Nigeria’s Science, Technology and Innovation (STI) Policy	101
3.15	Conclusion.....	104
	PART III: THE THREE PILLARS OF OPEN ACCESS:.....	105
	POLICIES AND PRACTICES.	105
	CHAPTER 4: OPEN ACCESS JOURNAL ARTICLES.....	106

4.	OBJECTIVES.....	106
4.1	Background	107
4.2	Introduction	108
4.2.1	The Internet.....	108
4.2.2	Before the Internet	109
4.2.3	Gutenberg’s Printing Press.....	110
4.2.4	Statute of Anne.....	110
4.2.5	Permission Plus Price	112
4.2.6	14th of February 2002.....	113
4.2.7	The Knowledge Based Economy	113
4.3	Adoption of Open Access Policies: National, International & Funding Organisations	118
4.3.1	United States.....	118
4.3.2	United Kingdom	119
4.3.3	Brazil.....	121
4.3.4	Canada	122
4.3.5	European Union.....	123
4.3.6	United Nations	124
4.3.7	Organisation for Economic Cooperation and Development (OECD).....	124
4.3.8	Funding Organizations-Governmental and Non-governmental.....	125
4.3.8.1	National Institutes of Health (NIH).....	125
4.3.8.2	European Research Council (ERC)	126
4.3.8.3	Research Council United Kingdom (RCUK).....	127
4.3.8.4	Australian Research Council (ARC).....	128
4.3.8.5	Wellcome Trust	129
4.3.8.6	Gates Foundation	130
4.3.8.7	Ford Foundation.....	131
4.3.8.8	William & Flora Hewlett Foundation.....	132
4.3.9	Universities, Publishers and Libraries	133

4.4	Publishing Agreement	135
4.5	Creative Commons	138
4.5.1	Creative Commons Nigeria (CC Nigeria).....	139
4.5.2	Types of Licences	140
4.6	Open Access In Nigeria	143
4.7	Scholarly Publishing In Nigeria.....	144
4.8	Nigeria Introduced To Open Access	146
4.9	Institutional Repositories In Nigeria	148
4.10	OA Journals In Nigeria	150
4.10.1	Open Access and Cost implications.....	151
4.11	Opening Access To Developing Countries.....	152
4.11.1	Health InterNetwork Access to Research Initiative: (HINARI)	152
4.11.2	International Network for the Availability of Scientific Publication (INASP) 153	
4.11.3	African Journal Online (AJOL)	154
4.11.4	Access to Global Online Research in Agriculture (AGORA).....	155
4.11.5	Online Access to Research in the Environment (OARE).....	155
4.11.6	Access to Research for Development and Innovation (ARDI).....	156
4.11.7	Siyavula.....	156
4.11.8	The African Legal Information Institute (African LII)	156
4.11.9	Social Science Research Network.....	156
4.12	Open Access Implications To Nigeria And Developing Countries	157
4.13	Likely Effects [Positively Or Negatively].....	157
4.13.1	Increased Accessibility, Visibility, Impact and Utility.....	157
4.13.2	Knowledge Sharing.....	157
4.13.3	Access to the World's Library	158
4.13.4	Global and Local.....	158

4.13.5	Digitization and Preservation of Works/Heritage.....	159
4.13.6	Avoiding Duplicity.....	160
4.13.7	Learning Without Barriers	160
4.14	Possible Negative Effects	161
4.14.1	Consumption Partners	161
4.14.2	Cultural re-orientation/Loss of Cultural Heritage	162
4.14.3	Digital Divide	163
4.15	Conclusion.....	164
Chapter 5: OPEN EDUCATIONAL RESOURCES		166
5.	OBJECTIVE	166
5.1	Introduction	167
5.2	Definition Of OER.....	171
5.2.1	Content.....	172
5.2.2	Target Actors	173
5.2.3	Platform/Format	173
5.2.4	Intellectual Property (IP)	174
5.2.5	Commercial or Non-Commercial.....	174
5.3	Components Of Open Educational Resources	175
5.3.1	Open	175
5.3.2	Educational	178
5.3.3	Resources	180
5.4	Rationale for OER.....	180
5.4.1	Technological Advancements	181
5.4.2	Cost.....	181
5.4.3	Adult Education	182
5.4.4	Growing Competition between Higher Educational Institutions	182
5.4.5	Altruistic Reasons	182

5.4.6	A Social Responsibility Through Which The Common Good Is Served ...	183
5.4.7	New Business Models created on the Platform of the Internet	183
5.4.8	It Has Been Mandated By My Employers.....	184
5.4.9	Easy Accessibility to a New Licensing Model Allowing for Development of OER	184
5.5	The Role Of The Law And Open Educational Resources	184
5.5.1	As an Enabler	184
5.5.2	As a Standard.....	185
5.6	IP The Legal Framework For OER	185
5.7	Law In The Private And Public Interest.....	186
5.8	Law As An Enabler And Disabler.....	187
5.9	Licensing.....	187
5.10	Policies	188
5.11	The Impact of Open Educational Resources.....	189
5.11.1	OER Africa.....	189
5.11.2	African Virtual University (AVU).....	189
5.11.3	Siyavula	190
5.11.4	Writing Commons	190
5.11.5	OERisation of Four Courses in Kenya	190
5.11.6	NOUN & UNESCO.....	191
5.11.7	MIT	191
5.11.8	Obama Administration	191
5.11.9	British Columbia	192
5.11.10	California.....	192
5.11.11	OpenStax College	192
5.11.12	US Book Project	192
5.11.13	World Bank.....	193

5.12	OER By And For Developing Countries	194
5.12.1	Locate, Adapt and Build	194
5.12.2	OER Databases	194
5.12.3	Be Innovative-Tell Your Own Story.....	195
5.13	OER Challenges	196
5.13.1	Rights Clearance.....	196
5.13.2	Uncertainty as to Choice of Open Licence	197
5.13.3	Digital Divide & Inability to Access Online Available Materials Due to Lack of Infrastructural Facilities & Lack of ICT Skills.....	197
5.13.4	Universality of Resources & Cultural Appropriateness.....	198
5.13.5	Locating OER	199
5.14	OER & MOOCS.....	199
5.15	Future of OER	201
CHAPTER 6: PUBLIC SECTOR INFORMATION.....		203
6.	OBJECTIVES.....	203
6.1	Introduction	204
6.2	Definition and Scope of PSI.....	207
6.3	Importance of Enabling Access to PSI.....	209
6.3.1	Consumer Protection	210
6.3.2	Transparency in Governance	211
6.3.3	Promotion of Democratic Ideals.....	211
6.3.4	Enhances Public Health, Safety and General Social Welfare	212
6.3.5	Serves Essential Scientific And Technical Research Function.....	213
6.3.6	Socio-Political Development.....	213
6.3.7	Pragmatic Feedback.....	213
6.3.8	Sense of Duty	213
6.3.9	Accountability.....	213

6.3.10	Reduced Cost.....	214
6.4	Global Outlook On PSI.....	216
6.4.1	United States.....	217
6.4.2	European Union.....	218
6.4.3	United Nations.....	220
6.4.4	The Organisation for Economic Co-operation and Development (OECD) 222	
6.4.5	United Kingdom.....	224
6.4.6	New Zealand.....	226
6.4.7	Australia.....	227
6.4.8	Nigeria.....	228
6.5	Nigeria’s Freedom of Information Act-Structure (FOIA).....	230
6.5.1	Nigeria’s FOIA-Implementation.....	232
6.5.2	National Applicability of FOIA.....	233
6.5.3	PSI and FOI.....	235
6.5.4	PSI and Intellectual Property Law.....	235
6.5.5	PSI and Privacy Law/Issues; Confidentiality.....	236
6.5.6	PSI and Government Business Interest.....	236
6.5.7	PSI and National Interest/National Security.....	237
6.6	Nigerian Case Studies.....	238
6.6.1	Fuel Crisis.....	238
6.6.2	Bring Back Our Girls.....	239
6.6.3	“Nigeria’s Ebola Outbreak”.....	240
6.7	Conclusion.....	241
PART IV: OPEN ACCESS: PRECEPTS AND PROSPECTS.....		243
CHAPTER 7: GUIDELINES FOR DEVELOPING A FRAMEWORK FOR ACCESS TO KNOWLEDGE IN NIGERIA.....		244

7.	OBJECTIVE	244
7.1	Introduction	244
7.2	What is a framework?	247
7.3	Why Develop A Framework	247
7.4	Key Stakeholders For The Framework.....	248
7.5	Scope of the Framework.....	248
7.6	Legal Framework.....	248
7.7	Regulatory Framework	249
7.8	Policy Framework	249
7.9	Features Of The Framework.....	250
7.9.1	Title of the Framework	250
7.9.2	Purpose.....	250
7.9.3	Applicability and Scope.....	252
7.9.4	Definitions	253
7.9.5	Commencement Date	254
7.9.6	Governing Principles.....	255
7.9.7	Action Plan	256
7.9.8	Licensing Framework.....	257
7.9.8.1	Management of Copyright	258
7.9.8.2	Clarify Rights.....	258
7.9.8.3	Payment	258
7.9.8.4	Licences	258
7.10	Open Access Framework.....	259
7.10.1	Academic and Research Communities	259
7.10.2	Institutional Repository.....	260
7.11	Framework for Open Educational Resources	262
7.11.1	Understanding OER.....	262
7.11.2	Purpose.....	262

7.11.3	Intellectual Property	263
7.11.4	Scope.....	263
7.11.5	Government’s Role.....	263
7.11.6	Higher Education Institutions	264
7.11.7	Academic Staff	266
7.11.8	Students	267
7.11.9	Supervisory Ministry and Agencies and Accreditation Bodies.....	268
7.12	Public Sector Information Framework	270
7.13	Factors to consider.....	271
7.13.1	Transparency	271
7.13.2	Participation.....	271
7.13.3	Collaboration	271
7.13.4	Accountability.....	272
7.13.5	Openness.....	272
7.13.6	Legal Conformity (Use and Reuse Rights).....	273
7.13.7	Intellectual Property Protection.....	273
7.13.8	Interoperability	273
7.13.9	Cost.....	273
7.13.10	Sustainability.....	274
7.14	Steps To Be Taken.....	274
7.14.1	Publish Government Information Online	274
7.14.2	Provide Quality Information.....	274
7.14.3	Create And Institutionalise An Open Government Culture	275
7.14.4	Create Awareness About Public Sector Information	275
7.15	International Treaties.....	275
7.15.1	WIPO Development Agenda.....	276
7.15.2	Marrakesh Treaty	276

7.16	Access to Knowledge Treaty (A2K).....	278
7.16.1	Guidelines For Adapting A2k.....	278
7.17	Conclusion.....	279
CHAPTER 8: CONCLUSION: WEAVING THE THREADS TOGETHER		280
8.	Weaving The Threads Together.....	281
8.1	Collaboration Is The Key.....	282
8.2	The Frustrations Are Still There	282
8.3	Chibok Girls Still Missing	283
8.4	Retrospect.....	283
8.5	Recommendations.....	284
9.	BIBLIOGRAPHY:.....	288
	Journal & Electronic Articles.....	288
	Books & Book Chapters	304
	Cases.....	310
	Reports.....	310
	Legislation & Official Government Documents.....	313
	Treaties.....	318
	Internet Sources.....	319

DEDICATION

In the knowledge economy **words** have become the main article of trade. I therefore dedicate this work to the living **WORD**, Jesus Christ, the all-knowing, the only wise God, the creator of knowledge.

LIST OF ABBREVIATIONS

A2K	Access to Knowledge
A4AI	Alliance for Affordable Internet
ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
ACU	Australian Catholic University
ADR	Alternative Dispute Resolution
African LII	The African Legal Information Institute
AGORA	Access to Global Online Research in Agriculture
AHRC	Arts and Humanities Research Council
AJOL	African Journal Online
APC	Article Processing Charge
ARC	Australian Research Council
ARDI	Access to Research for Development and Innovation
ARPANET	Advanced Research Project Agency Network (ARPANET)
AVU	African Virtual University
BBB	Budapest Bethesda Berlin
BIS	Business Innovation and Skill
BOAI	Budapest Open Access Initiative
BPP	Bureau Public Procurement
CC BY NC	Creative Commons Attribution but Non Commercial
CC BY NC ND	Creative Commons Attribution Non Commercial No Derivatives
CC BY NC SA	Creative Commons Attribution, Non Commercial Share Alike
CC BY ND	Creative Commons Attribution No Derivatives
CC BY SA	Creative Commons Attribution Share Alike
CC BY	Creative Commons Attribution

CC	Creative Commons
CEO	Chief Executive Officer
CIHR	Canadian Institute of Health Research
CLAMP	Copyright Litigation Alternative Mediation Programme
CMO	Collective Management Organisation
COL	Commonwealth of Learning
COSON	Copyright Society of Nigeria
DEST	Department of Education, Science and Training
DOAJ	Directory of Open Access Repositories
DPADM	The Division for Public Administration and Development Management
DRM	Digital Rights Management
DRMI	Digital Rights Management Information
DVC	Deputy Vice Chancellor
EC	European Commission
EFA	Education for All
EFCC	Economic and Financial Crimes Commission
EIFL	Electronic Information for Libraries
ERA	European Research Area
ERC	European Research Council
ERMI	Electronic Rights Management Information
EU	European Union
FASTR	Fair Access to Science Technology and Research
FEC	Federal Executive Council (Nigeria)
FMST	Federal Ministry of Science and Technology
FOI	Freedom of Information
FOSS	Free Open Source Software
GDP	Gross Domestic Product

GPL	General Public Licence
GWB	General Well Being
HEI	Higher Education Institution
HINARI	Health InterNetwork Access to Research Initiative
ICESCR	International Covenant on Economic, Social and Cultural Rights
ICT	Information Communications Technologies
IDRC	International Development Research Centre
IDS	Institute of Development Studies
IGF	Internet Governance Forum
IIA	Internet Industry Association
INASP:	International Network for the availability of Scientific Publication
INSPIRE	Infrastructure for Spatial Information in Europe
IP	Intellectual Property
IPR	Intellectual Property Rights
IR	Institutional Repository
KJV	King James Version
LFN	Laws of the Federation of Nigeria
LGA	Local Government Area
MDA	Ministries Departments and Agencies
MDG	Millennium Development Goals
MIT	Massachusetts Institute of Technology
MOOC	Massive Open Online Courses
MTCPS	Medium Term Corporate Plan and Strategy
NACA	National Agency for Control of Aids (Nigeria)
NADA	Nigerian National Data Archive
NCC	Nigerian Copyright Commission
NCS	Nigerian Custom Service

NERDC	Nigeria Educational Research and Development Council
NGO	Non-Governmental Organisations
NIH	National Institutes of Health
NIMR	National Institute for Medical Research
NITDA	National Information Technology Development Agency Act
NIV	New International Version
NLN	National Library of Nigeria
NORA	Norwegian Open Research Archives
NOUN	National Open University of Nigeria
NPC	National Planning Commission
NPF	Nigerian Police Force
NSERC	Natural Sciences and Engineering Research Council of Canada
NSHDP	National Strategic Health Development Plan
NSTDA	National Science and Technology Development Agency
NSW	New South Wales
NUC	National Universities Commission
NZGOAL	NewZealand Government Open Access Licensing Framework
OA	Open Access
OAIC	Office of the Australian Information Commissioner
OAK	Open Access to Knowledge
OARE	Open Access to Research in the Environment
OCL	Open Content Licensing
OCW	Opencourseware
ODL	Open Distance Learning
OECD	Organisation for Economic Co-Operation and Development
OER	Open Educational Resources
OJS	Open Journal System

OKR	Open Knowledge Repository
OMB	Office of Management and Budget (United States)
OpenAIRE	Open Access Repository Infrastructure for European Research Publication.
OPL	Open Publication Licence
OPSI	Office of Public Sector Information
PCF7	Pan-Commonwealth Forum on Open Learning
PFGHI	Policy Framework for Government Held Information
PIPA	Protect Intellectual Property Act
PLOS	Public Library of Science
PSI	Public Sector Information
QUT	Queensland University of Technology
RCUK	Research Council United Kingdom
ROAR	Register of Open Access Repositories
ROARMAP	Registry of Open Access Repositories Mandate Archiving Policies
SciElo	Scientific Electronic Library Online
SME	Small and Medium Scale Enterprises
SOPA	Stop Online Anti-Piracy Act
SPARC	Scholarly Publishing and Academic Resources Coalition
SSHRC	Social Science and Humanities Research Council of Canada
SSRN	Social Science Research Network
STM	International Association of Scientific, Technical and Medical Publishers
STRAP	Strategic Action Against Piracy
TCP/IP	Transmission Control Protocol/Internet Protocol
TPM	Technological Protection Measures
TRIPS	Trades Related Aspects of Intellectual Property
UBE	Universal Basic Education
UDHR	Universal Declaration for Human Rights

UDHR	Universal Declaration of Human Rights
UN	United Nations
UNCTAD	United Nations conference on Trade and Development
UNDESA	United Nations Department of Economic and Social Affairs
UNESCO	United Nations Education Scientific and Cultural Organisation
UNIBEN	University of Benin
UNISA	University of South Africa
UNPAP	United Nations Public Administration Programme
US	United States of America
VC	Vice Chancellor
VIP	Visually Impaired Persons
WCT	WIPO Copyright Treaty
WHO	World Health Organisation
WIPO	World Intellectual Property Organisation
WPPT	WIPO Performances and Phonograms Treaty
WTO	World Trade Organisation

ACKNOWLEDGEMENTS.

The people in one's life gives it beauty. Those in mine made this PhD journey an interesting and unforgettable experience. They did not take away the challenges but rather helped me through them. They guided, supported, encouraged, inspired and a times even pushed me. This acknowledgement is evidence that I am who I am because of who we all are, it is evidence that the many inputs from different quarters has produced this work, it is evidence that I am not alone, that I am loved and that without these contributions I would not have been able to produce what I have today.

To my lovely wife Eru, my best friend and to our four blessed boys, David, Daniel, Darren and Derek, thank you for the support in the last three years. For allowing me to be a part time Husband and Dad. Eru you carried most of the load at home and you did it excellently. I sincerely appreciate and love you.

I will like to thank Anne Fitzgerald for kick starting my exposure to Australia. Without your initial prompting the Nigerian delegation that came to Australia would not have come and I most likely would not have met Brian Fitzgerald who immediately took interest in me, kept in touch and eventually guided me through what has been an interesting PhD experience.

To my Supervisor and Australian Mentor, Brian Fitzgerald, you are a combination of greatness and simplicity. Your sincerity, availability, understanding, guidance, interest in not just the work but my person, my family and my future is something I will never forget. I recall how you picked my family and I when we just arrived in Melbourne and how you helped and guided us to settle in. I recall the many other special things you have done and are still doing. These words are just an expression of my appreciation-thank you.

To my co-supervisor, John Gilchrist you were always available, you never made an excuse, if outside Melbourne you would stay on the phone for hours. You painstakingly read through every line and made very useful comments. I recall one of your comments that took me back to the drawing board and eventually turned out as a new chapter. Thanks John!

To my mentor, brother and friend, Adebambo Adewopo. All the years at the Nigerian Copyright Commission where you taught me the rudiments of Intellectual Property and exposed me to the best of trainings across the world, all of those efforts is what has culminated in this. You have always been there for me and I am grateful.

To my wonderful parents Prof and Mrs R.F Ola who have always believed in me thank you.

To Dr and Mrs Jose and Bolanle Omotosho, thank you for your kindness to us when we just arrived and for your continued interest in our welfare. To all those who assisted me one way or the other through this thesis; the Australian Catholic University for granting me this scholarship; to all the staff members at the Thomas More Academy of Law (TMAL), for friendship, the morning teas, the cakes and the work; to my father (Prof. R.F. Ola) and Ladep Gwamzhi for helping with proof-reading the thesis; to Dr. Lola Akin-Ojelabi for her guidance when I needed to prepare for the pre-submission seminar; to Pastor Akin-Ojelabi for his pastoral care and unending support; to Dr Olasoji for his encouragement; to my elder brother Bandele Ola for his technical support and assistance in sorting out and solving all my formatting challenges; to you all, I acknowledge the roles you have played in my life and I am grateful.

Last and most important, to God, my father and friend, I am grateful for the many blessings you bestow on me. For life, the opportunity to undergo and complete this thesis and for your steadfast love which is new every morning, thank you.

DECLARATION OR SIGNED STATEMENT OF AUTHORSHIP AND SOURCES.

This thesis contains no material published elsewhere or extracted in whole or in part from a thesis by which I have qualified for or been awarded another degree or diploma.

No part of this thesis have been submitted towards the award of any other degree or diploma in any other tertiary institution.

No other person's work has been used without due acknowledgement in the main text of the thesis.

ABSTRACT

The thesis provides an analysis of the legal and policy dimensions of open access to research, education and public sector information with special focus on Nigeria. It aims to investigate how open access has evolved across the world and how such initiatives could be implemented in Nigeria. It seeks to connect Nigerian works to the ‘global library’ thereby providing visibility and increasing the possibilities for impact and utility of such works. It seeks to provide a platform where Nigerians are able to freely connect to the ‘global library’, through the open access dual platforms of self-archiving and open access publishing, thereby providing them with access to use and reuse scholarly works. It further seeks to provide an understanding of open educational resources as alternative avenues to accessing education and seeks to foster citizenry participation, good governance, accountability, democratic values and spur creativity and innovation through open governance and access to public sector information.

PART I: THE FUNDAMENTALS OF OPEN ACCESS

Part I is made up of the first two chapters. It lays out the structure for the entire research and provides background information on open access. It explains what open access is all about, how it has gained its current status and why it is important.

Chapter 1, explores the basic concepts underpinning open access and identifies the major stakeholders within the open access movement. It introduces the two major strategies to open access, namely self-archiving and open access publishing.

Chapter 2 discusses the rationale for open access from a theoretical perspective. The chapter analyses the rationale for open access and considers the ideologies of the movement from a social, economic, legal and political perspective.

“In the beginning was the Word...and the Word was made...”¹

1. INTRODUCTION

1.1 WHAT IS THE AIM OF THIS THESIS?

Bill Gates had identified early enough that Content is King² and it has been said often that Knowledge is Power.³ This is the knowledge dispensation, the knowledge economy. Impact in this generation and probably the next will largely be dominated by knowledge. Acquiring knowledge is therefore imperative for development and the currency for acquiring knowledge is “access”. No knowledge, no development; no access, no knowledge.

Considering the importance of knowledge, this work explores and discusses the development of frameworks capable of enabling free and unrestricted access to knowledge and particularly knowledge in journal articles, open educational resources and public sector information. It seeks to connect Nigerian works to the ‘global library’ thereby providing visibility and increasing the possibilities for impact and utility of such works. It seeks to provide a platform where Nigerians are able to freely connect to the ‘global library’, through the open access dual platforms of self-archiving and open access publishing thereby providing them with access to use and reuse scholarly works. It further seeks to provide an understanding of open educational resources as alternative avenues to accessing education and seeks to foster citizenry participation, good governance, accountability, democratic values and spur creativity and innovation through open governance and access to public sector information.

1.2 WHY IS THIS THESIS IMPORTANT?

It will provide a framework that enables access to knowledge to all Nigerians and if this is achieved, it will bring about multiple platforms for development in Nigeria. This research holds a key to Nigeria’s development and Nigeria is the arrow head of Africa’s development. The importance of development through access to knowledge is imperative considering the fact that

* This Chapter contains a substantial part of an article published by the author with the European Intellectual Property Review titled ‘Fundamentals of Open Access’ *E.I.P.R* 2014 36 (2) 112-123.

¹ Holman, *The Holy Bible : Authorized King James Version, Containing The Old And New Testaments* (Holman Bible Publishers Read-to-me ed. 1984) John Chapter 1:1&14.

² Craig Bailey, *Content is King by Bill Gates* 31 May 2010 <http://www.craigbailey.net/content-is-king-by-bill-gates/>.

³ See Generally, J. Henry, *Knowledge is Power: Francis Bacon and the Method of Science* (Icon. 2002). See also, The Economist, *Knowledge is Power: Do we need a new competition policy for the new economy?* (21 September 2000) <http://www.economist.com/node/375597>.

Africa is the second largest continent in the World and that Nigeria has the largest population in Africa.⁴ It has been estimated that the continents present over 1 billion population is expected to more than quadruple over the next 90 years. This will no doubt make Africa more important than ever. “And it's not just that there will be four times the workforce, four times the resource burden, four times as many voters. The rapid growth itself will likely transform political and social dynamics within African countries and thus their relationship with the rest of the world”.⁵ This thesis holds an important key to Nigeria’s development. It is a key that provides opportunity for development to all Nigerians. If Nigeria attains true development via open access to knowledge, the spread of development to all of Africa becomes tangible and the journey to African development becomes easier.

1.3 RESEARCH IN CONTEXT

Open access is a broad field, which started off in the journal article arena but has now spread to several other fields. It is therefore important to provide a clear focus for this work by delineating the areas of analysis and discussion. This introductory chapter discussing the tapestry of open access recognises the different fields within the open movement but lays emphasis on open access journal articles, the field that started off the open movement.

1.3.1 Background

We live on the same planet but definitely not in the same world. Global inequality is on the increase and whereas it has been postulated that all men are equal it is however apparent that some are more equal than others.⁶ A world where billions of people live on less than two dollars per day and others live in luxury and waste, a world where some have unlimited access to power supply, good water, good road and quality education, while others live in squalor, in constant absence of power supply, bad roads, no pipe borne water and no access to quality education, information and knowledge.⁷ We live in a digitally divided world with those on the advantaged

⁴ UNdata, *Nigeria*, <https://data.un.org/CountryProfile.aspx?crName=NIGERIA>. See also, Robert Kunzig, *A World With 11 Billion People? New Population Projections Shatter Earlier Estimates: Dueling projections of population growth present different visions of the world's future.* (2014) National Geographic, <http://news.nationalgeographic.com/news/2014/09/140918-population-global-united-nations-2100-boom-africa/>.

⁵ Max Fisher, ‘The Amazing, Surprising, Africa-driven Demographic Future of the Earth, in 9 Charts’ The Washington Post, 16 July 2013.

⁶ See, G. Orwell & M. Bradbury, *Animal Farm* (Penguin Books Limited. 2003) 112. ‘All animals are equal but some animals are more equal than others’. See also the, U.S. Congress, *Declaration of Independence* (1776), http://www.archives.gov/exhibits/charters/declaration_transcript.html. Where it was noted that ‘We hold these truths to be self-evident, that all men are created equal.’

See also, The Constitution of the Federal Republic of Nigeria (1999) which states that ‘And to provide for a Constitution for the purpose of promoting the good government and welfare of all persons in our country, on the principles of freedom, equality and justice...’

⁷ World Bank, *Poverty Overview* (6 April 2015), IBRD-IDA <http://www.worldbank.org/en/topic/poverty/overview>. See also, World Bank, *Poverty & Equity Data*(2015), IBRD-IDA <http://povertydata.worldbank.org/poverty/home/>.

divide being able to maximize the benefits of information communication technology while those on the other divide struggle to make sense of it and are mostly *cut off* as a result of the inhumanity of men and the many societal inequalities.⁸ There are many challenges facing humanity with no current concrete solution.⁹ The challenge of access to knowledge, the closure and locking up of knowledge are some of the fundamental challenges facing humanity today but fortunately these problems can and are being addressed. The open movement (open access, open educational resources, open government or public sector information and other such initiatives) is taking active steps to open what has been hitherto closed.

Open access to Knowledge is the central focus of this thesis and as the open movement is dynamic and has a wide spread, this thesis narrows down its analysis and discussions to three fields, namely; open access to journal articles (Chapter 4), open educational resources (Chapter 5) and public sector information (Chapter 6). These three areas play a vital role in any society and they are of particular interest to Nigeria as they form the bedrock of scientific and academic research, socio-economic and political development.¹⁰ This thesis draws attention to the creative and innovative abilities of Nigerians but also notes that Nigerian authors are facing accessibility, visibility and impact challenges with respect to scholarly works. It also showcases the growth in Nigeria's higher education institutions, particularly her universities and discusses open educational resources as a tool for addressing several challenges to Nigeria's educational system. The thesis discusses amongst other things the entrance of freedom of information into Nigeria's legal system in Chapter 6 where public sector information is discussed. It highlights their similarities and differences and discusses the importance of public sector information in Nigeria. The thesis discusses several strategies the open movement has adopted in addressing challenges of accessing knowledge. These strategies include self-archiving, open access journals, open access mandates, aggressive public enlightenment, lobbying and licensing.

See also, David Pannell, *278-Global Wealth Inequality* (9 February 2015), <http://www.panneldiscussions.net/2015/02/278-global-wealth-inequality/>.

⁸ R. Burns & L. Brander, *Poems of Robert Burns* (Oxford University Press. 1950) 91. "Man's inhumanity to man makes countless thousands mourn!"

⁹ United Nations UN, *The Millennium Development Goals Report 2014* <http://www.un.org/millenniumgoals/2014%20MDG%20report/MDG%202014%20English%20web.pdf>. 3-4. "But more needs to be done to accelerate progress. We need bolder and focused action where significant gaps and disparities exist...Substantial progress has been made in most areas, but much more effort is needed to reach the set target"

¹⁰ Kunle Ola, *Fundamentals of Open Access*, (2014) 36 (2) E.I.P.R 112, 119. "The campaign for free unrestricted access and unrestricted use online has a wide spread. This is not unexpected as its influence in one field quickly spreads over to another field and it continues to grow. The open access movement itself received inspiration from other related movements such as the access to knowledge (A2K) movement and the Free Open Source Software Movement. Open access covers several fields and directly impacts on research, journal articles and literature, publications, public sector information, open education resources, open content licensing, open standards, records and data"

1.4 THE MEANING OF OPEN ACCESS

Open Access (OA) refers to free immediate unrestricted online access to peer-reviewed literature. Open access is not merely putting any material up online, it is not vanity publishing, it does not honour fragrant disregard for the legal system, rather it is a revolution working within legitimate rules against structures that have permitted and enabled a business model which erects and facilitates legal, price and technical restrictions against users. It seeks to allow users' access to knowledge by providing a legal platform to open up what the knowledge distribution system has legally closed up¹¹.

Several definitions have been provided about the term. Suber one of the pioneers in this field provides this definition; "open access (OA) literature is digital, online, free of charge, and free of most copyright and licensing restrictions"¹². To Harnad it is "free, immediate, permanent online access to the full text of research articles for anyone worldwide"¹³. Fitzgerald opines that open access "aims to disseminate knowledge broadly and freely across the internet in a timely fashion."¹⁴ Hubbard says it is "to make the full text of the research article freely available."¹⁵ Willinsky who was one of the first to publish a book on the subject contextualises open access within his constructed "access principle"¹⁶, and sees open access as a tool for extending the frontiers of knowledge through the extension of the circulation of research outputs. A concise definition is found on the Public Library of Science (PLOS) website which defines open access as "unrestricted access and unrestricted reuse."¹⁷ One central theme running through the definitions of open access is the freedom to access, use and reuse information within legally defined frameworks. The formal foundations of open access can be traced back to a number of meetings where the initiative was given formal definition, crafted and shaped into what has become a global initiative today. The term "open access"¹⁸ was first coined at a meeting in

¹¹ Ibid. at, 114.

¹² Peter Suber, *Open Access* (MIT Press. 2012) 4.

¹³ Stevan Harnad, *What is Open Access*, <http://www.eprints.org/openaccess/>.

¹⁴ Brian Fitzgerald, et al., *Oak Law Report-Creating a Legal Framework For Copyright Management Of Open Access Within the Australian Academic and Research Sector* (Report Prepared for the Department of Education and Science and Training, 2006). 79 where he also noted that 'the OA movement has captured worldwide attention and support'

¹⁵ Bill Hubbard, *Transcript of a conversation between Bill Hubbard and Steve Burbolt* <https://radar.brookes.ac.uk/radar/file/77294217-6d7d-04a0-db9a-ef4dba94c6e3/1/RADAR_BillHubbard.pdf.

¹⁶ John Willinsky, *The Access Principle: The Case for Open Access to Research and Scholarship* (The MIT Press 2006) xii. The Access Principle: 'A commitment to the value and quality of research carries with it a responsibility to extend the circulation of research output as far as possible and ideally to all who are interested in it and all who might profit by it'

¹⁷ PLOS, *Open Access*, [http 18 February 2013 www.plos.org/about/open-access](http://www.plos.org/about/open-access).

¹⁸ *Budapest Open Access Initiative* (14 February 2002) www.opensocietyfoundations.org/openaccess/read. 'By "open access" to this literature [peer-reviewed research literature], we mean its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on

Budapest, where the Budapest Open Access Initiative (BOAI) was crafted and signed¹⁹. The Bethesda Statements on Open Access Publishing which was released about a year later on the 20th Of June 2003 is similar in context to that of the Budapest initiative.²⁰ The Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities is similar to Bethesda's definition. The declaration which was signed on the 22nd of October 2003 also defines the term by providing a definition of an open access contribution and the conditions it must satisfy.²¹

The Bethesda and Berlin declarations particularly provide that for a work to be open access, prior consent is required to have been given by the copyright owner permitting users to “copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship...”²² These two documents provide for use and re-use rights thereby providing a wider scope for exploiting the work in comparison with that of the Budapest declaration which provides for only use rights. Whereas, permission to “make and distribute derivatives of works” (re-use rights) was specifically included in the Bethesda and Berlin declarations alongside use rights (reproduction and distribution which cover exploitations such as to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose), the Budapest declaration on the other-hand has no clear provision for re-use rights but basically permits users to reproduce and distribute works (use rights) but do not contain permission to make and distribute derivatives of work (re-use rights).

reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited.’

¹⁹ Mellisa Hagemann, *Ten Years on, Researchers Embrace Open Access*, (20 February 2013) <http://www.opensocietyfoundations.org/voices/ten-years-on-researchers-embrace-open-access>.

²⁰ Peter Suber, *Bethesda Statement on Open Access Publishing*, (2003) www.earlham.edu/~peters/fos/bethesda.htm. “An Open Access Publication is one that meets the following two conditions:

The author(s) and copyright holder(s) grant(s) to all users a free, irrevocable, worldwide, perpetual right of access to, and a license to copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship[2], as well as the right to make small numbers of printed copies for their personal use.

A complete version of the work and all supplemental materials, including a copy of the permission as stated above, in a suitable standard electronic format is deposited immediately upon initial publication in at least one online repository that is supported by an academic institution, scholarly society, government agency, or other well-established organization that seeks to enable open access, unrestricted distribution, interoperability, and long-term archiving (for the biomedical sciences, PubMed Central is such a repository).”

²¹ Max-Planck-Gesellschaft, *Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities*, (2003) http://oa.mpg.de/files/2010/04/berlin_declaration.pdf.

²² See Peter Suber, *Open Access Overview: Focusing on open access to peer-reviewed research articles and their preprints*, (18 February 2003) <http://www.earlham.edu/~peters/fos/overview.htm>. (Peter Suber ed.) See also Peter Suber, *Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities* 18 February 2013 http://oa.mpg.de/files/2010/04/berlin_declaration.pdf.2003.

1.5 BUDAPEST BETHESDA & BERLIN (BBB) DEFINITION

The outcome of the Budapest, Bethesda and Berlin meetings now referred to as the BBB definitions are generally accepted as the standard definitions for open access²³. These definitions are all agreed on the need to spread and extend the reach of knowledge, particularly peer-reviewed literature. The need for such knowledge to be freely available, that is, at no cost to users is a recurring decimal in these definitions. Similarly is that the knowledge be available via the platform of the internet. Some of the definitions use the term online, public internet and others webwide to describe the platform on which knowledge should be made available. The central focus with regards to platform is that information which would be considered open access is such that should be in digital form and available on the internet²⁴.

Not all of the definitions use the same term and address the same issues. Whereas Suber's definition has some peculiarity with regards to open access being free from most copyright and licensing restrictions, Harnad's definition is peculiar for his call that open access be immediate. Willinsky on the other-hand adopts a liberal perspective towards open access and considers every little opportunity that opens up the access gate to knowledge as part and parcel of open access. He explains this in his "Ten Flavors of Open Access"²⁵ which basically shows that the more restrictions that are removed from a work the more open it becomes. The restrictions which the open access movement seek to address were identified in the Budapest declaration as price, technical and legal. These restrictions can be individually or collectively removed²⁶. Where all three restrictions are removed, the access gate is apparently opened the widest. Harnad however opines on the need to maximize the opportunities of open access and notes that removal of price restriction (that is, the cost associated with gaining access to peer-reviewed journal articles via subscription and pay per view fees) alone is actually sufficient to constitute open access.²⁷ In the same vein, Suber notes that removing price restriction alone will provide most users and open access proponents with requisite access to basic peer-reviewed literature.²⁸ Considering the different flavours to open access which opens the access gate wider and wider depending on the

²³ Ibid. See also Peter Suber, *Praising Progress, Preserving Precision* (2 September 2004) SPARC Open Access Newsletter Issue 77 <http://www.earlham.edu/~peters/fos/newsletter/09-02-04.htm#progress>.

²⁴ Charles.W Bailey, 'What Is Open Access', in N Jacobs ed, *Open Access: Key Strategic, Technical and Economic Aspects* (Chandos Publishing Oxford, 2006).

²⁵ Willinsky, The Access Principle above n 16: *The Case for Open Access to Research and Scholarship* 211. 2006. See Appendix A, Table A.1. See also Sha. Li Zhang, 'The Flavors of Open Access' (2007) 23 (30 *OCLC Systems & Services: International digital library perspectives* 229-234, 229.

²⁶ Stevan Harnad, et al., *The Green and Gold Roads to Open Access* Nature Publishing Group http://www.nature.com/nature/focus/accessdebate/21.html?a_aid=3598aabf.

²⁷ Stevan Harnad, *The Green Road to Open Access: A Leveraged Transition* <http://users.ecs.soton.ac.uk/harnad/Temp/greenroad.html>.

²⁸ SUBER, Open Access above n 12, 58-60.

type of rights granted, that is, the quantum of restriction that has been lifted, the need to explain the different levels and clarify grey issues became imperative and hence both Suber and Harnad came up with the terms Libre and Gratis²⁹. Whereas, Gratis Open Access refers to access that is delivered free of charge to users (without price restriction);³⁰ Libre Open Access on the other hand is a combination of access that is free from prices and also free from technical and legal restrictions.³¹ The latter are the restrictions which Suber referred to in his definition when he said “and free of most copyright and licensing restrictions”³²

The BBB definitions appear to have provided the building blocks upon which the discussions on open access definitions have rested. They provide important clarifications as to what exactly is open access, what can be done with content termed open access, the target audience (authors, funders, library, publishers, users, funding agencies, universities, research institutions, International and non-governmental agencies) the mode of implementation, the interface with the law, the specific barriers it seeks to remove as well as the funding options. Identifying funding options coupled with the willingness of several stakeholders to sponsor and see to the success of this initiative has contributed immensely to the success of the open access initiative.³³

Below are some of the fundamentals of open access enunciated from the definitions of open access.

1.6 FUNDAMENTALS OF OA³⁴

It was at the Budapest meeting that the term open access was first coined and defined.³⁵ Apart from defining the term, the meeting provided the framework on which open access still operates

²⁹ Peter Suber, *Green/gold OA and gratis/libre OA* (2008) <http://legacy.earlham.edu/~peters/fos/2008/08/greengold-oa-and-gratislibre-oa.html>.

³⁰ Peter Suber, *Gratis and libre open access*, (8 August 2008) <http://legacy.earlham.edu/~peters/fos/newsletter/08-02-08.htm#gratis-libre>.

³¹ Suber, above n 28.

³² SUBER, Open Access above n 12, 4.

³³ Several funding agencies have contributed to the success of open access and continue to contribute. The Open Society Foundation sponsored and hosted the meeting where the Budapest Open Access Initiative was adopted and signed. See also, Bill & Melinda Gates Foundation, *Bill & Melinda Gates Foundation Open Access Policy*, <http://www.gatesfoundation.org/how-we-work/general-information/open-access-policy>. See also, The William and Flora Hewlett Foundation, *Commitment to Open Licensing*, <http://www.hewlett.org/about-us/values-policies/commitment-open-licensing>. See also, Philanthropy News Digest, *Ford Foundation Announces Open Licensing Policy for Grantees* (2015) <http://philanthropynewsdigest.org/news/ford-foundation-announces-open-licensing-policy-for-grantees>. See also, Creative Commons, *Hewlett Foundation extends CC BY policy to all grantees* (2014), <http://creativecommons.org/tag/the-william-and-flora-hewlett-foundation>. See also, Creative Commons, *Ford Foundation to require CC BY for all grant-funded projects* (2015), <https://creativecommons.org/weblog/entry/44865>. See also, Tate Williams, *Why Big Foundations Ganging up for Open Access is Important*, Inside Philanthropy (2015) <http://www.insidephilanthropy.com/home/2015/2/6/why-big-foundations-ganging-up-for-open-access-is-important.html>.

³⁴ This portion of the thesis is has been published by the author in the European Intellectual Property Journal, (2014) Volume 36, 112-123.

³⁵ Hagemann, above n 19.

and identified certain crucial issues that have shaped the developments and discussions around open access.³⁶ The meeting addressed the need to remove barriers to accessing knowledge and focused on what would enable access to knowledge such as the need to structure effective and proactive management systems for copyright.³⁷ It advocated for a copyright system that will have a default pre-granting of “permission to use”, rather than the current default “prohibition from use”.

It further advocated for the removal of fees which constitute price barriers to access and for the discovery of business models that would ensure payment of publication. In addition to this, it recommended two strategies for the actualization of open access, namely self-archiving (green road) and open-access journals (gold road).³⁸

Several other statements have endorsed the BOAI such as the Bethesda Statement on Open Access Publishing,³⁹ the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities,⁴⁰ and the Declaration on Access to Research Data from Public Funding.⁴¹ Fundamental to all of these initiatives and statements are some of the issues mentioned here-under:

1.6.1 An Old Tradition

The academic community is knowledge based. It builds and feeds on knowledge and thrives through the expansion of knowledge. It has a practice of publishing its articles for free and provides editorial and refereeing services to publishers also for free⁴². The structure for promotion, advancement and academic recognition is directly connected to the number and quality of papers published and has promoted a “publish or perish culture”⁴³. The BOAI took

³⁶ Budapest Open Access Initiative, *Ten years on from the Budapest Open Access Initiative: Setting the default to open* (12 September 2012) <http://www.opensocietyfoundations.org/openaccess/boai-10-recommendations>.

³⁷ See SUBER, Open Access above n 12, 9. Where he said "OA is made possible by the Internet and copyright-holder consent"

³⁸ *Budapest Open Access Initiative*, (2012) www.opensocietyfoundations.org/openaccess/read. See generally, Cutler Kim-Mia, *Elsevier's Research Takedown Notices Fan Out To Startups, Harvard, Individual Academics* (2013), <http://techcrunch.com/2013/12/19/elsevier/>.

³⁹ Peterson Andrea, *How one publisher is stopping academics from sharing their research* (2013), <http://www.washingtonpost.com/blogs/the-switch/wp/2013/12/19/how-one-publisher-is-stopping-academics-from-sharing-their-research/>.

⁴⁰ Max-Planck-Gesellschaft, above n 21 *Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities* (2003) http://oa.mpg.de/files/2010/04/berlin_declaration.pdf.

⁴¹ OECD, *Declaration on Access to Research Data from Public Funding* (2004), <http://www.oecd.org/science/sci-tech/sciencetechnologyandinnovationforthe21stcenturymeetingoftheoecdcommitteeofscientificandtechnologicalpolicyatministeriallevel29-30january2004-finalcommuniqu.htm> also <http://www.oecd.org/science/scienceandtechnologypolicy/38500813.pdf>.

⁴² See SUBER, Open Access above n 12, 17. Where he noted that ‘In general, scholarly journals don't pay editors or referees...’

⁴³ Phil Davis, *Publish-or-Perish Culture Promotes Scientific Narcissism*, (7 May 2012) The Scholarly Kitchen <http://scholarlykitchen.sspnet.org/2012/05/07/publish-or-perish-culture-promotes-scientific-narcissism/>.

cognisance of this old tradition, that is, the willingness of academics and researchers to publish their works for free and was able to use it as one of the building blocks of the Open Access Movement. The OA movement reasons that if academics and researchers are willing to release their work to the public for free (publishing for free) then the public should be allowed to access these works for free.

1.6.2 A New Technology

The switch from the Advanced Research Project Agency Network (ARPANET) to Transmission Control Protocol/Internet Protocol (TCP/IP) marked the birth of the internet and the world has not been the same ever since. The enabling ability of the internet to grant access to, as well as distribute content is unprecedented. This enabling ability of the internet constitutes probably the most important building block in the Open Access structure. The internet has been described as a

“global system of interconnected [computer networks](#) that use the standard [Internet protocol suite](#) (often called TCP/IP, although not all applications use TCP) to serve billions of users worldwide. It is a network of networks that consists of millions of private, public, academic, business, and government networks, of local to global scope, that are linked by a broad array of electronic, wireless and optical networking technologies. The Internet carries an extensive range of information resources and services, such as the inter-linked [hypertext](#) documents of the [World Wide Web](#) (WWW) and the [infrastructure](#) to support email”⁴⁴

1.6.3 Public Good

The objectives of the open access movement is larger than any individual’s interest and seeks to serve the common good by providing platforms capable of enabling access to knowledge. The merger of the old tradition with the enabling ability of the internet would have the potential of granting access to research output as well as instantaneous world-wide electronic distribution of such outputs and this will no doubt result in the good of all of mankind.⁴⁵

1.6.4 Quality

The OA movement is concerned about the quality of published information and is thus not advocating for just any kind of literature, it has made it clear that the information it would like to put out for free, without permission and price restrictions are literatures that have been peer-

⁴⁴ Wikipedia, *Internet*, (15th January 2014) <http://en.wikipedia.org/wiki/Internet>

⁴⁵ Peter Suber, *Knowledge as a Public Good*, (2009), SPARC <http://www.sparc.arl.org/resources/articles/knowledge#sthash.R1nBSIQF.dpuf>.

reviewed.⁴⁶ The BOAI puts it this way “Open access to peer-reviewed journal literature is the goal.”⁴⁷

1.6.5 Delivery

Peer-reviewed literature in the closed access model is delivered through a subscription/fee paying model. On the other hand, it is the objective of the open access movement that peer-reviewed articles and literature would be delivered free and without any access restrictions to the general public.

1.6.6 Barriers

The three barriers identified in the BOAI are Financial, Legal and Technical.

1. Financial barriers include price barriers in the form of subscription fees.
2. Legal barriers refer to intellectual property rights that grant exclusive rights to owners, restrict access to works and require intending users to seek and obtain permission to use such works.
3. Technical barriers refer to technologies deployed by right-owners to restrict and control access to copyrighted digital contents. They are referred to as Technological Protection Measures (TPM) and Digital Rights Management (DRM).

1.6.7 Focus

The Budapest meeting identified five classes of people as beneficiaries of the free and unrestricted access to peer-reviewed literatures. They include scientists, scholars, teachers, students and other curious minds. The inclusion of the category ‘other curious minds’ must have been intended to capture any group not specifically mentioned as well as the general public.

1.6.8 Potential Benefit

Five potential benefits of a system where peer-reviewed literature is delivered for free and without any form of access barrier include:

- i. Accelerate research
- ii. Enrich education
- iii. Share the learning of the rich with the poor and the poor with the rich
- iv. Make the literature as useful as it can be

⁴⁶ Stevan Harnad, ‘Open Access – Stevan Harnad Im Interview’ (2012) 65 Mitteilungen Der Vöb.

⁴⁷ Cutler Kim-Mia, *Elsevier’s Research Takedown Notices Fan Out To Startups, Harvard, Individual Academics* (2013), <http://techcrunch.com/2013/12/19/elsevier/>.

- v. Lay the foundation for uniting humanity in a common intellectual conversation and quest for knowledge

1.6.9 Area of Operation

One important point to note is that the terrain for the free and unrestricted access to these peer-reviewed literatures is only online. The BOAI only dealt with online availability and online accessibility on the public internet.

1.6.10 Exploitation

The BOAI interestingly mentions in detail what it expects users to be able to do with works that are within the Open Access regime and it is clear that the BOAI seeks to open up the access door as wide as possible and at the same time allay any fears regarding infractions of the law by potential users. The types of use noted include the following:

- i. reading,
- ii. downloading,
- iii. copying,
- iv. distributing,
- v. printing,
- vi. searching,
- vii. linking to the full text,
- viii. crawling for indexing,
- ix. passing the information as data to software,
- x. or use for any other lawful purpose.

1.6.11 Nexus to IP Rights

This movement is not anti-copyright or anti-intellectual property.⁴⁸ It actually builds on IP rights to achieve its objectives.⁴⁹ For instance the open access movement, in reliance on the right of an author which is traditionally to prohibit (negative by default) exploitation of a work without permission, turns around its traditional default position and grants permission in advance to prospective users. In doing this, copyright becomes the building block upon which permission is granted but this time, permission is not prohibitively used rather it is used for empowerment by

⁴⁸ See Lawrence Lessig, 'The Vision for the Creative Commons: What are We and Where are We Headed? Free Culture'. In Brian Fitzgerald, (Ed) *Open Content Licensing: Cultivating the Creative Commons*, (Sydney University Press, 2007) 42. Where he said 'I want to be clear about something, intellectual property is good. I am in favour of it.'

⁴⁹ Ibid 45. Where he said "We want to use IP to enable free culture." See also Jeremy De Beer et al, *Innovation & Intellectual Property Collaborative Dynamics in Africa*. (UCT Press, 2014) 7. Where it was noted that "It seems clear that IP does, to some extent, have a positive role to play in incentivising innovation and creativity."

advanced authorization. Hence, the restrictions placed by copyright are no longer present, except for the moral rights of the copyright owner to be appropriately acknowledged as the author and to exercise control over the integrity of his or her work. This authorization is made possible by the rules of the law of contract and open licensing, and is explored further in chapter two. (See 2.5.5 and 2.5.6).

1.6.12 Who Pays the Bills?

If subscription fees are no longer paid by the users, who then funds production? After all, publishing, including facilitating peer review and editing costs money, and since it is a business concern issues as to how to cover the costs must be considered. The BOAI made some suggestions on how these costs could be defrayed and opens the door for more ideas. It stated that:

“While the peer-reviewed journal literature should be accessible online without cost to readers, it is not costless to produce. However, experiments show that the overall costs of providing open access to this literature are far lower than the costs of traditional forms of dissemination. With such an opportunity to save money and expand the scope of dissemination at the same time, there is today a strong incentive for *professional associations, universities, libraries, foundations, and others*⁵⁰ to embrace open access as a means of advancing their missions. Achieving open access will require new cost recovery models and financing mechanisms, but the significantly lower overall cost of dissemination is a reason to be confident that the goal is attainable and not merely preferable or utopian.”⁵¹

(Emphasis added) Article Processing Charges (APC) have been introduced as a means of paying the bills but just like the BOAI suggested these fees are often (but not all the time) covered by funding agencies, universities and professional associations⁵².

1.7 BARRIERS TO OA

1.7.1 Legal

The OA movement takes cognisance of the fact that access to the results of either public or private research are often inaccessible due to protections on such materials as stipulated by intellectual property laws; for example, copyright laws which prohibit unauthorised persons from

⁵⁰ Emphasis mine, for the category of those suggested to be able to cover the cost.

⁵¹See, Read Budapest Open Access Initiative, (15th January 2014) <http://www.opensocietyfoundations.org/openaccess/read>

⁵² David Solomon & Bo-Christer Bjork, ‘A Study of Open Access Journals Using Article Processing Charges’, (2012) 63 *The Journal of the American Society for Information Science and Technology* 1485.

exploiting the output of research without having first obtained permission.⁵³ In essence only persons who have obtained permission from the copyright owner or who are covered by some form of exceptions or limitations to copyright may exploit research outputs.⁵⁴

1.7.2 Price

Permission is not the only barrier to gaining access to the results of research. The price barrier⁵⁵ is another restriction referring to costs such as licensing fees, fees for pay-per-view as well as subscription fees payable to journal publishers who are responsible for publishing,⁵⁶ warehousing, marketing and distributing the results of research. In recent times it has become impracticable for most institutions to pay the subscription fees for all the journals they would wish to access. This frustrating view was recently expressed by Harvard.⁵⁷ The high cost of paying the journal fees is an example of the price restriction; it means that those who are unable to pay are unable to access the needed information.

The involvement of government and funding organisations in research all over the world is such that research outputs can to a large extent be considered the product of tax payer's money (at least to the extent that it was funded by the government) and it is only reasonable that if tax payers have funded research⁵⁸ outputs of such research should be freely available to tax payers without legal or price restrictions.⁵⁹

⁵³ For example Section 6 of the Nigerian Copyright Act provides that works protected under copyright are under the exclusive control of the copyright holder. See also Caralee Adams, *Open Access in Latin America: Embraced as key to visibility of research* (2013), <http://www.sparc.arl.org/news/open-access-latin-america-embraced-key-visibility-research-outputs>.

⁵⁴ Olukunle Ola, *Copyright Collective Administration In Nigeria Lessons For Africa* (Springer, 2013) 4.

⁵⁵ Stevan Harnad, et al., 'The Access/Impact Problem and the Green and Gold Roads to Open Access' [2004] *Serial Review* 310 .

⁵⁶ WIPO, *STRAP and CLAMP – Nigeria Copyright Commission in Action*, (September 2008) WIPO Magazine http://www.wipo.int/wipo_magazine/en/2008/05/article_0009.html.

⁵⁷ See, Justin Norrie, *Harvard Decries The High Cost of Journal Subscription*, (24 April 2012) The Conversation, <http://theconversation.edu.au/harvard-journal-subscription-fees-are-prohibitive-6659>. Where it was reported that "harvard library says it can no longer afford the vast cost of academic journal subscriptions.. Subscription prices for online content from two publishers have increased by 145% over the past six years, far in excess of not only the consumer price index but also the higher education and the library price indices"

⁵⁸ See Carolyn Deere, *The TRIPS Agreement and the Global Politics of Intellectual Property Reform in Developing Countries* (Oxford University Press. 2009) 3. Where reference was made to the worldwide movement led by organisations such as the Organisation for Economic Cooperation and Development (OECD) to allow citizens access the outputs they have funded.

⁵⁹ See MIT, *Working with the MIT faculty Open Access Policy* <http://libraries.mit.edu/scholarly/mit-open-access/open-access-at-mit/mit-open-access-policy/working-with-the-mit-faculty-open-access-policy/>.

1.7.3 Technical

The advent of digital technology and online access to information raised concerns amongst right owners as to ensuring that due protection is given to their copyrightable works.⁶⁰ To this end, the World Intellectual Property Organisation (WIPO) passed the WIPO Copyright Treaty⁶¹ and the WIPO Performance and Phonogram Treaty⁶² both referred to as the Internet Treaties⁶³ which provide a legal regime for technological protection measures and digital rights management on works in which copyright subsists. Both treaties place an obligation on contracting States to provide adequate legal protection and effective legal remedies against circumvention of effective technological measures and against anyone knowingly doing, inducing, enabling, facilitating or concealing the removal or alteration of any electronic rights management in information without due authorization.⁶⁴ The open access movement advocates that for free unrestricted online access to be achieved technological lock ups via the deployment of technological protection measures and digital rights management need to be removed.⁶⁵

1.8 MAJOR STAKEHOLDERS

The implementation of Open Access involves multiple strategies and several players⁶⁶. These players include universities⁶⁷, research institutions⁶⁸, government⁶⁹, funding agencies, libraries, learned societies and professional agencies. Five broad groups could however be considered directly involved in all open access publications namely;⁷⁰ Authors who generate content such as literary works, Funders/Employers, who provide funding for carrying out research, for example

⁶⁰ David Fewer, *The genie in the information bottle* Index (2005) On Censorship <http://www.eurozine.com/articles/2005-10-24-fewer-en.html>.

⁶¹ WIPO Copyright Treaty (WCT), adopted in Geneva 20 December 1996, http://www.wipo.int/treaties/en/ip/wct/pdf/trtdocs_wo033.pdf WCT.

⁶² WIPO Performances Phonograms Treaty (WPPT), adopted in Geneva on 20 December 1996, http://www.wipo.int/treaties/en/ip/wppt/pdf/trtdocs_wo034.pdf WPPT.

⁶³ Nigerian Copyright Commission NCC, *Copyright Notification Scheme* (2005) <http://www.copyright.gov.ng/index.php/regulatory-schemes/copyright-notification>.

⁶⁴ WCT above n 61. See Articles 11 and 12. See also WPPT above n 62. Articles 18 and 19.

⁶⁵ Lucie Guilbault, 'Owning the Right to Open Up Access to Scientific Publications', in Lucie Guilbault & Christina Angelopoulos eds., *Open Content Licensing From Theory to Practice* (Amsterdam University Press, 2011) 158-159.

⁶⁶ See Sha. Li Zhang, 'The Flavors of Open Access' (2007) 23 (30) *OCLC Systems & Services: International digital library perspectives* 229-234, 231. Where it was mentioned that "there are many players in the open access movement. Some are advocates, some are spectators, and others take quite opposite stands"

⁶⁷ Most universities have put in place a repository for the deposit of final version of articles. The Queensland University of Technology QUT and University of South Africa's (UNISA) repositories are examples.

⁶⁸ The NIH in America and WELLCOME TRUST in the UK are examples of players in the research industry.

⁶⁹ Many government bodies are adopting open access and have opened up the results of publicly funded research to the public on several platforms inclusive of the Creative Commons licensing system. See http://wiki.creativecommons.org/Government_use_of_Creative_Commons informing of the adoption of CC licences by the Australian Bureau of Statistic for its census. Also mentioned are AusGOAL and the adoption by the Netherland government of a CCO as the default policy for the nation's single government website "Rijksoverheid".

⁷⁰ See Knowledge Unlatched, *A new Model For Academic Publishing*, <http://www.knowledgeunlatched.org/>. Where four of the five groups was mentioned.

NIH, ARC & RUCK. Publishers who publish works of authors and markets them, Libraries who are the major clients of the publishers and serve the multi-purpose of providing storage of literary works as well as access to literary work (usually to a select audience) and lastly, the User public.⁷¹ The strategies will now be discussed.

1.9 STRATEGIES TO ACHIEVING OA

Two major strategies were recommended by the BBB statements, namely; Self Archiving and Open Access Journals. Other strategies such as contracts, licensing and open access mandates are being explored in the implementation of open access and the movement encourages the discovery of new strategies for the implementation of open access.⁷² The two strategies suggested in the BBB definitions are as follows:

1.9.1 Self-Archiving (Green Road)

This is a system that enables authors to deposit their refereed journal articles in open electronic archives such as personal websites, blogs and repositories.⁷³ This strategy also referred to as Green Open Access could be implemented by the deposit of an e-print in an institutional repository. Electronic prints (e-prints) are made up of pre and post prints. Whereas the former refer to author documents that are yet to be peer-reviewed, the latter refer to those that have been peer-reviewed and may also be called publishers' version. The University of South Africa (UNISA)⁷⁴ and that of the Queensland University of Technology are examples of repositories.⁷⁵ The Directory of Open Access Repositories (DOAJ)⁷⁶, the Register of Open Access Repositories (ROAR)⁷⁷ and the Registry of Open Access Repositories Mandate Archiving Policies (ROARMAP)⁷⁸ hold important information about repositories. Whereas the DOAJ and ROAR

⁷¹ See Esther Hoorn & Maurits Graaf, 'Copyright Issues in Open Access Research Journals, The Authors' Perspective', (2006) 12 D-Lib Magazine. Also available online at <http://www.dlib.org/dlib/february06/vandergraaf/02vandergraaf.html>. Where the Open Access movement was said to have 'stimulated discussions on copyright in the scholarly communication system and noted that stakeholders in that system include publishers, academic institutions, libraries and academics authors.'

⁷² Budapest Open Access Initiative, *See Ten Years on from the Budapest Open Access Initiative: Setting the default to open* <http://www.opensocietyfoundations.org/openaccess/boai-10-recommendations>

⁷³ Steven Harnad, *What is Open Access* <http://www.eprints.org/openaccess/>. See also Steven Harnad, *Open Access Archivangelism* <http://openaccess.eprints.org/>

⁷⁴ UNISA, *Unisa Institutional Repository*, <http://uir.unisa.ac.za/>.

⁷⁵ QUT has both an eprint repository <http://eprints.qut.edu.au/> and a digital repository <http://www.digitalrepository.qut.edu.au/>. The eprint repository warehouses and showcase some of the research output of QUT staff and postgraduate students and the digital repository makes available the current QUT research repositories and digitized collections.

⁷⁶ Directory of Open Access Journals (DOAJ), *Open Access Journal*, <http://www.doaj.org/doi?func=loadTemplate&template=faq&uiLanguage=en>.

⁷⁷ ROAR, *Registry of Open Access Repositories* http://roar.eprints.org/cgi/roar_search/advanced?location_country=&software=&type=institutional&order=-recordcount%2F-date.

⁷⁸ ROARMAP, *Registry of Open Access Repositories Mandatory Archiving Policies*, <http://roarmap.eprints.org/>.

provide a comprehensive list of most of the repositories, the latter provide information on institutions that have adopted policies mandating deposits in repositories. Both DOAJ and ROAR currently lists on their databases over 2000 registered institutional repositories. The SHERPA ROMEO website provides a list of publishers that support green open access.⁷⁹

1.9.1.1 Origin of Self-Archiving

The origin of self-archiving has been traced to the field of computer sciences where researchers developed the practice of depositing their research output in ftp archives since the early 1980's⁸⁰. This practice was for purposes of establishing priority, ownership, expansion of knowledge as well as to receive constructive criticism and suggestions which could be used in revising the work before it was finalized and sent for publication with one of the Journals. The practice was that prior to the documents undergoing peer-review, the document would be sent out to colleagues in print form. However, with the advent of the digital age and the Internet, sharing moved online. In the field of physics, the practice of sharing research outputs was also prevalent. The era of the Internet saw sharing within this field move online and lead to the establishment in 1991 of an electronic pre-print archive which was called ArXiv⁸¹. The archive which is hosted by Cornell University is still fully operational⁸².

1.9.1.2 Rationale of Self-Archiving

Prior to the open access movement, some publisher's responding to calls from the United Nation and the World Health Organisation as well as a number of other International Organisations provided platforms through which peer-reviewed literature would be made accessible on limited basis to certain under developed and developing countries based on the world bank's indicators for poor countries. The projects HINARI,⁸³ AGORA⁸⁴ and INASP⁸⁵ were all commendable when initiated but as implementation progressed, the challenges became apparent. Although the initiatives were noble, they were highly restricted in terms of content, in that only specific literatures within specific fields, particularly the scientific fields were made

⁷⁹ ROMEO SHERPA, *Publisher copyright policies & self-archiving*, <http://www.sherpa.ac.uk/romeo/PDFandIR.html>.

⁸⁰ Stevan Harnad, 'The Open Challenge: A Brief History. Public Service Review: European Science & Technology', [2010] *Public Service Review: European Science & Technology*. See also, Alma Swan & Sheridan Brown, *Open Access Self-Archiving: An Author Study* (Key Perspective Limited. 2005) 1. See the Introduction where Alma noted that 'the practice of self-archiving has its roots in the field of computer sciences'

⁸¹ See the report by Leslie Chan, et al., *Open Access and Development: Journals and Beyond* (Institute of Development Studies [IDS], 2012) 16. See where it was noted that "The ArXiv electronic archive of self-archived preprints was founded in 1991"

⁸² Cornell University Library, *arXiv.org*, <http://arxiv.org/>.

⁸³ WHO, *About HINARI* (2014) <http://www.who.int/hinari/about/en/>.

⁸⁴ Access to Global Online Research In Agriculture, *About Agora* (2014), <http://www.aginternetwork.org/en/>.

⁸⁵ INASP, *INASP Annual Review* (2012-13), http://www.inasp.info/uploads/filer_public/2013/10/24/2012-2013_annual_review.pdf.

available. Use of the literatures were geographically confined to the location where the computers were located. It was also limited in terms of the number of people who could use it simultaneously.⁸⁶ There was therefore the need to expand the access gate and self-archiving appeared to provide the needed widening. Self-archiving of the e-print of a peer-review literature provides the user with access to information which before now was inaccessible⁸⁷. The responsibility of putting this information out no more lies in the hands of a third party, the publisher, but now rests on the author who is anxious to maximize the potentials in his work by getting it cited and for it to achieve strong impact factors⁸⁸. Self-archiving does two major things, it removes the major obstacle which users are confronted with and that is the problem of price and once this is resolved there is the freedom to access requisite literature and this resolves the second problem, an access/impact problem. This problem is resolved in favour of the author, because with access comes the opportunity for willing minds to read and cite the work and impact is therefore made possible⁸⁹. Putting it in a succinct form, no access, no reading, no reading no impact. The platforms of Self-archiving afford users' free access to literature and enables impact. This important platform coupled with the absence of the need to negotiate with publishers form important rationales for self-archiving.⁹⁰

1.9.1.3 Self-Archiving Strategies

Self-archiving is currently implemented in either of four ways namely; personal websites, disciplinary archives, institutional-unit archives or institutional repositories.⁹¹

1.9.1.3.1 Personal Website

Individuals are able to set up personal webpages where they provide information about themselves and from where they relate to the world as they wish. Such sites often contain personalised information about the individuals who set them up. One of such information is usually a list of publications and a link to the full documents of such publication. Several authors

⁸⁶ Willinsky, above n 16.

⁸⁷ Stevan Harnad, *Gold Open Access Publishing Must Not Be Allowed to Retard the Progress of Green Open Access Self-Archiving* <http://eprints.soton.ac.uk/271818/1/logospaper.pdf>.

⁸⁸ Peter Suber, *Praising Progress, Preserving Precision* (2 September 2004) SPARC Open Access Newsletter Issue 77 <http://www.earlham.edu/~peters/fos/newsletter/09-02-04.htm#progress>.

⁸⁹ Stevan Harnad, et al., *The Access/Impact Problem and the Green and Gold Roads to Open Access*, 30 Serial Review (2004).

⁹⁰ See generally, Tim Brody, et al., 'Incentivizing the Open Access Research Web. Publication-Archiving, Data Archiving and Scientometrics', (2007) 3 CTWatch Quarterly 42.

See also, Alma Swan & Sheridan Brown, *Open Access Self-Archiving: An Author Study* (Key Perspective Limited. 2005).

⁹¹ Bailey, above n 24.

now make their works available via the platform of their personal websites. See for example the personal webpage of Peter Yu.⁹²

1.9.1.3.2 Specialised or Disciplinary Archive

Particular disciplines have cultivated the practice of sharing research output with one another even prior to the digital and online age. Experts in the field of Computer Science and Physics are particularly known for such practices. Authors within these disciplines have an archive where they deposit their research outputs. ArXiv was the first electronic archive to be set with a focus on the field of physics⁹³. It has extended to most of the physical sciences today and now includes fields like, mathematics, astronomy, computer sciences and quantitative biology. Other examples of such archives are the Archaeological Data Services⁹⁴ and the Analytical Sciences Digital Library (ASDL)⁹⁵

1.9.1.3.3 Departmental or Unit Repository

These are departmental, unit or school specific archives dedicated to hosting eprints of members only. This type of repositories are often not that large as they majorly host the deposits made by members of a specific unit, department or school within an institution. See for example the repository hosted by the Duke Law School⁹⁶ and that hosted by the Queensland Department of Agriculture, Fishery and Forestry⁹⁷.

1.9.1.3.4 Institutional Repository

This strategy is similar to the departmental or unit repository but is different in the sense that an institutional repositories refer to repositories set up by institutions where all research outputs in the institution is deposited. It is usually larger in capacity than the one run by a department, unit or school. These repositories operate as one stop shops for archiving the output of research and other similar information within such institutions. Most universities today have institutional repositories and that of the Queensland University of Technology (QUT)⁹⁸ is an example, so is that of the Covenant University in Nigeria⁹⁹.

⁹² See for example the home page of Peter K Yu, *Peter Yu*, (2014) <http://www.peteryu.com/publications.htm>. Where a list of all his publications are listed and made available.

⁹³ Cornell University Library, arXiv.org

⁹⁴ ADS, *Archaeology Data Service*, available <http://archaeologydataservice.ac.uk/>.

⁹⁵ ASDL, *Analytical Sciences Digital Library (ASDL)*, <http://home.asdlib.org/>.

⁹⁶ Duke Law, *Duke Law Scholarship Repositories*, <http://scholarship.law.duke.edu/>.

⁹⁷ E Research Archive eRA, *Queensland Department Of Agriculture, Fisheries And Forestry Archive Of Scientific And Research Publications*, <http://www2.dpi.qld.gov.au/extra/era/index.html>.

⁹⁸ Queensland University of Technology, *QUT ePrints*, <http://eprints.qut.edu.au/>.

⁹⁹ Covenant University, *Covenant University Repository*, <http://eprints.covenantuniversity.edu.ng/>.

The four strategies to self-archiving highlighted above are all aimed at enabling access to knowledge. There are other initiatives that support access to knowledge from a policy framework perspective [**Open Access Mandates**] as well as by the creation of platforms for easy detection of resources [**Open Archive Initiatives**].

1.9.1.4 Open Archive Initiative

This is an initiative that ensures easy location of resources. It was set up to ensure that despite the large numbers of repositories any one conducting a search for information that should be in a repository would be able to harvest, that is, extract such information from any repository. The OAIster database is an example of a site powered by the open archive initiative providing resources from multiple repositories that can be easily harvested.¹⁰⁰ This is achieved by the development and promotion of standardized formats to enable interoperability and seamless searching which in turn would enhance dissemination and sharing of information¹⁰¹. This initiative achieves centralization as it enables a single search via a database to run through all repositories that are compliant with the Open Archive Initiative and therefore high numbers of repositories cannot constitute a challenge to those seeking information thanks to the interoperable nature of repositories enabled by the open archive initiative.¹⁰²

1.9.1.5 Open Access Mandate

These are policies adopted by institutions (employers, funding agencies, government etc.), to ensure the output of academic scholarship inclusive of peer-reviewed journal publications, research findings, conference papers, theses, dissertations and institutional information are made open access by self-archiving such documents in a freely accessible central or institutional repository.¹⁰³ Prior to the issuance of mandates it was observed that authors were not depositing their works.¹⁰⁴ This may have been due to a general lackadaisical attitude on the part of authors

¹⁰⁰ See, Online Computer Library Centre (OCLC), *OAIster* (2015), <http://www.oclc.org/oaister.en.html?urlm=168646>. OAIster is built upon the Archive Initiative Protocol for Metadata Harvesting (OAI-PMH) "Today, OAIster includes more than 30 million records representing digital resources from more than 1,500 contributors." See also, MOAI Server, *MOAI, an Open Access Server Platform for Institutional Repositories*, <http://infrae.com/products/moai>.

¹⁰¹ Open Archives, *Open Archive Initiative*, <http://www.openarchives.org/>.

¹⁰² See, Open Archives, *Open Archives Initiative Protocol for Metadata Harvesting*, <https://www.openarchives.org/pmh/tools/tools.php>. This site has a list of sites that are powered by the open archive initiative (OAI).

¹⁰³ See Stevan Harnad et al, 'The Access/Impact Problem and the Green and Gold Roads to Open Access' 2004 *Serial Review* 30 (4) 310-314. Where it was noted that to reach 100% OA, self-archiving needs to be mandated by researchers' employers and funders, as the United Kingdom and the United States recently recommended, and universities need to implement that mandate.

¹⁰⁴ Tom G Cochrane & Paula A Callan, 'Making a Difference: Implementing the eprints mandate at QUT' (2007) 23(3) *International Digital Library Perspectives* 262-268.

or the age long practice of assigning all author rights to publisher.¹⁰⁵ It has been discovered that open access via self-archiving help authors achieve accessibility, visibility and impact on their work but breaking the age old practice of turning over the entire copyright to the publisher now stands as the challenge¹⁰⁶. This is where open access mandates play a key role in that they are able to swing the negotiating pendulum in favour of authors due to institutional influence.

1.9.1.6 How Open Access Mandate works

These open access mandates make open access a requirement for researchers and people under the charge of a mandating institution thus placing on authors' an obligation to make the output of their research available via the platform of self-archiving. It also places authors in a position of strength to bargain with publishers for the right to self-archive the output of their research and thus provide open access to such journal articles.¹⁰⁷ It also places a responsibility on authors who would ordinarily not have bothered, to ensure that their works are deposited in an institutional repository.¹⁰⁸ A good example is the National Institutes of Health (NIH) in the United States of America, which has made it mandatory that the output of all funded research be deposited in its institutional repository, PubMed.¹⁰⁹ Open access self-archiving has been mandated by over 200 universities,¹¹⁰ including Harvard University,¹¹¹ Queensland University of Technology (QUT),¹¹² Massachusetts Institute of Technology (MIT),¹¹³ University College of London,¹¹⁴ research organisations in the United States (National Institutes of Health),¹¹⁵ United Kingdom (RCUK)¹¹⁶ and Europe (European Research Council (ERC))¹¹⁷ the Australian Research Council (ARC)¹¹⁸

¹⁰⁵ Swan & Brown, *Open Access Self-Archiving: An Author Study* (Key Perspective Limited. 2005).

See also, Bailey, What is Open Access. 2006. See also, Harnad, The Green Road to Open Access: A Leveraged Transition. 2007.

¹⁰⁶ Harnad, Mitteilungen der VÖB, (2012). See also, Suber, Open Access Overview: Focusing on open access to peer-reviewed research articles and their preprints <http://www.earlham.edu/~peters/fos/overview.htm>.

¹⁰⁷ The Conversation, *Princeton goes open access to stop staff handing all copyright to journals – unless waiver granted*, <http://theconversation.edu.au/princeton-goes-open-access-to-stop-staff-handing-all-copyright-to-journals-unless-waiver-granted-3596>

¹⁰⁸ See Swan Alma, (2005) *Open access self-archiving: An Introduction* <http://eprints.soton.ac.uk/261006/1/jiscsum.pdf>

¹⁰⁹ NIH, *NIH Public Access Policy*, <http://publicaccess.nih.gov/>.

¹¹⁰ See, ROARMAP, above n 78.

¹¹¹ See Harvard University, *OA Self-Archiving Policy: Harvard University: Faculty of Arts and Sciences* <http://www.eprints.org/openaccess/policysignup/fullinfo.php?inst=Harvard%20University%3A%20Faculty%20of%20Arts%20and%20Sciences>

¹¹² See QUT, *QUT ePrints*, http://www.mopp.qut.edu.au/F/F_01_03.jsp

¹¹³ See MIT, Massachusetts Institute of Technology, <http://ocw.mit.edu/about/>.

¹¹⁴ See OA Self-Archiving: University College London (UCL), <http://www.eprints.org/openaccess/policysignup/fullinfo.php?inst=University%20College%20London%20%28UCL%29>

¹¹⁵ NIH, NIH Public Access Policy, above n 109

¹¹⁶ RCUK, *RCUK Policy on Open Access*, <http://www.rcuk.ac.uk/research/Pages/outputs.aspx>.

¹¹⁷ Open-access mandate, http://en.wikipedia.org/wiki/Open-access_mandate

¹¹⁸ ARC, *ARC Open Access Policy*, http://www.arc.gov.au/applicants/open_access.htm. The ARC has introduced a new open access policy for ARC funded research which takes effect from 1 January 2013. According to this new

the World Bank¹¹⁹ and the major global funding organisations.¹²⁰ A comprehensive list of registered repositories can be found on the website of the Registry of Open Access Repositories Mandatory Archiving Policies (ROARMAP).¹²¹

1.9.2 The Gold Road

The other road to achieving open access is the gold road; open access journal-publishing. The Directory of Open Access Journals defines open access journals as journals that use a funding model that does not charge readers or their institutions for access.¹²² This new model of publishing, provides a free platform to the general public read and re-use peer-reviewed literature.¹²³ It however charges an Article Processing Charge (APC) to cover the publication cost.¹²⁴ These are scholarly journals readily available online to the public without “financial, legal or technological barriers other than those inseparable from gaining access to the internet itself”¹²⁵ Open access journals are not free to produce but are free to access. Users are therefore not required to make any form of payment to be able to access such materials. In addition, a number of journals allow for re-use rights. The scope of re-use is often made known by means of the application of a licence on the work¹²⁶. Examples of OA journals are, PLoS¹²⁷, BioMed Central¹²⁸, The New Journal of Physics¹²⁹ and Murdoch University Law Review.¹³⁰ The paths to open access are not all together straightforward. Several approaches have been adopted to provide free unrestricted access to the output of scholarly research. Some publishers maintain the traditional journal system and at the same time make particular articles available online subject to payment of a fee by the author or the authors sponsor (Hybrid Open access).¹³¹ An example is the Thomas

policy the ARC requires that any publications arising from an ARC supported research project must be deposited into an open access institutional repository within a twelve (12) month period from the date of publication.

¹¹⁹ The World Bank, *World Bank Announces Open Access Policy for Research and Knowledge, Launches Open Knowledge Repository* (2012), <http://www.worldbank.org/en/news/press-release/2012/04/10/world-bank-announces-open-access-policy-for-research-and-knowledge-launches-open-knowledge-repository>.

¹²⁰ Bill & Melinda Gates Foundation, *Bill & Melinda Gates Foundation Open Access Policy*. See also, Digest, Ford Foundation Announces Open Licensing Policy for Grantees. 2015. See also, Foundation, *Commitment to Open Licensing*.

¹²¹ See ROARMAP, above n 78.

¹²² (DOAJ), above n 76.

¹²³ Quin Sarah, *Open Access by IOP Publishing* (2013), http://australe.upmc.fr/access/content/group/fcMED_infoScient/seminaire_2012/UPMC_IOP_2012_11_anglais.pdf.

¹²⁴ JISC, *Report on the JISC Collections Workshop: Open Access Fees and the Hybrid Journal* (2011).

¹²⁵ Suber, *Open Access Overview: Focusing on open access to peer-reviewed research articles and their preprints*, <http://www.earlham.edu/~peters/fos/overview.htm>.

¹²⁶ (CC) Creative Commons, *About the Licenses*, <http://creativecommons.org/licenses/>.

¹²⁷ PLoS, *PLOS ONE is a Peer-Reviewed, Open Access Journal*, PLOS ONE.

¹²⁸ BioMed Central, *BioMed Central The Open Access Publisher*, BioMed Central.

¹²⁹ IOPscience, *New Journal of Physics The open access journal for physics*, <http://iopscience.iop.org/1367-2630>.

¹³⁰ Murdoch University, *Murdoch University Law Review*, <https://mdulr.murdoch.edu.au/index.php/mdulr>.

¹³¹ These are referred to as Hybrid open access journals.

Walker's Florida Journal of Entomology.¹³² Another practice is to make a particular article published in the traditional journal available after an embargoed period, which refers to an agreed period of time within which the work shall not be made open access. (Delayed Open Access).¹³³ Journal of the Physical Society of Japan is an example of a traditional journal with delayed open access.¹³⁴ The SHERPA ROMEO website provide amongst other things, a list of publishers and their embargo period for each of the publishers.¹³⁵

1.10 STRATEGIES IN ACTION

To further underscore the importance of access to knowledge, the positive impacts made by the open movement particularly the successes made by the policy and licensing strategies, three of the largest not-for-profit funding organisations in the United States, Ford Foundation,¹³⁶ Bill and Melinda Gates Foundation¹³⁷ and the William and Flora Hewlett Foundation¹³⁸ have all adopted open access policies requiring that the output of funded research be made available under Creative Commons licences thereby granting free access for use and reuse to the general public.¹³⁹ Similarly, on the 20th of January 2011, the Obama administration pledged \$2 billion for purposes of making available, accessible and reusable educational resources and required that

¹³² Ben Mudrak, *New Study Tracks Growth of Open Access Publishing*, Expert Edge (2012), <http://expertedge.aje.com/2012/11/10/new-study-tracks-growth-of-open-access-publishing/>.

See also, David W Lewis, 'The Inevitability of Open Access' (2012) 73 *College & Research Libraries* 494.

See also, Wikipedia, *Hybrid Open Access*, http://en.wikipedia.org/wiki/Hybrid_open_access_journal. where it was noted that this was the first journal to have been recorded to have used this model. It was later extended to the other publications of the Entomological society of America and later refined by David Prosser in 2003 in the journal *Learned Publishing*.

¹³³ These are referred to as delayed open access journals.

¹³⁴ See, B-C Bjork, et al., *Analysis of Economic Issues Related to Open Access to Scientific Publications* (Wydawnictwa ICM. 2014) 20, 36. Mikael Laakso & Bo-Christer Bjork, 'Anatomy of open access publishing: a study of longitudinal development and internal structure', (2012) 10 *BMC Medicine* 2. See also Wikipedia, *Delayed Open Access*, http://en.wikipedia.org/wiki/Delayed_open_access_journal. Where it was noted that *Molecular Biology of the Cell* has a one month embargo, whereas *Journal of the Physical Society of Japan* has a 15 years embargo period.

¹³⁵ See Publisher copyright policies & self-archiving: Embargoes required, <http://www.sherpa.ac.uk/romeo/PDFandIR.html> where it categorised the embargo periods into 1 month (1 publisher) 3 months (1 publisher) 6 months (25 publishers) 12 months (22 publishers) 18 months (3 publishers) 24 months (10 publishers) 3 years (2 publishers) 4 years (2 publishers) 5 years (2 publishers) and various embargo lengths (1 publisher).

¹³⁶ See Philanthropy News Digest, *Ford Foundation Announces Open Licensing Policy for Grantees* (2015) <http://philanthropynewsdigest.org/news/ford-foundation-announces-open-licensing-policy-for-grantees>.

¹³⁷ See Bill & Melinda Gates Foundation, *Bill & Melinda Gates Foundation Open Access Policy*, <http://www.gatesfoundation.org/how-we-work/general-information/open-access-policy>.

¹³⁸ See also, The William and Flora Hewlett Foundation, *Commitment to Open Licensing*, <http://www.hewlett.org/about-us/values-policies/commitment-open-licensing>.

¹³⁹ See also, Creative Commons, *Ford Foundation to require CC BY for all grant-funded projects* (2015), <https://creativecommons.org/weblog/entry/44865>. See also, Tate Williams, *Why Big Foundations Ganging up for Open Access is Important*, Inside Philanthropy (2015) <http://www.insidephilanthropy.com/home/2015/2/6/why-big-foundations-ganging-up-for-open-access-is-important.html>.

they be released under a Creative Commons attribution (CC BY) license.¹⁴⁰ The National Institutes of Health (NIH), (the largest source of funding for medical research in the world¹⁴¹ and home to the largest hospital totally dedicated to medical research)¹⁴² has adopted and mandated open access by making available online all its research findings and requiring that all NIH funded research be made available in line with the Institutes open access policy.¹⁴³ In the same vein, similar policies have been adopted by the Research Councils United Kingdom (RCUK),¹⁴⁴ the European Research Councils (ERC),¹⁴⁵ the Australian Research Council (ARC)¹⁴⁶ and the World Bank. The World Bank reiterating the well-known phrase that “knowledge is power” announced its adoption of an open access policy. It requires that all research outputs and knowledge products published by the Bank be licensed under a Creative Commons attribution license (CC BY) as a default and as a first phase of the policy, the Bank on the 10th of April, 2012 launched the Open Knowledge Repository¹⁴⁷ with more than 2,000 books, articles, reports and research papers under a CC BY license,¹⁴⁸ thus making those materials freely available and accessible to the general public.¹⁴⁹

Although access to knowledge is critical to societal development, it is imperative to note that the default setting for the grant of access for the vast stores of knowledge is closed.¹⁵⁰ This closure is architecturally structured within a legal framework known as Intellectual Property (IP) which requires that permission/consent be sort and obtained before content with IP protection can be exploited, thereby giving the closure mechanism not only legal rights but also protection against non-compliance.

1.11 FOCUS OF THE RESEARCH

This research therefore investigates legal, regulatory and policy frameworks for creating an enabling environment where Nigerians and indeed all would be users, have the opportunity to

¹⁴⁰ Timothy Vollmer, *New federal education fund makes available \$2 billion to create OER resources in community colleges* (2011), <http://creativecommons.org/weblog/entry/26100>. The announcement was jointly made by the Secretary of Labor Hilda L. Solis and Secretary of Education Arne Duncan.

¹⁴¹ NIH, *About NIH*, <http://www.nih.gov/about/>.

¹⁴² Ibid

¹⁴³ Ibid

¹⁴⁴ RCUK, RCUK Policy on Open Access <http://www.rcuk.ac.uk/research/Pages/outputs.aspx>.

¹⁴⁵ ERC, *Open Access Guidelines for Researchers Funded by the ERC* (2012), http://erc.europa.eu/sites/default/files/document/file/open_access_policy_researchers_funded ERC.pdf.

¹⁴⁶ ARC, ARC Open Access Policy http://www.arc.gov.au/applicants/open_access.htm. "ARC requires that any publications arising from an ARC supported research project must be deposited into an open access institutional repository within a twelve (12) month period from the date of publication."

¹⁴⁷ The World Bank, *Open Knowledge Repository*, <https://openknowledge.worldbank.org/>.

¹⁴⁸ Creative Commons, About the Licenses above n 126

¹⁴⁹ World Bank, World Bank Announces Open Access Policy for Research and Knowledge, Launches Open Knowledge Repository above n 119.

¹⁵⁰ Fitzgerald, et al., OAK Law Report above n 14, 113.

share, access, use and reuse the output of knowledge, which in turn has the potential to improve healthcare, education, agriculture, government services and reduction of poverty. Access to information which are purely for entertainment purposes such as music, films and novels are not the focus of this research as they may be considered as luxuries, non-necessities for fundamental development. On the other hand, access to peer-reviewed literature, educational resources and public sector information are cardinal for the development of any society.

1.12 MOTIVATION

1.12.1 The Position in Nigeria

Lack of access to knowledge and information is a fundamental challenge to the average Nigerian. It is a key determinant for international, social, economic, political and environmental development.¹⁵¹ The fact that there is a wealth of information freely available but mostly inaccessible and at the same time 57% of Nigerian's are rated as illiterate without any formal education or access to education, 40 million of whom are adults and that about 7 million children are not in school is worrisome and should be of great concern to the Nigerian government and the international community.¹⁵²

In an article written in furtherance of the 2012 World literacy day organised in Nigeria, it was noted that

“The United Nations Education Scientific and Cultural Organisation lists (sic) Nigeria as one of the nine countries with the largest population of illiterate people. The nine countries, namely: Bangladesh, Brazil, China, Egypt, India, Indonesia, Mexico, Nigeria and Pakistan, account for 53 per cent of the world's illiterate population. These nations account for the world's largest population of illiterate adults and over half of the world's population of out- of-school children.”¹⁵³

If the illiteracy level in Nigeria is to be tackled, there must be open education and access to knowledge and it is imperative that strategies be put in place to effectively and efficiently address

¹⁵¹ See generally Krikorian Gaëlle & Kapczynski Amy, *Access to Knowledge In The Age of Intellectual Property* (Zone Books. 2010) 20-21. Where it was noted that "The rise of new forms of knowledge management and the application of sophisticated information-processing schemes to fields such as health and agriculture means that our relationships to our very bodies—how we eat, whether we live—are more intimately governed by scientific and technical knowledge and information than ever before."

¹⁵² UNESCO, *Major push for adult and youth literacy in Nigeria* (2012) UNESCO http://www.unesco.org/new/en/dakar/about-this-office/single-view/news/major_push_for_adult_and_youth_literacy_in_nigeria/.

¹⁵³ John Alechenu, *Nigeria, still in the throes of illiteracy* Punch <http://www.punchng.com/education/nigeria-still-in-the-throes-of-illiteracy/>.

the barriers to accessing knowledge. High illiteracy levels affect virtually all sectors, in the sense that an illiterate community is often an unhealthy, sick, poor and disadvantaged community and this is not unconnected to their lack of general and specific knowledge.¹⁵⁴ The Secretary General of the United Nation, Ban Ki-moon captured it succinctly when he noted that “Illiteracy exacerbates cycles of poverty, ill-health and deprivation. It weakens communities and undermines democratic processes through marginalization and exclusion. These and other impacts can combine to destabilize societies.”¹⁵⁵

The illiteracy level is one challenge but other issues around information management, distribution and sharing also exist in Nigeria. There are problems associated with poor visibility, lack of access, low impact and utility of works authored and published by Nigerian academics, researchers and writers.¹⁵⁶ The private and public sector in Nigeria are also faced with challenges of accessing, using and reusing government held information. The difficulties associated with cultural beliefs, terrorism (Boko-Haram), high cost of school fees, school/educational textbooks and other teaching aids and materials as well as access, use and re-use of research and educational materials by students and researchers are serious challenges to access to knowledge in Nigeria.

Other issues both in the private and public sectors are beginning to emerge from the steady growth of Nigeria’s Higher Education Institutions,¹⁵⁷ (HEI) to the growth in the software industry,¹⁵⁸ to the dynamism of Nigeria’s entertainment industry and the fast growth of the telecommunication industry in Nigeria.¹⁵⁹ These four industries constantly make use of

¹⁵⁴ WHO and World Bank, *Dying for Change Poor People's experience of health and ill-health* 20 February 2013 http://www.who.int/hdp/publications/dying_change.pdf.

¹⁵⁵ UN News Centre, *Literacy vital for beating poverty and disease and reinforcing stability* – UN, http://www.un.org/apps/news/story.asp?NewsID=39485&Cr=literacy&Cr1#.USQB_h1BP-Y.107.

¹⁵⁶ Kunle Ola, ‘Scholarly Publication in Nigeria: Implications of Open Access’ (2015) 6 *The WIPO Journal* 117, 127. “The choice of where to publish often determines accessibility, visibility, impact and utility of the work. Most works published in Nigeria suffer low global and local visibility. By contrast, works published in foreign journals are globally visible, but most often inaccessible to Africans as well as to others in developing countries due to the high subscription costs and pay-per-view fees. Most people in the global north have access to most peer-reviewed journal articles through their institutions which are able to afford subscription fees. For those within the global south, however, the inability of virtually all universities and research institutions to keep up with high subscription fees has necessitated cancellations, thereby reducing access to peer-reviewed journal articles.”

¹⁵⁷ National Universities Commission, *List Of Nigerian Universities And Years Founded*, http://www.nuc.edu.ng/pages/universities.asp?ty=1&order=inst_name.

¹⁵⁸ Jide Awe, *Software Nigeria-The Software Industry in Nigeria*, <http://www.jidaw.com/nigeria/nigeriasoftware.html>.

See also, *Microsoft Corporation v Frankie Associates Ltd LPELR-8987 (CA)*, (Court of Appeal). Where Microsoft brought an action against the defendant for copyright infringement of her products. Although the court did not eventually rule on the infringement charges due to jurisdictional issues, the fact that copyright infringement cases based on software are before Nigerian courts is evidence of higher activities in the Nigerian software industry.

¹⁵⁹ See, *Comrade Victor Ashaolu v. Prince Muyideen Alade Aromire and Ors.*, Suit No.FHC/L/CS/949/97, (Federal High Court, Lagos). Where the plaintiff brought and succeeded in his action for infringement of copyright. The plaintiff particularly sought the following orders inter-alia:-

knowledge products and hence the constant need to access, use and reuse contents. These knowledge products often enjoy proprietary rights and the proprietary issues around the contents accessed, used and reused, need to be addressed within a legal, policy and/or regulatory framework to achieve balance. This balance is meant to provide a system that enables sharing in the interest of users and the general public and at the same time incentivises right owners to continue creating and innovating.¹⁶⁰ Achieving this balance could be difficult with the constant extension of copyright duration and the increasing limitations on user rights. Fortunately, the Canadian Supreme Court has asserted the rights of users' and has made it clear that use within certain specified ambits are not merely a defence but are actually user rights. The Chief Justice noted this when he said that

the fair dealing exception is perhaps more properly understood as an integral part of the Copyright Act than simply a defence. Any act falling within the fair dealing exception will not be an infringement of copyright. The fair dealing exception, like other exceptions in the Copyright Act, is a user's right. In order to maintain the proper balance between the rights of a copyright owner and users' interests, it must not be interpreted restrictively.¹⁶¹

Part of the strategy of the open movement is to ensure that the freedoms guaranteed in the current legal framework under compulsory licensing, limitations and exceptions to copyright are adequately explored and sufficiently protected.¹⁶² These principles often referred to as *fair use* or *fair dealing* provide a safe haven where users are free to use knowledge products. The major challenge for Nigeria and indeed the global community when it comes to the interface between

1. An Order of perpetual injunction restraining the-Defendants herein, whether acting by themselves or through their directors, servants, agents, privies or whosoever otherwise from recording, reproducing, causing any other person to reproduce, distributing by way of trade or offering for sales the video entitled Olorun Wa which said film infringes the plaintiffs copyright in his video film entitled Tani Were?

2. An order of perpetual injunction restraining the defendants herein whether acting by themselves or through their directors, officers' servants, agents, privies or whosoever otherwise from infringing the moral rights of the plaintiffs in the plaintiffs film entitled Tani Were? which moral right was infringed when the defendants changed the title of the said film to Olorun Wa without the authorization of the plaintiffs.

The fact that these works were being marketed outside of Nigeria is testimony of the growth in the Nigerian film industry.

¹⁶⁰ Jerome H. Reichman & Ruth L. Okediji, 'When Copyright Law and Science Collide: Empowering Digitally Integrated Research Methods on a Global Scale' (2012) 96 *Minnesota law review*, 1367,1370. See where it was noted respectively that "The differences between these two approaches have clearly diminished over time, as policymakers on both sides of the Atlantic rely on both incentives to create and natural property-rights thinking to justify ever higher levels of copyright protection" ... "These uses promote public goods in ways that courts must reconcile with the private rights of authors in an appropriately balanced copyright system. Much depends, however, on how judges determine whether the harm incurred by the copyright owner is justified by the benefit to the public from allowing the use in question."

¹⁶¹ CCH Canadian Ltd. v. Law Society of Upper Canada (2004) 1 S.C.R. 339.

¹⁶² Kevin Smith, *Are fair use and open access incompatible?*, (2014) Duke University <https://blogs.library.duke.edu/scholcomm/2014/09/25/fair-use-open-access-incompatible/>. "the solution is to help them understand that fair use and open licensing are NOT incompatible"

access to knowledge and fair use/fair dealing are the limitations placed on exploiting such knowledge products through use and reuse¹⁶³. Below are some examples of the challenges faced with accessing knowledge in Nigeria.

1.12.2 Professor's Frustration

I got an email from a friend who is a professor in one of Nigeria's leading research institutes. In the email he informed me about his current research and about his frustration with regards to not being able to get needed journal articles. Attached to the email was a word document which contained a list of over 35 journal articles he needed for his research but which he could not access. He therefore needed my help to locate, download and send them to him. I understood his pain and frustration because I had been there myself. (My experience on the same issue will be explained hereunder).

It took me about an hour to get all the articles he needed and I forwarded them to him. I did not need to go to any library, nor travel anywhere, all I had to do was to log on to the internet via my laptop computer in my apartment (I wasn't even within the school premises) and search for the articles. Most of the articles were found on proprietary databases and since my university had subscribed to most of them, I had unfettered access to view, read and download whatever I wanted.

It is this privilege my friend in Nigeria, a professor and scholar is not able to enjoy. The point is if a Professor who is at the top of the academic ladder is unable to access journal articles (his raw material) how then can he successfully conduct any meaningful research and what about the others who are trying to climb up to the top not mentioning the students who are just beginning the climb. The situation is often very frustrating.

1.12.3 Personal Frustration

As a scholar in Africa, I recall an academic experience where I needed some articles to complete an assignment. Without these articles it would be practically impossible to complete the assignments. Going to the library to get the articles was not an option because most libraries were stocked with many materials most of which were obsolete and incapable of addressing current cutting edge issues. The libraries did not have recent journal articles as they were unable

¹⁶³ Jeremy Malcolm, *UK Copyright Law: Back to the Future, or Stuck in the Past?* (12 June 2014) Electronic Frontier Foundation <https://www.eff.org/deeplinks/2014/06/uk-copyright-law-back-future-or-stuck-past> See where he noted that "Fair use is not just one of those odd American quirks that Britons like to laugh about ... Fair use is actually a core requirement for a modern, flexible and adaptable copyright law in the Internet age—as more and more countries around the world are realizing."

to afford the high subscription costs for the relevant journals. Most of the available materials were usually donated materials which were already old and outdated. The available options were to use google or some other search engines or send an email to a friend in the global north who if you are lucky would graciously download the article from the database of their school's library and then send it out. The usual thing however, was to always try the first option of an internet search via google. The search would often provide some information on the article, usually the abstract or title of the paper but not the full article. Once in a while, the search would reveal the availability of the word or pdf version of the article and in such instance it solves the first stage of the problem. Then comes the second phase, downloading such files, which often takes forever due to the slow speed of the internet. Most times one is not that lucky to find the full text of the article and would have to rely on the goodwill of friends in the global north to send these articles.

One cannot begin to imagine the level of frustration one has to go through in search of available but inaccessible knowledge. We are talking about knowledge that is crucial to the completion of an educational endeavour, knowledge without which you cannot complete the assignment and therefore you cannot complete the course, meaning that your chances for a better life is being dashed due to inaccessibility of available knowledge. Knowledge that was produced by authors who are more than happy to share them with curious minds but which have been locked up behind pay walls and these lock up system enjoy legal protection.¹⁶⁴

This frustration is aggravated by the knowledge that what is being sought for is actually available but ones local circumstances, that is, the inability of Nigerian institutions to afford subscription fees, or the inability of ones country to provide the requisite ICT infrastructure for speedy internet connectivity and access amongst other things is what has caused inaccessibility to available information.¹⁶⁵

In recognition of the importance of accessing knowledge to development, particularly knowledge within peer-reviewed literatures, school text books (educational resources) and that within the

¹⁶⁴ Suber, Open Access above n 12, 15 16 39 44.. See where he noted respectively that

“All authors want to cultivate a larger audience and greater impact”

“OA is not a sacrifice for authors who write for impact rather than money. It increases a work's visibility, irretrievability, audience, usage, and citations, which all convert to career building”

“publishers exercise their control over research articles through copyright”

“For 350 years, scholars have willingly, even eagerly, published journal articles without payment, freeing them to consent to OA without losing revenue.”

¹⁶⁵ G.E Christian, *Issues and Challenges to the Development of Open Access Institutional Repositories in Academic and Research Institutions in Nigeria* (2008) International Development Research Centre (IDRC) <https://idl-bnc.idrc.ca/dspace/bitstream/10625/36986/1/127792.pdf>.

See also, E.S Gbaje, *Open Access Journal Publishing in Ahmadu Bello University, Zaria, Nigeria* 76th IFLA (2010) World Library and Information Congress <http://conference.ifla.org/past-wlic/2010/138-gbaje-en.pdf>.

broader public sector (public sector information) and the challenges I have faced in accessing requisite information. I began to ponder how many other people in my country and other developing countries with similar circumstances would be experiencing the same frustration. These thoughts reminded me of Ghandi's words "be the change you wish to see"¹⁶⁶ and it prompted severally questions in me such as "what can be done, what can I do, what is the way out from this dark tunnel of knowledge inaccessibility, is there a way that available knowledge can be made accessible without all the restrictions currently on it, what platforms need to be put in place to enable impact, visibility and utility of Nigerian works? These questions underscore my motivation for this research.

1.13 AIMS & OBJECTIVES

1. To demonstrate the potential benefits of the open access movement to Nigeria's national development.
2. To investigate, explain and propose a legal, regulatory and policy framework for Nigeria that would enable open access to the output of journal articles, open educational resources and public sector information.
3. To situate Nigeria within the current Open Access Movement by engaging in local pragmatic projects capable of advancing the development of Nigerians, other developing countries and the world at large. (For instance the establishment of institutional repositories in most Nigerian Tertiary Institutions.)

1.14 RESEARCH QUESTION

1. What role(s) can open access play in Nigeria's national development?
2. What are the possible challenges to the implementation of open access in Nigeria?
3. What legal, regulatory and policy frameworks are required or needed to be strengthened for the successful implementation of open access in Nigeria?

1.15 ASSUMPTIONS AND POINT OF DEPARTURE

This research will focus on open access as a developmental tool for Nigeria. It will build on the research that has been carried out by other scholars in other parts of the world which have shown that open access to peer-reviewed literatures, open educational resources and public sector information, have in no small way contributed to developmental growth in countries where they have been adopted.

¹⁶⁶ Carmella B'Hahn, 'Be the Change You Wish to See: An Interview with Arun Gandhi', (2001) 10 *Reclaiming Children and Youth*, 6.

In situating the relevance of open access to Nigeria, this research will show that open access is not limited to developed countries and that the principles and strategies that have been adopted, and implemented in other countries particularly developed countries can also be replicated and domesticated for purposes of the national development of Nigeria. To this end this research will provide a guide for the development of legal, regulatory and policy frameworks addressing peculiar idiosyncrasies of Nigeria and the Nigerian people as well as crafting practical tools for the effective implementation of open access in Nigeria through suggesting regulatory or administrative regimes to administer and supervise its implementation.

Whilst the review of our over 300 years' copyright framework will be desirous, this research is excluding copyright review but will rather focus on the practice and implementation of copyright. The financial models and economic structures for the administration of open access, open educational resources and public sector information is outside the scope of this research. Extensive work has been carried out by Bo-Christer and his colleagues (Wojtek Sylwestrzak and Jakub Szproton),¹⁶⁷ as well as by John Willinsky.¹⁶⁸ Research has also been done in this area by other scholars including John Houghton and his colleagues (Bruce Rasmussen, Peter Sheehan, Charles Oppenheim, Anne Morris, Claire Creaser, Helen Greenwood)¹⁶⁹ and by Raed,¹⁷⁰ The core of this this research focuses on investigating the legal, regulatory and policy frameworks for the successful development and implementation of open access in Nigeria.

1.16 RESEARCH METHODOLOGY

The research methodology is majorly qualitative and is a combination of historical, literature review and legal analysis. It explores the historical growth of the open access movement noting the fundamentals of open access using the BBB (Budapest, Bethesda and Berlin) initiative documents as foundational documents. It identifies Nigeria on the open access map, highlights the challenges, points out possible solutions and builds upon the lessons learnt from other jurisdictions. The research makes use of primary and secondary sources such as legislation, case law, International treaties, legal agreements, as well as encyclopaedias, dictionaries, reports, books, articles, and mandates.

¹⁶⁷ See, B-C Bjork, et al., *Analysis of Economic Issues Related to Open Access to Scientific Publications* (Wydawnictwa ICM. 2014) 20, 36. Mikael Laakso & Bo-Christer Bjork, 'Anatomy of open access publishing: a study of longitudinal development and internal structure', (2012) 10 *BMC Medicine* 2.

¹⁶⁸ John Willinsky, *The Stratified Economics of Open Access*, (2009) 39 *Economic Analysis & Policy* 53.

¹⁶⁹ Houghton J, et al., *Economic Implications of alternative scholarly publishing models: Exploring the costs and benefits*. (2009) *A report to the Joint Information Systems Committee (JISC)* http://vuir.vu.edu.au/15222/1/EI-ASPM_Report.pdf.

¹⁷⁰ Sharif Read, *Maximizing the Value of Public Sector Information for Scientific and Socioeconomic Development in Africa* 2009 KMAfrica <http://www.hsra.ac.za/uploads/pageContent/320/09aug11Sharifpaper.pdf>.

In seeking to address the core objectives of this research, the theory of open access is considered from a social, economic, political and legal point of view. The current legislative, regulatory and policy frameworks for accessing knowledge in the context of open access, (open educational resources and public sector information) in Nigeria is investigated looking at Nigeria's national agenda, key government Ministries, Departments and Agencies (MDA's). The legal, regulatory and policy instruments of these MDA's are analysed. This is done to assess where Nigeria is at and to identify possible lacunas which will aid in the development of tools for addressing such lacunas. Journal articles, open educational resources and public sector information are investigated as distinct chapters and they form the core of the research. Each of these chapters address the lacuna identified in the legal, regulatory and policy frameworks of Nigeria.

1.17 CHAPTER STRUCTURE

The thesis is divided into four parts with eight chapters as shown in the diagram below.

Part I: Fundamentals of Open Access

Chapter 1: Introduction: The Tapestry of Open Access

Chapters 2: Theory of Open Access

Part II: The Nigerian Context: Open Access

Chapters 3: Framework for Open Access in Nigeria

Part III: The Three Pillars of Open Access (Policies & Practices)

Chapters 4: Open Access Journal Articles

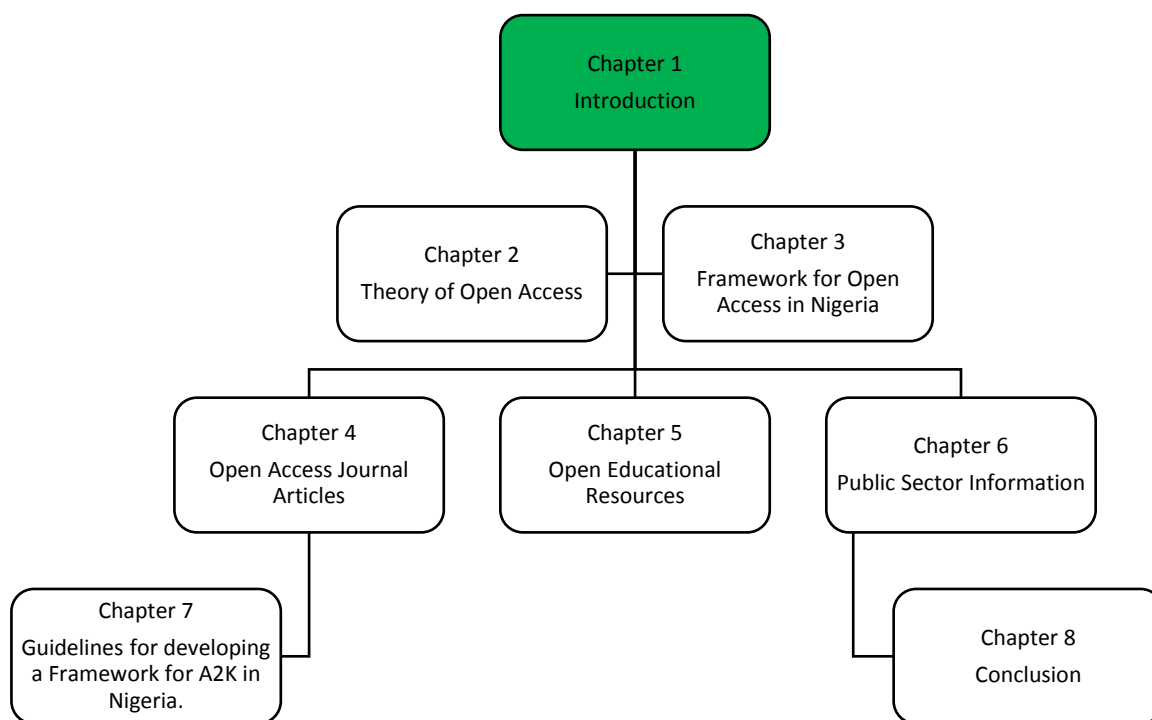
Chapters 5: Open Educational Resources

Chapters 6: Public Sector Information.

Part IV: Open Access: Precepts and Prospects

Chapters 7: Framework Chapter

Chapter 8: Conclusion: Weaving the Thread Together.



Chapter one is the introductory chapter laying the foundation for the discussions that run through the eight chapters. It explains the importance and relevance of access to knowledge and links it to the open movement. It also provides the structure for the entire research, states the problem it seeks to address, the aims and objectives of the research and the methodology adopted for the research.

Chapter two is a theoretical analysis of open access. It explores the rationale for providing free, immediate, open and unrestricted access to the output of research. It considers this rationale from a social, economic, legal and political perspective.

The third chapter investigates initiatives set up within the Nigerian legal, policy and regulatory systems with regards to dissemination of the output of research findings. It considers these initiatives by examining certain Nigerian Government Ministries, Departments and Agencies (MDA's) and considers whether or not they provide open access to the output of research findings.

The fourth chapter examines open access journals and articles. It explores the meaning of open access and traces the evolution of the movement from its inception. The meetings and statements that have moulded the open access movement are analysed as well as the two major strategies (open access journals and self-archiving) that were recommended and that are being adopted all over the world. This chapter also locates Nigeria on the open access map by

discussing the emergence of open access in Nigeria and identifying initiatives and activities taking place in Nigeria on the subject.

Open Educational Resources (OER) is the focus of the fifth chapter which identifies a lack of access to education as a major problem in most developing countries. The relevance of education to development is noted and that access to educational resources will play a major role in the achievement of the “Education For All” (EFA) goal set by the United Nations under her Millennium Development Goals. The challenges of terrorism is also mentioned. This chapter discusses how educational resources on an open platform can address the problems of lack of education. It explains the concept and components of OER and discusses the global impact and relevance of OER. The connection between the Law and OER as well as the challenges faced by the OER movement. OER and Open Distance Learning as well as Massive Open Online Courses are also discussed.

In the sixth chapter access to information held by government also referred to as Public Sector Information (PSI) is addressed. The underlying thoughts running through this chapter is that tax payers who fund research are entitled to the output of these research at zero or near zero cost where possible and without the usual restrictions of government bureaucracy and those imposed by the economic, technological and legal systems. The exceptions of national security and confidentiality is of course taken into cognisance.

Chapter seven, provides guidelines on how to develop national, institutional and personal policies on open access to knowledge. It draws on the challenges identified in Nigeria’s legal, regulatory and policy frameworks (Chapter 3) and addresses them using the principles highlighted of open access journal articles, open educational resources and public sector information (Chapters 4,5&6). It highlights issues that must be considered from a legal, regulatory and policy perspectives and adapts the frameworks that have been successfully implemented in other jurisdictions.

The eighth chapter brings together the thoughts in the seven chapters and concludes by drawing out an action plan as well as making recommendations for the effective implementation of open access to knowledge in Nigeria from a multi-sectoral perspective.

CHAPTER 2: THEORIES OF OPEN ACCESS

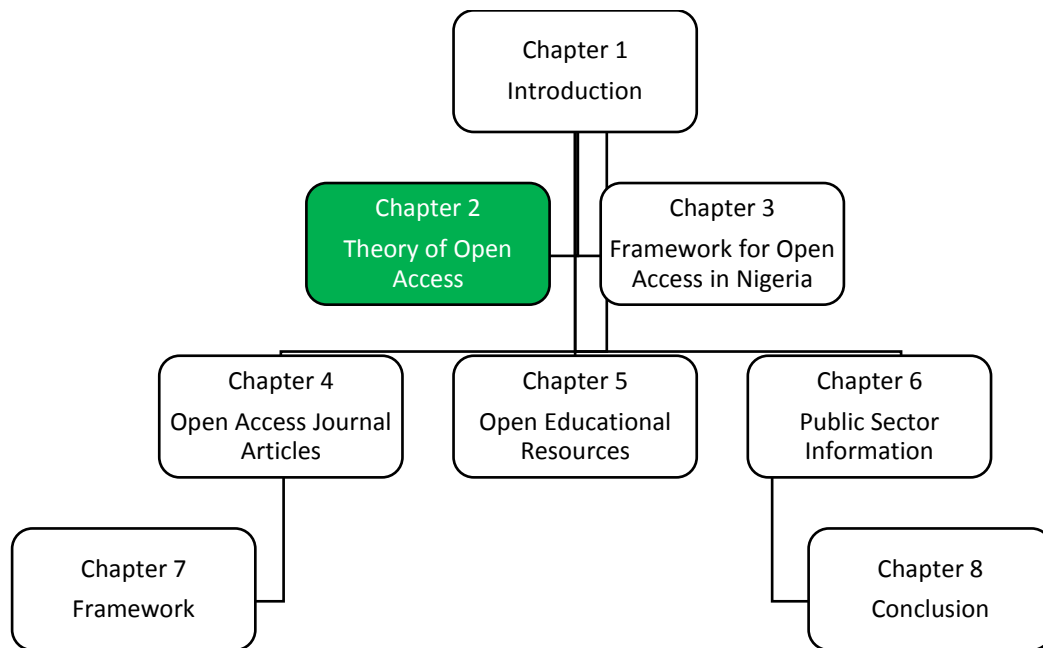
“One person gives freely, yet gains even more; another withholds unduly, but comes to poverty.
A generous person will prosper; whoever refreshes others will be refreshed”.¹⁷¹

2. OBJECTIVES

This chapter provides a theoretical analysis of open access and explores the rationale for providing free, immediate, open and unrestricted access to knowledge. This rationale is considered from a multi-dimensional perspective inclusive of social, economic, legal and political dimensions.

Aims & Objective 1: To demonstrate the potential benefits of the open access movement to Nigeria’s national development and,

Research Question 1: What role can open access play in Nigeria’s national development?



2.1 INTRODUCTION

Aristotle the Greek philosopher told us over 2300 years ago that “Man is a social animal. He who lives without a society is either a beast or a God.”¹⁷² We all exist as a result of a combined

¹⁷¹ Tyndale, *The Holy Bible: New International Version* (Tyndale House Publishers 1978) Proverbs 11:24

effort. Development has brought about an increase in man's standard of living but has also caused a strain on social values. Values such as dependency and inter-dependence, sharing, caring and helping have gradually gravitated towards a culture of self-aggrandizement, self-acquisition and self-dependency to the exclusion of others. The reality is that we are who we are because of who we all are¹⁷³. No man is an island, we need each other. The wise book teaches that two are better than one, because they have a good reward for their labour,¹⁷⁴ that how good and pleasant it is for brethren to dwell together in unity¹⁷⁵ and that Iron sharpens Iron.¹⁷⁶ It is in sharing, giving, caring and helping that life finds its true expression, meaning and fulfilment. As aptly captured by Viktor Frankl in his book *Man's Search for Meaning*, "Ultimately, man should not ask what the meaning of his life is, but rather he must recognise that it is he who is asked".¹⁷⁷ Life is not about "me" it is not about "you", it is about "us."

It is this spirit of camaraderie that open access seeks amongst other things to build. It also seeks to draw our focus away from the egocentric and self-centredness that has become the norm in the society and re-engineer a sharing structure that would bring about a balanced knowledge society. Open access is about a revolutionary change in how peer-reviewed literature and all other information is accessed, used, reused and generally exploited¹⁷⁸. It seeks a shift in the publication process from *closed* to *open*, *restricted* to *unrestricted*, *payment* to *free*, *all rights reserved* to *some rights reserved* or better still *no rights reserved*.

2.2 KNOWLEDGE DEVELOPMENT PROCESS

Information dissemination within the knowledge management framework falls within the exclusive right of copyright owners and is therefore restricted unless permission is granted or it falls under some form of limitation, exception or compulsory licensing system¹⁷⁹. Knowledge/Information development within the academic and research community have a practice of peer-review for purposes of ascertaining and maintaining quality¹⁸⁰. The practice is for

¹⁷² G. Catt, 'Man the Social Animal' (1962) 29 *The Western Socialist* 20. See also, Luntley Michael, *The Meaning of Socialism* (Open Court. 1990) 78. See also, Bharat Kumar, *1333 words essay on Man is a social animal* <http://www.preservearticles.com/201102184074/man-is-a-social-animal-essay.html>.

¹⁷³ Relando Thompkins, *Ubuntu: A Humanitarian Philosophy*, <http://www.relandothompkins.com/philosophy/>.

¹⁷⁴ See, Tyndale, *The Holy Bible : Authorized King James Version, containing the Old and New Testaments* (Tyndale House Publishers 1984) Ecclesiastes 4:9.

¹⁷⁵ Ibid at Psalm 133:1.

¹⁷⁶ Ibid at Proverbs 27:17.

¹⁷⁷ V.E. Frankl, *Man's Search for Meaning* (Beacon Press. 1992) 99.

¹⁷⁸ He Calls it the Commons "a new paradigm for creating value and organizing a community of shared interest" See David Bollier, *Viral Spiral: How the commoners built a digital republic of their own* (New Press, 2008) 6. "A commons arises whenever a given community decides that it wishes to manage a given resources in a collective manner with special regard for equitable access, use and sustainability."

¹⁷⁹ Fitzgerald, et al., OAK Law Report above n 14 21.

¹⁸⁰ Richard Smith, *Peer-Review: 'A Flawed Process at the Heart of Science and Journals'*, (2006) 99 *J R Soc Med*.

academics to write and for publishers to take care of the peer-review, publication and marketing aspects. The practice of Journal publishing dates back to 1665 when the first journal “Le Journal des Scavans” later renamed “Les Journal Savants” was published by Jean Cusson, rue S. Jacques¹⁸¹. In the same year the first scientific journal printed in the English language and edited by Henry Oldenburg titled “Philosophical Transactions of the Royal Society of London” was also published¹⁸². Henry Oldenburg had the practice of sending out submitted manuscripts for independent evaluation by competent referees and has been recognised as the initiator of the peer-review process.¹⁸³

2.2.1 The Publishing Industry

The duo of the printing press and peer-review process has developed into what today is the publishing industry and has become a major player in determining how knowledge, particularly peer-reviewed knowledge is disseminated. This influence by the publishing industry on knowledge dissemination can be traced to the strategic role of publishers as the door way to the output of research and to the introduction of subscription payment. Payments which users, mostly libraries have to pay before they are able to access published peer-reviewed information.

Publishers are responsible for the investments put into publishing the written works of authors and have a business model based on subscription payments by users to recoup their investments. Initially these fees were minimal but with time, the consistent rise in subscription fees have turned the publishing industry into knowledge barricades instead of knowledge access gates. Even the wealthiest of universities are not able to keep up with the rising cost of journal subscriptions¹⁸⁴. It has been reported that the rate of increase in journal subscription prices is second to none.¹⁸⁵ Increase in student loan indebtedness has also been reported and may not be unconnected to the high subscription rates which directly or indirectly affect students’ ability to pay for the kind of education they desire¹⁸⁶. Elliot Harmon in the Creative Commons News reported that “Earlier this year, the Federal Reserve Bank of New York announced that student

¹⁸¹ *Le Journal des Scavans*(1665), <http://gallica.bnf.fr/ark:/12148/bpt6k56523g>.

¹⁸² *Philosophical Transactions of the Royal Society of London (or Phil. Trans.)*(1665), <http://gallica.bnf.fr/ark:/12148/bpt6k55806g>.

¹⁸³ WHO, About HINARI, above n 83

¹⁸⁴ Norrie, The Conversation, above n 57

¹⁸⁵ University of Illinois at Urbana-Champaign University Library, *The Cost of Journals*, <http://www.library.illinois.edu/scholcomm/journalcosts.html>.

¹⁸⁶ Greg Edwards, *Fed: Student Loan Debt Surpasses Auto, Credit card debt*. St. Louis Business Journal <http://www.bizjournals.com/stlouis/blog/2013/04/fed-student-loan-debt-surpasses-auto.html>.

loan debt had surpassed auto loans and credit debt, coming in at an estimated \$1 trillion. And a not-insignificant contribution to this burden has been the rising cost of textbooks.¹⁸⁷

If all libraries and research institutions in the world are able to afford the cost of journal subscriptions and are therefore able to pay and subscribe continually to all journals, universal access to peer-reviewed literatures would be attained. If that was a dream or an expectation, it unfortunately is one that is unlikely to come true, considering the continued rise in subscription cost. Libraries and research institutions all over the world are cancelling subscriptions due to its ever rising cost and worse still, most libraries and research institutions in developing countries are not able to maintain subscriptions with journals¹⁸⁸. Where such subscriptions are maintained they are usually not in the fields that are most relevant to their research needs and this is directly connected to the inability of these institutions to keep up with the increase in subscription fees.¹⁸⁹

The high cost of journal subscriptions, the frustrations experienced by users due to an inability to access information, the need to explore new business models for publishing as well as the moral sensitivity of the human soul to share knowledge has precipitated the emergence of the movement advocating for free unrestricted access to use and reuse peer-reviewed literature off the internet. Other precipitating factors include the academic culture of publish or perish,¹⁹⁰ the eagerness to increase impact factor on the side of authors in respect of their works,¹⁹¹ the goal of sharing the knowledge of the poor with the rich and that of the rich with the poor,¹⁹² as well as the pursuit to provide available platforms for the visibility, impact and accessibility of works originating in developing countries. Also included is the need by governments to be seen to be providing access to knowledge,¹⁹³ education for all and freedom of information in compliance

¹⁸⁷ Elliot Harmon, *U.S. News and World Report Examines the Growth of Open Education* (2013) Creative Commons, http://creativecommons.org/weblog/entry/36366?utm_campaign=newsletter_1301&utm_medium=blog&utm_source=newsletter.

¹⁸⁸ University of Illinois at Urbana-Champaign, *The Cost of Journals* (2009) University Library, <http://www.library.illinois.edu/scholcomm/journalcosts.html>.

¹⁸⁹ Willinsky, *The Access Principle* above n 16. See the introduction where he noted that "the final five subscriptions which they could barely afford, did not include the leading journals on the institute's principal research interest,"

¹⁹⁰ Davis, *Publish-or-Perish Culture Promotes Scientific Narcissism* above n 43.

¹⁹¹ Harnad, et al., *Serial Review* above n 55

¹⁹² Budapest Open Access Initiative, above n 18

¹⁹³ See the following case studies which signifies the effort of governments to enable access to knowledge in their respective countries.

Ireland, *The Transition to Open Access*, (2014) <http://www.pasteur4oa.eu/sites/pasteur4oa/files/resource/Ireland%20Case%20Study.pdf>.

Norway, *Education, Research and Open Access in Norway* (2014) http://www.pasteur4oa.eu/sites/pasteur4oa/files/resource/Norway%20Case%20Study_0.pdf.

Hungary, *Open Access Case Study* (2014) <http://www.pasteur4oa.eu/sites/pasteur4oa/files/resource/Hungary%20Case%20Study.pdf>.

UK, *Open Access Case Study* (2014) <http://www.pasteur4oa.eu/sites/pasteur4oa/files/resource/UK%20Case%20Study.pdf>.

with international best practices and probably one of the most compelling reasons is the desire to maximize the internet as a platform for knowledge dissemination. Regardless of the thoughts underpinning the idea to promote an open culture, a culture where peer-reviewed literature is freely and immediately available upon publication and in the broadest and most effective way, free from price, legal and technical restrictions, such thoughts have a bearing on four factors which I have identified with the acronym “SELP” referring to ‘S’ for Social, ‘E’ for Economic, L for Legal and P for Political.

2.2.2 Guerrilla

The philosophical basis for the pursuit of open access provides the rationale and the underpinnings of the movement which can be seen from the outcome of several meetings and initiatives that have moulded the way the movement has developed since the Budapest open access initiative in 2002. At this meeting held in Budapest on the 14th of February, 2002, the words *open access* was coined and it was agreed amongst other things that peer-reviewed literatures be made freely available via the internet through self-archiving or open access journals¹⁹⁴. The Bethesda statement which came out of a meeting held on the 11th of April at the headquarters of Howards Hughes in Chevy, Maryland noted the need to promote the rapid and efficient transition to open access¹⁹⁵. Similarly, the Berlin declaration which was the result of a meeting held on the 22nd of October 2003 in Berlin, noted that “Our mission of disseminating knowledge is only half complete if the information is not made widely and readily available to society”¹⁹⁶. In a more radically inclined declaration, the Guerrilla Open Access Manifesto noted the power of information and that those with access to information must do something about sharing this information to those who do not have access. The manifesto decried the greed of corporations and calls on everyone to oppose the privatization of knowledge. The manifesto noted that

“Information is power. But like all power, there are those who want to keep it for themselves...There are those struggling to change this. The Open Access Movement has fought valiantly to ensure that scientists do not sign their copyrights away but instead ensure their work is published on the Internet, under terms that allow anyone to access

Portugal, *PASTEUR4OA/Case Study: Potugal Open Access Policy Landscape* (2014) <http://www.pasteur4oa.eu/sites/pasteur4oa/files/resource/Portugal%20Case%20Study.pdf>.

¹⁹⁴ Budapest Open Access Initiative. above n 18

¹⁹⁵ Bethesda Statement on Open Access Publishing, (2003) www.earlham.edu/~peters/fos/bethesda.htm.

¹⁹⁶ Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities, (2003) http://oa.mpg.de/files/2010/04/berlin_declaration.pdf.

it... Those with access to these resources, students, librarians, scientists, you have been given a privilege. You have a duty to share it with the world.¹⁹⁷”

Looking at all of these meetings it is clear that the stakeholders supporting and driving the movement are diverse including authors, researchers, funding agencies, universities, libraries, publishers, research institutions, other interested organisations and the user publics. The fact that there are many supporters and drivers is an indication that these different groups may approach the goal of free, immediate, broad and effective dissemination of knowledge to the general public from different perspectives. The goal may be the same but the rationale for the goal often differs and therefore the approach by the different groups to achieving the goal may also differ. Some supporters and drivers come to the table from an economic perspective¹⁹⁸, that is for reasons bordering on finances, others come for social reasons¹⁹⁹, that is to promote the common good and respect for the dignity of the human person by providing the opportunity for all of mankind not only the right of access to knowledge but the actual access to knowledge via the platform of the internet. Others join the movement due to the frustrations the current legal regime allows and are working to either align the laws to current realities or to work around the laws using other mechanism for example licensing²⁰⁰. For some others, they come for political reasons that is, to achieve political ambitions by using such initiatives as tools for scoring political points and making promises to would-be voters²⁰¹. Whatever the underpinnings of the supporters or drivers be it social, economic, legal or political, the end-user is happy to have immediate, broad, effective, free and unrestricted access to use and reuse peer-reviewed literature without the barriers of price, legal and technical restrictions.

This chapter will examine these underpinnings in the minds of the varied supporters and drivers from a social, economic, legal and political perspective. An understanding of these underpinnings would enable better appreciation of the role open access can play in Nigeria’s national development and would enable constructive engagements with these different groups in developing and re-developing strategies for the realisation of open access at all levels.

¹⁹⁷ Aaron Swartz, *Guerilla Open Access Manifesto*, Internet Archive (2008), http://archive.org/stream/GuerillaOpenAccessManifesto/Goamjuly2008_djvu.txt.

¹⁹⁸ Willinsky, *Economic Analysis & Policy*, above n 167

¹⁹⁹ T. Massaro, *Living Justice: Catholic Social Teaching in Action* (Rowman & Littlefield Publishers. 2008) 79-119. See chapter 5 on the 9 key themes of Catholic Social Teachings and the table of the nine keys at page 80.

²⁰⁰ Jessica Litman, ‘Copyright Non-compliance (Or Why We Cant "Just Say Yes" to Licensing)’, (1997) 29 N.Y.U. J. INT’L L. & POL.

²⁰¹ Cable Green, *British Columbia Government Lends Support to Open Textbooks* http://creativecommons.org/weblog/entry/34566?utm_campaign=newsletter_1210&utm_medium=blog&utm_source=newsletter.

2.3 SOCIAL

2.3.1 Ubuntu

At the burial ceremony of Nelson Mandela, the President of the United States while giving his speech referred to an African word which he says encapsulates the life and person of Mandela. He said “There is a word in South Africa -- Ubuntu -- a word that captures Mandela's greatest gift: his recognition that we are all bound together in ways that are invisible to the eye; that there is a oneness to humanity; that we achieve ourselves by sharing ourselves with others, and caring for those around us”.²⁰²

The word “Ubuntu” means “humanity to others” the more popular meaning is “I am what I am because of who we all are”.²⁰³ It depicts that “your pain is my pain, my wealth is your wealth, your salvation is my salvation”.²⁰⁴ We are all intertwined through our humanity and as the word Ubuntu depicts, humans are interdependent. We are who and what we are because of who we all are. The African culture although very diverse is basically community based and has celebrated mutuality and connectedness for centuries.²⁰⁵ No man is an island; man thrives best when he works in cooperation with others.²⁰⁶ The spirit of the Ubuntu ideology was aptly captured by David Cameron when he said

It's time we admitted that there's more to life than money, and it's time we focused not just on GDP, but on GWB - general well-being," ... "Well-being can't be measured by money or traded in markets. It's about the beauty of our surroundings, the quality of our culture and, above all, the strength of our relationships... Improving our society's sense of well-being is, I believe, the central political challenge of our times.²⁰⁷

The essence of Ubuntu is exemplified in Amy Biehl’s story.²⁰⁸ Amy was a promising lady who graduate from Stanford University and had extensive work experience in the different continents of the world. Amy was the winner of a 1993 Fulbright scholarship which she dedicated to the establishment of a multiracial democracy in South Africa. She was an active member of the ANC

²⁰² Edwin Rutsch, *Obama Speaks about Ubuntu & Empathy at Nelson Mandela Memo* 2013 <http://www.youtube.com/watch?v=jiebOGRPPxg>.

²⁰³ Ubuntu, *The Ubuntu Story*, <http://www.ubuntu.com/about/about-ubuntu/>.

²⁰⁴ Barbara Nussbaum, ‘African Culture and Ubuntu: Reflections of a South African in America’, (2003) 17 *World Business Academy, Perspectives* 1.

²⁰⁵ Kimmerle Heinz, ‘Ubuntu and Communalism in African Philosophy and Art’, (2006) *Rozenberg Quarterly Magazine*. See also, Barbara Nussbaum, ‘Reflections of a South African on our Common Humanity’, (2003) 4 *Reflections* 21.

²⁰⁶ See, Roy Jackson, ‘Aristotle on What it Means To Be Happy’, (2007) *Richmond Journal of Philosophy* 2. "Aristotle is pointing out that man is not a solitary animal; he defines his happiness in terms of his relationships with others, that is his family, friends and fellow countrymen."

²⁰⁷ Allegra Stratton, *David Cameron aims to make happiness the new GDP*, *The guardian* <http://www.theguardian.com/politics/2010/nov/14/david-cameron-wellbeing-inquiry>.

²⁰⁸ Amy Biehl Foundation, *Amy's life and legacy*, <http://www.amybiehl.org/amy.php>.

and helped in registering voters for South Africa's first free elections. On the 25th of August 1993, Amy was killed in an act of political mob violence in Guguletu, a town outside of Cape Town. Four young men were arrested and sentenced to 18 years imprisonment. In honour of Amy's values for peace and reconciliation and in the spirit of Ubuntu, Amy's parent's supported the grant of amnesty to all four of the convicted killers. Today two of the four young men (Ntobeko Peni and Easy Nofemela) work at the Amy Biehl Foundation which was set up to address the challenges of violence. In the words of the Managing Director of the foundation "They are a living embodiment of values, such as forgiveness, reconciliation and tolerance, which we strive to teach the youth of Cape Town through our work."²⁰⁹ The spirit of Ubuntu is not one that condones violence or fragrant disregard of the law, rather it is one that is alive to the realities of violence and instead of responding to violence with violence or hatred, it stretches out the hand of forgiveness, love and sharing. It is this hand open access seeks to stretch out in the information hemisphere, the hand that shares instead of keeps, that opens instead of closing. A prayer offered over 800 years ago titled "make me an instrument of your peace" by Saint Francis reflects the Ubuntu spirit and goes to the root of what open access is.²¹⁰

Lord, make me an instrument of your peace. Where there is hatred, let me sow love; where there is injury, pardon; where there is doubt, faith; where there is despair, hope; where there is darkness, light; where there is sadness, joy.

O, Divine Master, grant that I may not so much seek to be consoled as to console; to be understood as to understand; to be loved as to love; For it is in giving that we receive; it is in pardoning that we are pardoned; it is in dying that we are born again to eternal life.

2.3.2 Koinonia

Human flourishing is actually dependent in many ways on the quality of our relationships with one another. This is what the Greek word "Koinonia" connotes. It "is the selfless emersion into each other lives...It means to be a sharer, a companion, one who is a partaker, a participant in communion."²¹¹ Life is best lived when it is shared. That is why the open movement advocates a sharing culture. A culture of koinonia, where participants selflessly immerse themselves into each other as sharer, companion and partakers. The Android technology which is an open source

²⁰⁹ Kevin Chaplin, *The Ubuntu Spirit in African Communities*, Amy Biehl Foundation, <http://www.coe.int/t/dg4/cultureheritage/culture/Cities/Publication/BookCoE20-Chaplin.pdf>.

²¹⁰ Christian Renoux, *The Origin of the Peace Prayer of St Francis by Dr. C. Renoux*, (2001) Associate Professr of the University of Orleans, Frances <http://www.franciscan-archive.org/franciscana/peace.html>.

²¹¹ Dan Grubbs, *More than Fellowship: Understanding Koinonia*, (2004) Sermon Central, <http://www.sermoncentral.com/sermons/more-than-fellowship-understanding-koinonia-dan-grubbs-sermon-on-discipleship-84103.asp>.

project led by Google is a living proof of the benefits, efficiency and effectiveness of sharing.²¹² Interestingly, knowledge is given a tangible form because man decides to reveal what was hitherto hidden in the mind. The whole essence of revealing the unseen ideas in the mind is for others to appreciate and benefit from it. It is for it to be shared, otherwise, it could and indeed should have been left hidden from all others, locked up in the mind.

2.3.3 Sharing: A Social Responsibility

Sharing the output of research findings can be the difference between life and death to somebody. Accessing a freely downloadable article or getting some open educational resources to help with a class assignment can be the difference between success and failure. Access to public sector information has the tendencies to bring about good governance, responsibility and accountability.²¹³ Sharing knowledge is paramount to development.²¹⁴ No other living being on earth has the privilege that man enjoys when it comes to knowledge creation and dissemination. We therefore owe it to ourselves as a social responsibility to share knowledge with one another, more so that knowledge is power²¹⁵. The holy bible stressing the importance of knowledge tells us that people are destroyed for lack of knowledge²¹⁶. Knowledge provides the requisite know-how and access is key to knowledge acquisition. Aaron Swartz captured this social responsibility succinctly in the Guerrilla open access manifesto when he said ““Those with access to these resources — students, librarians, scientists — you have been given a privilege. You get to feed at this banquet of knowledge while the rest of the world is locked out. But you need not — indeed, morally, you cannot — keep this privilege for yourselves. You have a duty to share it with the world.”²¹⁷

Aaron understood that we all have a duty, a responsibility to share knowledge because of the potential power it carries, because of its potency as a change agent and because of its revolutionary abilities. This was what motivated him to challenge everyone with access to that all important social responsibility to share it with the world.

²¹² Android, *Welcome to the Android Open Source Project*, <http://source.android.com/>.

²¹³ Judge Elizabeth, ‘Enabling Access to Public Sector Information in Canada’, in (Michael Geist ed. 2010) *From Radical Extremism to Balance Copyright: Canadian Copyright and the Digital Agenda*. 598, 601 & 603. "Public sector information, which is information created by government in the course of governing, is essential for transparency, accountability, democratic participation, and citizen engagement."

²¹⁴ See, Kunle Ola, ‘Evolution and Future Trends of Copyright In Nigeria’, (2014) 2 *Journal of Open Access to Law (JOAL)* 1, 30. "Acquiring knowledge is therefore imperative for development and the currency to acquiring knowledge is access. No knowledge no development, no access, no knowledge."

²¹⁵ The World Bank, above n 119.

²¹⁶ Tyndale, *The Holy Bible : Authorized King James Version, containing the Old and New Testaments*.(Tyndale House Publishers, 1984). Hosea 4: 6.

²¹⁷ Swartz, *Guerrilla Open Access Manifesto*, above n 196.

Aristotle explaining the meaning and essence to life noted that “all men by nature desire knowledge”²¹⁸ and that the good life is what we all should aim for and that it is all about flourishing. He called it “Eudaimonia” a life that fulfils man’s natural drive, (a drive which he identified as the search for knowledge), and drives them to the highest end²¹⁹. In essence Aristotle advocates that we should live not just for ourselves but we should live in pursuit of the common good and

to speak of the common good is to recognise that there are numerous proper goals in life beyond our own private benefits. Responsible people look for opportunities to contribute to worthy causes and to improve society however possible, even when the benefits of this progress will go primarily to others.... Everyone has an obligation to promote the common good by making whatever contributions are necessary to improve the lives of all.²²⁰

This obligation may not be compellable or enforceable under the law but is a social responsibility which all well-meaning individuals must strive to meet. It must be focused on planning for the community as a whole and not for a limited class.²²¹ This is probably what was behind the minds of those gathered at the Bethesda meeting when they said

Our organizations sponsor and nurture scientific research to promote the creation and dissemination of new ideas and knowledge for the public benefit... This mission is only half-completed if the work is not made as widely available and as useful to society as possible... We adopt these policies in the expectation that the publishers of scientific works share our desire to maximize public benefit from scientific knowledge and will view these new policies as they are intended —an opportunity to work together for the benefit of the scientific community and the public.²²²

The wordings of the statement made at the Budapest open access initiative meeting also provides insightful knowledge when it says that one of the objectives of the open access movement is to provide a platform that would enable the sharing of the knowledge of the rich with the poor and

²¹⁸ Aristotle (384 BC - 322 BC), <http://www.quotationspage.com/subjects/knowledge/>.

²¹⁹ Jules Evans, *Aristotelians: What is Aristotle's Theory of Human Nature?*, <http://philosophyforlife.org/philosophies-for-life/aristotelians/>.

²²⁰ Thomas Massaro, *Living Justice: Catholic Social Teaching in Action* (Rowman & Littlefield. 2012) 84.

²²¹ A.C Pigou, *Socialism versus Capitalism* (Macmillan and Co. Limited. 1937) 9.

²²² Bethesda Statement on Open Access Publishing, www.earlham.edu/~peters/fos/bethesda.htm. 2003.

the poor with the rich.²²³ The interesting part of meeting this social obligation to share, and in this instance, sharing knowledge, is that it provides justification for the idea/expression dichotomy by reinforcing the fact that ideas are expressed to be shared²²⁴.

2.3.4 Give And It Shall Be Given Unto You

In the book of Luke at the sixth chapter and thirtieth verse (Luke 6:38) it says, “Give, and it shall be given unto you; good measure, pressed down, and shaken together, and running over, shall men give into your bosom. For with the same measure that ye mete withal it shall be measured to you again.”²²⁵ King Solomon in the book of wisdom at Proverbs 11:24-25 emphasizes the wisdom of sharing freely above undue restrictions and says that “One person gives freely, yet gains even more; another withholds unduly, but comes to poverty. A generous person will prosper; whoever refreshes others will be refreshed”.²²⁶ It is in sharing that humanity finds true fulfilment and development. Margaret Wheatley corroborates this point in “The Paradox and Promise of Community” a chapter in her book “Finding Our Way, Leadership for an Uncertain Time.”²²⁷

The open access movement builds on the above principles by encouraging the sharing of scholarly works. The greater the works shared the higher its visibility, citation and impact.²²⁸ Therefore the author who gives out a work for free will definitely receive some form of reward. The work will come back but this time it may have been reused, modified or adapted (*pressed down, shaken together and running over*). Ken Smith in *Free is Cheaper* discusses the inhumanity of man to man but however notes that the “urge to co-operate freely is as old as the human race.”²²⁹ Isaac Newton appreciated the essence and importance of sharing and expressed it this way, “if I have seen further it is by standing on the shoulders of giants”.²³⁰ He could stand on their shoulders because they provided the needed access. The open access movement is advocating that this generation of giants provide the needed access and not hide their shoulders

²²³ Budapest Open Access, above n 18

²²⁴ Fitzgerald, et al., OAK Law Report, above n 14

²²⁵ Hendrickson, *The Holy Bible : King James version* (Hendrickson Publishers. 2011) Luke 6:38.

²²⁶ International Bible Society, *The Holy Bible: New International Version* .(Zondervan, 1978.

²²⁷ M.J. Wheatley, *Finding Our Way: Leadership for an Uncertain Time* (ReadHowYouWant.com, Limited. 2010). "We human beings have a great need for one another...Our great task is to rethink our understandings of community so that we can move from the closed protectionism of current forms to an openness and embrace of the planetary community...This cooperation is spawned from a fundamental recognition that nothing can exist without the other, that it is only in relationship that one can be fully one's self. The instinct of community is everywhere in life"

²²⁸ Brody, et al., (2007) CTWatch Quarterl. "It has now been repeatedly demonstrated that making publications OA by self-archiving them in an OA IR dramatically enhances their research impact."

²²⁹ K. Smith, *Free is Cheaper* John Ball Press. 1988) Introduction page. See the Introduction of Chapter 1

²³⁰ Isaac Newton, *From a letter written by Isaac Newton to Robert Hooke, 5 Feb. 1676, (1676).*

but should allow, permit, authorise and provide the needed platforms and opportunities for others to see further by sharing the use of their shoulders.

2.4 ECONOMIC

2.4.1 Global Inequality-Greed

The scale of global inequality is staggering. In 2014 it was reported that 48% of global wealth was owned by the richest 1%. \$1.9 trillion wealth of 80 top billionaires is equal to the bottom 50% of the rest of the world. There has been a \$600bn increase in wealth for 80 top billionaires in 4 years, comprising a 50% rise and there has been a \$750 billion drop in wealth for the poorest 50% of the world in 4 years.²³¹ The above reports reveals that the financial purchasing capacity of the average global citizen is on the decline and this is affecting every kind of commodity inclusive of knowledge products which are vital to development. This global economic inequality is depriving many of a fundamental right, the right to access knowledge and as pointed out by the Guerrilla open access manifesto, “Only those blinded by greed would refuse to let a friend make a copy... Large corporations, of course, are blinded by greed. The laws under which they operate require it, their shareholders would revolt at anything less.”²³² The above words reflect the mind of certain proponents of open access who believe that greed is one of the underlying factors that have enabled the continued lock up of access to knowledge.

There is the capitalist argument that people need to be incentivized for hard work and individual initiative and that competition brings out the best in people.²³³ This postulation has brought about great innovations, creativity, employment and great opportunities but at the same time it has widened the divide between the rich and poor, between those who have access and those who are unable to obtain access. It is not always about gain, about money, about how much one acquires. If the meaning of life were tied to wealth, King Solomon with all his wealth would not have cried out meaningless, meaningless, life is meaningless. As noted earlier while discussing Ubuntu, meaning is found in sharing and that is why the open community is making great strides through sharing and are yet able to find business models which run concurrently. The examples

²³¹ BBC News Business, *Richest 1% to own more than rest of the world*, (2015) Oxfam <http://www.bbc.com/news/business-30875633>.

²³² Swartz, Guerrilla Open Access Manifesto, above n 196.

²³³ B.R. Scott, *Capitalism: Its Origins and Evolution as a System of Governance* (Springer. 2011) 102. “The extraordinary capacity of capitalism to facilitate the mobilization of human energy through a process of organised competition within markets is a prime force in the improvement in incomes and human welfare, and supportive of democracy. But the motivational power of competition depends upon the fact that consumers reward preferred suppliers with their business and, accordingly, reward the winning suppliers more than the losers.”

of Android,²³⁴ Apache,²³⁵ Ubuntu,²³⁶ Linux,²³⁷ SUSE,²³⁸ and Creative Commons licences²³⁹ are all examples of knowledge products that are developed based on communal cooperation and are shared freely yet the organisation behind managing these products have been able to work out business models for the effective running of their organisations.

2.4.2 Adam Smith (1723-1790)

In his book the Wealth of Nations had postulated “the invisible hands”²⁴⁰ and noted that individual self-interest constitutes a major motivating factor for the production and acquisition of goods and services. He referred to butchers and bakers who use their discretion in determining the amount to produce and points out that this power of discretion is made possible because of a free market economy which he relates to his classical economics theory.²⁴¹ The theory postulates that a “laissez-faire attitude by government toward the market place will allow the invisible hand to guide everyone in their economic endeavours, create the greatest good for the greatest number of people, and generate economic growth.”²⁴² This capitalist theory is what prevails in the global economy today.

2.4.3 Karl Marx (1818-1883)

Karl Marx did not share Smith’s theory on capitalism. Whereas Smith saw capitalism as a motivating agent in individuals, Marx saw it as exploitation. In his 1867 *Das Kapital*, he noted that capitalist’s derive their gains from an exploitative system and explained that they under pay workers for the value of work done.²⁴³ Marx posited that capitalism breeds exploitation and leads to class struggle.²⁴⁴ He predicted that this same struggle will lead to the demise of capitalism.²⁴⁵ He noted that as business entities increase production capacity and profit margins rise, the rich get richer and poor poorer thus breeding dissatisfaction, oppression and exploitation. This

²³⁴ Android, *The Android Source Code*, <https://source.android.com/source/index.html>.

²³⁵ Apache, *The Apache Software Foundation: Community-led development since 1999*, <<http://www.apache.org/>>

²³⁶ Ubuntu, *The Ubuntu Story* above n 202

²³⁷ Linux, *Introduction to Linux, Free Software and Open Source*, <http://linux.org.au/introduction-linux-free-software-and-open-source>.

²³⁸ SUSE, *About SUSE*, <https://www.suse.com/company/open-source/>.

²³⁹ Creative Commons, *About the Licenses* above n 126

²⁴⁰ A. Smith, *Wealth of Nations* (Hayes Barton Press. 2001) 288.

²⁴¹ Infoplease, *Overview of Economics*, <http://www.infoplease.com/cig/economics/three-economists-their-theories.html>.

²⁴² T. Gorman, *The Complete Idiot's Guide to Economics* (Alpha. 2003) 58.

²⁴³ K. Marx, et al., *Das Kapital: A Critique of Political Economy* (Regnery Gateway. 1996) 174, 178 & 190.

²⁴⁴ Woods Alan, *The Ideas of Karl Marx* International Marxist Tendency (IMT) <http://www.marxist.com/karl-marx-130-years.htm>.

²⁴⁵ Marx, et al., *Das Kapital: A Critique of Political Economy* above n 242, xvi.d

underscores today's situation where 1% of the wealthiest control about 50% of the global wealth.²⁴⁶

2.4.4 Economic Realities versus Imperatives for Free

The publishing cycle costs money and entails multiple processes consisting of peer-review by editors, typesetting, printing, distribution and marketing.²⁴⁷ This process can be cost intensive and most authors and researchers may not be in the position to fund the actual publication of their works.²⁴⁸ When the practice of journal publication began, it served as the major avenue for disseminating literary scholarly works and this system for knowledge dissemination has grown through the years.²⁴⁹ Technological development has however enabled easier and faster publication of copyright protected content and the structure that has existed where authors write and publishers invest in publishing was effective until two issues began to raise their heads. The first was the continuous rise in journal subscription fees and the other was the emergence of the Internet.²⁵⁰

2.4.5 Higher Subscription Fees & The Internet

The publishing industry has grown to become one of the most successful lines of businesses.²⁵¹ What started out as an activity for the promotion of learning has now turned into a capitalist venture and a business empire with the central theme being that of generating the highest possible revenue.²⁵² In one breathe, it can be explained that, that is the focus of all business enterprises but on the other hand, it is pertinent to note that the commodity in which the industry trades is a commodity they receive at no cost and those who provide the expertise to improve and analysis the quality of these products do it also at no cost.²⁵³ The peer-review process which authenticates the quality of the work is made possible by the duo effort of authors and editors both of whom are from the academic and research community and both of whom

²⁴⁶ BBC News Business, above n 230.

²⁴⁷ See Page 12, *The STM Report, An overview of scientific and scholarly publishing.* (2012)."Here research information, created by an author from a particular research community, passes through the journal editorial office of the author's chosen journal to its journal publisher, subscribing institutional libraries – often via a subscription agent – before ending up back in the hands of the readers of that research community as a published paper in a journal.

²⁴⁸ University of Illinois at Urbana-Champaign University Library, above n 187

²⁴⁹ See, *Philosophical Transactions of the Royal Society of London (or Phil. Trans.)* 1665. See also, *Le Journal des Sçavans.* 1665. See also, *The History of Journal Publication* http://www.journal.au.edu/au techno/2008/jan08/journal113_editorial.pdf.

²⁵⁰ Brian Fitzgerald, et al., *Internet and E-Commerce Law Business and Policy* (Thomson Reuters. 2011) 5.

²⁵¹ Livres Hebdo, *The Global Ranking of the Publishing Industry 2014*, (2014) Rüdiger Wischenbart Content and Consulting <http://wischenbart.com/upload/Global-Ranking-of-the-Publishing-Industry-2014-Analysis.pdf>.

²⁵² International Publishers Association IPA, *Annual Report October 2013|October 2014* (2014), <http://www.internationalpublishers.org/images/reports/2014/IPA-annual-report-2014.pdf>.

²⁵³ Suber, *Open Access*, above n 12, 17&19.

render such services at virtually no cost²⁵⁴. This came to the fore when those providing the content for the development of the publishing industry began finding it difficult to access needed research materials due to high cost of journal subscriptions and technical restriction that had been placed on contents through the aid of technologically protected measures and electronic rights management.²⁵⁵ The challenges of inability to access requisite materials to expand the scope of research had become a matter of concern. There was therefore the need to work out a modality for effective access to needed research materials.

At the heel of all these, the Internet with its many potentials became a viable alternative to the current structure that was already a monopolistic monster. The preprint service ArXiv²⁵⁶, started by Paul Ginsparg in 1991, in the field of Physics and the Education Policy Analysis Archives started in 1993²⁵⁷, by the Statistician, Gene Glass are examples of how the internet even back then was not only considered but actually deplored as a one stop shop for knowledge development, dissemination and preservation. They are both still functioning as at the time of this writing.

The meeting held at Budapest captures the thoughts of open access promoters. At the meeting, it was noted that “An old tradition and a new technology have converged to make possible an unprecedented public good. The old tradition is the willingness of scientists and scholars to publish the fruits of their research in scholarly journals without payment, for the sake of inquiry and knowledge. The new technology is the internet.”

So we see the frustration within the research community met by the possibilities offered by a new invention to resolve in no small way the said frustration. However, an industry that had thrived for hundreds of years would not sit back and allow herself to be relegated or displaced. The hundreds of people employed in that sector, the investors who profit from its continued existence and the structures that are in place would not fold their hands and go into oblivion. It therefore is only reasonable to consider that, if this new technology is able to enable global online distribution of peer-reviewed literature free of charge and without any form of access restriction to the user public, how will this new initiative built on the shoulders of this new

²⁵⁴ David Solomon, ‘The Role of Peer Review for Scholarly Journals in the Information Age’, (2007) 10 *The Journal of Electronic Publishing (JEP)*.

²⁵⁵ WIPO, *WIPO Internet Treaties*, http://www.wipo.int/copyright/en/activities/wct_wppt/wct_wppt.html.

See also, Brian Gutterman, Internet as a catalyst for change: access, development, freedoms and innovation. (2011) Internet Governance Forum (IGF).

²⁵⁶ Cornell University Library, arXiv.org above n 82.

²⁵⁷ *Education Policy Analysis Archive*, University of Arizona, <http://asu.academia.edu/EPAAAAPE>.

invention called the internet, affect the economic well-being of the traditional publishing industry? As can be imagined, the economic factor, the capitalist spirit, the invisible hand referred to by Adam Smith will rise up to protect its territory and even annex more.

It is important to give some thoughts to these economic concerns, considering the high returns on investment that has been recorded in the publishing industry. These high financial returns imply that, there are interests to be protected. This is why the open access movement provides for Article Processing Charges (APC) to cover the cost of publication production in the open access environment.²⁵⁸ The CEO of Springers in an interview put it this way “our policy is very simple: as long as the cost of the value-added services provided by publishers is recognized and covered, Springer is happy to provide the research community with an open access publishing option”.²⁵⁹ The need to find a balance between the quest for profit and the provision of access to knowledge is the rationale for open access.

2.4.6 OA Will Adversely Affect Traditional Publishing

The fears however, that freedom to access peer-reviewed literature at no cost or restriction to the users would adversely affect the publishing industry has been proved wrong. It is now 23 years since Arxiv was established and it has not adversely affected the revenues of journals publishing in the field of physics²⁶⁰.

2.4.7 OA Is Not A Viable Publishing Business Model

The fears that open access publishing cannot be economically viable has been disproved by the successes of BioMed Central, its acquisition by the second largest commercial publishers Springer²⁶¹, and the continued establishment of more open access publishing outfits. The concept of free, unrestricted and immediate access to the peer-review literature is not merely a social oriented ideology but also a new business model running on the possibilities enabled by the Internet and now asserted by the successes of several open access publishers.²⁶²

²⁵⁸ BioMed Central, *Article-Processing Charge*, BioMed Central, <http://www.biomedcentral.com/authors/apc>.

²⁵⁹ Springer, *Interview with Derek Haank on Open Access*, <http://www.springer.com/societies+%26+publishing+partners/society+%26+partner+zone?SGWID=0-173202-12-489299-0>.

²⁶⁰ See Willinsky, *Economic Analysis & Policy*, above n 167. Where he noted that "the publishers of the relevant physics journals reports that after more than a decade of a substantial portion of their content being archived, they have no greater decline in journal subscriptions than they are experiencing more generally"

²⁶¹ See Springer, *Springer Acquires BioMed Central Group*, <http://www.springer.com/authors/author+zone?SGWID=0-168002-12-563100-0>. Where Derek Haank, CEO of Springer said “This acquisition reinforces the fact that we see open access publishing as a sustainable part of STM publishing, and not an ideological crusade” and also where matthew Cockerill noted that “...BioMed Central has demonstrated that the open access business model can work...”

²⁶² Willinsky, *Economic Analysis & Policy*, above n 167.

2.4.8 Rivalrous Against Non-rivalrous

In the pre-digital era, printed materials such as peer reviewed literatures became books, articles, pamphlets and were basically printed on materials which became visible and tangible objects. These objects could only be used one at a time. It would be impossible for the same book to be in two places at the same time or for two persons to use it at the same time. In that sense they were rivalrous goods, that is, goods that can only be consumed or enjoyed one at a time, or goods which when used reduces in value, quantity or quality. The digital era has altered this position and has enabled the simultaneous production, reproduction, usage and enjoyment of printed materials, thus moving such works into the category of non-rivalrous goods, which are goods which when simultaneously utilised do not diminish in value.²⁶³ Examples of non-rivalrous goods are air, public roads, public libraries and water in the sea. These goods can be utilised simultaneously without reducing its value or quantity; the use of such goods by Mr. A would not deprive Mr. B from utilising the same good.

From an economic perspective, goods that are rivalrous in nature are depletable and therefore require replacement with cost implications and other cost effects. On the other-hand non-rivalrous goods are generally non-depletable and thus regardless of the number of users or the quantum of usage, the goods are still available. If regardless of the quantum of use of a good, such goods will still be available and it is clear that such goods are important, it is not only a social responsibility to make such goods available but there is also an economic imperative to make it accessible at a zero cost or a cost closest to zero and just as the CEO of Springer noted, that so long as the costs associated with the added value on the goods have been taken care of, then open access can be provided to the general public.²⁶⁴ The cost associated with the added value mentioned above is what those at the BOAI committed to defray within reasonable standards. The Article Processing Charges business model has been introduced to cover the

²⁶³ See Suber, Knowledge as a Public Good above n 45. Where he noted that "a public good is non-rivalrous and non-excludable. A good is non-rivalrous when it's undiminished by consumption. We can all consume it without depleting it or becoming "rivals". Radio broadcasts are non-rivalrous; my reception doesn't block yours or vice versa...Knowledge is non-rivalrous. Your knowledge of a fact or idea does not block mine, and mine does not block yours."

See also, Bill Cope & Mary Kalantzis, *Signs of epistemic disruption: Transformations in the knowledge system of the academic journal* <http://www.firstmonday.dk/ojs/index.php/fm/article/view/2309/2163>. Where it was noted that: "And on the distinction between rivalrous and non-rivalrous goods, the key theoretical problem is to base one's case on the circumstantial aspects of knowledge consumption rather than the practical logistics of knowledge production. Rivalrous and non-rivalrous goods equally need to be made. They cost their makers labor time, time which otherwise could be spent making buildings or food. Ostensibly non-rivalrous goods also need physical spaces and tools and storage devices and distribution networks, and these all have to be made by people who need buildings and food. In these fundamental respects, knowledge or cultural goods are not so different from any other goods. In fact, knowledge and material domains are not so neatly separable. Buildings and food have design in them (and when we go to architects and restaurants we are in part purchasing intellectual property). Equally, all cultural products have to be made, delivered and rendered materially."

²⁶⁴ Springer, Interview with Derk Haank on Open Access above n 259

costs of production. These charges basically move the onus of payment from the user publics to other sources of payment such as universities, funding agencies and in very few occasions' individual authors.

There is no doubt that there will be economic implications as a result of open access. The implications are just not that of the non-feasibility of an open access publishing model neither is it that open access will adversely affect the subscription base of journal articles. These fears have been addressed by the continued successes of BioMed Central and the parallel existence of Arxiv and other journals in the field of physics. Derk Haank captured it succinctly when he opined that "Personally, I do not believe that open access will ever totally replace the subscription model, but I am more than happy to be proved wrong. I do believe, however, that STM publishers will continue to play a vital role as partners to the research community, as long as we make every effort to give the scientific community what it wants, rather than simply telling it what we are willing to provide."²⁶⁵ The effort he referred to is where the economic implication comes in, the implications associated with finding a new business model and committing to human resource development to satisfy the scientific and research community rather than holding to old models which are now obsolete and non-desirable by the user publics.

2.5 LEGAL

No society is static...When the behaviour of people has moved away from the law with a sufficient degree of permanence, tensions arise with varying results. The law itself may be stretched to take account of the development, or it may be ignored until it becomes a dead letter, or it may be repealed and a new law substituted. In these ways evolution gives direction to future development²⁶⁶

Change is inevitable. The tools of communication available in this generation exemplified by social media platforms such as Skype, Facebook, WhatsApp, YouTube, Twitter, Instagram and many others have changed the landscape of society and has brought in new dimensions to human relationships. Technological changes appear to be way ahead of the law and the law is not responding promptly to these change, thereby leaving gaps between the law and societally accepted practices.²⁶⁷ Many of today's global citizens are not ready to sit back and wait for the

²⁶⁵ Ibid

²⁶⁶ See Chapter 15 on Justice in adapting to change by, R.W.M. Dias, *Jurisprudence* (Butterworths. 1985) 305.

²⁶⁷ L. Lessig, *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity* (Penguin Press. 2004) 199.

"Overregulation stifles creativity. It smothers innovation. It gives dinosaurs a veto over the future. It wastes the extraordinary opportunity for a democratic creativity that digital technology enables. In addition to these important harms, there is one more that was important to our forebears, but seems forgotten

legal system to change. They see some of the current laws as impracticable and unrealistic and as Litman observed,

People don't obey laws that they don't believe in. It isn't necessarily that they behave lawlessly, or that they'll steal whatever they can steal if they think they can get away with it. Most people try to comply, at least substantially, with what they believe the law to say. If they don't believe the law says what it in fact says, though, they won't obey it -- not because they are protesting its provisions, but because it doesn't stick in their heads. Governments stop enforcing laws that people don't believe in. Laws that people don't obey and that governments don't enforce get repealed, even if they are good laws in some other sense of the word.²⁶⁸

This section will consider the reactions of Aaron Swartz and Edward Snowden to the legal system and discuss other legal dimensions to the society in light of the open access movement.

2.5.1 Aaron Swartz

Aaron did not believe the law represented the interest of the ordinary people, he did not see any hope in sight through legislative channels and therefore encouraged everyone to take the law into their hands by downloading as much information as they could and make it available to the world on the Internet. In his 2008 Guerrilla Open Access Manifesto he noted that “We need to take information, wherever it is stored, make our copies and share them with the world. We need to take stuff that's out of copyright and add it to the archive. We need to buy secret databases and put them on the Web. We need to download scientific journals and upload them to file sharing networks. We need to fight for Guerrilla Open Access.²⁶⁹” This is exactly what he eventually did through the MIT website when he downloaded copyright protected contents belonging to JSTOR which lead to his prosecution and eventually to him committing suicide on the 11th of January 2013²⁷⁰.

2.5.2 Edward Snowden

In a similar action, we see Edward Snowden leaking out classified Intelligence information to the entire world and basing his action on the failure of the system to respect the ordinary citizens’

today. Overregulation corrupts citizens and weakens the rule of law. The war that is being waged today is a war of prohibition. As with every war of prohibition, it is targeted against the behaviour of a very large number of citizens. According to The New York Times, 43 million Americans downloaded music in May 2002.¹⁵ According to the RIAA, the behaviour of those 43 million Americans is a felony. We thus have a set of rules that transform 20 percent of America into criminals”

²⁶⁸ Litman, ‘Copyright Non-compliance (Or Why We Cant "Just Say Yes" to Licensing"')’ above n 199.

²⁶⁹ Swartz, above n 196

²⁷⁰ Paul McGeough, *Aaron Swartz: a beautiful mind*, (2014) The Sydney Morning Herald, <http://www.smh.com.au/technology/technology-news/aaron-swartz-a-beautiful-mind-20140127-31hjr.html>.

right to freedom of information and privacy. Snowden who himself worked as an intelligence officer had seen the scale of surveillance on the ordinary citizen, businesses and foreign governments and had become agitated by the happenings. His hope for some form of reforms was not coming and he like Aaron Swartz decided to take laws into his own hands. It was noted that

"He got hardened. In other words, the more information he saw about what he viewed as ... mass surveillance, the more disillusioned he became. He says quite explicitly that he thought that (President Barack) Obama would roll back some of these programs when he came into the White House, and when this didn't happen, essentially Snowden decided he would take things into his own hands, and become a whistle-blower," the author said."²⁷¹

In what has been described as US worst disclosure, he leaked out sensitive intelligence information causing political and diplomatic instabilities and it is said that the worst is yet to come.²⁷²

Prominent figures like Dr King and Mahatma Ghandi have advocated that when the laws are unjust, disobedience is a social responsibility. Whilst they did not advocate violence, they noted that unjust laws are themselves species of violence. On the contrary side were philosophers like Thomas Aquinas, Plato, Socrates and Aristotle who all noted that laws may be unjust but obedience is the best way to preserve and maintain an orderly society.²⁷³

2.5.3 The Law is an Ass²⁷⁴

When Mr Brumble was told that the court supposes his wife acts according to his instruction, he responded that if the law supposes so, then "the law is a ass- a idiot".²⁷⁵ The above phrase in the popular book, *Oliver Twist* by Charles Dickens points out the law has the propensity to exhibit some stupidity and rigidity.

The open movement is about responding to the need for greater access and were possible completely free access to knowledge, information, education, government and all things that should belong to the ordinary citizen. The OA movement recognises the frustration of

²⁷¹ Mark Morgenstein, *Edward Snowden: World's most wanted man, says new book* (2014) CNN, <http://edition.cnn.com/2014/02/02/world/europe/uk-snowden-book/>.

²⁷² Wikipedia, *Edward Snowden*, http://en.wikipedia.org/wiki/Edward_Snowden.

²⁷³ Simona Vieru, 'Aristotle's Influence on the Natural Law Theory of St Thomas Aquinas', (2010) 1 *The Western Australian Jurist* 119-120.

²⁷⁴ The phrase has been attributed to an English dramatist, George Chapman in 1654 - *Revenge for Honour*. See Gary Martin, *The law is an ass*, <http://www.phrases.org.uk/meanings/the-law-is-an-ass.html>.

²⁷⁵ C. Dickens, *Oliver Twist* (Richard Bentley. 1839) 279.

researchers and users in gaining access to peer-reviewed literature and identifies that some interest groups have utilized the current legal system as a tool for locking up access.

The crux of the challenge with the legal system is that laws are reactionary in that they are drafted to deal with current and past issues but not future issues. The dynamic and changing nature of society however leaves citizens in dilemma as a result of the gaps between the law and new societal norms. This is what Lessig referred to when he noted that the current copyright legal framework which is over 300 years old has criminalised today's generation (the internet and social media generation) who see downloading and sharing of files (music, video and pictures) as a normal part of everyday life.²⁷⁶

As exemplified in Oliver Twist's story, the OA movement recognises that the law can be an ass and notes that if the law is being deployed to serve the selfish interest of a few to the detriment of the generality, then the generality can also deploy the same law to work in their interest. This is exactly what the open access movement has chosen to do and that is why Peter Suber has noted that while he supports the legally correct aspect of the Guerrilla open access manifesto, he is not in support of the illegal aspects, and this is because, open access has not been structured to run and thrive on illegality. Open access respects the current legal framework that controls information and actually builds on that same framework to now provide open access to the information that was before now locked up. Suber expressed it this way when he said "I support all the legal tactics recommended here (and then some) and none of the illegal tactics. It's legal to self-archive and it's legal to make public-domain texts OA. It's not legal to make copyrighted texts OA without the copyright holder's permission, even if you paid for your own copy"²⁷⁷

The laws could be frustrating and compliance often constitutes a problem when these laws appear unreasonable and non-representative of the people. That appears to have been the dilemma of both Aaron and Edward but frustration is no licence for conscientious disobedience but rather it should stir a prompting for radical but positive change. Seeing that the law is an ass and is amenable to different situation, the law can be made stirred in the direction of open. This is not definitely not an easy task as the stir towards open is a stir against the current legislative current and change is often not easily achieved. Nonetheless, progress is already been made in this direction with initiatives like open licencing. Although it has not changed the laws but it has

²⁷⁶ Lessig, above n 265, 207. See where he noted that "When forty to sixty million Americans are considered "criminals" under the law, and when the law could achieve the same objective— securing rights to authors— without these millions being considered "criminals," who is the villain? Americans or the law? Which is American, a constant war on our own people or a concerted effort through our democracy to change our law?"

²⁷⁷ Peter Suber, *Guerrilla OA*, (2008) Open Access News [http://legacy.earlham.edu/~peters/fos/2008/09/guerrilla-oa.html](http://legacy.earlham.edu/~peters/fos/2008/09/guerrilla-<u>oa.html</u>).

stirred the law in its direction by turning around to positive, the erstwhile negative powers inherent in copyright. Based on this initiative it is able to revolutionise the software and content industries. This is the path to be taken and it promises tremendous changes.

2.5.4 Information Legal Structure & Compliance

The dynamics of knowledge is governed by certain rules. These rules determine ownership, transfer, reproduction, distribution and basically use and reuse rights when it comes to products of knowledge or content. An important part of knowledge which forms the backbone of academic development is peer-reviewed literature. The quality analysis and distribution mechanism for peer-reviewed knowledge is carved around writing, editing, peer-review and publication. These activities which are undertaken by authors, editors, referees, publishers, funding agencies, universities and of course the user-publics are governed by structures protecting amongst other things the creative endeavours of copyright owners under a legal framework called Intellectual Property and more directly, Copyright. This framework is now over 300 years old and is facing several challenges especially that of technological change which in turn has affected the behaviour and attitude of the user-publics.

In 1710 when the Statutes of Anne was passed, the author or copyright owner enjoyed the rights of reproduction, importation and distribution.²⁷⁸ The task of reproducing literary works was laborious, difficult, time consuming and error prone. The rivalrous nature of literary works prior to the advent of the internet made it such that literary works had to be utilized one after the other and the only way to maximize use of such literary works was by means of reproduction. Reproducing a work allows for multiple copies of such works and thereby enables several users' access to the same content. The right of reproduction is one of the exclusive rights of an author or a copyright owners and it constitutes exploitation of a work. The birth of copyright has been linked to a dispute that had to do with the reproduction of a literary work. Finnian who had just obtained a copy of the Bible loaned it to Columcille who was later accused of copying the Bible without the consent of Finnian, the owner. King Diarmund in making his declaration said "to every cow her calf; and to every book its copy."²⁷⁹ This decision reinforces the fact that acts of reproduction are within the exclusive rights of a copyright owner.

²⁷⁸ Statute of Anne, 8 Anne c. 19 (1710).

²⁷⁹ Ola, above n 10, 25. See also, Thomas Cahill, *How The Irish Saved Civilization*, (Anchor Books, Doubleday, New York, 1995) 14, 170.

The legal architecture which structured copyright law and gave copyright owners exclusive powers to restrict all others from reproducing their works or books where consent was not obtained, was at the time appropriate to the printing technology of the day. At that time, the generality of people would not have had any problem complying with the laws as it did not affect all of the public, but rather a select few involved in the business of printing and reprinting. Compliance to the provision of the law was therefore not a problem from the technological standpoint and from the standpoint of the general public's adherence and acceptance of the appropriateness and rationality of the laws. However, in today's internet and technologically driven society, reproducing a copyright protected content has become very easy and has taken a new face. It is no more the manual transcription of documents, neither is it just the printing of documents via the printing machine, it has assumed a new dimension. The typewriter, photocopier, fax machine, tape recorder, video player recorder, the desktop, laptop and the many variants of handheld devices have brought in entirely new dimensions to reproduction and in turn the exercise of the right of reproduction in unprecedented manners.

In 1710, reproduction was within the exclusive preserve of a few entrepreneurs but today, reproduction has become a normal and subconscious part of daily activities considering that every act of download on a laptop, mobile phone, PC or any handheld device amounts to reproduction. The community of printers, re-printers, publishers and marketers who used to control the business of reproduction is facing a new order. An order in which the general public has now joined the community of printers, re-printers, publishers and marketers and can now deal directly with and on the content they before now relied on the old community to provide. Technological advancement bringing in innovations like the computer and the Internet is what has enabled this new order.

The new order has turned everyone inclusive of children into potential writers, printers, publishers and marketers and have in some ways taken away the three layered structure that entailed authors, publishers and the user publics and have replaced it with a two layered structure entailing authors and users, thus potentially doing away with publishers. A problem however exists and it is that the laws governing information management and distribution is governed by copyright laws, laws which as stated above are currently over 300 years old and were built on technology and practices which have changed drastically. The laws as they then were could not have contemplated the technological possibilities that exist today. Considering when the laws were passed, the changes in technology and in the perception of people, compliance has become

an issue and worse still, the people do not see the appropriateness of the laws.²⁸⁰ There is a disconnection between the written provisions of the law and the daily realities of people living in a digital world and hence the words of Aaron saying “There is no justice in following unjust laws. It's time to come into the light and, in the grand tradition of civil disobedience, declare our opposition to this private theft of public culture.” Similarly this is why the whistle blower, Edward Snowden would knowingly break the laws and say “I have no intention of hiding who I am because I know I have done nothing wrong”²⁸¹ and that the “moral decision to tell the public about spying...has been costly, but it was the right thing to do and I have no regrets.”²⁸²

The nobility of the actions of these men is not in doubt nor is it in question, but it however does not negate the fact that the law declares such acts illegal. The dilemma is that of non-compliance due to a failure in the system and that of non-believe in the reasonability and sensibility of the laws.²⁸³

2.5.5 Law Reforms

Copyright has two intrinsic objectives, one is to incentivize creativity and the other to encourage learning by providing access for dissemination of knowledge to the general public. The second objective continues to suffer at the hands of the first and attempts to restructure copyright have only seen copyright laws being strengthened in favour of copyright owners. The ascendance of the TRIPS agreement and other bilateral agreements have only strengthened IP rights and has made it a necessity for criminal sanctions to be introduced into virtually every national Intellectual Property legislation, thereby criminalising more and more the unapproved exploitation of content by the general public. This really should not come as a surprise and it is because the whole concept of copyright is esoteric and not very general public friendly²⁸⁴. Most people do not understand what it is all about and have generally accepted whatever is told to them. This system of general acceptance of what was passed down was acceptable when the

²⁸⁰ Lessig above n 48, 42-43. See where he said “They are doing it today by rendering this activity illegal and by doing this we say to our kids “you are criminals when you engage in this behaviour”. We raise a generation who thinks their activity is criminal. These children... will learn something different about democracy if they think that activities that seem to them to be totally obvious and totally creative and totally productive, are called, by the great Soviet, ‘criminal?’

²⁸¹ Glenn Greenwald, et al., *Edward Snowden: The whistleblower behind the NSA surveillance revelations*, (2013) The Guardian <http://www.theguardian.com/world/2013/jun/09/edward-snowden-nsa-whistleblower-surveillance>.

²⁸² Barbara Miller, *Fugitive Edward Snowden meets with human rights groups at Moscow airport*, (2013) ABC News <http://www.abc.net.au/news/2013-07-12/snowden-meets-with-human-rights-groups/4817674>.

²⁸³ J. Litman, *Digital Copyright: Protecting Intellectual Property on the Internet* (Prometheus Books. 2006) 29, 112. Members of the general public commonly find copyright rules implausible, and simply disbelieve them...the copyright law is complicated, arcane, and counterintuitive, and the upshot of that is that people don't believe the copyright law says what it does say. People do seem to buy into copyright norms, but they don't translate those norms into the rules that the copyright statute does; they find it very hard to believe that there's really a law out there that says the stuff the copyright law says

²⁸⁴ Litman, ‘Copyright Non-compliance (Or Why We Cant “Just Say Yes” to Licensing)’ above n 199

exploitation of content (reproduction, distribution, and marketing) was within the control of a few. But today, everyone with a laptop and an internet enabled mobile phone is involved in numerous acts of reproduction on a daily basis and it is quite difficult to expect such number of persons' to merely accept a rule that requires them to go and seek permission from the copyright owner who they may not know and if they do, may not know where he is, and if they do know where he is, it may not be practicable for them to seek and obtain such permission.

Clamour for a change in the legal rules governing the use and reuse of content is continually being made but the current legal provisions regulating the information system is still not adequately reflective of the current technological realities. In the November 2009 issue of the SPARC open access newsletter, Peter Suber opining on this issue noted that

“We possess a revolutionary technology for knowledge sharing but are often restrained from using it by laws which (in the relevant respects) have not changed for more than two centuries. It's not just that legal change is slower than technological change. The desire for legal change is either not sufficiently widespread or is dispersed among the comparatively powerless and opposed by the comparatively powerful. Some of us want to seize the opportunities created by digital media and lift the legal restrictions on new kinds of knowledge sharing. But many others want to keep the restrictions in place and force us to forego the full benefits of our revolutionary technology.”²⁸⁵

Even if we had no problems to tackle with regards to accessing peer-reviewed literature, the thought of a technological invention that enables unprecedented ways for knowledge dissemination is another reason to explore the open culture as against the old toll publishing system. However, we have both the problems and the opportunities for resolving them.

2.5.6 Alternative to Legal Reform

Considering the difficulties encountered in the several processes of changing the laws from its default closed access model to an open access model,²⁸⁶ the open community working within the current legal framework of copyright has deployed exclusive rights of copyright owners as enabling tools for empowering prospective users. This is achieved by what traditional versus

²⁸⁵ Suber, Knowledge as a Public Good, above n 45

²⁸⁶ J. Litman, 'Revising Copyright Law for the Information Age', (1996) 75 *Oregon Law Review* 19, 20. Where she noted that, “Our current copyright law is based on a model devised for print media, and expanded, with some difficulty to embrace a world that includes live, filmed and taped performances, broadcast media, and, most recently, digital media. That much is uncontroversial. The suitability of that model for new media is much more controversial. As one might expect, to the extent that current legal rules make some parties "haves" and others "have-nots," the haves are fans of the current model,' while today's have-nots suggest that some other model might be more appropriate for the future.2 Meanwhile, copyright lawyers, who, after all, make their livings interpreting and applying this long and complex body of counterintuitive, bewildering rules, insist that the current model is very close to the platonic ideal, and should under no circumstances be jettisoned in favour of some un-tried and untrue replacement.”

modern scholars might regard as the holy and unholy marriage between open licencing and copyright law. Holy because open licensing operates on the platform of the current legal system thereby working in harmony with the current copyright regime in a substitutive/complementing role. It is unholy because although working on the platform of the copyright system, it identifies the lacunas and deficiencies in the current legal system and provides an immediate solution to address the said lacunas created by the deficiencies in the system. By doing this open licensing works as both a stop-gap by addressing the lacuna and a competition/challenge to copyright reform by identifying and providing immediate solutions to the lacunas and deficiencies. (See Paragraphs 1.12.1, 5.3.2 and footnote 370)

In deploying open licensing in its substitutive/complementing, stop-gap and competition/challenge roles, it considers that if copyright owners have powers to restrict others from exploiting a work, such copyright-owners are equally empowered to grant consent for the use of such works. It considers that the hitherto restrictive (negative) powers can be turned into enabling (positive) powers.²⁸⁷ This can be achieved by means of the law of contract which prescribes that once an offer is made and accepted and there is the intention to enter a binding legal relationship and consideration has been furnished, then a valid contract comes into place.²⁸⁸ By means of the law of contract, the right of the copyright owner to license his/her work is deployed in making copyright an enabling tool for granting access to prospective users. The copyright owner by issuing an open licence to prospective users' both establishes his intention to enter a binding legal relationship and at the same time makes an offer which is open to the general public. Any interested member of the public is therefore free to accept the terms of the offer and by using the content either through downloads, translation or any other form of reuse, confirms acceptance and at the same time furnishes consideration, thereby establishing that a contract has been entered into.

In practical terms the author or copyright owner is able to provide access to peer-reviewed literatures through a two tiered structure. The first tier is for copyright owners to place their works in a repository where anyone who has access to the internet is able to access it and basically read such works. The permission granted in this respect must contain at least the right

²⁸⁷ Brian Fitzgerald, *Open Content Licensing: Cultivating the Creative Commons* (Sydney University Press, 2007) 5. Where it was noted that "The genius of Stallman was in understanding and implementing the ethic that if you want to create a community of information or creative commons you need to be able to control the way the information is used once it leaves your hands. The regulation of this downstream activity was achieved by claiming an intellectual property right (copyright in the code) at the source and then structuring its downstream usage through a licence (GNU GPL). This was not a simple 'giving away' of information but rather a strategic mechanism for ensuring the information stayed 'free' as in speech. It is on this foundation that we now see initiatives like the Creative Commons expanding that idea from open source code to open digital content."

²⁸⁸ Hugh Collins, *The Law of Contract* (Butterworths. 1993). 3

to use the work but may exclude the right to reuse the work. This is not to say that works placed in repositories may not be licensed for reuse. At the level of the second tier, which involves publishing in an open access journal, the copyright owner makes available his work to prospective users through journals that provide immediate, free and permanent access for use and reuse of peer-reviewed literatures and via this platform clearly tells them what it is they can do or may not do with such works. Most often reuse rights are granted in this tier and such grants could be restrictive or non-restrictive. Some permission to use and reuse would allow reproduction, distribution but would not allow adaptation and commercialization of the work. Others allow reproduction, distribution, adaptation but not commercialization, others allow all the above activities. This is achieved via the licensing vehicle, using the laws of copyright and contract. The software industry has taken the lead in this initiative with open source licences²⁸⁹, for example the GNU GPL licence²⁹⁰. The content industry has followed suit with several content licences in use today but the Creative Commons licences have made the greatest impact in this respect²⁹¹.

2.6 POLITICAL

“We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.--That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed, --That whenever any Form of Government becomes destructive of these ends, it is the Right of the People to alter or to abolish it, and to institute new Government, laying its foundation on such principles and organizing its powers in such form, as to them shall seem most likely to effect their Safety and Happiness”²⁹².

Philosophers argue that man by nature is a communal being and should not live in isolation. Aristotle postulated that the city-state exists by nature and that humans by nature are political animals.²⁹³ Thomas Hobbes in his well-known aphorism notes that life is “solitary, poor, nasty,

²⁸⁹ Richard Stallman, ‘Free Software’, in Mark Perry & Brian Fitzgerald (eds), *Knowledge Policy for the Twenty-First Century: A Legal Perspective* (Irwin Law Inc, 2011) 17-28.

²⁹⁰ Richard Stallman, *The GNU Project* <http://www.gnu.org/gnu/thegnuproject.html>.

²⁹¹ Ola, above n 10.

²⁹² U.S. Congress, *Declaration of Independence* (1776), http://www.archives.gov/exhibits/charters/declaration_transcript.html.

²⁹³ Fred Miller, *Political Naturalism* Stanford Encyclopedia of Philosophy <http://plato.stanford.edu/entries/aristotle-politics/supplement3.html>.

brutish and short” that man is intrinsically self-centred and to ensure peace, law and order, a government is required.²⁹⁴

John Locke agrees with Hobbes on the role of government in the society but argues against Hobbes view that man is by nature bestial. Locke argues that man has rights to property and that God created the earth for man to enjoy and when man works the earth he should be entitled to the revenues. Locke argues that man has rights and that when a government is unjust the oppressed have a right to resist tyranny. In his opinion, a tyrant has no authority.²⁹⁵

Jean Jacques Rousseau²⁹⁶ is somewhat more metaphysical than either Hobbes or Locke and argues that the general will is what controls society. He describes this general will as an agreement between the individual and the community and that the government represents this agreement. He argues that so long as the government represents this general will, it is capable of doing anything.²⁹⁷ It appears in one breath that Rousseau advocates democracy by acknowledging the role of citizenry participation but in another breathe acknowledges the ability of the state to do anything thereby endorsing totalitarianism.

The role of government in maintaining law and order in the society is unquestionable. When however, this role is abused and the people do not feel adequately represented or they feel misrepresented, tyranny sets in and Locke has argued that in such instances, man has a right to challenge tyranny. The declaration of independence states that “whenever any Form of Government becomes destructive of these ends, it is the Right of the People to alter or to abolish it, and to institute new Government.” The next section will show the exercise of these rights.

2.6.1 SOPA & PIPA

The reaction by the general public to the two bills introduced at both houses of the United States’ legislative arm, Stop Online Anti-Piracy Act (SOPA) at the house of representative and Protect IP Act (PIPA) in the Senate is a vivid evidence of the power of the people through social media and the Internet. It was reported that as an aftermath of the online protest, “more than 162 million people saw the protest message on Wikipedia, 18 senators have backed away from

²⁹⁴ T. Hobbes & R. Tuck, Hobbes: *Leviathan: Revised Student Edition* (Cambridge University Press. 1996) 89.

²⁹⁵ J. Locke, *Two Treatises of Government*, (C. and J. Rivington. 1824) 270.

²⁹⁶ J.J. Rousseau & G.D.H. Cole, *The Social Contract* (Cosimo, Incorporated. 2008).

²⁹⁷ R. Wacks, *Understanding Jurisprudence: An Introduction to Legal Theory* (OUP Oxford. 2012) 24-25.

the proposed legislation, and 4.5 million people signed a petition against the acts”²⁹⁸. The bills failed due to the voice of the people and politicians listened to the people.

Politicians are also listening to the people who are speaking in favour of open access and have made decisions whether politically oriented or not, that favour the open cause and the generality of people would be better for it.

2.6.2 FASTR

Senators Cornyn and Wyden as well as Reps Doyle, Yoder and Lofgren of the United States congress have in a bi-partisan move introduced The Fair Access to Science and Technology Research Act (FASTR) in both the House of Representatives and the Senate.²⁹⁹ The Act requires federal agencies with annual research funding of \$100 million or more to provide open access to the outputs of funded research no later than six months after publication³⁰⁰. If passed, the legislation will represent an improvement on the NIH Policy by reducing the embargo period and would increase the usefulness of public access to research. It would particularly maximize the impact and utility of such researches by its focus on reuse rights as reflected in the main text of the act.³⁰¹

The political imperatives for the open culture is not only linked to the need to score political points but is more about fulfilling the core purpose of representing the people. The open culture affords the opportunity for everyone to participate in governance and allows for the voice of the people to be heard. When SOPA and PIPA were being pushed in both houses, the people were able to speak up affirmatively although in a new and unprecedented way and their voices were heard. The bills were not passed. The legislation giving effect to the National Institutes of Health’s mandate are another example of legislation which are working in the interest of the

²⁹⁸ Paul Ian, *Were SOPA/PIPA Protests a Success? The Results Are In*, (2010) PC World http://www.pcworld.com/article/248401/were_sopa_pipa_protests_a_success_the_results_are_in.html.

²⁹⁹ U.S. Congress, *Fair Access to Science and Technology Research Act of 2013*, Congress.gov, <https://www.congress.gov/bill/113th-congress/house-bill/708/text>.

³⁰⁰ Timothy Vollmer, *FASTR introduced in U.S. Congress to drastically expand public access to federally funded research* (2013), http://creativecommons.org/weblog/entry/36699?utm_campaign=newsletter_1302&utm_medium=blog&utm_source=newsletter.

³⁰¹U.S Congress, above n 297. See preamble (2.3): “the United States has a substantial interest in maximizing the impact and utility of the research it funds by enabling a wide range of reuses of the peer-reviewed literature that reports the results of such research, including by enabling computational analysis by state-of-the-art technologies.” See also provision (4.b.5) which includes a formatting and licensing provision covering versions deposited in repositories and made OA. It states that it shall be made available “in formats and under terms that enable productive reuse, including computational analysis by state-of-the-art technologies.” See also (4.f.2.B.i) & (4.f.2.B.ii) respectively covering “whether the terms of use applicable to such research papers are effective in enabling productive reuse and computational analysis by state-of-the-art technologies” and the results of the agency’s “examination of whether such research papers should include a royalty-free copyright license that is available to the public and that permits the reuse of those research papers, on the condition that attribution is given to the author or authors of the research and any others designated by the copyright owner”.

ordinary people.³⁰² The legislation which makes it a requirement for research funded by NIH to be made available within 12 months in PubMed has given researchers a strong foot against publishers.³⁰³ FASTR now seeks to reduce the 12 month embargo period to 6 months thereby increasing the opportunities for availability and accessibility to these research findings and at the same time maximizing their useful and impact.³⁰⁴ Use of political positions in the ways referred to above enable proper representation of the people and ensures that these kind of legislation do not end up on the shelves of some government department or within the exclusive access of a privileged few. It also assists young researchers from being confronted with the up-heel task of having to negotiate terms of agreement for self-archiving with publishers.

2.7 KNOWLEDGE IS NOT AN END IN ITSELF IT IS A MEANS TO AN END

With the advent of digital technology and the internet, the production of knowledge has increased astronomically and it continues to increase with endless avenues to create and disseminate such knowledge.³⁰⁵ Considering the vast amount of knowledge available and accessible today, (let us leave out the inaccessible knowledge) if knowledge strictly speaking was the key change factor, then definitely, the overwhelming amount of available and accessible knowledge would have solved all the world's problems already but as we all know the world still has its large share of problems and the ultimate solution is not in sight.³⁰⁶ Several initiatives have been pushed to help solve global challenges through the eight Millennium Development Goals of the United Nations but as we all know, these problems are not near solved.³⁰⁷ The efforts at addressing poverty, universal basic education, gender inequality, HIV Aids, infant mortality, maternal mortality, environmental sustainability and global partnership for development are indeed helping the world especially developing countries and this is most commendable.³⁰⁸ However, the collation of information on the above noted issues is not what solves the problems

³⁰² NIH, NIH Public Access Policy above n 109

³⁰³ National Institute of Health (NIH), *Policy on Enhancing Public Access to Archived Publications Resulting from NIH Funded Research* § NOT-OD-05-022 (2005) (Department of Health and Human Services) <http://grants.nih.gov/grants/guide/notice-files/NOT-OD-05-022.html>.

³⁰⁴ Peter Suber, *United States doubles down on open access to federally-funded research* SPARC Open Access Newsletter <http://legacy.earlham.edu/~peters/fos/newsletter/03-02-13.htm>.

³⁰⁵ Rogers. Paul, et al., *Infobesity: The enemy of good decisions* Insight <http://www.bain.com/publications/articles/infobesity-the-enemy-of-good-decisions.aspx>.

³⁰⁶ Jon Sobrino, 'Humanizing a Sick Civilization', in R. Ammicht-Quinn et al (eds), *Evil Today and Struggles to be Human* (SCM Press, 2009) 61-69, 62. "The world's tragedy is plain to see, but as far as possible, it is ignored."

See also, Annie Malknecht, *What the Millennium Development Goals Have Accomplished at* <https://www.americanprogress.org/issues/security/news/2014/08/18/95805/what-the-millennium-development-goals-have-accomplished/>.

³⁰⁷ Ana Jesus Lopez Menendez & Rigoberto Perez Suarez, *Measuring Progress towards the Millennium Development Goals. A regional approach* http://www.academia.edu/999515/Measuring_Progress_towards_the_Millennium_Development_Goals._A_Regional_Approach.

³⁰⁸ United Nations UN, *Millennium Development Goals and Beyond 2015*, <http://www.un.org/millenniumgoals/>.

but rather how the information gathered is utilized as an agent for change. Albert Einstein put it this way, he said “any fool can know, the point is to understand.”³⁰⁹ Just like every flour is a potential loaf of bread so also every knowledge is a potential solution to a problem, but just as flour is not bread, so also knowledge is not “solution to a problem”. The same way some effort and extra steps need to be taken to transform flour into bread, so also some effort and extra steps must be taken to transform knowledge into “solutions to problems” and that is what Einstein was referring to when he noted that the point is understanding.

It is therefore not the availability of knowledge alone that spurs change, rather it is the positive use of knowledge, in other words, it is not what you know that matters but what you do with what you know. However, you cannot do anything with knowledge if you don't first have it and hence the movements for greater access to knowledge through the multiple platforms of open access, open educational resources and public sector information.

2.8 CONCLUSION

The open movement is a movement for change which some are pursuing within legally recognised limits while others are more radical in their approach. As explained earlier, philosophers have postulated on the two sides of the divide that firstly change must be within the confines of the law and on the other hand where citizens are dissatisfied with a tyrannical government or the laws are unrepresentative of the people, the people are free to fight for change and that protest is in fact, a social responsibility of the people.

The desire to see a world where access to peer-reviewed knowledge is free from the structural restrictions of price, the law and technology is now an international objective. The realities of today made possible by technological developments and innovation has altered the architecture of information dissemination and has enabled a group who before now were purely users and spectators to become themselves creators and stakeholders in the knowledge industry. However, the laws regulating information dissemination are still fundamentally what they used to be some 300 years ago. The gap between the written laws and today's reality has brought about a generation that abhors the law, not because they are miscreants or truants but rather because they see that the laws are not reflective of today's reality and that those who are meant to ensure these reflections have failed and are continually failing the system. They have therefore taken laws into their hands and the consequences have been severe.

Careful consideration on how the goals of open access, open educational resources and public sector information can be achieved has brought about open access journals, institutional

³⁰⁹ Robert Mills, *Knowing Vs Understanding* (2012), <http://www.robertmills.me/knowning-vs-understanding-2/>.

repositories and open licences which are platforms and mechanisms that enable instant, free and unrestricted publishing and sharing of information in the research, educational and governmental realms. These platforms have brought about the development of mandates and policies which are addressing the negotiating imbalance between publishers and authors and have enabled greater successes for institutional repositories. They have also produced successes through the introduction of open licensing, a concept which utilizes the current laws governing information dissemination and deploys it to create a shift from an all rights reserved regime to some rights reserved and in certain instances no rights reserved. The products of these platforms have been able to address the fears in some minds about the viability of open access, open educational resources and public sector information as a business model and about its impact on the publishing industry. Today most of the major publishers have embraced open policies.

The underpinnings of the open movement are intrinsically linked to respect for the dignity of the human person which recognises Aristotle's postulation that man is a social animal and also recognises the intrinsic value of each person. It is further inspired by the word "Ubuntu" which teaches us that we are who we are because of who we all are and that we really cannot thrive alone. We owe ourselves a social responsibility to share. Each one of us must always remember, it's not about me, rather it is about us. It is an open world and the best way to maximize the riches of the world is to leave it open, to leave the knowledge open, to leave the opportunities open and to open it up so we all can continue to build just like Isaac Newton who understood that his development was intrinsically connected to that which had been provided by his forerunners. The rationale for open is diverse encompassing socio-economic, legal and political aspects, in some ways they affect us and it is therefore our responsibility to respond and bring about the goal of a world where everyone has not only the opportunity for access to knowledge but actually has access to knowledge.

PART II: THE NIGERIAN CONTEXT: OPEN ACCESS

Part I introduced the research. In chapter 1 the fundamentals of open access was explored while chapter 2 analysed the theories of open access.

Part II discusses the framework for open access to knowledge in Nigeria. It has one chapter which is divided into two sections. The first section discusses Copyright development in Nigeria as the legal basis for open access in Nigeria and the second section examines specific policy, regulatory and legal frameworks within the Nigerian system that influences information dissemination.

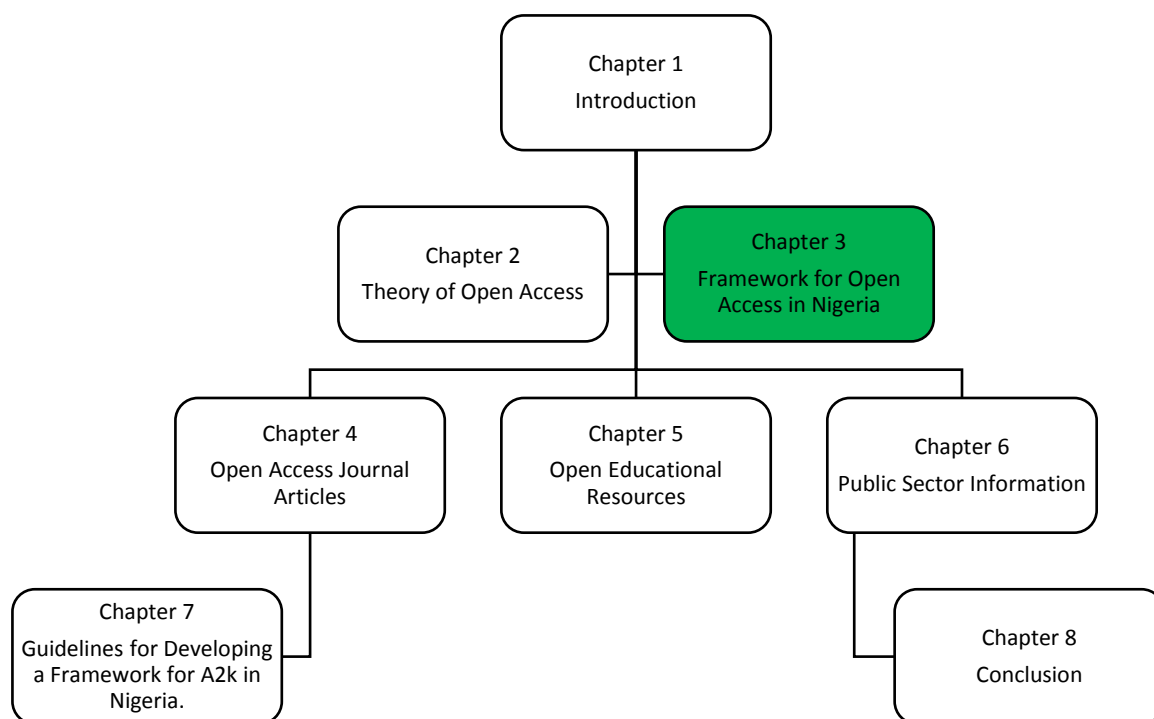
The chapter on framework for open access in Nigeria investigates key Nigerian policy documents to ascertain frameworks supporting open access in Nigeria. In doing this, it highlights the impact of English law on the Nigerian legal system, the introduction of copyright law to the Nigerian legal system and the interface between copyright and open access in Nigeria.

3. OBJECTIVES

This chapter seeks to assess Nigeria’s current position on the global open access map. In making this assessment, it examines Nigeria’s copyright law as well as some of Nigeria’s legal, regulatory and policy frameworks against the background of the global open access movement.

Aims & Objectives 2: To investigate, explain and propose a legal, regulatory and policy framework for Nigeria that would enable open access to the output of journal articles, open educational resources and public sector information.

Research Question 2: What are the possible challenges to the implementation of open access in Nigeria?



3.1 INTRODUCTION

This chapter is divided into two sections and addresses aim and objective (2) as well as research question (2). The first section situates Nigeria in the open access theoretical framework by examining the development of Copyright law in Nigeria. It discusses the different legal regimes that have existed within Nigeria's copyright system and provides an historical perspective on the development of Copyright law in Nigeria by tracing the introduction of the first indigenous copyright law in Nigeria and the current copyright legislation into the Nigerian legal system. The chapter highlights the issues with the first indigenous copyright legislation and discusses some of the provisions of the Act. The interface between open access and Copyright law is discussed as well as the future for copyright in Nigeria.

The second section examines the provisions that govern research and the dissemination of the output of research in certain Ministries, Departments and Agencies (MDA's) of the Federal Republic of Nigeria. The focus will be on MDA's with research oriented mandates in different fields including Health, Agriculture, Education, Science and Technology. In considering these fields, laws and policies enabling the establishment of these institutions and which determine how information is shared will be examined to consider whether they provide for free, immediate, unrestricted access to the output of the research they generate. It is one thing to make laws and issue policies but it is another to put in place effective mechanisms that would bring about the fulfilment of the intendment of such laws and that would ensure and manage the implementation of the strategies as contained in the policies.

The overarching goal of the open access movement is to provide platforms that enable freedom of access to knowledge. The dynamics of information dissemination is spreading across virtually every field of endeavour, thereby making the management and regulation of the creation, dissemination and exploitation of information an important issue. Information management recognises the right of copyright owners to exclude all others from exploiting their creativity unless appropriate consent or exemptions applies.³¹⁰ In the pursuit of development, Nigeria recognises the role of creativity and innovation as tools for development and encourages research in different fields through her different ministries, departments and agencies. For example, the national development strategy of Nigeria, Nigeria-Vision 20:2020 has a vision

³¹⁰ D.J. Gervais, *Collective Management of Copyright and Related Rights* (Kluwer Law International. 2010) 1-2. See where he noted that "The apparent paradox of copyright is that in order to maximize the creation and dissemination of new works of art and the intellect while adequately rewarding authors and other owners of copyright and related rights, intellectual property law seemingly poses obstacles both to the creation of new works-because authors may not create derivative works without authorization, and to their dissemination-because it provides copyright owners with a right to exclude others from copying, performing and communicating those new works."

where by 2020, Nigeria will have a large, strong, diversified, sustainable economy that effectively harnesses the talents and energies of its people and responsibly exploits its natural endowments to guarantee a high standard of living and quality of life to its citizen. One of the ways it aspires to achieve this is by strengthening the national health information systems and integrating them into a comprehensive national database to improve health data and promote research.³¹¹ The mechanism that would enable the free dissemination of the output of these creative endeavours is at the heart of this chapter.

SECTION I

3.2 CREATIVITY

Creativity gives expression to the ideas in the human soul. Every culture reveals an intrinsic part of itself through the creativity of her people. The Director of the Museum of Fine Arts in Boston commenting on some Nigerian artistic works said “These objects are the Benin Kingdom’s legacy to the world and a testament to the brilliance and creativity of its artists”.³¹² The works he referred to were 34 in number, 28 made of bronze and 6 of ivory and are currently displayed at the Benin Kingdom Gallery of the Museum of Fine Arts in Boston.³¹³ These works include what the gallery describes as “Horseman, Battle Plaque, Double Gong, and Oba Dominating Leopards”.³¹⁴

3.2.1 Iyoba

Seating in another Museum outside the shores of Nigeria is a bone ivory sculpture known as the Queen Mother Pendant Mask-“Iyoba”. Iyoba is a sculptured work of Idia, who was the Queen mother of Oba Esigie, an ancient monarch of the Bini’s now part of the people of Nigeria and located in Edo State in the mid-western part of Nigeria³¹⁵. The sculptured work dates back to the 16th century and its presence at the Metropolitan Museum in London serves as a reminder to the world of the creative genius of Nigerians.³¹⁶

³¹¹ National Planning Commission, *Nigeria Vision 20:2020 Economic Transformation Blueprint* December 2009 <http://www.nationalplanning.gov.ng/images/docs/NationalPlans/nigeria-vision-20-20-20.pdf>.

³¹² MFA, *Museum of Fine Arts, Boston, Opens Benin Kingdom Gallery Showcasing Robert Owen Lehman Collection of Rare West African Art* (2013) <http://www.mfa.org/news/benin-kingdom>.

³¹³ MFA, *Benin Kingdom Gallery Gallery 172*, (2013) Museum of Fine Arts Boston <http://www.mfa.org/collections/featured-galleries/benin-kingdom-gallery>.

³¹⁴ Tajudeen Sowole, ‘U.S. Museum Splits Benin Royal House’, *The Guardian* (Nigeria), 29 September 2013.

³¹⁵ The Bini’s are now referred to Benin’s of the Federal Republic of Nigeria and this should not be confused with Benin Republic.

³¹⁶ Metropolitan Museum of Arts, *Queen Mother Pendant Mask: Iyoba. On Display in Gallery 352*, <http://www.metmuseum.org/collections/search-the-collections/318622>.

3.3 NIGERIA

Nigeria is a country with over, one hundred and sixty (160) million people, five hundred ethnic groups, two hundred and fifty (250) local languages (however, English is the official language), thirty-six (36) states, a Federal Capital Territory (Abuja) and seven hundred and seventy-four (774) local government councils. It is the most populous African nation and the 7th most populous in the world.³¹⁷ It has a dual mixed culture, one from its traditional background and the other from its British colonial heritage. Her people are distinct in culture, tradition, belief and religion and it is these differences that bring about an enriched cultural diversity and a uniqueness in the expression of her creativity.

Nigeria's rich cultural diversity plays a key role in the creative expressions of her people and has a strong influence on the copyright based works created by Nigerians. The rise in the Nigerian entertainment industry, popularly known as Nollywood has put Nigeria on the limelight both in the music and film industries. It is therefore not surprising that Nigeria's film industry has been rated as the third largest in the world after Hollywood of the United States and Bollywood of India.³¹⁸ These creative works continue to lay credence to the creative capabilities of Nigerians and underscores the need to encourage further creativity by putting in place a strong and viable copyright system.

Creativity is the bedrock of every civilization and it encourages the transformation of ideas into tangible products such as articles, books, pictures, films, drawings, music, poems and drama amongst several other things. Appreciation of the value of these tangibly expressed ideas often lead to commercialisation of the products. This was the situation that occurred in the United Kingdom when printers were enabled by the invention of the printing press to commercialise the writings of popular authors.³¹⁹ This practice by printers to commercially exploit the literary works of authors must have been due to the fact that printers recognised an appeal by the general public to some works and that such works if mass produced could be commercially viable. The challenge was that commercialisation of these works meant reproduction of the works and this was done without the consent of authors and apparently, with no financial benefits accruing to them. This practice gave rise to complaints and agitations which brought about the introduction

³¹⁷ Federal Republic of Nigeria, *About Nigeria*, <http://www.nigeria.gov.ng/2012-10-29-11-05-46>.

³¹⁸ UNCTAD, *Assessing the participation of domestic SMEs in the international production chain: The case of Nu Metro in Nigeria*. (2010) http://unctad.org/en/Docs/diaeed20095_en.pdf.

³¹⁹ Chris Butler, *The invention of the printing press and its effects* (2007) FC74 <http://www.flowofhistory.com/units/west/11/FC74>.

of the first copyright law to protect the rights of authors to their literary works by the grant of exclusive rights to the work, for a specified period of time.³²⁰

Since the passage to law of the first copyright legislation, the Statute of Anne³²¹, many copyright legislations have been passed by national governments and the International community.³²² These legislations underscore the importance of copyright and rights related to copyright also referred to as neighbouring rights to national and socio-economic development. Nigeria is one of the nations with a copyright legislation³²³ and plays her role within the International copyright system.

3.4 ENGLISH COPYRIGHT ACT 1911

Nigeria's copyright history is deeply connected to that of the United Kingdom because of the colonial linkage. Nigeria's copyright history can be traced from two perspectives. The first traces the history to economic and political interests by the United Kingdom which could have been linked to the growing dependence by Nigerians on literary, artistic, musical and other copyright related works originating from the west. During Britain's colonial rule over Nigeria which lasted for 60 years,³²⁴ a new copyright legislation replacing the Statute of Anne was passed and by virtue of the extension order in council of 1912 of the English Copyright Act of 1911, the English Copyright law became applicable in the Southern Protectorate of Nigeria. The introduction of the English Copyright Law to Nigeria represents the first perspective. The second is of the opinion that copyright has been and is an intrinsic part of the customs and traditions of Nigerians. This view points to the practice where dancers and singers pay homage to their ancestors and predecessors in the trade before they commence their performances. The intent for acknowledgement is the traditional believe that if the current performers desire to succeed, homage must be paid to their ancestors and predecessors in the trade and such homage will attract the requisite blessings. They also point to the practice where money, gifts, refreshment and other forms of remuneration is given to the performers in appreciation and recognition of their performances.³²⁵ All these practices go to the root of the modern copyright concepts of moral and economic rights. Both perspectives support the importance of respect, appreciation and some form of remuneration for the efforts of those who have produced creative works. It is

³²⁰ OLA, Copyright Collective Administration in Nigeria Lessons for Africa, above n.54, 6-7.

³²¹ 8 Anne c. 19 (1710).

³²² WIPO, *WIPO Administered Treaties*, <http://www.wipo.int/treaties/en/>. WIPO provides a comprehensive list of all national and international copyright legislation.

³²³ Nigerian Copyright Act, Cap C28 (2004).

³²⁴ World History, *History of Nigeria*, <http://www.historyworld.net/wrldhis/plaintexthistories.asp?historyid=ad41>. Nigeria was under British Colonization from 1900 till 1960 when she gained her Independence. British interests in Nigeria however predates 1900.

³²⁵ Adebambo Adewopo, *Nigerian Copyright System: Principles and Perspectives* (Odade Publishers, 2012).

without contention however that the extension of the English Copyright Act of 1911 to Nigeria in 1912 introduced into Nigeria's legal system, a copyright legal framework.

The introduction of the English Copyright Act of 1911, (hereinafter referred to as CA 1911) in Nigeria made very little impact on the ordinary Nigerian's day to day life and this was probably due to cultural differences between the people that originated the CA of 1911 and those to whom it was now being applied in Nigeria. At the time of the enactment of the CA 1911, writing had become a way of life in the United Kingdom, expressing ideas be they original or non-original in fixed tangible forms had become the general mode of communication and constituted important elements in the 'fixation and originality' requirements for what would qualify as a copyright work.³²⁶ In Nigeria however, the predominant mode of communication at the time was through verbal and non-written modes. Information was passed down from one generation to the other verbally, that is through word of mouth. Songs were composed and given life not by it's been written down but by it been sung. Many a times, singers pick up their inspiration while performing and songs are delivered extempore. The audience is the only living evidence that the songs exist. Excluding sculptures and other artistic works which were naturally expressed in fixed form, musical and dramatic works were expressed verbally and were rarely expressed as literary works.³²⁷

Furthermore, the Nigerian tradition that favours communal ownership and encourages the spirit of camaraderie and free sharing was at variance with the individualistic and proprietary nature of the modern concepts of copyright. In the eyes of the ordinary person, the laws did not exist and would have been regarded as just another administrative process introduced by the colonial masters. The Act however provided the first legislative framework for Nigeria's administration of a copyright system and provided the basis for further development of Copyright laws in Nigeria. This Act continued in force through independence in 1960 until 1970 when the first indigenous Copyright Act was promulgated.

3.4.1 Open Access and Folklore/Traditional Knowledge

The way of life described above depicted by the spirit of camaraderie and free sharing can be referred to as folklore or traditional knowledge.³²⁸ In accordance with the growing trend of increasing Intellectual Property protection, the Nigeria Copyright Act (1988) provides protection

³²⁶ Jennifer Davis, *Intellectual Property Law* (Nicola Padfield ed., Oxford University Press 3rd ed. 2008) 28, 2.12, 2.14 & 2.15

³²⁷ John Asein, *Nigerian Copyright Law and Practice* (Books and Gavel Limited 2nd ed. 2012).

³²⁸ Dan Ben-Amos, *Toward a Definition of Folklore in Context*, (1971) 84 *The Journal of American Folklore*, 6. "Folklore has been considered ... knowledge shared by every member of the group"

for folklore.³²⁹ Intrinsic in this way of life was the open culture of sharing, the communal ownership of creativity and the delight to know that others can freely use and reuse the output of creativity. Looking at the characteristic nature of folklore and the open movement, one will realise in both the cultures of sharing and communality. There are some differences between the open access concept and that of folklore/ traditional knowledge, nonetheless, the spirit of the cultures are very similar in that they are both focused on sharing, communal ownership and the freedom to develop.

3.5 THE COPYRIGHT ACT, 1970

The 1970 Act was passed as a decree on the 24th day of December in 1970 under the then General Gowon led military government of Nigeria. The legislation had twenty (20) sections and three (3) schedules. It provided for works eligible for copyright, conferment of copyright, nature of copyright in certain works, first ownership, assignment and licensing, infringement and actions for infringement. The Act provided powers for the appointment of a competent authority to resolve copyright licensing conflicts but the said powers were never activated throughout the life of the legislation.³³⁰ Nigeria being a party to the Universal Copyright Convention (UCC)³³¹ provided for reciprocal extension of protection and placed restrictions on importation of printed copies. Reliance on copyright deriving its source from common law rights were abrogated and the enactment allowed for the making of regulations to fill any lacuna which the enactment left out or which may arise. The sections providing for repeals, transitions and saving provisions as well the Interpretations and citation sections were the last three sections.

The First Schedule to the Act provided for the term of copyright and interestingly reduced the term of copyright from 50 years after the death of the author as reflected in the earlier CA 1911 legislation to 25 years for literary, musical and artistic works. For photographs it provided for 25 years after the end of the year in which the work was first published in contrast to that of the CA 1911 which provided for 50 years from the making of the original. That amounted to a 25 years reduction.

The Copyright Act 1970 being the first indigenous act was expected to protect the Nigerian interest and be reflective of the peculiarities of her people as well as their culture and traditions. This may have accounted for why it cut down the term of copyright to 25 years from 50 years,

³²⁹ Nigerian Copyright Act, Cap C28, Laws of the Federation of Nigeria, 2004 Cap C28 (2004). See Sections 31-33 which provides for Protection for Expression of folklore, Infringement of folklore and criminal liability in respect of infringement of folklore respectively.

³³⁰ OLA, Copyright Collective Administration in Nigeria Lessons for Africa above n.54, 28.

³³¹ UNESCO, *Universal Copyright Convention, with Appendix: Declaration relating to Article XVII and Resolution concerning Article XI*. Geneva, 6 September 1952, <http://www.unesco.org/eri/la/convention.asp?KO=15381&language=E>.

after all the Nigerian traditional culture is more disposed to a culture of sharing as opposed to the proprietary system. The cut down has however been viewed as a negative move in that Nigerian copyright owners expected to have retained at least the same rights provided by a non-indigenous legislation and that the indigenous legislation would provide enhanced and more favourable rights, instead it cut down on the term of copyright and was in general terms a watered-down version of the English Copyright Act of 1911. The Act while making provisions on copyright failed to designate any particular authority to oversee copyright issues in Nigeria. The legislation was basically a lame duck and at this time the local copyright based industry in Nigeria was beginning to grow and required a firm policy structure to support this local industry from a local and international perspective.³³² Concerns about the lacuna in the 1970 act lead to agitations in the copyright based industries which eventually led to the 1988 Copyright Act. Okoroji captured the frustration succinctly when he said

“The very weak provisions of Decree No 61 Of 1970, the copyright law then in force, was identified as the major obstacle to effective confrontation of the copyright problem. The civil provisions were cumbersome and had many loop holes... The criminal sanctions... were laughable. There was no provision for any imprisonment. There was therefore very little legal deterrent against piracy... It became very clear that the most important and urgent task ... was to get an effective copyright law promulgated in Nigeria.”³³³

3.6 THE COPYRIGHT ACT 1988

The end of the Nigerian civil war in 1970 coincided with Nigeria’s oil boom which brought immense wealth to Nigeria. With lots of money to spend and people needing to get back their lives, entertainment offered comfort and further developed into an important industry in Nigeria. Highlife was in high demand and the likes of Sir Victor Uwaifo, Osita Osadebe, Victor Olaiya, Cardinal Rex, Jim Lawson and Celestine Ukwu met these entertainment needs through life performances and productions with Philips Ijora Causeway studios in Lagos Nigeria. Philips which later became phonogram was not the only point of production at the time, there was also Polygram which later became Premier and then EMI which changed to Ivory, DECCA and then Afrodisia. Popular Nigerian artists such as Fela Anikulapo Ransome-Kuti known for his Afro-beat Music, Sunny Okosun for his popular singles “Fire in Soweto”³³⁴ and Mother & Child”, Bongos Ikwue for “Beautiful woman” all produced with EMI. EMI also sold foreign produced

³³² Wikipedia, *Music of Nigeria*, http://en.wikipedia.org/wiki/Music_of_Nigeria#The_1950s.2C_.2760s_and_.2770s.

³³³ Tony Okoroji, *Copyright Neighbouring Rights & the New Millionaires: the twists and turns in Nigeria*, (Tops Limited. 2008).

³³⁴ Author, *Fire in Soweto*, (Youtube).

works, such as those of Bob Marley, Peter Tosh, Jimmy Cliff and Jonny Nash amongst several others. Indigenous producers were also thriving and made big hits. Homzy Sounds produced the popular “Love Nwantinti” performed by Nelly Uchendu. Another indigenous producer was Rogers All stars who produced what may be regarded as one of Nigeria’s most impacting songs “Sweet Mother” performed by Prince Nico Mbarga and the Rocafil Jazz Orchestra.³³⁵ In the midst of all these developments in the entertainment industry, technological development enabled the invention of the cassette player and cassettes which further brought about cheaper and easier copying. A proliferation of facilities to mass produce works on cassettes brought about piracy challenges in the entertainment industry. Producers, authors and performers were all concerned about the high level of piracy.³³⁶ The same effects were being felt in the publishing industry as well. This led to setting up an Anti-Piracy Vanguard made up of the music and publishing industries.³³⁷ Despite several anti-piracy raids and collaborations with the police, piracy was on the rise and the copyright law which had been recently passed had no teeth to bite and therefore did not deter the pirates from their acts. The Nigerian copyright industry frustrated and agitated identified legislative reform as one of the cardinal issues in combatting the challenges posed by piracy. After series of meetings and lobbying the 1988 Copyright legislation was passed and became a part of the Nigerian legal system.

The Act was promulgated under a military administration and was passed as a decree. The Act has been amended twice, firstly in 1992 and secondly in 1999. In 2004, the laws were re-codified under the laws of the federation of Nigeria. The recodification changed the numbering of the sections but its contents are still the same. The Act when passed in 1988 had 41 sections but the combined effect of the recodification and the amendments to the Act has moved the number of sections to 53 sections while retaining the original number of parts and schedules, that is, 4 parts and 5 schedules.

The four parts provide for the following:

Part I: Copyright,

Part II: Neighbouring rights,

Part III: Administration of copyright and

Part IV: Miscellaneous.

³³⁵ Okoroji, above n 331.

³³⁶ Nigerian Copyright Commission, *Survey of Copyright Piracy in Nigeria* (Management Review Limited. 2008). See the foreword at page v.

³³⁷ Okoroji, above n 331.

The five schedules to the act cover the following:

First Schedule: Terms of copyright,

Second Schedule: Exceptions from copyright control

Third Schedule: Special exceptions in respect of a sound recording of a musical work respectively.

Fourth Schedule: Compulsory licences for translation and reproduction of certain works

Fifth Schedule: Translation and savings provisions.

3.6.1 Works Eligible for Copyright under the Act

Works eligible for Copyright are similar but there exist some differences depending on the jurisdiction. Under the Nigerian Copyright Act, six works are particularly mentioned as eligible for copyright. They are as follows: literary, musical and artistic works; cinematograph films, sound recordings and broadcasts.³³⁸ The first three works form the core of copyright while the last three, are by-products of the first three. They are the economic and commercial end of the first three and are referred to as neighbouring or related rights. Therefore, in the discussions on copyright in this section, the focus will be on the first three (literary, musical and artistic) and when reference is made to the last three (cinematograph films, sound recordings and broadcasts), it is in respect of neighbouring rights.

For a work to be eligible for copyright under the act, sufficient effort must have been expended on the work to give it an original character and it must have been fixed in a definite medium directly perceivable or perceivable with the aid of any device or machine.³³⁹ The fact that the making of a work involved some form of copyright infringement would not alone constitute grounds for ineligibility.³⁴⁰

3.6.2 Conferment of Copyright

Once a work is eligible for copyright, copyright may be conferred on such a work through a number of channels.

- i. By virtue of nationality or domicile: The author(s) is a citizen of or is domiciled in Nigeria or an organisation/company duly registered under the laws of Nigeria.³⁴¹
- ii. By reference to country of origin: The work was first published or made in Nigeria.³⁴²

³³⁸ Section 1 (1) (a)-(f) Cap C28 (2004).

³³⁹ Ibid. at. Section 1 (2) (a) & (b)

³⁴⁰ Ibid. at. Section 1 (4)

³⁴¹ Ibid. at. Section 2

- iii. In Works of government, State authorities and International bodies: The work is made under the direction of the government, a state authority or an international body.³⁴³
- iv. Reference to International agreements: The work is made by a person who on the date of the first publication of the work, such person was a citizen of a country or domiciled in a country to which Nigeria is a party to an obligation in a treaty or other international agreement; or where the work was first published in a country where Nigeria has treaty obligations, or where it was first published in either of the following organisations, the United Nations or any of its specialised agencies, the African Union or the Economic Communities of West African States.³⁴⁴

3.6.3 Powers of a Copyright Owner

The author of a copyright work or the owner of Copyright enjoys certain exclusive rights. These rights operate as restrictive rights in that the author is empowered by Copyright to control the doing of certain actions and without his consent or authorization, such works may not be carried out. The doing of any of such works amount to an infringement of the right of the author or the copyright owner. Sections 6-9 of the Act provides for the general nature of copyright and provides for the exclusive actions that the author/copyright owner controls. These exclusive actions include reproducing, publishing, performing, translating, making any cinematograph film or a record in respect of the work, distributing to the public for hire or for commercial purpose copies of the work, communicating to the public and making an adaptation of the work. The doing of any of the afore-mentioned actions without due authorization amounts to copyright infringement which carry consequences both in the civil and criminal realms.

3.6.4 Infringement of Copyright

An important part of the legislation are the infringement provisions of the Act which provide for both civil and criminal actions which may be instituted simultaneously³⁴⁵. The Act specifically states amongst other things when prescribing copyright infringement that

Copyright is infringed by any person who without the licence or authorisation of the owner of the copyright

³⁴² Ibid. at. Section 3

³⁴³ Ibid. at. Section 4

³⁴⁴ Ibid. at. Section 5

³⁴⁵ Ibid. at. Section 24

(a) does or causes any other person to do an act, the doing of which is controlled by copyright;
(b) imports or causes to be imported into Nigeria any copy of a work which, if it had been made in Nigeria would be an infringing copy under this section of this Act;...³⁴⁶

In the event of an infringement, the copyright owner, assignee or exclusive licensee may bring an action before the Federal High Court and may claim for damages, injunctions and/or accounts. Ignorance is a defence to copyright infringement, but it must be proved that at the time of the infringement the defendant was actually unaware and had no reasonable grounds to suspect that copyright subsisted in the work. In such situations plaintiffs are not entitled to damages but rather account for profits in respect of the infringement.³⁴⁷

The Act criminalises copyright infringement with Section 20 of the Act providing conviction or fine and conviction and fine punishment to those found guilty. It provides that where a person is found guilty of making or causing to be made for sale, hire or other commercial purposes any infringing copy, or imports or causes to be imported into Nigeria a copy of any work which if it had been made in Nigeria would be an infringing copy, or makes, causes to be made or has in his possession, any plate, master tape, machine, equipment or contrivances, for the purpose of making any infringing copy of any such work, such a person shall be liable to a fine of an amount not exceeding N1,000 for every infringing copy or a term of imprisonment not exceeding five years, or to both such fine and imprisonment. The criminal provisions with stiff penalties have been tested in the courts and have in many ways served as deterrence to further copyright infringements.

3.6.5 Court Convictions

The Commission has successfully prosecuted several copyright infringement cases and obtained sentences against the offending parties.

In the cases of *NCC V Godwin Kadiri*,³⁴⁸ *NCC V Michael Paul*³⁴⁹ and *NCC V Emordi Henry Chukwuma*³⁵⁰ all on charges infringing broadcast rights, the defendants were all found guilty. In the case of *NCC V Godwin Kadiri*, which held in the Benin judicial division, the defendant was sentenced to serve a six-and-a-half-year jail term with no option of fine and is being made to serve two jail terms. In *NCC V Emordi Henry Chukwuma* and *NCC V Micheal Paul* which were heard in the Abuja and Lafia jurisdictions of Nigeria, they were both sentenced upon conviction

³⁴⁶ Ibid. at. Section 15 (1)

³⁴⁷ Ibid. at. Section 16 (3)

³⁴⁸ *NCC V GODWIN KADIRI*, FHC/B/43C/2010, (Federal High Court, Benin-City. 17/12/2012).

³⁴⁹ *NCC V MICHAEL PAUL*, FHC/LF/CR/2/2013, (Federal High Court, Lafia 3/10/2013).

³⁵⁰ *NCC V EMORDI HENRY CHUKWUMA*, FHC/ABJ/CR/90/2013, (Federal High Court, Abuja. 19/06/2013).

to pay fines of N10,000 and 5,100 respectively. Convictions have been made with regards to infringements of other works. In *NCC V Nwoke Israel*³⁵¹, the Lagos judicial division of the Federal High Court, convicted and sentenced the defendant to one-year imprisonment without the option of fine for infringing upon literary rights. In *NCC V. Anoke Celestine* on charges bordering on infringements of sound recording and cinematograph film rights, the Benin judicial division of the federal high court sentenced the defendant to 10 months' imprisonment.

3.7 NIGERIAN COPYRIGHT COMMISSION

3.7.1 Establishment

The 1999 amendment to the Act amongst other things established a body responsible for all matters affecting copyright in Nigeria known as the Nigerian Copyright Commission³⁵². Although the Nigerian Copyright Act was passed in 1988, it was not until August 1989 that the Nigerian Copyright Council was established by virtue of Decree No.47 of 1988 and in 1996 government approved that it become the Nigerian Copyright Commission. The 1999 Amendment to the Act gave legislative effect to government's earlier approval. The Nigerian Copyright Council has it then was, was only saddled with copyright administrative responsibilities but with the amendments to the Act, its mandate was extended to cover enforcement and it became a full-fledged enforcement agency with perpetual succession.³⁵³ The Commission was given certain powers such as powers to grant compulsory licenses³⁵⁴, approval of organisations desirous of operating as collecting societies³⁵⁵, powers to make regulations subject to the approval of the Minister³⁵⁶ and powers to appoint copyright inspector inclusive of all police powers³⁵⁷. The combined effect of these provisions upgraded the status of the Commission from an administrative agency to an enforcement agency.

In addition to the responsibility provided in Section 34 (3) a, that is, to administer all matters affecting copyright in Nigeria, Section 34 (3) b-f of the Act provides for other functions of the Commission as follows:

b) monitor and supervise Nigeria's position in relation to international conventions and advise government thereon;

³⁵¹ *NCC V NWOKE ISREAL*, FHC/L/159C/2013, (Federal High Court, Lagos 6/05/2013).

³⁵² Cap C28 (2004) Section 34

³⁵³ Nigerian Copyright Commission NCC, *About NCC Historical Background*, <http://www.copyright.gov.ng/index.php/about-us/ncc-historical-background>.

³⁵⁴ Cap C28 (2004). Section 37

³⁵⁵ *Ibid.* at. Section 39 (1)

³⁵⁶ *Ibid.* at. Section 45

³⁵⁷ *Ibid.* at. Section 38. This section was introduced into the Act through the 1992 Amendment to the Act as Section 32A.

- c) advise and regulate conditions for the inclusion of bilateral and multilateral agreements between Nigeria and any other country;
- d) enlighten and inform the public on matters relating to copyright;
- e) maintain an effective databank on authors and their works;
- f) be responsible for such other matters as relate to copyright in Nigeria as the Minister may from time to time direct.

3.7.2 Strategies

In carrying out the above functions, the Commission over time has adopted several strategies. In 2005, the Commission launched the Strategic Action against Piracy (STRAP) which had three core components namely, mass enlightenment, rights administration and enforcement. This strategy also entailed an alternative dispute resolution (ADR) component tagged Copyright Litigation and Mediation Programme (CLAMP) which enable out of court settlements in the event of misunderstandings.³⁵⁸ The focus of STRAP when launched was to reduce the menace caused by piracy through strategic engagement with the general public and with stakeholders through targeted enlightenment programs, effective rights administration and where necessary through enforcement. The current administration of the Commission has re-adapted STRAP into what is now called a Medium Term Corporate Plan and Strategy (MTCPS) 2012-2014 and has the following ten critical goals:

1. Improving the Policy and Legislative Framework for copyright Protection
2. Enhancing copyright Awareness and Education
3. Promoting Effective Rights Management and Regulation of copyright Industries
4. Proactive Enforcement Interventions
5. Strengthening Prosecutorial Activities
6. Strengthening Human and Institutional Capacity for Better Service Delivery
7. Deepening Strategic Engagement with Stakeholders
8. Expanding International Cooperation
9. Strong Public Private Partnership
10. Enhancing the Funding Profile of the Commission

³⁵⁸ WIPO, *STRAP and CLAMP*, n 56

The objective of the Commission either through STRAP, CLAMP or MTCPS is to harness and maximise the creative genius of Nigerians for national development and global influence through dissemination of copyright knowledge, effective rights administration and protection of rights.³⁵⁹

3.7.3 Public Enlightenment

Enlightenment in any society is crucial because it provides requisite information and empowers ordinary citizens with the knowledge required to interact in the society. The esoteric nature of copyright makes it somewhat complex for the ordinary person to comprehend or appreciate what copyright is, what it does and how it works. Many Copyright owners do not understand what it is and how it works and hence do not know what rights they have and what users can do without the need for authorization. When copyright is infringed, right owners need to know what to do, who and where to go to. Similarly, if users feel cheated or do not understand certain issues regarding copyright, they ought to know where to go to seek relevant information and to get some sense of fairness and justice.

Under STRAP and now vigorously pursued under MTCPS, the Commission in furtherance of its vision to disseminate copyright knowledge set up the training arm of the Commission called the Nigerian Copyright Institute which is responsible amongst other things for training both the members of staff and the general public on issues of copyright. The institute carries out regular training programs for staff members, agencies of government, the judiciary, stakeholders, Intellectual Property lawyers and the general public.³⁶⁰ The Commission has also embarked on several enlightenment campaigns in furtherance of one of her core mandates as contained in Section 34 (2) d of the Act, that is to “enlighten and inform the public on matters relating to copyright;”. See the 2012 Annual Report for a list of some activities the Commission has been involved.

3.7.4 Rights Administration

When the 1988 Copyright legislation was passed, the agitations leading to the legislation was centred on the outcry for greater protection of the rights of copyright owners.³⁶¹ To ensure protection of these rights, the Commission has been saddled with the responsibility for all matters affecting copyright in Nigeria and this responsibility is both symbolic and significant. It is symbolic because the Commission has been made the designated reference point for all

³⁵⁹ NCC 2012 Annual Report. (2012). See page 3 where it mentions the vision, mission and strategies of the Commission.

³⁶⁰ Nigerian Copyright Commission NCC, *Nigerian Copyright Institute*, <http://www.copyright.gov.ng/index.php/2013-02-10-16-11-10/nigerain-copyright-institute-nci>.

³⁶¹ NCC, About NCC Historical Background.

copyright matters in Nigeria and it is significant because whilst the Commission protects the rights of Copyright Owners, it simultaneously must protect the rights of user. It must therefore carry out this very sensitive role of maintaining an uncertain balance and must at the same time avoid delving into the arena of conflict. To achieve this symbolic and significant role, the Commission has been involved in and has also developed a number of mechanisms to administer copyright in Nigeria. These mechanisms include administration of the following:

- i. Copyright (Reciprocal Extension) Regulation 1972³⁶²
- ii. Copyright (Security Devices) Regulation 1999³⁶³
- iii. Copyright (Video Rental) Regulations 1999³⁶⁴
- iv. Copyright Notification Scheme³⁶⁵
- v. Copyright (Optical Disc) Regulation 2006³⁶⁶
- vi. Copyright (Collective Management Organisation) Regulations 2007³⁶⁷
- vii. Copyright (Levy on Materials) Order 2012³⁶⁸

3.7.5 Enforcement

In addition to public enlightenment and rights administration, the Commission uses enforcement mechanisms in tackling the challenges in the industry. It does this in collaboration with the traditional enforcement agencies in the country such as the Nigerian Police Force (NPF), the Nigerian Customs Services (NCS), the Economic and Financial Crimes Commission (EFCC) and other non-enforcement sister agencies. The Commission shares information with other agencies and maximizes available platforms. The Commission embarks on regular anti-piracy raids, arrests and prosecution of pirates. These raids are conducted in conjunction with sister organisations and cover notorious areas such as well-known markets where the products are usually trafficked and the borders through which the products are known to be brought in or taken out.

³⁶² Nigerian Copyright Commission NCC, *Copyright (Reciprocal Extension) Regulation 1972* (1972), <http://www.copyright.gov.ng/images/downloads/Copyright%20Reciprocal%20Extension%20Order%201972.pdf>.

³⁶³ Nigerian Copyright Commission NCC, *Copyright (Security Devices) Regulation 1999* (1999), <http://www.copyright.gov.ng/images/downloads/Copyright%20Security%20devices%20regulation%201999.pdf>.

³⁶⁴ Nigerian Copyright Commission NCC, *Copyright (Video Rental) Regulation 1999* (1999), <http://www.copyright.gov.ng/images/downloads/Copyright%20Video%20rental%20regulation%201999.pdf>.

³⁶⁵ NCC, Copyright Notification Scheme. 2005.

³⁶⁶ Nigerian Copyright Commission NCC, *Copyright (Optical Discs Plants) Regulation 2006*. B 697-711 (2006), <http://www.copyright.gov.ng/images/downloads/Optical%20Disc%20Regulation.pdf>.

³⁶⁷ Nigerian Copyright Commission NCC, *Copyright (Collective Management Organisation) Regulation 2007* (2007), <http://www.copyright.gov.ng/images/downloads/CMO%20Regulation%202007.pdf>. The earlier regulation was called Copyright (Collecting Societies) Regulation 1993.

³⁶⁸ Nigerian Copyright Commission NCC, *Copyright (Levy on Materials) Order 2012* (2012), <http://www.copyright.gov.ng/images/downloads/REVISED%20DRAFT%20LEVY%20ON%20COPYRIGHT%20MATERIALS%20ORDER.pdf>.

In the discharge of the Commission's enforcement mandate, the Commission carries out its operations through Copyright Inspectors who are empowered by Section 38 of the Act to enter, inspect and examine any premises they reasonably believe is being used for infringing activities. They are also empowered to seize items which they reasonably suspect to be infringing items as well as to arrest any person who they reasonably believe has committed an offence as stipulated by the Act. See the Commission's 2012 annual report for some successful enforcement activities.³⁶⁹

The legal framework for copyright in Nigeria covers administrative, enforcement and regulatory issues. The pro-enforcement and pro-copyright owner slant of the legislation has been a veritable tool in tackling piracy in Nigeria. The digital age has however introduced new challenges to copyright which exceptions from copyright control as provided in the second schedule to the act cannot adequately cater for and there is therefore the need for Nigeria's copyright law to adequately respond to these issues.³⁷⁰ The next section on the future of copyright in Nigeria, looks at how Nigeria can address these issues.

3.8 THE FUTURE OF COPYRIGHT IN NIGERIA

As noted at the beginning of this chapter, Nigeria is a nation rich in creativity. The pre-colonial era provides evidence of this in the artistic works seating in the museum in the western parts of the world. Today, Nigeria's Nollywood, the third largest film industry in the world is also evidence of Nigeria's rich and ingenious creativity. Nigeria's collective management organisation in music, copyright society of Nigeria (COSON) in 2011 and 2012 distributed royalties of 25 million naira in 2011 and 100 million naira in 2012 to members of the society³⁷¹. The legal framework covering copyright in Nigeria has been instrumental to these developments. The

³⁶⁹ NCC, NCC 2012 Annual Report. 2012. See pages 6-9

³⁷⁰ Cap C28 (2004). See the Second Schedule to the Act which provides for fair dealing.

(a) the doing of any of the acts mentioned in the said section 6 by way of fair dealing for purposes of research, private use, criticism or review or the reporting of current events, subject to the condition that, if the use is public, it shall be accompanied by an acknowledgement of the title of the work and its authorship except where the work is incidentally included in a broadcast;

(b) the doing of any of the aforesaid acts by way of parody, pastiche, or caricature

(c) the inclusion in a film or a broadcast of an artistic work situated in a place where it can be viewed by the public;

(d) the reproduction and distribution of copies of any artistic work permanently situated in a place where it can be viewed by the public;

(e) the incidental inclusion of an artistic work in a film or broadcast;

(f) the inclusion in a collection of literary or musical work which includes not more than two excerpts from the work, if the collection bears a statement that it is designed for educational use and includes an acknowledgement of the title and authorship of the work;

(g) the broadcasting of a work if the broadcast is approved by the broadcasting authority as an educational broadcast;

(h) any use made of a work in an approved educational institution for the educational purposes of that institution, subject to the condition that, if a reproduction is made for any such purpose it shall be destroyed before the end of the prescribed period, or if there is no prescribed period, before the end of the period of 12 months after it was made;

³⁷¹ Ola, Copyright Collective Administration in Nigeria Lessons for Africa, above n 54

future of Nigeria like any other country is intrinsically tied to its ability to harness the potentials in her people as the world has since moved from industrial based economies to knowledge based economies with structural frameworks protected under the laws of intellectual property of which copyright is a core component. If Nigeria must play a significant role in this new frontier, there is the urgent need for strategic repositioning to ensure maximal benefits in today's global knowledge based economy and tomorrow's dynamic technologically driven market.

3.8.1 Internet Treaties

In 1996, the World Intellectual Property Organisation passed the WIPO Copyright Treaty and the WIPO Phonogram and Phonographic Treaty, both referred to as the Internet treaties. The treaties were to bring international copyright issues in tandem with the growing use of the internet and technological advancements. Nigeria has since signed these treaties but is yet to domesticate them. If Nigeria will play a leading role in the emerging economy, there is the need to strategically domesticate these laws to enable copyright owners and the general public maximize the opportunities created by the advancements in technology. The whole idea of strategic domestication is to ensure that whatever laws are enacted should be primarily focused on favouring national development and on a secondary level should accommodate the interests of the wider global community. The general observation has been that many developing countries enact legislation which do not favour the nationals but rather favour the developed countries³⁷². Such engagement with legislation cannot promote national development, hence the need for Nigeria to strategically domesticate the legislation.

3.8.2 TRIPS & Flexibilities

The Uruguay round negotiations that produced in 1996, the Agreements on Trade Related Aspects of Intellectual Property (TRIPS) upgraded international copyright protection and placed on all parties to the agreement obligations to provide certain minimum standard of protection to copyright works. Nigeria as a developing country has complied with most of these requirements but it is important to note that these requirements are majorly in the interest of developed and not developing countries. Articles 7 and 8 of the Agreement provides some flexibilities to developing countries. Understanding these flexibilities and maximizing them in the interest of Nigeria's creative industry and copyright legislation will enable her play a stronger role in the present and coming economies. Nigeria's copyright future must therefore be one of strategic engagement for the development of the Nigerian creative industry through appropriate legislative

³⁷² Carolyn Deere, *The TRIPS Agreement and the Global Politics of Intellectual Property Reform in Developing Countries* (Oxford University Press, 2009) 232. "...the world's poorest countries adopt some of the world's highest IP standards at an earlier date than TRIPS required"

reforms, strengthening international negotiation in the interest of Nigeria's creative industry and encouraging further development of creativity from the cradle to the grave.

3.9 OPEN ACCESS AND THE FUTURE OF COPYRIGHT LAW

3.9.1 Copyright and Open Access

In situating copyright in today's technologically enabled and driven society, balancing the interest of copyright owners and users is key. In achieving this, there is the need to create some kind of synergy between copyright as a system and the open culture that favours free, online, unrestricted and immediate dissemination of information (Open Access). Whereas the current copyright system is restrictive by default, the open culture seeks ways to change that default. The underpinning for this change is the inability to access requisite information due to certain factors hindering access; factors which as explained in chapter one have been identified as "price, permission and technical".³⁷³ Price in the form of subscription costs by publishers as well as pay per view by specialised vendors. The obstacle created by permission is directly connected to the exclusive rights granted to copyright owners which restricts access to copyright materials except permission has been obtained.³⁷⁴ Technology provides the opportunity for right owners to place technologically enabled measures for protection on devices carrying their copyrighted contents as well as to monitor the use of such contents. By means of these measures, right owners are able to block access to their copyright materials and are also able to manage the use of their copyrighted contents. These technical possibilities may actually prove to be beneficial to right-owners but at the same time constitutes a hindrance to access; access to knowledge, access to information and access to peer-reviewed literature. In a global context access restriction constitutes hindrance to knowledge be they peer-reviewed, educational, public sector information or purely entertainment information. For purposes of this chapter, access to information which are purely for entertainment purposes such as music, films and novels are not the focus because they can be considered as luxuries, non-necessities for fundamental development. On the other hand, access to peer-reviewed literature, educational resources and public sector information are cardinal for the development of any society.

3.9.2 Changing the Default from Closed to Open

Whereas the default setting for protecting knowledge under the current copyright regime is closed, (no access without permission), the open movement seeks to change this default from closed to open for purposes of empowering the general public with access to peer-reviewed

³⁷³ Suber, n 12, 4-5. See also, Budapest Open Access Initiative, above n 18

³⁷⁴ OLA, Copyright Collective Administration in Nigeria Lessons for Africa above n.54, 4.

literature, access to educational resources, access to public sector information to the end that the general public will be properly equipped to make the best from available knowledge. Prior to the great exit of Nelson Mandela he noted that Education is the greatest tool for changing lives³⁷⁵. But what is the value of education when the knowledge required to gain education cannot be accessed? It is now commonly known that knowledge is power and that we live in a knowledge based economy³⁷⁶. Impact in this generation and probably the next will have a lot to do with knowledge. Acquiring knowledge is therefore imperative for development and the currency to acquiring knowledge is access. No knowledge, no development; no access, no knowledge.

To ensure maximal utility of created knowledge, highest impact on such knowledge and greatest visibility to such knowledge amongst other things, the open access movement has concerned herself with shifting the access default from closed to open. In recognition of the importance of the current Copyright system, which empowers the copyright owner to restrict all others (except those falling under some form of limitation or exception) from exploiting copyright protected works without prior consenting having first been obtained, the movement relies on this right of the Copyright owner but this time not in a restrictive manner but rather in an enabling manner. It achieves this through open licensing systems which grants prior consent to prospective users.

Limitations and exceptions to copyright when considered alongside open licensing are two access granting mechanisms with similar goals, that is, the provision of access to works. To the extent that both mechanisms work towards granting access they are considered useful. The challenge with limitations and exceptions to copyright is that the access granted via this route is narrow and limited in comparison to what open licensing provides, especially when considering unrestricted licenses like the creative commons attribution licenses (CC-BY see 4.5.2). See paragraphs 1.12.1, 5.3.2 and footnote 370). The access-gap made possible by the lacuna in the current copyright legal system is what open licensing fills up and thereby serves as a substitute, stop-gap and challenge to the current legal system. (See 2.5.6). Open licensing has been very successful in the software industry through the free open source software licenses such as GNU GPL³⁷⁷. In the content industry, there are several licenses but the Creative Commons licences appear to be the most popular.³⁷⁸

³⁷⁵ Valerie Strauss, *Nelson Mandela's famous quote on education*, The Washington Post 2013.

³⁷⁶ World Bank, *World Bank Announces Open Access Policy for Research and Knowledge, Launches Open Knowledge Repository*, Press Release No:2012/379/EXTOP, (2012). Where the World Bank Group President Robert Zoellick said "knowledge is power"

³⁷⁷ Stallman, above n 288

³⁷⁸ Brian Fitzgerald, *A short Overview of Creative Commons* (Sydney University Press 2007).

In Nigeria's copyright future, embracing the open culture will be very instrumental to her development. However, in adopting this culture, there is the need for proper understanding of the concepts through enlightenment and also the need to adopt policies that would encourage further creativity within the Nigerian creative industry. This is very important because the open culture has the tendency of opening developing countries to become mere consumers and non-contributors to the world library. In order to benefit from the open access movement, Nigeria needs to strategically engage with the open culture for purposes of empowerment and not mere consumption. A mentality or attitude of mere consumption may seem to provide an easy win at the beginning but will eventually kill creativity and could no doubt bring about the eradication of the Nigerian culture and may produce the next dispensation of colonization.³⁷⁹ Proper engagement with the open culture will afford the opportunity to share the knowledge of the poor with the rich and the rich with the poor; it will also afford the highest level of visibility to works by Nigerian authors and allow for the possibility of global impact on locally generated works. The sharing culture typified by "Open" is the now and future for all form of content.

When the British carted away Nigeria's creative works prior to her independence it may have seemed that her creativity had been stolen. The reality is that creativity is deeply rooted in the people and their culture and it will take more than carting away a few items to steal a nation's national creativity. The passage into law of the 1970 Copyright Act signalled Nigeria's first domestic copyright law but it did not provide much in the opinion of Nigerian copyright owners and it led to the current 1988 copyright Act which has been amended twice to reflect the changing and dynamic nature of copyright. The several regulations that have been issued by the commission and the different strategies adopted the Nigerian Copyright Commission have in no small ways helped in the administration of copyright in Nigeria. The heightened convictions on copyright infringement will hopefully continue to serve as deterrence to others who think flagrant disregard for copyright is acceptable.

The concept of exclusive rights in the digital era has changed but the laws have not changed. The exceptions to copyright control are no more adequate. If Copyright will have a thriving future, it must interface with these new realities. Nigeria will therefore need to strategically engage with the international community in domesticating legal instruments and negotiating issues of interest for the development of Nigeria's creative industries. Cardinal to the development of copyright in Nigeria will be her ability to embrace the open culture by first understanding the concepts and taking steps to put in place policies that would enable the freedoms required for development. If

³⁷⁹ Ola, above n 156, 130-132

the open culture is not embraced, copyright may be suffocated and relegated to a place of insignificance.

SECTION II

This section is focused on examining the framework that exists within Nigeria's Ministries, Departments and Agencies (MDA's) to ascertain the level of appreciation of the open culture.

3.10 THE CURRENT LEGAL, REGULATORY AND POLICY FRAMEWORKS FOR OPEN ACCESS IN NIGERIA

Part I discussed Nigeria's Copyright laws. Copyright is critical to research because it controls information management. The legal, regulatory and policy frameworks discussed hereunder all have Intellectual Property/Copyright components and this is because the output of research is often expressed as literary works and is therefore covered under Copyright laws. Part II examines four Federal Ministries under the Federal Republic of Nigeria and analyses their institutional framework in light of the open culture.

Research in Nigeria is administered from a multi-ministerial and multi-departmental perspective³⁸⁰. The Federal Ministries of:

- i. Health³⁸¹
- ii. Agriculture and Rural Development³⁸²
- iii. Education³⁸³ and
- iv. Science and Technology³⁸⁴

all play key roles in the development of research as well as in the dissemination of the output of such research. These ministries put in place policies and legislation which enable the establishment of regulatory bodies to administer, regulate and manage issues of research. They are also saddled with the responsibility to oversee several agencies which have amongst other things, specific mandates covering different research interests and fields. In the pursuit of development, creativity and innovation has been recognised as pillars for development and the encouragement of research has been enshrined in most of the government ministries,

³⁸⁰ Federal Ministry of Health, *Revised National Health Policy* (2004), <http://osgf.dammy.net/payload?id=19d51d38-c75f-4461-91ce-f6a6d2298b87>. See where it was noted that "Priorities for health service and biomedical research shall be set and reviewed in collaboration with the Federal Ministry of Education and the Federal Ministry of Science and Technology and the Federal Ministry of Justice".

³⁸¹ Federal Ministry of Health, *Home*, <http://www.health.gov.ng/?view=featured>.

³⁸² Federal Ministry of Agriculture and Rural Development, *About us*, <http://www.fward.gov.ng/About-us-new>.

³⁸³ Federal Republic of Nigeria, *Federal Ministry of Education*, <http://www.nigeria.gov.ng/2012-10-29-11-06-51/executive-branch/93-federal-ministry-of-education/116-federal-ministry-of-education>.

³⁸⁴ Federal Ministry of Science and Technology FMST, *Harnessing Technology for Nigeria's Social and Economic Development*, <http://fmst.gov.ng/>.

departments and agencies³⁸⁵. This development is commendable and worthy of praise. However, the focus should not be limited to merely encouraging research and development but in addition, on freedom to accessing the output of such research³⁸⁶. What value is the research when the output is simply compiled and locked up in some official cabinet or is made available to only the members of an elite group or produced as articles or series of articles by journal publishers who subsequently lock up the output of such research behind their paywalls?

In the draft of the framework for Nigeria's National Innovation System, it was noted that a resilient and effective innovation system is key to overcoming the great challenges of "poverty, wealth creation, insecurity, environmental issues, sustainable and productive industries, curing diseases, affordable and robust education" in Nigeria.³⁸⁷ It also pointed out that in an attempt to deploying innovation as a tool for development it is crucial to understand that this "system is about people: the knowledge, technology, infrastructure and cultures they have created or adopted, who they work with, and what new ideas they are experimenting with. An innovation system is an open network of organisations both interacting with each other... and it is an open system, which interacts with its environment."³⁸⁸

Open access seeks to provide an enabling environment where similar interactions as referred to above can take place without restrictions. It seeks to ensure that the output of research is readily available and accessible to all willing minds who are desirous of investigating further and adding to the development and betterment of the society howbeit by building on the ideas and knowledge which others have developed and interacted with.³⁸⁹

This section of the chapter will therefore examine the institutional frameworks of the Ministries of Health, Agriculture and Rural Development, Education and Science and Technology with a view to determining their relevance, applicability and compliance with the overarching goals of the open access movement.

³⁸⁵ Federal Republic of Nigeria FMST, Science, Technology and Innovation (STI) Policy, <http://workspace.unpan.org/sites/internet/Documents/UNPAN048879.pdf>. (Federal Ministry of Science and Technology ed., Federal Government of Nigeria 2011). Where it was noted that the policy was designed to foster the pursuit of knowledge through providing an enabling environment for the research and development.

See also UNESCO, *Nigerian President pledges US\$5 billion towards National Science Foundation*, <http://www.unesco.org/new/en/natural-sciences/science-technology/sti-policy/country-studies/nigeria/nigerian-president-pledges-us5-billion-towards-national-science-foundation/>. "Its main functions would be the provision of grants to research bodies, universities, enterprises and individuals on a competitive basis; the equipping and capitalization of research groups and; the establishment of research universities."

³⁸⁶ Leni Wild, *Information Alone is Not Enough: It's All About Who Uses It, and Why*, (2014) World Bank <http://blogs.worldbank.org/publicsphere/information-alone-not-enough-it-s-all-about-who-uses-it-and-why>.

³⁸⁷ Federal Ministry of Science and Technology FMST, Framework for the Nigerian National System Of Innovation < <http://fmst.gov.ng/downloadable/NATIONAL%20SYSTEM%20OF%20INNOVATION%20-%20Draft.pdf>>. See page 1 of the policy document

³⁸⁸ Ibid. at. page 3 of the policy document.

³⁸⁹ Newton, n 229

3.11 FEDERAL MINISTRY OF HEALTH

This Ministry is responsible for ensuring quality health care for Nigerian's and has the vision "to develop and implement policies that strengthen the national health system for effective, efficient, accessible and affordable delivery of health services in partnership with other stakeholders"³⁹⁰. The Ministry has four departments namely, departments for Health Planning, Research and Statistic (P.R.S), Public Health, Family Health and Procurement and is saddled with oversight functions covering fifty-five (55) parastatals³⁹¹ including 8 Federal Specialty Hospitals, 3 National Orthopaedic Hospitals, 1 National Eye Centre, 1 National Ear Care Centre, 22 Federal Medical Centres, 20 Federal Teaching Hospitals and 5 Agencies³⁹². Virtually all of these departments, parastatals and agencies encourage and carry out research and in turn produce research outcomes.

In a National Health Policy of the Federal Republic of Nigeria, it has been identified that "most of Nigeria's disease burden is due to preventable diseases and poverty is a major cause of these problems"³⁹³. In a similar release by the United Nations Press, the Secretary General of the United Nation took cognisance of the role illiteracy plays in poor health when he noted that "Illiteracy exacerbates cycles of poverty, ill-health and deprivation. It weakens communities and undermines democratic processes through marginalization and exclusion. These and other impacts can combine to destabilize societies."³⁹⁴ If these diseases are preventable, what is being done to prevent these diseases? Strategic engagement in inquiry, interrogation, research and development are more often than not central to addressing these questions and access to knowledge is crucial for effective inquiry and interrogation as well as for the maximization of the output of research and development.³⁹⁵

Nigeria's national health strategies are currently guided by the National Strategic Health Development Plan (NSHDP 2010-2015) which was endorsed by the National Council on Health (the highest health policy advisory body in Nigeria) on the 16th of March 2010 and approved by

³⁹⁰ Federal Ministry of Health, *Mission and Vision*, <http://www.health.gov.ng/index.php/about-us/mission-and-vision>.

³⁹¹ Federal Ministry of Health, *Parastatals*, <http://www.health.gov.ng/index.php/parastatals>.

³⁹² Federal Ministry of Health, *Agencies under FMOH*, <http://www.health.gov.ng/index.php/about-us>. National Primary Health Development Agency, National Agency for Food & Drugs Administration Control, National Health Insurance Scheme, National Institute of Medical Research, National Institute of Pharmaceutical Research & Development and National Agency for the Control of AIDS (NACA)

³⁹³ Federal Ministry of Health, Revised National Health Policy above n 378 See Health Status at page 3.

³⁹⁴ Centre, Literacy vital for beating poverty and disease and reinforcing stability – UN.

³⁹⁵ Bill and Melinda Gate, *2015 Gates Annual Letter: Our big Bet For the Future* (2015), http://www.gatesnotes.com/2015-annual-letter?page=0&lang=en&WT.mc_id=01_21_2015_AL2015-GF_GFO_domain_Top_21. Where they discuss about "Finding the secret to the destruction of Malaria" and "Forcing HIV to a tipping point"

the Federal Executive Council on the 10th of November, 2010. This policy was preceded by the revised National Health Policy of 2004 which had 7 major thrusts.³⁹⁶ The current NSHDP has 8 namely; the NSHDP Leadership and Governance for Health; Health Service Delivery; Human Resources for Health; Financing for Health; National Health Management Information System; Partnerships for Health; Community Participation and Ownership; and Research for Health. Common to both policies is the recognition of the importance of research and the inclusion of information management in the national policy for health.

Para 8.3 of NSHDC provides for a comprehensive repository and states that it shall “develop a comprehensive repository for health research at all levels (including both public and non-public sectors)³⁹⁷” From paragraphs 8.3.1-8.4.2, the policy document discusses developing strategies for getting research into strategies and practices, enshrining mechanisms that would ensure that funded research produce new knowledge, creating a framework for sharing the output of research, establishing channels for sharing research outputs between researchers, policy makers and development practitioners. At Paragraphs 8.4.2, it was noted that “governments and donors will support; the publication of high quality national journals, following a review of editorial boards, establishing appropriate linkages between editors of national journals and reputable publishers (especially online, free web-based access publishers) and international collaborators, to improve the quality of national journals” It would also vigorously pursue “wide dissemination of selected national journals to all stakeholders at federal, state and LGA levels.”³⁹⁸

High Points: The high points of the policy document are that the above provisions reveal an awareness of the importance of access to knowledge and at the same time some form of willingness on the part of policy makers to create an environment for knowledge dissemination. The mention of the development of a comprehensive repository for health research at all levels, as well as the intention of government to support high quality journal publication particularly those that are online and that have free web-based access publishers are indications that access to knowledge appears to be relevant to Nigeria’s policy makers.

Down Side: The down side of the policy document are that an attempt to locate the comprehensive repository referred to in the national policy document via a careful analysis of the website of the ministry revealed that no such repository exists. The mention however of the

³⁹⁶ Federal Ministry of Health, Revised National Health Policy above 378. The 7 thrusts were; National Health System and Management, National Health Care Resources, National Health Interventions, National Health Information System, Partnerships for Health Development, Health Research, and National Health Care Laws.

³⁹⁷ Federal Ministry of Health, *National Strategic Health Development Plan (NSHDP 2010-2015)*, <http://www.health.gov.ng/doc/NSHDP.pdf>.

³⁹⁸ Ibid.

terminology “repository” is an indicator that policy makers may be aware of a global trend to disseminate information through repositories or databanks. Another issue is the absence of the freedom to use and reuse information, a crucial element for open access publishing. In addition to the above, is the failure to provide the infrastructures that would enable the dissemination of the output of research (peer-reviewed literatures) in a way that is free, available, online, immediate and where possible open for reuse.

The fact that repositories are mentioned is commendable but merely mentioning them will not provide the desired result. The policy clearly attempts to address dissemination and sharing of research findings by addressing online publication, it however leaves out the practical mechanism of obtaining access, use and reuse of the research output unaddressed. Addressing the gaps between the current positions by the introduction of practical open access publishing mechanisms will be imperative.³⁹⁹ Most of the research outputs are generated by the work undertaken by agencies under the supervision of the Federal Ministry of Health. The National Institute for Medical Research (NIMR) is an example.⁴⁰⁰

3.11.1 National Institute for Medical Research

NIMR was established in 1977 pursuant to the National Science and Technology Development Agency Decree (No 5) of 1977⁴⁰¹ and is responsible for research into human medicine. Medical research in Nigeria dates back to 1920 when the Rockefeller Foundation, Yellow Fever Commission to the West Coast of Africa arrived in Nigeria. In 1925, the West African Yellow Fever Commission arrived and built a research unit in Yaba, Lagos.⁴⁰² The West African Council for Medical Research was later established in 1954. The predecessor to the current NIMR was the Medical Research Council of Nigeria established pursuant to Decree No.1 of 1972.⁴⁰³ NIMR lists out very important areas as her priority research focus and they include Malaria, Onchocerciasis, Schistosomiasis, Diarrhoeal Diseases, Tuberculosis, HIV Infections, Haemoglobinopathies, Nutrition, Special Childhood Communicable Diseases, Strategic Research, Biotechnology Research and Leprosy Research⁴⁰⁴. It is expected that some level of considerable research has been carried out on the above mentioned area. An attempt to locate published research output on the above mentioned priority areas revealed a list of publications

³⁹⁹ See generally, EIFL, *22 Open Access Policies Adopted in 2014*, eifl(2014), http://www.eifl.net/news/22-open-access-policies-adopted-2014?utm_source=EIFL&utm_medium=email&utm_campaign=newsletter72.

⁴⁰⁰ National Institute for Medical Research, *Research for National Health*, <http://www.nimr-ng.org/>.

⁴⁰¹ National Science and Technology Development Agency Decree NSTDA (1977).

⁴⁰² National Institute for Medical Research, *History*, <http://www.nimr-ng.org/NIMR-history.htm>.

⁴⁰³ Aminu Yakubu & Clement A. Adebamowo, ‘Implementing National System of Health Research Ethics Regulations: The Nigerian Experience’, (2012) 1 *BEOnline: Journal of the West African Bioethics Training Program*.

⁴⁰⁴ National Institute for Medical Research, *Research Priorities*, <http://www.nimr-ng.org/NIMR-research-priorities.htm>.

with no access to the actual publications. The implication is that the output of these priority researches are inaccessible.⁴⁰⁵ This not only limits accessibility to the information but also reduces the possible utility the work can achieve.

3.11.2 National Agency for Control of AIDS

Another agency under the Federal Ministry of Health is the National Agency for Control of AIDS formerly known as National Action Committee for AIDS which has the vision “to make Nigeria a nation of people with functional knowledge of HIV/AIDS who provide care and support to individuals, families and communities confronted with the epidemic⁴⁰⁶” This vision of imparting functional knowledge is at the heart of the organisation and indeed several public enlightenment campaigns have been carried out by NACA⁴⁰⁷. However, a careful search of the organisation’s website provides some information in the frequently asked question (FAQ) section but when it comes to reports and publications which constitutes an integral part of research output that section is majorly empty and the expected reports and publications are not available.

3.12 FEDERAL MINISTRY OF AGRICULTURE

This Ministry which was established in 1966 regulates agricultural research, agriculture and natural resources, forestry and veterinary research all over Nigeria. It has the responsibility amongst many other things to address Nigeria’s food and agricultural problems thereby reducing the poverty level in Nigeria⁴⁰⁸. One of the agricultural policies of the ministry is to transform the Agricultural Research Council which was established pursuant to Agricultural Research Council Act⁴⁰⁹. The Act in Section 5 provide for the functions of the council and narrows down at sub-sections (f-j) on encouraging research and ensuring the greatest utility for such research. It provides as follows:

“(f) maintain an up-to-date record of all existing facilities for research, training and extension in the agricultural sciences in Nigeria and advise the Federal Government on their adequacy and efficient utilisation;

⁴⁰⁵ National Institute for Medical Research, *List of Publications*, <http://www.nimr-ng.org/NIMR-publications.htm>.

⁴⁰⁶ NACA, *National Agency for the Control of AIDS*, <http://www.naca.gov.ng/history-naca>.

⁴⁰⁷ NACA, *PMTCT Advert NACA Nigeria* (2013) <http://vimeo.com/66643571>. See also NACA, *HIV Prevalence Advert NACA Nigeria on vimeo* (2013), <http://vimeo.com/66643577>.

⁴⁰⁸ FMARD, *Federal Ministry of Agriculture and Rural Development*, <http://www.fward.gov.ng/About-us-new>.

⁴⁰⁹ Agricultural Research Council Act, (2004) [http://placng.org/lawsfnigeria/node/17_Cap_L5_\(2004\)](http://placng.org/lawsfnigeria/node/17_Cap_L5_(2004)).

- (g) advise the Federal Government on the re-organisation of existing institutes, including the creation of new ones, as are required to implement or further the efficiency of research, training and extension in the agricultural sciences;
- (h) promote collaboration between scientists engaged in research in the agricultural sciences in Nigeria and their counterparts in other countries or international bodies;
- (i) establish and maintain a National Agricultural Science Library and Documentation Centre and publish or sponsor the publication of the research results in the agricultural sciences; and
- (j) carry out such activities as may, in the opinion of the Council, further the advancement of research, training and extension in the agricultural sciences.⁴¹⁰

Nigeria is the country with the highest population in Africa. It has vast expanse of cultivatable lands but ironically it faces food and poverty challenges⁴¹¹. These challenges make the issue of agricultural research of paramount importance. The act as quoted above provides at S. 5(f) for the maintenance of records on research facilities for purposes of facilitating agricultural research thus recognising the importance of research. S.5 (g) addresses the provision of structures to support efficient and effective research, S.5 (h) focuses on promoting local and international collaboration between researchers in the agricultural sciences and S.5 (i) provides for a library/documentation centre which would publish or sponsor the publication of the output of research. The above provisions no doubt are a manifest demonstration of the agencies acknowledgement that research plays a key role in development.

S.5 (g) particularly provides for the reorganisation of existing research institutes or the establishment of new ones. The purpose of reorganising or establishing these research institutes is amongst other things to encourage research that would produce useful knowledge able to transform the agricultural sector and positively address the food and poverty challenges in Nigeria. Access by interested researchers and curious minds to the output of these researches becomes imperative to achieve agricultural development.

⁴¹⁰ Ibid

⁴¹¹ Enete A.A & Amusa T.A, *Challenges of Agricultural Adaptation to Climate Change in Nigeria: a Synthesis from the Literature* The Journal of Field Actions: Field Actions Science Reports [Online] <http://factsreports.revues.org/678#quotation>. See also, Nigeria, About Nigeria <https://en.wikipedia.org/wiki/Nigeria>. Where it noted that "Nigeria is the most populous country in Africa and the eighth most populous country in the world with a population of over 150 million, therefore making it the most populous 'black' country in the world." See also, Wikipedia, *Demographics of Nigeria*, <http://en.wikipedia.org/wiki/Nigeria#Demographics>. Where it noted that "Nigeria, known as "the Giant of Africa", is the most populous country in Africa and the seventh most populous country in the world"

In an attempt to search for the output of agricultural research generated by the research institutes in Nigeria, a careful search for the library and documentation centre (National Agricultural Science Library and Documentation Centre⁴¹²) revealed an exact match but the centre was that of Hungary⁴¹³, it did not reveal any result for Nigeria. It appears that the said library and documentation centre has either not been established and if established, it is yet to come online. A further search of the publication section of the ministry's website reveals a file library which has 11 available and downloadable documents. It would also be noted that although section 5 of the Act provides for advising government on adequate and efficient utilisation of research, as well as encouraging research collaboration between researchers, the Act makes no clear provision for the management of research output. It is silent as to online access, use and re-use rights with regards to the output of research. Online availability and accessibility to the output of research is one of the pillars upon which open access stands and this no doubt should be an important aspect of agricultural research considering the many agricultural institutes in Nigeria covering agricultural produce including cocoa, oil, rubber, fisheries and animals⁴¹⁴. Easy access to the output of research from all these research institutes has the capacity of enhancing agricultural research in Nigeria, reducing poverty and addressing the food challenge in Nigeria.

3.13 THE FEDERAL MINISTRY OF EDUCATION

This ministry has the vision of delivering sound education for public good and seeks to deplore education as a tool for fostering national development. It is responsible for formulating, coordinating, harmonizing and supervising the implementation of Nigeria's education policies⁴¹⁵. It has oversight functions over 24 parastatals/agencies including the Universal Basic Education Commission (UBEC), National Library of Nigeria (NLN), National Open University of Nigeria (NOUN), National Universities Commission (NUC) and Nigeria Educational Research and Development Council (NERDC). Common to all of these agencies is that they promote education and research. For example, the policy of the nation in furtherance of universal basic

⁴¹² See Section 5(i), Cap L5 (2004).

⁴¹³ AgriVIVO, *National Agricultural Science Library and Documentation Centre*, <http://www.agrivivo.net/organization/national-agricultural-library-and-documentation-centre>.

⁴¹⁴ FMARD, *Parastatals*, <http://www.fmard.gov.ng/parastals.php?0=0&limit=6&pno=8>. There are over 15 research institutes in the Nigerian Agricultural sector inclusive of; 1. National Cereals Research Institute, Badeggi; 2. National Veterinary Research Institute, Vom; 3. National Root Crops Research Institute, Umudike; 4. National Institute for Oil Palm Research, Benin; 5. Lake Chad Research Institute, Maiduguri; 6. National Institute of Oceanography & Marine Research; 7. Cocoa Research Institute, Ibadan; 8. National Institute for Fresh Water Fisheries Research; 9. Nigeria Stored Product Research Institute, Ilorin; 10. National Horticultural Research Institute, Ibadan; 11. Rubber Research Institute, Benin; 12. National Agricultural Extension & Research Liaison; 13. National Animal Production Research Institute, Zaria; 14. Nigerian Institute of Animal Sciences, Abuja.

⁴¹⁵ See, Nigeria, Federal Ministry of Education above n 381.

education is implemented under the auspices of the Universal Basic Education Act which provides at Section 2 for the right to compulsory, free, universal basic education for children in their primary and junior secondary school stages⁴¹⁶. One major issues with the ministry is the absence of a dedicated website.⁴¹⁷ A Wikipedia⁴¹⁸ and Facebook page⁴¹⁹ is what is found when a search is conducted for the ministry. The implication is that the Federal Ministry of Education has no online presence and any information that would be obtained on the ministry can only be obtained offline. People desirous of obtaining relevant information are cut off. This is something that must be addressed urgently. Most of the agencies under the parent ministry however have functional websites. The Nigerian Educational Research Development Council and the National Universities Commission are examined hereunder.

3.13.1 Nigerian Educational Research Development Council

Another agency involved in educational research is the Nigerian Educational Research Development Council established pursuant to the Nigerian Education Research Development Council Act No.53. The Council's core objective is "educational research and development in Africa"⁴²⁰. It is responsible amongst other things for compiling relevant publications, sponsoring the publication of education research and making such publications available⁴²¹. These publications are meant to be made available and accessible through the agencies "library and informatics centre"⁴²². It is the responsibility of the centre to serve as a point of exchange for information, provide information on completed research and to promote the dissemination of such research as e-resources, the Council's library and informatics centre provide links to the abstract of the output of research. The two links on the e-resource page "Nigerian Education Abstracts Volume II and Family Life HIV/AIDS Education (FLHE) Manual do not provide download opportunities."⁴²³ Whereas the first provides abstracts of different thesis, the second is merely a link to another webpage.

⁴¹⁶ See Section 2 of the Compulsory, Free Universal Basic Education Act [http://www.placng.org/lawsfnigeria/node/121_UBE_\(2004\)](http://www.placng.org/lawsfnigeria/node/121_UBE_(2004)). See also, UBEC, *Universal Basic Education Commission*, http://ubeconline.com/about_ubec.html.

⁴¹⁷ Nairaland, *Where Is The Official Website To The Ministry Of Education? - Education - Nairaland*, (2013).

⁴¹⁸ Wikipedia, *Nigerian Federal Ministry of Education*, http://en.wikipedia.org/wiki/Nigerian_Federal_Ministry_of_Education.

⁴¹⁹ Facebook, *Federal Ministry of Education, Federal Scholarship Board Nigeria*, (2013).

⁴²⁰ NERDC, *NIGERIAN EDUCATIONAL RESEARCH AND DEVELOPMENT COUNCIL (NERDC)* <http://nerdc.ng/about-nerdc>.

⁴²¹ Ibid. at. See "RESPONSIBILITY OF THE COUNCIL"

⁴²² NERDC, *Library and Informatics Centre*, <http://nerdc.ng/academic-centres/library-and-informatics-centre>.

⁴²³ NERDC, *Resource*, <http://www.nerdc.gov.ng/i/contents/eresources.html>.

3.13.2 National Universities Commission (NUC)

The National Universities Commission (NUC) is probably one of the most important agencies under the Federal Ministry of Education⁴²⁴. The agency is responsible for regulating the activities of all universities in Nigeria which is currently 147 made up 46 Federal, 40 State and 61 Private universities.⁴²⁵ The agency has 11 departments.⁴²⁶ Five of the departments are mentioned hereunder.

The vision of the Department of Research and Innovation is to be “the catalyst for quality research and development outputs and outcomes delivery by Nigerian universities that impact positively on the socio-economic sectors of Nigeria”. It seeks to “deliver desired, relevant, innovative, and quality-driven interventions in Nigerian universities in partnerships with other stakeholders to enhance the infrastructure and capacity of Nigerian universities to better execute their research and development mandates.”⁴²⁷

The Department of Inspection and Monitoring is responsible for monitoring the level of compliance of Nigerian Universities with the provisions of the Benchmark Minimum Academic Standards (BMAS) and other quality assurance guidelines laid down by Government. It undertakes regular visits to universities and prepares periodic reports on the state of university education in Nigeria⁴²⁸

Department of Students’ Support Services (DSSS) has a vision “to be a catalyst in the Commission’s drive to deploy strategies for improving Nigerian University students’ career opportunities and sense of social responsibility.”⁴²⁹

The Department of Information and Communication Technology seeks to facilitate the utilization of ICT for teaching, research, planning management and effective evaluation through decision making package in the Nigeria university system.⁴³⁰

⁴²⁴ National Universities Commission Act, Cap N.81, Laws of the Federation of Nigeria (LFN) <http://www.placng.org/laws/nigeria/node/507>. Cap N.81 Laws of the Federation of Nigeria (LFN) (2004). See Section 4 where it provides for the functions of the Commission

⁴²⁵ National Universities Commission, LIST OF NIGERIAN UNIVERSITIES AND YEARS FOUNDED.

⁴²⁶ Executive Secretary's Office, Academic Standards Department, Management Support Services Department, Research and Innovation Department, Inspection and Monitoring Department, [Student Support Services Department](#), Information and Communication Technology Department, Finance and Accounts Department, Quality Assurance Department, Physical Planning and Development Department, Open and Distance Education Department, [Liaison Office Department](#), Department of Protocol & Special Duties.

⁴²⁷ National Universities Commission NUC, *Department of Research and Innovation*, <http://www.nuc.edu.ng/pages/pages.asp?id=25>.

⁴²⁸ National Universities Commission NUC, *Department of Inspection and Monitoring*, <http://www.nuc.edu.ng/pages/pages.asp?id=51>.

⁴²⁹ National Universities Commission NUC, *Department of Students' Support Services (DSSS)* <http://www.nuc.edu.ng/pages/pages.asp?id=08>.

Department of open and distance education was established on the 26th of July, 2011 to tackle the challenges of inadequate access in the Nigerian University system using the ODL mode.⁴³¹

The laudable visions and missions of the departments are evident in the administration of Nigerian Universities. Monitoring quality, tackling the challenges of inadequate access, deploying information communication technology as a tool for integration and cooperation as well as encouraging and facilitating research and development are a fundamental issue that guarantees quality education and that enhances the culture of research.

Universities are known for not just educating students but even more for research and for providing peer-reviewed literature with ground breaking ideas⁴³². This practice is inspired by the research culture which has become part and parcel of the University system. Universities account for the majority of the knowledge that is published as peer-reviewed literature and quality research thrives on accessibility to this knowledge. It is generally agreed that the global academic community have a culture of sharing research output for free and that they are more concerned about the impact of their work therefore accessibility, visibility, impact and maximal utilization of these works is what is paramount to academics.⁴³³

Two of the cardinal issues with Nigerian Universities are, the problem of inaccessibility to peer-reviewed literature and that of poor visibility of research generated in Nigeria. The visibility problem is both local and international. Local in the sense that fellow researchers within Nigeria are unable to access the work as well as fellow researchers within the wider global community. How to ensure visibility to research generated in Nigeria as well as accessing the output of research generated in other parts of the world have been the preoccupation of several writings all

⁴³⁰ National Universities Commission NUC, *Department of Information and Communication Technology* <http://www.nuc.edu.ng/pages/pages.asp?id=75>.

⁴³¹ National Universities Commission NUC, *Department of Open and Distance Education* <http://www.nuc.edu.ng/pages/pages.asp?id=182>.

⁴³² See Sotunde Oluwabusayo, *World Bank Approves \$150m Grant For Education In Africa* http://www.ventures-africa.com/2014/04/world-bank-grants-150m-for-stem-education-in-africa/?utm_source=Friday%2C+25th+April+2014&utm_campaign=PR%2C+Africa+Business%2C+Africa+Economy%2C+Africa+Entrepreneur%2C+Ventures+Africa&utm_medium=email. Where it noted that "The continent also needs its local research and innovative solutions to tackle its peculiar developmental challenges including climate change, political stability, and infectious diseases amongst others".

⁴³³ Budapest Open Access Initiative, above n 18.

See also, Suber, *Open Access Overview: Focusing on open access to peer-reviewed research articles and their preprints*, <http://www.earlham.edu/~peters/fos/overview.htm>.

See also, Harnad, et al., *Serial Review*, above n

See also, Chan, et al., *Open Access and Development: Journals and Beyond*. 2012.

See also, Barbara Kirsop, et al., *Access to Scientific Knowledge for Sustainable Development: Options for Developing Countries* ARIADNE at <http://www.ariadne.ac.uk/issue52/kirsop-et-al>.

See also, Willinsky, *Economic Analysis & Policy*, (2009). Bailey, *What is Open Access*. 2006.

See also, Ola, E.I.P.R., (2014).

of which are united in the view that open access provides the platform for actualizing these objectives⁴³⁴.

The adoption of open access by Nigerian universities has been slow as only 8 of the 140 universities have repositories.⁴³⁵ The National University Commission in her role as regulator can influence the policy direction of access to knowledge in Nigeria by encouraging all Nigerian Universities to develop open access mandates and develop institutional repositories.

3.14 THE FEDERAL MINISTRY OF SCIENCE AND TECHNOLOGY

This ministry is “saddled with the responsibility of facilitating the development and deployment of Science, Technology and Innovation to enhance the pace of socio-economic development of the country”⁴³⁶. The ministry deplores specialized research and development projects using the platform of parastatals and agencies under her charge to distil the vision and mission of the ministry. The ministry works with a number of strategies to further the goal of strengthening innovation in Nigerian through research and development. The strategies include the following:

1. The Science, Technology and Innovation (STI) Policy⁴³⁷,
2. The Framework for the Nigerian National System of Innovation⁴³⁸,
3. The National ICT Policy⁴³⁹ and
4. The National Information Technology Development Act⁴⁴⁰.

These strategy documents contain the legislative, regulatory and policies frameworks that have been put in place by the Nigerian government and are geared towards entrenching a culture of research and development aimed at strengthening the innovation capacity of Nigeria and Nigerian’s. At the 17th session of the Commission on Science and Technology for Development (CSTD) organised by the United Nations conference on Trade and Development (UNCTAD)

⁴³⁴ Samuel Utulu & Omolara Bolarinwa, ‘Open Access Initiatives: Adoption by Nigerian Academics’ (2009) 58 *Emerald Law Review*.

See also, Gbaje, above n 164.

See also, O. Ivwighreghweta & O.K. Onoriode, *Open Access and Scholarly Publishing: Opportunities and Challenges to Nigerian Researchers*, (2012) CLIEJ.

See also, M.O. Okoye & A.N. Ejikeme, *Open Access, Institutional Repositories, and Scholarly Publishing: The Role of Librarians in South Eastern Nigeria*, (2011) Library Philosophy and Practice.

See also, Christian, above n 164.

⁴³⁵ OpenDOAR, *Directory of Open Access Repositories*, <http://www.andoar.org/countrylist.php>. See also, ROARMAP, above n 78.

⁴³⁶ FMST, *Harnessing Technology for Nigeria's Social and Economic Development*.

⁴³⁷ FMST, Science, Technology and Innovation (STI) Policy, <http://workspace.unpan.org/sites/internet/Documents/UNPAN048879.pdf>, 2011.

⁴³⁸ FMST, Framework For The Nigerian National System Of Innovation <http://fmst.gov.ng/downloadable/NATIONAL%20SYSTEM%20OF%20INNOVATION%20-%20Draft.pdf>.

⁴³⁹ Federal Ministry of Information and Communication Technology MICT, National ICT Policy, <http://www.nitda.gov.ng/downloads/NEW ICT Policy.pdf> (2012).

⁴⁴⁰ National Information Technology Development Agency Act, 2007 <http://www.placng.org/lawsfnigeria/node/342> (2007).

the supervising minister for the ministry of science and technology for Nigeria noted that Nigeria had successfully revised her Science, Technology and Innovation (STI) Policy and that “the revised STI policy articulates the establishment of a National Research and Innovation Council to facilitate the transformation of Nigeria into a knowledge based economy with strong capabilities in STI.”⁴⁴¹

3.14.1 Nigeria’s Science, Technology and Innovation (STI) Policy

The STI (Policy) contains 8 broad provisos with a total subdivision of 20 provisos. The preamble, national STI policy, vision, mission, general and specific objectives are all covered under proviso’s 1.0, 2.0, 2.1, 2.2, 2.3 & 2.4 respectively⁴⁴². Proviso 3 is the key provision in the policy document and it contains the core of the policy strategies addressing issues of human resources development, research and development, intellectual property rights, technology transfer and diffusion, standardisation and quality assurance, STI information management system and finally, Women and STI. The last section of the document covers funding, partnership, governance, institutional and legal framework and appreciation under proviso’s 4.0, 5.0, 6.0, 7.0 and 8.0 respectively.⁴⁴³

The STI policy seeks to accelerate development, competitiveness and creation of wealth for all Nigerians in line with Nigeria’s vision 20:2020 Economic Transformation Blueprint (NV20:2020)⁴⁴⁴ and therefore has the mission of “evolving a nation that harnesses, develops and utilises STI to build a large, strong, diversified, sustainable and competitive economy that guarantees a high standard of living and quality of life to its citizens.”⁴⁴⁵

Both the general and specific objectives of the STI policy focuses on capacity development and underscores the importance of access to knowledge. The policy identifies the importance of not just access to the use of knowledge but also reuse. It notes that the STI seeks to “facilitate the acquisition of knowledge to adapt, utilise, replicate and diffuse technologies for the growth of SMEs, agricultural development, food security, power generation and poverty reduction.”⁴⁴⁶ The STI policy document is evidence of one of Nigeria’s institutional recognition that the task of development is best achieved under a collaborative atmosphere. The more works open for

⁴⁴¹ UNCTAD, *Ministerial Round Table on "Science, Technology and Innovation for the Post-2015 Development Agenda"* E/2014/31-E/CN.16/2014/4, UNCTAD(2014),

http://unctad.org/meetings/en/Presentation/CSTD_2014_STMT_Nigeria_Minister.pdf.

⁴⁴² FMST, Science, Technology and Innovation (STI) Policy, <http://workspace.unpan.org/sites/internet/Documents/UNPAN048879.pdf>, 2011.

⁴⁴³ Ibid.

⁴⁴⁴ National Planning Commission, Nigeria Vision 20:2020 above n 309.

⁴⁴⁵ See Proviso 2.2 National STI Policy Mission, FMST, Science, Technology and Innovation (STI) Policy, <http://workspace.unpan.org/sites/internet/Documents/UNPAN048879.pdf>, 2011.

⁴⁴⁶ Ibid, See Provisos 2.3 and 2.4 on General Policy Objective and Specific Policy Objectives.

utilisation and replication (use), adaptation and diffusion (reuse), the greater the possibilities for development. It is based on the above that proviso 3 sets out a policy strategy that seeks to create awareness and build a sharing culture that would foster development. The document employs multiple strategies in addressing the problems. For instance, at 3.1.3, it employs the approach of creating awareness through primary, secondary and technical schools. In this way it adopts the grass root approach by going to early learners to inculcate the concepts into the academic curricula of schools and thereby stir an interest for STI in youths. At 3.3 it emphasizes the need to prioritise research and development for purposes of “generation, acquisition, storage, application and diffusion of S&T knowledge for national development.”⁴⁴⁷ The focus of this research and development encompass different sectors ranging from agriculture, water resources, biotechnology, health, energy, environmental science and technology, mines and materials development, ICT, transport system, space research, industrial research, youths, sports and tourism development, works, land, housing and urban development, defence and national security, word resources, science laboratory technology, raw materials as well as new and emerging technologies.

The act recognises the need to respect intellectual property rights and notes that creativity and innovation are easily advanced where a system that ensures the management, harmonisation and coordination of IPRs are in place.⁴⁴⁸

The policy directly addresses the issue of access to use and reuse of knowledge at 3.7 where it seeks to “establish an effective information management system designed to provide real-time access to functional and updated database on STI activities in order to provide a platform for accessing, sharing and exchanging information.”⁴⁴⁹ It outlines seven strategies to achieve its information management goal.

- i. Developing national STI indicators that will be revised periodically in line with international standards.
- ii. Establishing and maintain a national database on STI input/outputs within an agency of FMST and strengthen the existing information management system on R&D in all sectors.
- iii. Creating active networks for interaction, cooperation and exchange of ideas among STI actors and stakeholders within and outside the country.

⁴⁴⁷ Ibid, See Proviso 3.3 on Research and Development.

⁴⁴⁸ Ibid, See Proviso 3.4 on Intellectual Property Rights.

⁴⁴⁹ Ibid, See Proviso 3.7 on STI Information Management System.

- iv. Establishing a mechanism within the FMST to coordinate the management of STI Information system.
- v. Establishing information system nodes in all agencies of FMST and other cognate ministries.
- vi. Linking the National STI information system with the National Bureau of Statistics for local and international usage.
- vii. Facilitating ICT infrastructure deployment to all S&T institutions.⁴⁵⁰

So far, the activities of this ministry has proved very positive on Nigerians and Nigeria as a whole. The provision of better internet access has made it possible for the ordinary Nigerian to gain better access to the internet. Recently, the Alliance for Affordable internet (A4AI) ranked Nigeria as the 2nd among emerging economies.⁴⁵¹ Building on these improvements, Nigerians are able to build and develop initiatives to enhance communication, trade and commerce and for effective participation in eGovernment.⁴⁵² Recently, the United Nations noted Nigeria's rise on the eGovernment Development ranking from 193 to 141, a 21 point rise.⁴⁵³ These developments are positive indicators that needed infrastructures are being put in place to enable effective and efficient creation, storage, dissemination and adaptation of knowledge resource. The policy document's aspiration at 3.7.3 (vi) to create a platform for information linkage to the National Bureau of Statistics for purposes of enabling use and reuse of information locally and internationally appears to be on-going. A search of the National Bureau of Statistics website revealed links to a number of downloadable resources and reports.⁴⁵⁴ The website particularly has an NBS data portal which has different tabs including those for data, maps, data analysis, state profiles, dashboards, resource centre, tutorial and user guides.⁴⁵⁵ A very significant part of the NBS is her data archive called the Nigerian National Data Archive (NADA) centre. Through this archive the agency seeks to promote equitable access to micro data in the interest of all citizens. The agency particularly notes that "Survey and census micro data are invaluable resources for statisticians, researchers and analysts because they constitute important and irreplaceable assets which need to be managed in a way that encourages their use and re-use, while protecting the

⁴⁵⁰ Ibid, See 3.7.3 on Strategies.

⁴⁵¹ Alliance For Affordable Internet (A4AI), *Alliance For Affordable Internet's 2014 Affordability Report* (2014) <http://a4ai.org/affordability-report/report/>. See also, FMCT, *Nigeria's Internet Ranks 2nd Among Emerging Economies* (2014), <http://commtech.gov.ng/index.php/videos/daily-press-release/298-nig-internet-ranked-2nd>.

⁴⁵² United Nations UN, *Nigeria Makes Mild Stride in eGovernment Development Rnking* (2014), <http://www.unpan.org/PublicAdministrationNews/tabid/651/mctl/ArticleView/ModuleID/1555/articleId/42587/Default.aspx>.

⁴⁵³ FMCT, *Nigeria improves in United Nations eGovernment Development Ranking* (2014), <http://commtech.gov.ng/index.php/videos/news-event/176-nig-improves-un-egov-dev>.

⁴⁵⁴ NBS, *National Bureau of Statistics* (2015), <http://www.nigerianstat.gov.ng/>.

⁴⁵⁵ NBS, *Nigeria Statistical Data Portal* (2015), <http://nigeria.prognoz.com/>.

privacy of respondents.⁴⁵⁶ No doubt the Ministry of Science and Technology is moving in the right direction when it comes to access to knowledge. The fact that the STI policy document recognises that the creation, use and reuse of knowledge resources play a dominant role in social, economic and political development is an indicator that Nigeria is beginning to appreciate the importance of access to knowledge.

3.15 CONCLUSION

The legal, regulatory and policy frameworks discussed above all indicate that there is growing awareness about open access in Nigeria and that some of the frameworks have even begun to build structures that are able to implement the goals of open access. However, it is unthinkable and inexcusable that in this digital age, a Federal Ministry of Education would not have an official website. The analysis has also shown that a lot of the institutional infrastructures are inherently defective and reveal a dearth of understanding about the concept and culture of open access. Nigeria's legal, regulatory and policy structures provide for the establishment of digital libraries, documentation and informatics centres but most of these institutions do not even have any such platform and where they exist, they do not provide free, online, unrestricted, immediate access to the actual output of their research.

The website of some of these agencies are able to provide abstracts of papers, some provide the list of some research, while others provide information on frequently asked questions, but the actual output of research is often not available online thereby constituting barriers to access. Removing these barriers on the legal, regulatory and policy framework front is imperative because without their removal, advancing open access, open educational resources and public sector information in Nigeria would be an uphill task. The good news is that the open culture is gradually being introduced into Nigeria through initiatives like the National Data Archive Centre under the National Bureau of Statistics. This gradual introduction will form important building blocks in developing a sustainable framework for the development and implementation of open access to knowledge in Nigeria. The next chapter will amongst other things consider how open access was introduced into Nigeria and will evaluate how the two strategies of open access, self-archiving and open access journals are being implemented in Nigeria and will discuss the advantages of open access to Nigerians.

⁴⁵⁶ NBS, *Nigeria National Data Archive (NADA) Centre* (2015) <http://www.nigerianstat.gov.ng/nada/index.php/home>.

PART III: THE THREE PILLARS OF OPEN ACCESS: POLICIES AND PRACTICES.

Part I introduced the research and Part II considered the framework of open access to knowledge in Nigeria.

Part III explores the dynamics of the open access to knowledge movement and the impact it is making globally. It does this by analysing the three pillars of open access from a policy and practice perspective.

Part III therefore focuses on three major areas within the open access movement namely,

- i. Open access to journal articles (considered in chapter 4),
- ii. Open educational resources (considered in chapter 5) and
- iii. Public sector information (considered in chapter 6).

4. OBJECTIVES

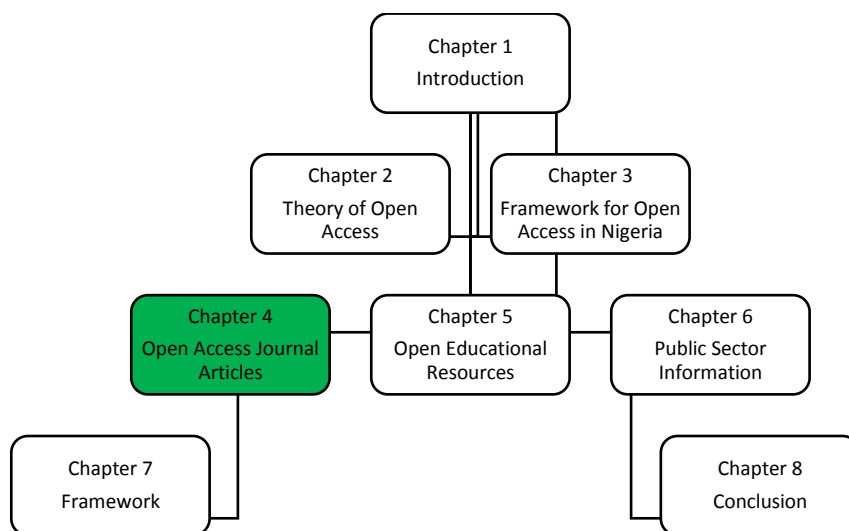
The aim of this chapter is to explain what open access means, why it was born and how it evolved into a global movement, with local, national and international perspectives. This chapter also provides some insights on the possible impact of open access to Nigeria and other developing countries and provides suggestions on what these countries could do to maximize the opportunities provided by open access.

Aims & Objectives

1. To demonstrate the potential benefits of the open access movement to Nigeria's national development.
2. To investigate, explain and propose a legal, regulatory and policy framework for Nigeria that would enable open access to the output of journal articles, open educational resources and public sector information.
3. To situate Nigeria within the current Open Access Movement by engaging in local pragmatic projects capable of advancing the development of Nigerians, other developing countries and the world at large. (For instance the establishment of institutional repositories in most Nigerian Tertiary Institutions.)

Research Questions

1. What role(s) can open access play in Nigeria's national development?
2. What are the possible challenges to the implementation of open access in Nigeria?
3. What legal, regulatory and policy frameworks are required or needed to be strengthened for the successful implementation of open access in Nigeria?



4.1 BACKGROUND

The open movement has made considerable progress since the Budapest meeting. The number of open access repositories, open access journals and open access mandates/policies have increased greatly.⁴⁵⁷ Many publishers that were sceptical about the viability of open access have themselves now developed or bought over open access journals and are supporting the open access movement.⁴⁵⁸ A high percentage of scholarly publications are now open access and a number of institutions recognise open access Journals for purposes of academic assessment and promotions. There is virtually no country in the world without an open access presence. In some countries the presence may be low but it exists. In this chapter the national adoption of open access will be considered. The focus is to analyse and understand how these countries have successfully handled the challenges encountered in adopting open access. This understanding will

⁴⁵⁷ See generally, ROARMAP, above n 78. The website revealed significant increase in adoption of open access mandates. Between 2005 and 2015, the following were noted

About 500% increase by research organisations, about 800% increase by funders, about 220% increase by sub-units of research organisations, about 500% increase by funder & research organisations, about 800% increase by multiple research organisations.

See also, (DOAJ), above n 76. The website notes that as of 2015 there are 10,476 Journals; 6,341 searchable at article level, 134 countries and 1, 938, 490 articles.

⁴⁵⁸ Springer, Springer Acquires BioMed Central Group, above n 259. Derek Haank of Springer and Matthew Cockerill of BioMed Central noted respectively that “This acquisition reinforces the fact that we see open access publishing as a sustainable part of STM publishing, and not an ideological crusade. We have gained considerable positive experience since starting Springer Open Choice in 2004, and BioMed Central’s activities are complementary to what we are doing. Additionally, this acquisition strengthens Springer’s position in the life sciences and biomedicine, and will allow us to offer societies a greater range of publishing options.”

“We are very excited about this new phase of BioMed Central's growth and development. Springer has been notable among the major STM publishers for its willingness to experiment with open access publishing. BioMed Central has demonstrated that the open access business model can work, and we look forward to continued rapid growth as part of Springer. The support of our authors, journal editors and institutional customers has been vital to BioMed Central's success and we will continue to focus on offering the best possible service to these groups.”

enrich the development of Nigeria's open access to knowledge framework and would address research questions 1, 2 and 3 as well as aims and objectives 1, 2 and 3. This chapter is divided into two sections. The first section lays out the foundation of the chapter, discusses the history of open access and then examines the adoption of open access by different stakeholders including international and national governments, funding agencies, libraries and universities. It also discusses open licensing an important part of open access. It identifies the strengths and weaknesses of open access. The second section is dedicated to the adoption of open access in Nigeria.

SECTION I

4.2 INTRODUCTION

Making information that is available online accessible, useable and reusable, free from legal, price and technological restrictions can be described as a central focus of the open access movement.⁴⁵⁹ Taking cognisance of the usefulness and efficacy of information, there is a pressing imperative to ensure that information is disseminated broadly and that barriers to accessing information are reduced and where possible removed entirely.⁴⁶⁰ It is this initiative that the open access movement seeks to achieve and to this end several strategy sessions, meetings and models⁴⁶¹ have been developed and are being implemented. The open movement is built on the platform of a technology that affords the opportunity for instantaneous flow of information at virtually no cost. That technology operating in the hemisphere of the online environment is called the internet.⁴⁶²

4.2.1 The Internet

Today, the internet is ubiquitous providing a unique means for all to access information wherever and whenever.⁴⁶³ The interesting and curious thing about the internet is that "it is not monolithic and no single organisation or corporation or government has control over its

⁴⁵⁹ See Suber, Open Access above n 12, 4.

⁴⁶⁰ See generally, Alma Swan, *Policy Guidelines for the Development and Promotion of Open Access* (UNESCO, 2012) 27 .

⁴⁶¹ Examples are: Budapest Open Access Initiative, www.opensocietyfoundations.org/openaccess/read. 2002; Bethesda Statement on Open Access Publishing, www.earlham.edu/~peters/fos/bethesda.htm.; Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities, http://oa.mpg.de/files/2010/04/berlin_declaration.pdf.; OECD Declaration Principles and Guidelines for Access to Research Data from Public Funding <http://www.oecd.org/sti/sci-tech/38500813.pdf>. (2006).

⁴⁶² See, Rita Matulionyte, 'Copyright on the Internet: Does a User Still Have any Rights at All?., (2005) 1 *Hanse Law Review*, (HanseLR) 177. "Internet services, together with other digital technologies enabled very easy reproduction and world-wide dissemination of copyright protected works in high speed quantities with almost no expenses and loss of quality"

See also, Lawrence Lessig, *REMIX: Making Art and Commerce Thrive in the Hybrid Economy* (Bloomsbury, 2008) 38. Where in his conversation with Gillis the activities of ten year old kids on the internet was noted.

⁴⁶³ Michael Strangelove, 'The internet as catalyst for a paradigm shift', (1994) 1 *Computer-Mediated Communication Magazine*.

structure or operations.”⁴⁶⁴ The internet is somewhat structured as an inconceivable vast and rapidly evolving series of interconnected technology platforms serving billions of people on earth and navigating through machines, computers and networks which are alterable in real time.⁴⁶⁵

The ubiquitous nature of the Internet with capabilities for instantaneous information distribution all around the world makes it a veritable platform for information flow and has become the hub for knowledge and information dissemination.⁴⁶⁶ The open access movement in recognition of the abilities and capabilities of the Internet embraces and uses it as one of its core pillars for the implementation of the vision of the movement.⁴⁶⁷ The movement is mindful of the need to deploy the quickest, fastest, most efficient and effective way of getting information to would be users and the platform of the internet apparently serves that purpose.⁴⁶⁸ Although Africa started slowly with regards to internet usage, the International Telecommunication Union’s data published by Google’s public data explorer⁴⁶⁹ on the growth of Internet Usage in Nigeria compared to Ghana, Kenya and South Africa is evidence of the heightened internet usage all over Africa but particularly in Nigeria.⁴⁷⁰

4.2.2 Before the Internet

Prior to the era of the Internet there were several dispensations. There was the Palaeolithic age, a prehistoric age characterised by the development of the most primitive stone tools and dating back to about 2.6 million years ago during which period, humans grouped together in small societies and thrived on farming, hunting and scavenging of wild animals; to the stone age, copper age, bronze age, iron age, right through the middle ages, the dark age and into the early modern age, the age of discovery and exploration. The age of discovery also known as the age of

⁴⁶⁴ Brian Fitzgerald et al, *Internet and E-Commerce Law, Business and Policy: Technology, Law and Policy* (Thomson Reuters, 2011) 2. See also, Jeremy Malcolm, ‘The Space Law Analogy to Internet Governance’ (2007) 18 (3) *Journal of Law, Information and Science* 2.1

⁴⁶⁵ Internet Industry Association (IIA), *Principles for a Digital Economy: A manifesto on internet policy and regulation with principles and recommendations to guide decision making*, (2010) 1.

⁴⁶⁶ See e.g Bollier, above n 177, 3. where it was noted that People started to discover their own voices...and their own capabilities...and one another

⁴⁶⁷ Budapest Open Access Initiative, above n 18. Where it was noted that "an old tradition and a new technology have converged to make possible an unprecedented public good" and went further to state that "the new technology is the internet"

⁴⁶⁸ See generally, Lawrence Lessig, *REMIK: Making Art and Commerce Thrive in the Hybrid Economy* (Bloomsbury, 2008) 69. Where it was noted that the Internet didn't make these other forms of writing significant rather it opened these media to the masses.

⁴⁶⁹ Google, *Public Data: Percentage of people using the Internet*, http://www.google.com/publicdata/explore?ds=emi9ik86jcuic_&ctype=l&strail=false&bcs=d&nselm=h&met_y=i99H&scale_y=lin&ind_y=false&rdim=country&idim=country:NG:ZA:GH:KE&ifdim=country&tstart=65078280000&tend=1313470800000&hl=en_US&dl=en_US&ind=false&icfg.

⁴⁷⁰ Goke Pelemo, *Growth of Internet Usage in Nigeria compared to Ghana, Kenya and South Africa* (2012) <http://www.nigeria360.com/growth-of-internet-usage-in-nigeria-compared-to-ghana-kenya-and-south-africa/>.

exploration was the period during which Europe explored Africa, the Americas, Asia and Oceania. It was within this period that the European nation states began their evolution.⁴⁷¹

4.2.3 Gutenberg's Printing Press

On the technological side, the printing press invented by Johannes Gutenberg, (a German) around 1440 began the technological advancement for the world's information system by introducing the era of mass communication which permanently altered the structure of society. Prior to the printing press the opportunity to access information was limited and hence knowledge was the preserve of a privileged few.⁴⁷² This invention brought about a new means for increased production and circulation of information and “(revolutionary) ideas transcended borders, captured the masses in the reformation and threatened the power of political and religious authorities; the sharp increase in literacy broke the monopoly of the literate elite on education and learning...”⁴⁷³ ushering in an entirely new era.

The printing press has been regarded as one of the most influential inventions of all time,⁴⁷⁴ revolutionizing the way people conceive and describe the world, the mode of reproduction of written materials as well as laying the foundation of modern mass communication. This technology made possible the production of about 3,600 pages per workday in comparison to about 40 by the earlier typographic hand-printing and hand-copying. The invention of the printing press by Gutenberg's opened the door to speedy reproduction and by 1500, printing presses had spread across Europe producing more than 20 million volumes.⁴⁷⁵ The estimated quantity of production by the 16th century had risen astronomically to between, 150 to 200 million copies.⁴⁷⁶

4.2.4 Statute of Anne

This invention regarded as one of the cornerstones towards the democratization of knowledge and which within 50 to 60 years of its existence had reprinted the entire classical canon, provided

⁴⁷¹ See Toth, Nicholas; Schick, Kathy '21 Overview of Paleolithic Archaeology' in Henke, H.C. Winfried; Hardt, Thorold; Tattersall, Ian. Handbook of Palaeoanthropology. (Volume 3. Berlin; Heidelberg; New York: Springer-Vorlage, 2007). p. 1944, See also, <http://en.wikipedia.org/wiki/Paleolithic>

⁴⁷² See Chris Butler, above n 317.

⁴⁷³ See Printing Press, http://en.wikipedia.org/wiki/Printing_press

⁴⁷⁴ See 1000+ People of the Millennium and Beyond, <http://rhsweb.org/library/1000PeopleMillennium.htm> where in 1999 Gutenberg Johannes (1394-1468) was ranked as number one.

See also Time –Life magazine, <http://www.mainz.de/gutenberg/g2000.htm> where in 1997 Gutenberg's invention was noted as “the most important discovery of the last millennium”

⁴⁷⁵ Febvre, Lucien; Martin, Henri-Jean, *The Coming of the Book: The Impact of Printing 1450-1800*, (London: New Left Books 1976), quoted in: Anderson, Benedict: 'Comunidades Imaginadas. Reflexiones sobre el origen y la difusión del nacionalismo, Fondo de cultura económica, (Mexico 1993) 58f

⁴⁷⁶ Ibid

unprecedented access to information and growth of knowledge.⁴⁷⁷ This growth also brought with it the challenges of printing and distributing defamatory, untrue and many a times seditious information.⁴⁷⁸ This led to censorship of printed materials in England by the granting of a near monopoly to the stationers' company through the enactment of a Licensing Act.⁴⁷⁹ This Act established a register of licensed books and empowered the stationers' company, a group of printers with the authority to administer that register and in some way, censor publication.⁴⁸⁰ The Act enacted in 1662 lapsed in 1695 and thus the censorship on printed materials by the government no more existed.⁴⁸¹ Agitations by booksellers and printers led to the enactment of the first copyright Act in 1710, the Statute of Anne. The Act for the first time established the principles of the authors' ownership of copyright and provided protection of these rights for a fixed term; twenty-one years in respect of published books and fourteen years for those books composed but not yet printed or published.⁴⁸²

This Act granted exclusive rights to authors to control the exploitation of their creative works by restricting all others from exploiting such works. The implication of the right bestowed on authors was that exploitation of creative works required the permission of authors now called copyright owners. It is important to note that prior to this Act, exploitation of publications did not require permission. In essence, the introduction of the Statute of Anne introduced a permission regime and guaranteed that permission must continually be sort until the expiration of copyright on such publications. The field of influence of copyright to other categories of work has since spread and so has the term of protection.⁴⁸³ The implication of this spread was that the world that existed prior to the statute of Anne and the reign of copyright, to wit a world in which information could be freely accessed used and reused (open by default) had become a world where access and reuse of information was now subject to permission (closed by default). The combination of this new permission regime and a publishing industry which was already

⁴⁷⁷ See Howard Rheingold, *Mobologs Seen as a Crystal Ball for a New Era in Online Journalism* 9 July 2009, Online Journalism Review, <http://www.ojr.org/ojr/technology/1057780670.php>

⁴⁷⁸ See Julia C. Crick; Alexandra Walsham, *The uses of script and print, 1300–1700* (Cambridge University Press, 2004) 20. See also, Nick Bilton, *I Live in the Future & Here's How It Works: Why Your World, Work, and Brain Are Being Creatively Disrupted* (Crown Publishing Group, 2010) 53.

⁴⁷⁹ The Licensing Act 1662

⁴⁸⁰ See Copyright Timeline: *A History of Copyright in the United States* <http://www.arl.org/pp/ppcopyright/copyresources/copytimeline.shtml>

⁴⁸¹ Ibid

⁴⁸² 8 Anne c. 19 (1710).

⁴⁸³ Association of Research Libraries, *Copyright Timeline: A History of Copyright in the United States* <http://www.arl.org/focus-areas/copyright-ip/2486-copyright-timeline#.VW-DxM-qqko>. 'Since the Statute of Anne almost three hundred years ago, U.S. law has been revised to broaden the scope of copyright, to change the term of copyright protection, and to address new technologies.'

producing literary and scientific journals⁴⁸⁴ was that access to use and reuse of information, except covered by some form of limitations and exceptions, became subject to permission.

4.2.5 Permission Plus Price

When Journal publishers began a system of subscription payment for access to journal articles and literature, the requirements for access to journal literature became permission plus price, that is, an additional layer (price) was placed upon the earlier one (permission). At the time, this was the known and most feasible model; hence the rationale for the subscription fees levied by publishers to the user publics was understandable seeing that publishers were responsible for financing production, marketing and distribution of the works and the said cost had to be covered. This model ruled the academic journal article distribution system for upward of 300 years, then came digital technology and the internet.

The advent of digital technology and the internet has been an enabler affecting virtually every aspect of human life. Prior to the internet era, publishers were the major source for production, marketing and distribution of published materials. The internet has however changed this, enabling everyone with a personal computer (PC) and the internet with the power to publish, market and distribute content such as literary works⁴⁸⁵. The same goes for music which in the past was produced by major studios and distributed under their platform. Today the internet has enabled everyone with an internet platform to upload music and it will be available to the entire world instantaneously. Taking cognisance of the enabling abilities of the internet and the need to address the restrictions of *permission* and *price* which had dominated the information system for upward of three hundred years, questions arose as to how this new technology could be deployed to positively impact the daily lives of the ordinary people against the background of the increase in access closure exemplified by the introduction of digital rights management (DRM), the added years to copyright expiration and the extension of intellectual property protection to issues such as software and database?

⁴⁸⁴ Editor Assumption University Journal of Technology, 'The History of Journal Publication' (2008) January Edition *Assumption University Journal of Thailand* http://www.journal.au.edu/au techno/2008/jan08/journal113_editorial.pdf. Where it was noted that "the first literary and scientific journal, Le Journal des Sqavans (later renamed Journal des savants), was founded in France 343 years ago... and that the first number was published on Monday, 5 January 1665 by Jean Cusson, rue S. Jacques" It also reports of the first scientific journal printed in the English language and edited by Henry Oldenburg titled "Philosophical Transactions of the Royal Society of London" which had its first volume published on Monday, 6 March 1665.

⁴⁸⁵ Bollier, above n 177, 3. "It started with that great leap forward in human history, the Internet... and then the World Wide Web... The shockingly open internet fortified by these tools, began empowering a brash new culture of rank amateurs, you and me."

4.2.6 14th of February 2002

In an attempt amongst other things to address this question, a meeting was held on the 14th of February 2002, where fourteen individuals agreed that the removal of access barriers to peer-reviewed literature will “accelerate research, enrich education, share the learning of the rich with the poor and the poor with the rich, make this literature as useful as it can be, and lay the foundation for uniting humanity in a common intellectual conversation and quest for knowledge”⁴⁸⁶.

The above referred meeting appreciated the fact that the advent of digital technology and the internet altered the information sharing system and provided the platform to facilitate access to knowledge in an unprecedented manner.⁴⁸⁷ Agitations concerning the inability of many researchers to access requisite information due to the rising cost of journal subscriptions was on the rise.⁴⁸⁸ The combined effect of these agitations and a new technology no doubt influenced the open access movement.⁴⁸⁹ These agitations had existed prior to the advent of digital technology and the internet but not in an organised form⁴⁹⁰. The major point of reference for this movement can be traced to the meeting referred to previously which was held in Budapest where leading proponents on the subject gathered together under the sponsorship of the Open Society Foundation and came up with the Budapest Open Access Initiative⁴⁹¹.

It is not clear if any of the leading proponents had at the back of their minds the prophecy foretold around the period of the 7th BC by Habakkuk⁴⁹² of the spread of knowledge and how he compared the coming spread of knowledge to water’s coverage of the sea⁴⁹³. At the time Habakkuk foretold of the massive spread of knowledge, the feasibility of its fulfilment was very bleak as knowledge was the exclusive preserve of a privileged few.⁴⁹⁴ Today, this is not the case. With the mere click of a mouse, information in today’s world can be accessed and disseminated around the different continents simultaneously, thanks to digital technology and the internet.⁴⁹⁵

4.2.7 The Knowledge Based Economy

⁴⁸⁶ See Budapest Open Access Initiative, above n 18.

⁴⁸⁷ Bollier, above n 177. 2008.

⁴⁸⁸ Norrie, above n 57.

⁴⁸⁹ Fitzgerald, et al., above n 14.

⁴⁹⁰ Peter Suber, *Timeline of the Open Access Movement*, <http://www.earlham.edu/~peters/fos/timeline.htm>.

⁴⁹¹ Budapest Open Access Initiative, above n 18.

⁴⁹² See Book of Habakkuk, http://en.wikipedia.org/wiki/Book_of_Habakkuk

⁴⁹³ See The Holy Bible, Habakkuk 2:14, King James Version (Cambridge Edition) 1930 “For the earth shall be filled with the knowledge of the glory of the lord as the waters cover the sea”

⁴⁹⁴ See Piero Scaruffi, *A Brief History of Knowledge* <http://www.scaruffi.com/know/history.html>

⁴⁹⁵ Brian Fitzgerald et al, above n 14, 1 and 79.

The economies of the world have made a significant shift towards reliance on knowledge⁴⁹⁶ and knowledge has been recognized as the key driver for productivity and economic growth, and has ushered in a “knowledge based economy” run on the shoulders of information and technology⁴⁹⁷. The provision of legal protection to products of knowledge has changed the paradigm of property. The concept of property prior to the shift to a knowledge based economy was mostly associated with tangibility but with this shift, this concept has assumed a new dimension and now includes intangibles such as songs, software, colour, scent, marks etc.⁴⁹⁸ The continuous growth in knowledge brings with it a continuous growth in intellectual property right protections.⁴⁹⁹ The knowledge which now stands upon legally protected frameworks serves as an incentive for developments⁵⁰⁰ but at the same time constitutes barriers to accessing knowledge that has either been invented or creatively expressed and designed. These barriers are often economically motivated but the curious combination of more IPR’s on more knowledge products has steadily locked up global knowledge.⁵⁰¹

Considering the fact that knowledge enables new possibilities and provides the requisite know-how as to how things may be done, where and how they may be found and the terms and conditions under which they may be used;⁵⁰² it has become imperative to find a middle line between protection of knowledge based products under the current IPR’s regime and availability of such knowledge products for global development and for the general good.⁵⁰³

⁴⁹⁶ L.M Whicker & K.M Andrews, ‘Human Resource Management in the Knowledge Economy: Realising the Potential’ (2004) 42 *Aisa Pacific Journals of Human Resources* 156, 157. It was noted that "Globally, Knowledge has become the most important factor in economic development and knowledge assets are considered essential for economic growth, competitive advantage, human development and quality of human life"

⁴⁹⁷ OECD, *The Knowledge-Based Economy*, a report by the Organisation of Economic Co-operation and Development (1996) OCDE/GD(96)102.

⁴⁹⁸ See generally, Stephan Kinsella, ‘Against Intellectual Property’ (2001) 15 *Journal of Libertarian Studies* 2-3.

⁴⁹⁹ Gaëlle & Amy, Access to Knowledge In The Age of Intellectual Property, above n 151, 24. where it was noted that IP law regulates strategies of information production... and has become a central battleground... of the contemporary economy

⁵⁰⁰ Peter K Yu, ‘The International Enclosure Movement’, (2007) 82 *Indiana Law Journal* 827, 836.

See also Peter K Yu, ‘Intellectual Property Rulemaking in the Global Capitalist Economy’, *adapted from* (2013) 82 *Ind. L.J.* 827.

⁵⁰¹ See e.g Daniel Cahoy, *Property Right V Public Access*, <http://research.smeal.psu.edu/news/smeal-professor-awarded-fulbright-research-chair>. Where it was noted that it's important to protect public access because a lot of the intellectual property rights relate to important technology and are tying up important information

⁵⁰² OLA, n.54, 24. Where it was noted that "what, why, when and how" of a subject matter refers to the framework.

⁵⁰³ See WIPO, *The 45 Adopted Recommendations under the WIPO Development Agenda*, <http://www.wipo.int/ip-development/en/agenda/recommendations.html>. See Recommendation 10 on the need to promote fair balance between intellectual property protection and the public interest; as well as cluster c which provides generally for access to knowledge

The Universal Declaration of Human Rights⁵⁰⁴ provides for the right to education⁵⁰⁵ and notes that education shall be free at the elementary and fundamental stages and compulsory at fundamental stages.⁵⁰⁶ It further sees education as a tool for ensuring world peace in the sense that it expects that all form of furtherance of knowledge/education should promote understanding, tolerance and friendship amongst nations, racial or religious groups.⁵⁰⁷ In the UNESCO 2012 Education for all Global Monitoring Report, it was noted that whilst there has been undeniable progress towards the six education for all goals, meeting the 2015 deadline was impracticable as the world is still not on track. It noted that the number of children out of school has stagnated since 2000 and that adult literacy and quality of education requires more attention.⁵⁰⁸

The systemic lock up of knowledge products have not helped in the achievement of the goal of education for all⁵⁰⁹ and the report notes that the “recent developments ascribe even greater urgency to ensuring equitable access to appropriate skills development programme. As urban populations grow rapidly, especially in low income countries, young people need skills to work their way out of poverty... and that around 200 million young people need a second chance to acquire basic literacy and numeracy skills”.⁵¹⁰ Surmounting the challenges of gaining access to knowledge will provide a second chance to acquiring basic literacy and numeracy skills and would be important as a strategy towards achieving education for all. The open access movement seeks to play a leading role in ensuring that knowledge is accessible, usable and reusable by those who need it, when they need it and wherever they need it.⁵¹¹

Access to knowledge is important and critical to the development of all societies. It is not only a cost effective tool for improving the quality of education but is also key to addressing societal development problems such as poor healthcare, agriculture, environment, climate change, eradication of poverty and the administration of good governance. Ten years ago, its importance

⁵⁰⁴ UN General Assembly, Universal Declaration of Human Rights, 10 December 1948, 217 A (III), <http://www.unhcr.org/refworld/docid/3ae6b3712c.html>. See also <http://www.un.org/en/documents/udhr/index.shtml>. (Full Text)

⁵⁰⁵ Ibid. at. Article 26

⁵⁰⁶ Ibid. at. Article 26(1)

⁵⁰⁷ Ibid. at. Article 26(2)

⁵⁰⁸ UNESCO, Education For All Global Monitoring Report 2012: *Youth and Skills Putting Education to Work: An Independent Publication Commissioned* (2012) UNESCO. The Six goals are listed on page 5 of the report.

⁵⁰⁹ Raymond Shih Ray Ku, et al., *Does Copyright Law Promote Creativity? An Empirical Analysis of Copyright's Bounty*, (2009) 62 *Vanderbilt Law Review* 1669, 1670.

⁵¹⁰ UNESCO, above n 506, 3.

⁵¹¹ Swan, above n 458, 27. Where she noted that Open access is an important early step in a move to creating a knowledge commons and building a true knowledge societies... where knowledge can be freely used, reused and redistributed

may not have been central, but today access to knowledge is critical to national and international development.⁵¹²

Nelson Mandela addressing the importance of access to knowledge noted that “Education is the great engine of personal development”⁵¹³ and that it “is the most powerful weapon which you can use to change the world”⁵¹⁴. In validation of these words, a 16 year old boy, Jack Andraka was named the 2012 Intel, International Science and Engineering Fair winner for discovering a cancer diagnosis.⁵¹⁵ In an interview with Francis Collins, Director at National Institutes of Health (NIH), Jack acknowledged that access to free online peer-reviewed literature and in particular information accessed from the NIH Pub Med repository played a major role in the success of his research. He also noted that several other materials that may have been useful were not accessible as they were technologically locked up and protected behind pay walls.⁵¹⁶ Imagine what this young boy and many other adventurous youths can do if only access to needed information and knowledge is available?

The challenges to accessing knowledge is multi-faceted, it is not a problem of lack of knowledge but rather one of accessing available knowledge. The challenges associated with accessing knowledge can be understood from a trio perspective namely financial, technical and legal.⁵¹⁷

⁵¹² Jeremy Malcolm and Danny O’Brien, *Human Rights Are Not Negotiable: Looking Back at Brazil’s NETMundial*, (25 April 2014) Electronic Frontier Foundation <https://www.eff.org/deeplinks/2014/04/netmundial>. See where he noted that “...when it comes to fundamental human rights and the battle for a trustworthy, open, and secure Internet, there can be no compromise.”

⁵¹³ Nelson Mandela, *The Autobiography of Nelson Mandela* (BackBay Books. 1995) 99.

⁵¹⁴ Strauss, The Washington Post above n 373.

⁵¹⁵ Right to Research Coalition, *Open Access Empowers 16-year-old Jack Andraka to Create Breakthrough Cancer Diagnostic* (11 June 2013) SPARC <http://www.righttoresearch.org/blog/open-access-empowers-16-year-old-to-create-breakth.shtml>.

⁵¹⁶ *How Open Access Empowered a 16 Year Old Boy to make Canver Breakthrough* <http://www.youtube.com/watch?v=G55hlnSD1Ys>.

⁵¹⁷ Budapest Open Access Initiative, above n 18.

“There are many degrees and kinds of wider and easier access to [research] literature. By “open access” to this literature, we mean its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without *financial, legal, or technical barriers* other than those inseparable from gaining access to the internet itself. [Emphasis mine].

See also, Suber, n 12, 4,5,7.

“A price tag is a significant access barrier. Most works with price tags are individually affordable. But when a scholar needs to read or consult hundreds of works for one research project, or when a library must provide access for thousands of faculty and students working on tens of thousands of topics, and when the volume of new work grows explosively every year, price barriers become insurmountable.”

“Copyright can also be a significant access barrier. If you have access to a work for reading but want to translate it into another language, distribute copies to colleagues, copy the text for mining with sophisticated software, or reformat it for reading with new technology, then you generally need the permission of the copyright holder. That makes sense when the author wants to sell the work and when the use you have in mind could undermine sales. But for research articles we’re generally talking about authors from the special tribe who want to share their work as widely as possible. Even these authors, however, tend to transfer their copyrights to intermediaries—publishers—who want to sell their work. As a result, users may be hampered in their research by barriers erected to serve intermediaries rather than

Financial challenges refer to the inability of most people to afford the cost of knowledge products and this goes back to the social inequality in the society. The technical challenge refers to technological restrictions placed on knowledge products to control and manage their use. These restrictions are placed on the products by deploying technological protection measures (TPM) and digital rights management information (DRMI) systems. These are devices, systems and platforms with usernames, passwords and access codes. They are able to regulate and monitor access, identity, time and whatever other information is required. The legal challenge refers to complying with the legal requirements laid down by the rules of intellectual property, particularly Copyright for using and reusing knowledge products. Considering the changes that have come with the digital technology and the internet, compliance with these legal rules have become difficult and sometimes offensive to users and even copyright owners.⁵¹⁸

Knowledge products are diverse and they include educational textbook, entertainment books, journal articles, newspaper, reports, music, video, comics, legislation, judicial decisions, government held information and such other related products. The rules relating to each of these knowledge products are similar but different and the three barriers referred to above apply to these products. Accessing these knowledge products requires overcoming the barriers and this in part entails understanding the information management policy of each country as well as their copyright laws.⁵¹⁹ The next section will therefore discuss the adoption of open access policies by national, international and funding agencies. It will also explore the role of publishers,

authors. In addition, replacing user freedom with permission-seeking harms research authors by limiting the usefulness of their work, harms research readers by limiting the uses they may make of works even when they have access, and thereby harms research from both directions. OA removes these permission barriers.”

⁵¹⁸ Lessig, above n 466, 293. 2008. Where he noted that

“It’s been a decade since I got myself into the fight against copyright extremism. Throughout this book, I have argued that this decade’s work has convinced me that this war is causing great harm to our society. Not only from losses in innovation. Not only from the stifling of certain kinds of creativity. Not only because it unjustifiably limits constitutionally guaranteed freedoms. But also, and most importantly, because it is corrupting a whole generation of our kids. We wage war against our children, and our children will become the enemy. They will become the criminals we name them to be. And because there is no good evidence to suggest that we will win this war, that’s all the reason in the world to stop these hostilities—especially when there are alternatives that advance the purported governmental interest without rendering a generation criminal.

⁵¹⁹ Office of the Australian Information Commission Australian Government, *Information Policy Report*, <http://www.oaic.gov.au/information-policy/information-policy-resources/information-policy-reports/>.

See also, New Zealand Government NZ, *New Zealand Data and Information Management Principles* (2011) <http://ict.govt.nz/guidance-and-resources/open-government/new-zealand-data-and-information-management-princi/>.

See also, Treasury Board of Canada Secretariat Canada, *Information Management Policy*, <http://www.tbs-sct.gc.ca/im-gi/imp-pgi/imp-pgi-eng.asp>.

See also, The National Archives, *UK Government Licensing Framework for Public Sector Information* (2013), <http://www.nationalarchives.gov.uk/documents/information-management/uk-government-licensing-framework.pdf>.

universities, libraries and their interface with publishing agreements in the open access movement.

4.3 ADOPTION OF OPEN ACCESS POLICIES: NATIONAL, INTERNATIONAL & FUNDING ORGANISATIONS

4.3.1 United States

The United States was one of the early adopters of open access. The National Institutes of Health is the world's largest research institute with 27 institutes and centres. The volume of research data and publication it generates annually is staggering.⁵²⁰ On the 26th of February, 2003, the NIH Statement on Sharing Research Data was issued. It noted that data sharing is essential for expedited translation of research results into knowledge, products and procedures to improve human health. It became effective on the 1st of October 2003.⁵²¹ Although this document encourages sharing of information, it was not focused on peer-reviewed documents.

In 2008, the NIH Public Access Policy was issued pursuant to the Consolidated Appropriations Act, 2008, making the United States the first national government to adopt a national open access mandate. Brazil was the first country however to put forward a bill in this regard but the bill is yet to be passed. The NIH Public Access Policy states that the "Director of the National Institutes of Health shall require that all investigators funded by the NIH submit or have submitted for them to the National Library of Medicine's PubMed Central an electronic version of their final peer-reviewed manuscripts upon acceptance for publication, to be made publicly available no later than 12 months after the official date of publication: Provided, That the NIH shall implement the public access policy in a manner consistent with copyright law."

NIH archives her papers in PubMed Central, an archive of full text biomedical journal papers freely available online.⁵²² The archive is linked to other databases such as GenBank⁵²³ and PubChem.⁵²⁴ The materials in this archive help millions of people. The words of a 16-year-old inventor Jack Andraka is testimony to this.⁵²⁵

A bill is currently before the US congress which seeks to further provide access to the output of research to the general public. The Fair Access to Science and Technology

⁵²⁰ NIH, About NIH above n 141.

⁵²¹ NIH, *NIH Data Sharing Policy* (2003) http://grants.nih.gov/grants/policy/data_sharing/.

⁵²² PubMed, *PubMed*, National Institutes of Health (NIH), <http://www.ncbi.nlm.nih.gov/pubmed/>.

⁵²³ GenBank, *GenBank Overview*, <http://www.ncbi.nlm.nih.gov/genbank/>.

⁵²⁴ PubChem, *PubChem*, <http://pubchem.ncbi.nlm.nih.gov/>.

⁵²⁵ NIH, *How Open Access Empowered a 16-Year-Old to Make Cancer Breakthrough* <http://www.nih.gov/about/director/videogallery/06112013-cancer-breakthrough.htm>.

Research Act (FASTR) was introduced on March 18, 2015 and if passed, will require all federal agencies with extramural research expenditures of 100 million or more to make peer-reviewed final manuscripts publicly available six months following publication.⁵²⁶ In addition, the FASTR bill calls for the long-term preservation of and access to these manuscripts. The legislation seeks to accelerate scientific discovery and fuel innovation by making articles reporting on publicly funded scientific research freely accessible online.⁵²⁷ This bill is the same bill that was introduced in 2013 before the previous congress and if passed would codify the provisions that enhance public access to federally funded journal literature that were included in the February 2013 Office of Science and Technology Policy (OSTP) memorandum on public access to research.⁵²⁸

4.3.2 United Kingdom

The United Kingdom has been very strategic in the development of open access. UK has empanelled a number of national inquiry on Open access and has taken active steps to enable access to the output of scientific publications in the United Kingdom.

In 2004, the House of Commons published a report titled “Scientific Publications: Free for all? The report was a reaction to the high pricing policies by publishers and the dwindling funds available to libraries. The report recommended that the UK government should take steps that would enable access to scientific publications and that Higher Education Institutions (HEIs) develop institutional repositories and that the government should develop a network that links these institutional repositories.⁵²⁹ In response to the report, the Research Council United Kingdom in 2005 noted that “e-print repositories and open access journals can help improve access to the results of publicly funded research”.⁵³⁰ In 2006, (AHRC, BBSRC, MRC, ESRC, NERC, and STFC) six of the UK Research Councils issued open access mandates for the first time requiring peer-reviewed publications to be deposited in open access repositories.⁵³¹

⁵²⁶ S.779 - *Fair Access to Science and Technology Research Act of 2015* [https://www.congress.gov/bill/114th-congress/senate-bill/779?q={%22search%22%3A\[%22Fair+Access+to+Science+and+Technology+Research+Act%22\]}](https://www.congress.gov/bill/114th-congress/senate-bill/779?q={%22search%22%3A[%22Fair+Access+to+Science+and+Technology+Research+Act%22]}).

⁵²⁷ ARL, *FASTR Bill to Enhance Public Access to Research Introduced in US Congress*, <http://www.arl.org/news/community-updates/3554-fastr-bill-to-enhance-public-access-to-research-introduced-in-us-congress#.VXocOM-qgkp>.

⁵²⁸ OSTP & Micheal Stebbins, *Expanding Public Access to the Results of Federally Funded Research*(2013), <https://www.whitehouse.gov/blog/2013/02/22/expanding-public-access-results-federally-funded-research>.

⁵²⁹ *Scientific Publications: Free for all? Tenth Report of Session 2003-04 (2004)* <http://www.publications.parliament.uk/pa/cm200304/cmselect/cmsctech/399/399.pdf>.

⁵³⁰ RCUK, *RCUK Position Statement on Access to Research Outputs* (2005), <http://www.rcuk.ac.uk/RCUK-prod/assets/documents/documents/2005statement.pdf>.

⁵³¹ P Suber, *AHRC announces its OA policy* (2007), <http://legacy.earlham.edu/~peters/fos/2007/09/ahrc-announces-its-oa-policy.html>.

In 2011, a working group led by Dame Janet Finch was set as a result of a roundtable discussion on transparency organised by the Department for Business, innovation and Skills with representatives of the scholarly publishing industry.⁵³² In 2012 the working group submitted and published a report titled ‘Accessibility, Sustainability, Excellence: How to Expand Access to Research Publication’.⁵³³ The report favoured the Gold route to open access and recommended that ‘a clear policy direction be set towards support for publication in open access or hybrid journals funded by APCs as the main vehicle for the publication of research, especially when it is publicly funded.’ In July of 2012, the UK government formally accepted and supported the recommendations in the Finch report.⁵³⁴ This prompted RCUK to announce a new open access policy to the effect that research funded by RCUK must be published in open access or hybrid journals.⁵³⁵

In 2013, Science and Technology Select Committee of the House of Lords published a report titled ‘Implementation of Open Access’.⁵³⁶ The report was in response to the Finch report and RCUK open access policy. The report recommended that RCUK should provide clarification on certain areas of the policy namely, incremental approach to compliance, embargo periods and also recommended that international best practices be observed to ascertain the preferred policy routes.⁵³⁶ RCUK revised her open access policy in March of 2013 to clarify the issues raised by the House of Lords on the incremental approach to compliance during the five-year transition plan and on embargo periods.⁵³⁷

In September of 2013, the House of Commons published an Open Access report criticising the Finch report and the RCUK open access policy. The report criticised the newly adopted open access policies, the choice of Gold over Green, the embargo periods, the CC-BY Licensing, APC costs and the capacity for UK educational institutions to remain globally competitive under the new publishing model. It recommended that since most HEIs already had Green open access in place and government had invested extensively in this area to develop repositories, authors

⁵³² Research Information Network & Stephane Goldstein, *Expanding access to published research findings* (2011) <http://www.rin.ac.uk/news/press/expanding-access-published-research-findings>.

⁵³³ Finch Report, Report of the Working Group on Expanding Access to Published Research Findings. (2012).

⁵³⁴ BIS & David Willetts, *Letter to Dame Janet Finch on the Government Response to the Finch Group Report: “Accessibility, sustainability, excellence: how to expand access to research publications”* (2012) https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32493/12-975-letter-government-response-to-finch-report-research-publications.pdf.

⁵³⁵ RCUK, *RCUK Policy on Open Access and Supporting Guidance* (2013) <http://webcache.googleusercontent.com/search?q=cache:9mcesRxxWHgJ:www.rcuk.ac.uk/RCUK-prod/assets/documents/documents/RCUKOpenAccessPolicy.pdf+&cd=1&hl=en&ct=clnk&gl=uk>.

⁵³⁶ House of Lords, *The Implementation of Open Access* (2013) <http://www.publications.parliament.uk/pa/ld201213/ldselect/ldscitech/122/122.pdf>.

⁵³⁷ Times Higher Education, *RCUK Open-Access Guidance Revised* (2013) <http://www.timeshighereducation.co.uk/news/rcuk-open-access-guidance-revised/2002396.article>.

should be allowed the freedom to choose between Green and Gold open access. It further recommended that HEFCE develop a policy mandating immediate deposit and that this be made a requirement for eligibility.⁵³⁸ Government responded to these issues noting that market forces will play a major role in deciding the prime route. However government noted her preference for the Gold route.⁵³⁹

In November 2013, the Review of Progress in Recommendations of the Finch Report was published. The report noted that most HEIs favoured Green above Gold. The choice of Green above Gold appears obvious when thought is given to the cost associated with APC. It has been noted that not all Gold requires APC but if Green can be made available immediately without the issues of cost and open access is about removal of barriers, it only makes sense to pursue the route that achieves the goal easily and fastest. The report also emphasized the need to improve interoperability and recommended support for a mixed economy where both Gold and Green co-exist but with preference given to Gold open access.⁵⁴⁰ This preference appears to be the position of the UK government as evidence by the statement of Minister David Willetts who noted that the preference is for Gold but Green is also accepted.⁵⁴¹

4.3.3 Brazil

The Scientific Electronic Library Online (SciELO) is a Brazilian open access initiative. It is one of the open initiatives providing visibility and accessibility to the output of research conducted in and by members of developing countries. It is an integral part of a project being developed by PAPESP-Fundacao de Amparo a Pesquisa do Estado de Sao Paulo, in partnership with BIREME. The Latin American and Caribbean Centre on Health Sciences Information. SciELO is both an electronic publisher and a repository. South Africa is currently the only African member country. It holds over 400,000 articles in 1,057 journals.⁵⁴² Brazil introduced a bill (PL 1120/2007) with a view to requiring all public institutions of higher education and research units to establish institutional repositories. The bill has not been passed but it is a right step in the right direction. Brazil has been highly rated on the open access tipping point.⁵⁴³ The positive

⁵³⁸ Innovation and Skills Committee House of Commons Business, *Open Access* (2013) <http://www.publications.parliament.uk/pa/cm201314/cmselect/cmbis/99/9902.htm>.

⁵³⁹ BIS, *Open Access: Responses to the Committee's Fifth Report of Session 2013–14*, (2013).

⁵⁴⁰ Accessibility, Sustainability, Excellence: How to Expand Access to Research Publications: A Review of Progress in Implementing the Recommendations of the Finch Report. (2013).

⁵⁴¹ BIS, *Progress Review: Implementing Finch Report Recommendations*, London: BIS, (2014).

⁵⁴² SciELO, *Scientific Electronic Library Online*, <http://www.scielo.br/>.

⁵⁴³ Open Access Strategies in the European Research Area: RTD-B6-PP-2011-2: Study to develop a set of indicators to measure open access. (2013). Outside the ERA, the US has passed the tipping point, and Canada is approaching. Brazil's proportion of OA articles is even more notable at 63%. See also Global Open Access Portal, *Brazil*. <http://www.unesco.org/new/en/communication-and-information/portals-and-platforms/goap/access-by-region/latin-america-and-the-caribbean/brazil/>. "Brazil is the most active country of the region in open access

disposition of Brazil to open access and the impact SciELO has made on Latin American and Caribbean countries can be useful in guiding Nigeria's development of a framework for open access to knowledge.⁵⁴⁴

4.3.4 Canada

In 2008, the National Research Council Canada under its NRC Publication Archive Statement of Responsibility has made it mandatory starting January 2009, for all NRC institutes to deposit copies of all peer-reviewed publications in the NRC Publication Archive. The "NRC publication archive is a web-based repository that improves accessibility to, and increases the citation impact of, NRC publications, as well as facilitates multidisciplinary and horizontal collaboration amongst NRC researchers,"⁵⁴⁵

In February, 2015, CIHR, NSERC and SSHRC in what has been described as a Tri-Agency Open Access Policy unveiled a harmonized open access policy⁵⁴⁶. This policy requires researchers who have been awarded funding from January 1, 2008 and onward to:

- ensure that all research papers generated from CIHR funded projects are freely accessible through the Publisher's website or an online repository within 12 months of publication;
- deposit bioinformatics, atomic, and molecular coordinate data into the appropriate public database (e.g. gene sequences deposited in GenBank) immediately upon publication of research results;
- retain original data sets for a minimum of five years (or longer if other policies apply);

implementations. And the first country to have a bill presented in 2007 to parliament proposing a national mandatory policy for open access, which is not yet approved."

⁵⁴⁴ Caralee Adams, *Open Access in Latin America: Embraced as key to visibility of research*, SPARC <http://www.sparc.arl.org/news/open-access-latin-america-embraced-key-visibility-research-outputs>.

"SciELO proved to be a powerful tool in addressing the problem of locally-generated research being noticed and recognized by the international research community. "Open Access soon showed it was the best way to raise the profile of Latin American-published journals," says Packer.

Now, most all nationally published journals in Latin America are Open Access. "Today, if it's not on the web, it doesn't exist," says Packer. In 2010, around 85% of academic publications in Latin America were publicly available through the Internet, however, about 35% satisfied Open Access journal standards of the Budapest Declaration. Currently, Scopus Journal catalogue points to the statistic that 72% of Latin American indexed journals are Open Access compared to about 13% of all journals.

The SciELO model for supporting Open Access publishing is a decentralized system, where each country uses common standards and technology developed by SciELO – yet, each funds and manages its own infrastructure and operations. "SciELO was a new avenue to give visibility to the intellectual output of the region and have it openly available to the users without any financial or technological barriers," says Nicholas Cop, a consultant on the SciELO program based in the U.S."

⁵⁴⁵ NRC-CISTI, *NRC Publications Archive Statement of Responsibilities*, http://cisti-icist.nrc-cnrc.gc.ca/obj/cisti-icist/doc/nparc/NPARC-Statement-of-Responsibilities_e.pdf.

⁵⁴⁶ Government of Canada, *Minister Holder Announces New Open Access Policy for Research* (2015) <http://www.science.gc.ca/default.asp?lang=En&n=415B5097-1>.

- and acknowledge CIHR support by quoting the funding reference number in journal publications.⁵⁴⁷

The policy provides two routes for complying with the policy. Researchers may either submit their manuscripts to a journal that offers immediate open access or offers open to the paper on its website within 12 months of publication; or may submit their manuscript to a journal that does not offer open access but will permit the archival of the peer-reviewed manuscript in a central or institutional repository within 12 months of publication.

4.3.5 European Union

The EU is actively involved in advocating, encouraging and implementing open access. It notes that “open access provides researchers, businesses and citizens with improved and free of charge online access to EU-funded research results, including scientific publications and research data.”⁵⁴⁸ The EU implements its open access objectives through FP7⁵⁴⁹ and Horizon 2020⁵⁵⁰ and at the member state levels. The EU adopts both Green open access and Gold open access. It encourages member states to develop national initiatives and contributes to strategic co-ordination where the need arises.

In July of 2012, the EU adopted a scientific information communication package through which it seeks to move “towards better access to scientific information: Boosting the benefits of public investments in research.”⁵⁵¹ The Commission’s position on open access was made explicit in the recommendation on access to and preservation of scientific information. The recommendation (*Brussels, 17.7.2012 C (2012) 4890 final*) on access to and preservation of scientific information noted that

“publicly funded research should be widely disseminated through open access publication of scientific data and papers. The ‘Innovation Union’ initiative calls for a European Research Area (ERA) framework to be set up to help remove obstacles to mobility and cross-border cooperation. It states that open access to publications and data

⁵⁴⁷ Canadian Institutes of Health Research, *Tri-Agency Open Access Policy on Publications* (2015) <http://www.cihr-irsc.gc.ca/e/32005.html>.

⁵⁴⁸ EU, *Open Access to scientific information*, <http://ec.europa.eu/digital-agenda/en/open-access-scientific-information>.

⁵⁴⁹ EU, *FP7: Research and Innovation Funding 2014-2020*, http://ec.europa.eu/research/fp7/index_en.cfm.

⁵⁵⁰ EU, *The EU Framework Programme for Research and Innovation: Horizon 2020: Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020* (2012) http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf.

⁵⁵¹ EU, *Communication From The Commission To The European Parliament, The Council, The European Economic And Social Committee And The Committee Of The Regions: Towards better access to scientific information: Boosting the benefits of public investments in research* (2012), http://ec.europa.eu/research/science-society/document_library/pdf_06/era-communication-towards-better-access-to-scientific-information_en.pdf.

from publicly funded research should be promoted and access to publications made the general principle for projects funded by the EU research Framework Programmes.”

4.3.6 United Nations

The UN through several of her agencies have demonstrated commitment to open access. UNESCO and the World Bank have been at the vanguard and have developed initiatives that maximizes the utility of the output of funded research. UNESCO for example developed the Global Open Access Portal which provides information about the state of open access globally. “The Global Open Access Portal is designed to provide the necessary information for policy-makers to learn about the global open access environment and to view their countries status and understand where and why Open Access has been most successful.”⁵⁵²

The World Bank in support of the Open Access movement has licenced most of her knowledge products under a CC-BY licence thereby permitting use and reuse of such works.⁵⁵³ In the same vein the Bank now hosts the World Bank Knowledge Repository which provides access to most of the research outputs of the World Bank.⁵⁵⁴

4.3.7 Organisation for Economic Cooperation and Development (OECD)

In 2004, the Minister for Science and Technology cognisant of the fact that access to research data increases the returns on public investment, reinforces open scientific inquiry, encourages diversity of studies and opinion, promotes new areas of work and enables the exploration of topics not envisioned by the initial investigators called on the Organisation for Economic Cooperation Development to develop a set of guidelines based on commonly agreed principles to facilitate cost-effective access to digital research data from public funding.⁵⁵⁵ In 2007, the Principles and Guidelines for Access to Research Data from Public Funding was published to assist in the sharing of, and access to research data.⁵⁵⁶

⁵⁵² UNESCO, *Global Open Access Portal* <http://www.unesco.org/new/en/communication-and-information/portals-and-platforms/goap/>.

⁵⁵³ World Bank, above n 374

⁵⁵⁴ World Bank, above n 147.

⁵⁵⁵ OECD, *Declaration on Access to Research Data from Public Funding: [C(2004)31/REV1]*; (30 March 2004) <http://acts.oecd.org/Instruments/ShowInstrumentView.aspx?InstrumentID=157>.

The Ministers laid the following objectives and principles namely: Openness, Transparency, Legal Conformity, Formal responsibility, Professionalism, Protection of intellectual property, Interoperability, Quality and security, Efficiency and Accountability. The member states are **THE GOVERNMENTS** of Australia, Austria, Belgium, Canada, China, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Russian Federation, the Slovak Republic, the Republic of South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

⁵⁵⁶ OECD, *OECD Principles and Guidelines on Access to Research Data from Public Funding* (2007) <http://www.oecd.org/science/sci-tech/38500813.pdf>.

Although Brazil is not a developed country. The culture of sharing academic publications is one they had developed prior to the open access movement. Due to this culture, they have been able to strengthen visibility of their journals. The analyses of open access in the four countries mentioned above shows that open access enables accessibility, visibility, impact and maximizes the utility of peer reviewed scholarly literatures. The role of policies and initiatives in the open access movement has been important. The choice of whether Gold, Green or a fine blend of both has raised arguments but the growth in the adoption and acceptance of open access globally is an indication that open access is the new model for publishing.

4.3.8 Funding Organizations-Governmental and Non-governmental

Outside International and national governments, some of the most impacting stakeholders in the open access movement have been funding agencies. They include governmental and non-governmental funding agencies. The governmental funding agencies include NIH, ERC, ARC, RCUK and NRC; while the non-governmental funding agencies include Wellcome Trust, Ford Foundation, Bill and Melinda Gates Foundation and William and Flora Hewlett Foundation. One important role these funding agencies have played outside that of mandating or requiring self-archiving or depositing in a repository is that of standing beside authors in the newly evolving publication mechanism. Most authors do not have the equivalent ability to compete with publishers when it comes to negotiation but the involvement of funding agencies that are now either mandating or requiring archival deposits have made it imperative for publishers to come to the negotiating table and review not just the terms but the entire publication circle and mechanism. In simple terms publishers have met their match and have had to bend their knees. This section will discuss the role of funding agencies in the open access movement.

4.3.8.1 National Institutes of Health (NIH)

The Institute was set up in 1887 as a one room laboratory within the Marine Hospital Service (MHS) which was established in 1798. In 1880, due to fear of an epidemic MHS was charged by congress to examine passengers arriving by ship for the dreaded cholera and yellow fever diseases.⁵⁵⁷ Today NIH is still researching the causes of and cures to many diseases and is the largest source of funding for medical research in the world. Due to these works the life expectancy of the average American has increased from 47 years in 1900 to 78 in 2009. “In recent years, nationwide rates of new diagnoses and deaths from all cancers have fallen significantly”⁵⁵⁸

⁵⁵⁷ NIH, *NIH History*, <http://www.nih.gov/about/history.htm>.

⁵⁵⁸ NIH, About NIH above n 141.

NIH funds more than 300,000 research personnel who all generate data and are mandated to publish the output of their research with PubMed Central. PubMed Central is a free full-text archive of biomedical and life sciences journal literatures at the NIH. It currently holds over 3.5 million articles.⁵⁵⁹ The goal of the institute is to strengthen the nation's research capacity, broaden the research base and inspire a passion for science in current and future generations of researchers. NIH seeks to expand the knowledge base in medical and associated sciences in order to enhance the Nation's economic well-being and ensure a continued return on the public investment in research. In realising these goals, NIH embraces the open access movement by collating and sharing information and by supporting the development of medical libraries.⁵⁶⁰ It is in response to the open access movement and in furtherance of the goal to collate and share information for the development of research that the NIH Public Access Policy has been issued.

The NIH 2008 Public Access Policy provides a strong policy framework by going further than requiring deposits to mandating deposit. However, the policy imposes two new compliance mandates. The first is related to the submission of manuscripts "final, peer-reviewed manuscript upon acceptance" and the second refers to copyright compliance. The policy "Provided, that the NIH shall implement the public access policy in a manner consistent with copyright law." Complying with copyright law requires that the author still holds the requisite rights when depositing the final manuscript with PMC. Six different compliance options have been suggested for grantees and principal investigators who are working in collaboration with authors. They are:

- Option 1. Rely on individual authors to satisfy grantee's obligation under the award.
- Option 2. Assist Authors with Copyright Management
- Option 3. The Grantee License.
- Option 4. The Grantee License - Plus
- Option 5. Negotiate Directly with Publishers
- Option 6. Pre-clear Journals⁵⁶¹

4.3.8.2 European Research Council (ERC)

The central focus of the European Research Council (ERC) is to encourage high quality research in Europe through competitive funding. The ERC which was established in 2007 under the EU's Seventh Framework Programme for Research (FP7) seeks to promote bottom-up curiosity

⁵⁵⁹ PubMed, above n 519.

⁵⁶⁰ NIH, *NIH Mission*, <http://www.nih.gov/about/mission.htm>.

⁵⁶¹ Michael Carrol, *Complying with the NIH Public Access Policy - Copyright Considerations and Options*, (2008) SPARC Open Access Newsletter.

driven frontier research and boosting the careers of excellent researchers from anywhere in the world. The ERC supports open access as a fundamental part of its mission. It considers that open access provides the most effective way of ensuring that the output of ERC funded research can be accessed, read and used as the basis for further research.⁵⁶²

The idea for establishing the Council arose from widespread discussions between European scientists, scholars and research umbrella organisations at a time when there was no clear roadmap and central platform to support research around the European region.⁵⁶³

ERC provides funding for research. In 2014 it had a total annual budget of 1.7 billion Euros. Since 2007 when it was established, some 4, 500 projects have been selected for funding from more than 43,000 applications. Over 20,000 articles have acknowledge ERC funding in their peer-reviewed high impact journals between 2008-2013. Under the new funding program Horizon 2020, it is estimated that around 7,000 grantees will be funded and 42,000 team members supported.⁵⁶⁴

4.3.8.3 Research Council United Kingdom (RCUK)

Research Councils UK are saddled with the responsibility of funding research in the UK for purposes of advancing knowledge and generating new ideas. The seven UK research Councils are funded from government's Science budget under the department for Business, Innovation and Skills.⁵⁶⁵ RCUK's seeks to enhance the performance and impact of UK research, training and knowledge transfer. The RCUK's overall aim is "for the Research Councils to be recognised as the benchmark around the world in terms of the impact they have and the ways they work"⁵⁶⁶

RCUK recognises that there are many benefits associated with publicly funded research and in line with the government's commitment to transparency and open data, RCUK is fully committed to ensuring that the output of public funded research is made freely available "not

⁵⁶² ERC, *About ERC*, <http://erc.europa.eu/about-erc>.

See also, ERC, *ERC Work Programme 2015 (European Commission C(2014)5008 of 22 July 2014)*, (2015). Where it was noted at page 9 that, "Principal Investigators from anywhere in the world can apply for an ERC grant. ERC grants are open to researchers of any nationality who may reside in any country in the world at the time of the application. The ERC is particularly keen to encourage excellent proposals from Principal Investigators based outside Europe that wish to carry out a project with a host institution in the EU or in one of the Associated Countries.

⁵⁶³ ERC, *History*, <http://erc.europa.eu/about-erc/history>.

⁵⁶⁴ ERC, *Facts and Figures*, <http://erc.europa.eu/about-erc/facts-and-figures>.

⁵⁶⁵ The seven Research Councils in UK are: Arts and Humanities Research Council (AHRC), Biotechnology and Biological Sciences Research Council (BBSRC), Engineering and Physical Sciences Research Council (EPSRC), Economic and Social Research Council (ESRC), Medical Research Council (MRC), Natural Environment Research Council (NERC), Science and Technology Facilities Council (STFC)

⁵⁶⁶ RCUK, *RCUK Aims & Objectives*, <http://www.rcuk.ac.uk/about/aboutrcuk/aims/>.

just to other researchers, but also to potential users in business, charitable and public sectors and to the general public”⁵⁶⁷

RCUK’s commitment to open access is supported by the RCUK Policy on Open Access and the 2014 Independent review of the implementation of the RCUK Policy on Open Access. Both documents provide the policy framework for RCUK’s commitment to open access.⁵⁶⁸ Open access under the RCUK policy framework applies only to peer-reviewed research articles but this includes review articles not commissioned by publishers and conference proceedings that acknowledge RCUK’s funding but does not include books, monographs, critical editions, volumes and catalogues, or forms of non-peer reviewed material. The Council however encourages that authors of such works may wish to consider making these works open access (freely available).

RCUK supports both Gold and Green open access but prefers the Gold route to open access. A five-year transition period was provided to allow for the growth of open access. Researchers are deemed to have complied with RCUK’s open access policy if the final published version of the output of their research is published with a journal that provides the output via its own website, immediately and access is unrestricted. It is expected that a CC-BY licence be affixed to the work and that the final published version can be deposited in a repository without any restrictions on reuse rights. The policy allows for payment of article processing charge to publishers. On the other hand, the journal may grant consent to deposit the final accepted manuscript in any repository without restrictions on non-commercial reuse and within a defined period. The maximum embargo period as contemplated by the documents will be 6 months for STEM disciplines and 12 months for arts, humanities and social sciences. Authors’ copyright traditional and historical ownership of Copyright is recognised and maintained under the policy.⁵⁶⁹

4.3.8.4 Australian Research Council (ARC)

The Australian Research Council was established in 2001 and seeks to advance Australian research and innovation globally and benefit the community. It provides funding for research through her National Competitive Grants Program and her Excellence in Research for Australia (ERA) and is the primary source of advice to the Government on research investment issues.⁵⁷⁰ ARC recognises that the outcome of ARC-funded research delivers cultural, economic, social and environmental benefits to all Australians and “is committed to ensuring the widest possible

⁵⁶⁷ RCUK, *Open Access*, <http://www.rcuk.ac.uk/research/openaccess/>.

⁵⁶⁸ RCUK, RCUK Policy on Open Access above n 144. See also, RCUK, *2014 Independent Review of Implementation*, <http://www.rcuk.ac.uk/research/openaccess/2014review/>.

⁵⁶⁹ RCUK, RCUK Policy on Open Access and Supporting Guidance above n 532

⁵⁷⁰ ARC, *About ARC*, http://www.arc.gov.au/about_arc/default.htm.

dissemination of the research supported by ARC funding, in the most effective manner and at the earliest opportunity, taking into account any restrictions relation to intellectual property or culturally sensitive data”.⁵⁷¹ In furtherance of this recognition and commitment, ARC has issued the ARC Open Access Policy which took effect from 1 January 2013 and is to the effect that “Any publications arising from an ARC supported research Project must be deposited into an open access institutional repository within a twelve (12) month period from the date of publication.”⁵⁷²

The issuance of this policy provides an institutional platform for strengthening open access. The policy is not optional but mandatory therefore the output of any research (full-text copy of the publication) funded by ARC will enjoy the advantage of global accessibility and visibility and also the opportunity for maximal impact as such works must be deposited in an institutional repository.

4.3.8.5 Wellcome Trust

The Wellcome Trust is the brain child of Sir Henry Wellcome. It is a non-governmental charitable organisation independent of both political and commercial interests and that champions science, funds research and influences health policies globally.⁵⁷³ The Trust aims at improving health by supporting bright minds in learning, discovery, creativity and innovation through science, the humanities, social sciences and public engagement and provides more than £700 million annually to support the organisations vision.⁵⁷⁴ It supports this vision through the instrumentality of a 10 year strategic plan (2010-2010) which is reviewed bi-annually⁵⁷⁵.

A fundamental part of the Trust’s mission is to ensure that the output of funded research is given the opportunity of maximal availability, accessibility, utility and impact. The Trust supports this mission by an open access policy which extends to all research articles, scholarly monographs and book chapters.⁵⁷⁶ The Wellcome Trust’s open access policy is predicated on the believe that “maximising the distribution of these publications by providing free, online access- is the most effective way of ensuring that the research we fund can be accessed, read and built

⁵⁷¹ ARC, ARC Open Access Policy above n 118

⁵⁷² Ibid

⁵⁷³ Wellcome Trust, *History*, <http://www.wellcome.ac.uk/About-us/History/index.htm>.

⁵⁷⁴ Wellcome Trust, *Our vision*, <http://www.wellcome.ac.uk/Our-vision/index.htm>. See also, *Wellcome Trust, Funding*, <http://www.wellcome.ac.uk/Funding/index.htm>.

⁵⁷⁵ Wellcome Trust Strategic Plan 2010-2020 (2010) http://www.wellcome.ac.uk/stellent/groups/corporatesite/@policy_communications/documents/web_document/WTDV027438.pdf.

⁵⁷⁶ Wellcome Trust, *Open access at the Wellcome Trust*, <http://www.wellcome.ac.uk/about-us/policy/spotlight-issues/Open-access/index.htm>. "to ensure that the work we fund can be read and utilised by the widest possible audience. We therefore support unrestricted access to the published outputs of research through our open access policy"

upon. In turn, this will foster a richer research culture.”⁵⁷⁷ The policy specifically requires that electronic copies of any research papers accepted for publication in a peer-reviewed journal and are supported in whole or in part by trust funds to be made available through Pub Med Central or through Europe PMC as soon as possible but within 6 months of the journal publisher’s official date of final publication. The policy expects funded recipients to choose publishing options that provide immediate availability on publications. The policy encourages the use of the Creative Commons Attribution licence (CC-BY) and where it pays for open access fee, it is a requirement on authors and publisher. This will enable the work to be freely copied and re-used.

4.3.8.6 Gates Foundation

Bill and Melinda Gates Foundation is a philanthropic organisation set up to support education, world health and population. It is dedicated amongst other things to bridging the digital divide by providing ICT access to less advantaged communities. The works of the Foundation were initially focused on the United States and Canada but has now become global and are executed through the global development, global health, United States and the global policy & advocacy divisions.⁵⁷⁸ The Foundation is of the view that progress can be accelerated and big impacts made around the world through research, creativity and innovation in technology. The foundation is optimistic that through global research endeavours, child deaths will go down and more diseases will be wiped out, African will be able to feed itself, mobile banking will help the poor transform their lives and better software will revolutionize learning.⁵⁷⁹

The Bill & Melinda Gates Foundation is committed to open access and supports immediate unrestricted online access to the output of research funded by their organisation. However, a transition period of up to two years has been provided expiring on the 1st of January 2017. During the transitory period, publications in journals that provide up to a 12-month embargo period will be allowed. After this transition period however, all publications shall be available immediately without any embargo period. Publications are expected to be deposited in a specified repository with proper metadata tagging. All publications must be licensed under the

⁵⁷⁷ Wellcome Trust, *Open Access Policy: Position statement in support of open and unrestricted access to published research* <http://www.wellcome.ac.uk/About-us/Policy/Policy-and-position-statements/WTD002766.htm>.

⁵⁷⁸ 1998 Annual Reports: Bill & Melinda Gates Foundation. (1998). See page 2 of the report. See also, Bill and Melinda Gate, *What We Do*, <http://www.gatesfoundation.org/what-we-do>. Where it was noted that “We work with partner organizations worldwide to tackle critical problems in four program areas. Our Global Development Division works to help the world’s poorest people lift themselves out of hunger and poverty. Our Global Health Division aims to harness advances in science and technology to save lives in developing countries. Our United States Division works to improve U.S. high school and postsecondary education and support vulnerable children and families in Washington State. And our Global Policy & Advocacy Division seeks to build strategic relationships and promote policies that will help advance our work. Our approach to grant making in all four areas emphasizes collaboration, innovation, risk-taking, and, most importantly, results.”

⁵⁷⁹ Gate, 2015 Gates Annual Letter above n 393

Creative Commons Attribution 4.0 Generic License (CC BY 4.0) or an equivalent licence. The open access policy adopted by the organisation “enables the unrestricted access and reuse of all peer-reviewed published research funded, in whole or in part, by the foundation, including any underlying data sets.”⁵⁸⁰

4.3.8.7 Ford Foundation

The Ford Foundation is a globally oriented independent, private not-for-profit organisation that was founded by Edsel and Henry Ford in 1936 with the mission of advancing human welfare, strengthening democratic values, reducing poverty and injustice, promoting international cooperation and advancing human achievement. The foundation supports visionary leaders and organizations on the frontlines of social change worldwide. This is done mainly by “making grants or loans that build knowledge and strengthen organizations and networks. Since our financial resources are modest compared with societal needs, we focus on key problem areas and program strategies”⁵⁸¹ These areas include democratic and accountable government, economic fairness, educational opportunity and scholarship, human rights, freedom of expression, sustainable development, gender, sexuality and reproductive justice and metropolitan opportunity.⁵⁸²

The Foundation has always been committed to transparency and supports the dissemination of the output of research funded in whole or in part by the foundation. In line with the foundations policy on policy and openness, it has adopted an open licensing policy which requires all grant-funded projects and research to be made available subject to a Creative Commons licence which allowing others immediate online access and the requisite use and reuse rights provided the appropriate credit is given to the original author. The President of the Foundation, Darren Walker noted recently that “Our organisation is committed to being as transparent and open as possible, and this philosophy extends to the work we fund and the valuable materials we and our grantees produce... This policy change will help grantees and the public more easily connect with us and build upon our work, ensure our grant dollars go further and are more impactful, and-most importantly-increase our ability to advance social justice worldwide.”⁵⁸³

⁵⁸⁰ Bill and Melinda Gate, *Bill & Melinda Gates Foundation Open Access Policy* <http://www.gatesfoundation.org/How-We-Work/General-Information/Open-Access-Policy>. See where it was noted that “As of January 1, 2015 our Open Access policy will be effective for all new agreements. During a two-year transition period, publishers will be permitted to apply up to a 12 month embargo period on the accessibility of the publication and its underlying data sets. This embargo period will no longer be allowed after January 1, 2017.”

⁵⁸¹ Ford Foundation, *Mission* <http://www.fordfoundation.org/about-us/mission>.

⁵⁸² Ford Foundation, *Issues* <http://www.fordfoundation.org/issues>.

⁵⁸³ Ford Foundation, *Ford Foundation Expand Creative Commons Licensing for All Grant-Funded Projects* (2015) <http://www.fordfoundation.org/newsroom/news-from-ford/934>. See where it was noted that

4.3.8.8 William & Flora Hewlett Foundation

The William & Flora Hewlett Foundation is popularly known for its support of the open movement, in particular, open educational resources. Since 2001, the foundation has been at the forefront of providing funding for open educational resources.⁵⁸⁴ The foundation helps people build measurably better lives through their Education, Environmental, Global Development and Population, Performing Arts Programs and the Effective Philanthropy Group. The foundation provides grants in line with the above programs but also reserves funding to support special projects which may not align directly with the above mentioned strategic areas.⁵⁸⁵

The Foundation is committed to openness and transparency and supports open licensing which provides a platform for unrestricted dissemination of information thereby providing opportunities for good ideas to be read, used, reused and further developed thereby providing the opportunity for greatest impact. The Foundations policy requires grant recipients to openly license the final materials created under the most recent Creative Commons Attribution license. Grantees are expected to post such materials on their websites. The choice of the CC-BY license is meant to provide the widest opportunity for use and reuse of such materials. The Foundation has however noted that “we will not enforce this new requirement thoughtlessly. If our default open license does not make sense for particular project—such as if the work contains sensitive information or if revenue generated by its sale is critical to an organization’s financial well-being—we will work with the grantee to determine the most appropriate license. Our commitment to open licensing is meant to help, not harm, grantees, and we will administer it accordingly.”⁵⁸⁶

All the governmental and non-governmental agencies discussed above have all issued open access policies. Whereas some of the policies are mandatory others merely encourage deposits in

“Beginning February 1, project grants from the foundation will include a requirement that the grantee widely disseminate all copyrightable products funded by the grant—including white papers, research reports, and websites—and license them under the CC BY 4.0 license. In certain situations, such as when the expected product contains sensitive or confidential material, the Creative Commons license will not be a requirement. Additionally, the change will apply to all materials not subject to third-party ownership on the Ford Foundation’s website.”

⁵⁸⁴ The William and Flora Hewlett Foundation, *Open Educational Resources Initiative* (2005) http://www.hewlett.org/uploads/files/OER_overview.pdf. It was noted that “Since 2001, the Hewlett Foundation has made grants in excess of \$40 million to support institutions and organizations that develop and provide online access to open educational content. For example, the Foundation is funding: • MIT OpenCourseWare – to publish course materials from virtually all MIT courses • Carnegie Mellon University’s Open Learning Initiative – a portfolio of highly interactive multi-media courses • African Virtual University – to provide free digital and printable materials to train teachers in Sub-Saharan Africa • Creative Commons – to offer innovative copyright solutions that allow for more “open access” of creative work and scholarly materials online • Widernet eGranary – to improve digital access in developing countries”

See also, UNESCO, *Open Educational Resources* <http://www.unesco.org/new/en/communication-and-information/access-to-knowledge/open-educational-resources/>.

⁵⁸⁵ The William and Flora Hewlett Foundation, *Programs*, <http://www.hewlett.org/programs>.

⁵⁸⁶ William & Flora Hewlett Foundation, *Commitment to Open Licensing*, <http://www.hewlett.org/about-us/values-policies/commitment-open-licensing>.

some form of repositories be it in PubMed Central, Europe PMC, a personal, departmental or institutional repository. The focus is to enable immediate, unrestricted online access for use and reuse. Not all agencies are able to offer immediate access due to embargo periods which range between 6 months to 2 years but the willingness of these agencies to address the access problem and set timelines for unrestricted immediate online access is in the right direction. The policies by the non-governmental organisations is a testimony of the impact the private sector can make on national and international policies and should serve as an impetus to the private sector in Nigeria. If the public sector in Nigeria is bedevilled with corruption and unable to operate due to bureaucratic bottlenecks, the examples demonstrated by the non-governmental organisations above can serve as important indicators for Nigeria and possibly other developing countries.

4.3.9 Universities, Publishers and Libraries

Universities, Publishers and Libraries are three other important stakeholders in the open access movement.

Universities are institutions of learning, centres of research, the rallying point for the incubation, birth, development and production of knowledge. They nurture authors, provide experts for peer-review, encourage and fund research and train the next generation.⁵⁸⁷ They play a major role in the open access movement as they serve as the nerve point that generates and ensures the integrity and quality of published materials. This is achieved through active participation in the peer-review process of journal articles.⁵⁸⁸

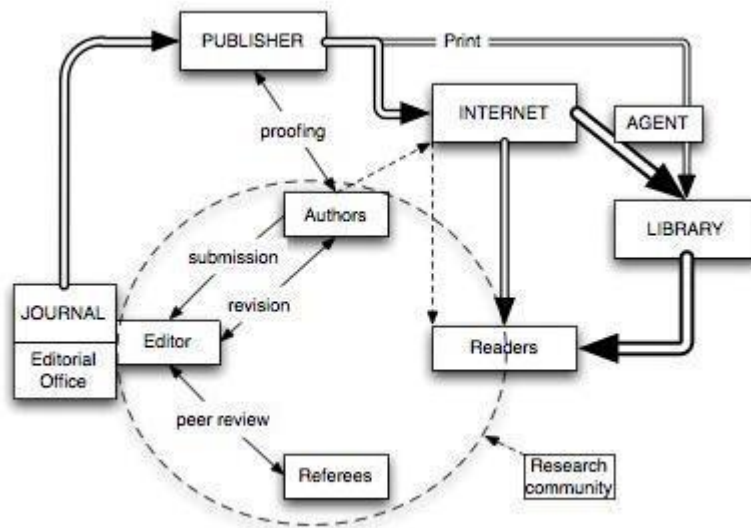
Publishers are the major commercial entity involved in the publication cycle. They are responsible for receiving manuscripts from authors, vetting and sending them for peer-review, notifying authors of acceptance or rejection, preparing manuscripts for final prints, financing

⁵⁸⁷ Qs Top Universities, *Top Universities in the World 2014/15* (2014) <http://www.topuniversities.com/university-rankings-articles/world-university-rankings/top-universities-world-201415>. It was noted that “The rankings also suggest a wider-reaching pattern of success for STEM specialists. ETH Zurich and EPFL Lausanne both fall into this category, meaning that STEM-focused universities account for a quarter of the top 20 places. Other science and technology-oriented institutions which have gained ground in this year’s ranking”.

⁵⁸⁸ Budapest Open Access Initiative, above n 18.

“scientists and scholars...publish the fruits of their research in scholarly journals without payment” and “without expectation of payment.” In addition, scholars typically participate in peer review as referees and editors without expectation of payment. Yet more often than not, access barriers to peer-reviewed research literature remain firmly in place, for the benefit of intermediaries rather than authors, referees, or editors, and at the expense of research, researchers, and research institutions.

publication and marketing the published work as hard and soft copies.⁵⁸⁹ Some publishers now publish solely online versions.⁵⁹⁰ See the publishing cycle diagram below.



Publishing Cycle Diagram. Source: The STM Report.⁵⁹¹

Libraries serve as the warehouse and middleman between publishers (the commercial entity) and users. These users include the university and research communities, other higher educational institutions and the general public. Libraries provide a platform for access to knowledge, archival of important and rare materials, preservation of documents in both hard and digital copies but now mostly as digital copies and they provide guidance to authors and users in multiple ways.⁵⁹² Libraries play a major role in the open access movement. The International Federation of Library Associations (IFLA) one of the major open access advocacy organisations continues to

⁵⁸⁹ Mark Ware & Mabe, *The STM Report, An overview of scientific and scholarly publishing*, 2012. See page 14 where it notes that "The movement of information between the different participants in the journal publishing process is usually called "the publishing cycle""

⁵⁹⁰ First Monday, *Peer-reviewed Journal on the Internet*, <http://firstmonday.org/index>. "First Monday is one of the first openly accessible, peer-reviewed journals on the Internet, solely devoted to the Internet. Since its start in May 1996, First Monday has published 1,467 papers in 229 issues, written by 2,027 different authors. First Monday is indexed in Communication Abstracts, Computer & Communications Security Abstracts, DoIS, eGranary Digital Library, INSPEC, Information Science & Technology Abstracts, LISA, PAIS, Scopus, and other services." See also, JOAL, *Journal of Open Access to Law*, <https://ojs.law.cornell.edu/index.php/joal>.

⁵⁹¹ Mark Ware & Mabe, *The STM Report, An overview of scientific and scholarly publishing* 2012.

⁵⁹² Gordon McIntyre, et al., *Library as Scholarly Publishing Partner: Keys to Success*, (2013) 2 *Journal of Librarianship and Scholarly Communication*.

"Many academic libraries are looking at new ways to add value when they deliver services to faculty, and one potential area where the library can provide new services is in partnering with academic staff to support the dissemination of faculty research. Librarians have traditionally helped faculty researchers at the beginning of the research cycle, with the discovery and delivery of information sources. However, they are now playing a role at the end of the research cycle, providing services that support scholarly publishing."

work in collaboration with other open access advocates for the progress and expansion of access to knowledge.⁵⁹³

The interesting link between universities and libraries is that most libraries are associated with and funded by universities due to the institutional framework of university systems. Universities and publishers also have an interesting link in that a large number of authors, particularly those concerned with academic publishing are from the university community and even more interesting is that those responsible for the peer-review process are also majorly from the university community. The publishing industry's continual increase in subscription costs coupled with declining or stagnated funds for libraries and universities brought about the "serials crisis" which led many libraries and universities back to the drawing board. The aim was to find a more realistic way to achieve access to knowledge in an affordable way and at an affordable price. The publishing industry came up with a new product known as "big deal or bundling" a strategy which give libraries access to a vast amount of published materials mostly in electronic format at discounted amounts for a period of three to five years. These deals are secured by way of contract through publishing agreements entered into between publishers and libraries. These agreements are often negotiated by a consortium of libraries to secure lower prices. The problem is that quite an amount of the published materials may be irrelevant to some of the libraries. The deal however is that access to a vast number of published materials is granted at a highly discounted price.⁵⁹⁴

4.4 PUBLISHING AGREEMENT

Agreements play a critical role in information management. They determine the semantics of interacting with information including ownership, price, duration and what rights are available

⁵⁹³ IFLA, *IFLA/Brill Open Access Award 2015 goes to DOAB* <http://www.ifla.org/node/9630>.

"The International Federation of Library Associations and Institutions (IFLA) is the leading international body representing the interests of library and information services and their users. IFLA is an independent, non-governmental, not-for-profit organization with over 1400 members in 150 countries. Guided by our Strategic Plan 2010-2015 and Key Initiatives, we work to improve access to information and cultural heritage resources for the global community in this rapidly changing digital and print environment"

⁵⁹⁴ Julie Caruso, et al., *Open Access Strategies in the European Research Area: RTD-B6-PP-2011-2: Study to develop a set of indicators to measure open access*. 2013. See page 25 of the report where it was noted that "In response to the changing landscape of scholarly communication, publishers developed new products known as 'big deals', or journal bundles. Big deals refer to contracts between libraries and publishers whereby libraries secure access to a large set of journals distributed by the publisher, mostly in electronic format, for all faculty and students at the subscribing university, for a set price for a period of three to five years. These deals are often negotiated by a consortium of libraries in order to secure lower prices. For example, in the UK, Jisc negotiates with the publishers at the national level for access to more than 450 journals."

for use and reuse. Publishing agreements are one of the prominent agreements in the information management scheme.⁵⁹⁵

It is therefore important for parties to understand the terms of agreement and their implications as they form important blocks in the publication process. Most publishers have standard publishing agreements which most authors do not bother to read.⁵⁹⁶ Most authors are more concerned with getting their work published than retaining their rights in the work (copyright). The implication of signing off on such documents must be understood and where necessary negotiated. Knowledge that authors can negotiate with publishers is important.⁵⁹⁷ Although the negotiation table may be tilted in favour of publishers it does not deny authors their right to negotiate. The difficulties associated with negotiating is part of what the open access movement is systemically addressing through open access policies. Funding agencies are major commercial stakeholders in the publishing industry because they fund research and in-turn the publication of such research. For this reason, publishers pay attention to their policy initiatives and will not ignore policies they make that concern publication. These policies which either mandate or require deposit of the output of published research in a repository form a strong basis for negotiating the terms of standard publishing agreements. Most of these standard agreements now contain clauses allowing for the deposit of pre-prints and post-prints.⁵⁹⁸

⁵⁹⁵ Y. Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (Yale University Press, 2006) 23-24

“Property together with contract, is the core institutional component of markets, and a core institutional element of liberal societies. It is what enables sellers to extract prices from buyers, and buyers to know that when they pay, they will be secure in their ability to use what they bought. It underlies our capacity to plan actions that require use of resources that, without exclusivity, would be unavailable for us to use. But property also constrains action. The rules of property are circumscribed and intended to elicit a particular datum—willingness and ability to pay for exclusive control over a resource. They constrain what one person or another can do with regard to a resource; that is, use it in some ways but not others, reveal or hide information with regard to it, and so forth.”

⁵⁹⁶ Reserving Rights of Use in Works Submitted for Publication: Negotiating Publishing Agreements. A Project of the IUPUI Copyright Management Center. (2004). See the comments by K.D. Crews and David Wong where they noted that “Despite efforts to encourage faculty to retain rights in their own works, creators too often forfeit rights that may be reserved for even the author’s own future scholarship and education. Many publishing agreements for journal articles and books are standard forms that ask the creator to transfer the copyright and all rights in the work to the publisher. As a result, even the author is barred from making many uses of his or her own work, including sharing with students and colleagues, without the publisher’s permission (unless the use qualifies as a fair use or is otherwise statutorily exempted)... In order to avoid these serious consequences, the creator should negotiate with the publisher for terms that allow the continued academic use of the work by the creator and their home University”

⁵⁹⁷ Anthony Austin, et al., *Academic Authorship, Publishing Agreements and Open Access: Survey Results* (Queensland University of Technology, 2008) 39. See where it was noted that “Almost one-in-two respondents (49%) have not understood that terms of a publishing agreement but signed the agreement anyway. Over half of the sample stated that it was too much trouble to negotiate agreements (53%) although 26% stated that they had thought about negotiating amendments. Importantly, almost two-thirds (62%) of respondents stated that they are unaware of the fact that amendments to a publishing agreement may be negotiated.”

⁵⁹⁸ Elsevier, *Copyright*, <http://www.elsevier.com/about/company-information/policies/copyright#openaccess>. See also, Springer, *Self-archiving policy*, <http://www.springer.com/gp/open-access/authors-rights/self-archiving-policy/2124>.

See also, Harnad, ‘Public Service Review’ (2010) *European Science & Technology*.

The dynamics of publishing agreements involves the law of contract and the principles of copyright.⁵⁹⁹ They determine rights and obligations between authors and publishers. Once an original work has been created, authors of such works are automatically conferred with copyright ownership.⁶⁰⁰ The agreements /contracts entered into between publishers and authors have the effect of either assigning or licencing author's copyright to publisher. An assignment effectively transfers, that is, moves all rights and privileges in the work from the author-assignor/transferor to the publisher-assignee/transferee. A licence is an authorization given by the licensor to the licensee to carry out certain acts. Licences may be exclusive or non-exclusive. An exclusive licence is similar to an assignment but the right in the work reverts back to the author at the expiration of the agreed term. A non-exclusive licence, allows that authorization be given to multiple parties simultaneously.⁶⁰¹

Authors are confronted with a challenge of uncertainty and confusion in the exercise of their right to grant an exclusive licence. This challenge comes to the fore when there are multiple authors and with the increased ease of creating digital content, contents by multiple authors has become common. Where a work has been authored by more than one party, any of the authors may issue an exclusive licence in respect of the work to a third party. The other parties are entitled to profit that arise from the transaction. The challenge stems from the fact that the grant of an exclusive right can only be truly effective when he who grants the right has all the right but since the right in works created by multiple parties reside in all the parties, it is illogical for one party to grant an exclusive licence without the authorisation of the other parties. This was the position of the court in **Sybersound V UAV**⁶⁰² where the Ninth Circuit Court of Appeals held that a co-owner of a copyright could never give an exclusive license. On a similar question, the

See also, Stevan Harnad & Nancy McGovern, *Institutional Repository Success Is Dependent Upon Mandates*, (2009) 36 Bulletin of the American Society for Information Science and Technology 27. Where the author noted that "97% of journals have already given their assent to some form of immediate open access self-archiving, 63% for the final refereed, accepted draft..."

⁵⁹⁹ Fitzgerald, et al., OAK Law Report above n 14, 116.

"Copyright and contract law are central to the establishment and administration of open access systems. Much academic output, irrespective of the form in which it is expressed, is protected by copyright while the relationships among the relevant parties (including their rights to use the copyright material) are largely defined by contract. In developing an open access system it is necessary to develop a sound understanding of how copyright and contract interact to determine the rights of the various parties in relation to access and use of academic materials."

⁶⁰⁰ See Article 5, Berne Convention for the Protection of Literary and Artistic Works, September 9, 1886, amended last on September 28, 1979 (September 9, 1886).

⁶⁰¹ Lawrence Liang, Guide to Open Content Licenses v 1.2 9 (Piet Zwart Institute, Institute for postgraduate studies and research, Willem de Kooning Academy Hogeschool 2004). See where it was noted that "Even in countries where copyright may, by law, be non-transferable, most publishers effectively circumvent this regulation by requiring the author to sign a contract which grants the publisher exclusive distribution rights."

⁶⁰² *Sybersound Records, Inc. v. UAV Corp.*, 517 F. 3d 1137 - Court of Appeals, 9th Circuit 2008. Before Milan D. Smith, JR., Circuit Judge: "We also consider whether the transfer of an interest in a divisible copyright interest from a copyright co-owner to Sybersound, unaccompanied by a like transfer from the other copyright co-owners, can be an assignment or exclusive license that gives the transferee a co-ownership interest in the copyright. We hold that it cannot."

district court in Wisconsin declined to follow the decision in *Brownmark Case*⁶⁰³ on the grounds that the intention of congress expressed in Section 501(b) of the Copyright Act is to the effect that “the legal or beneficial owner of an exclusive right under a copyright is entitled...to institute an action for any infringement of that particular right committed while he or she is the owner of it. The court held that the grant of interest in WWITB by Ciraldo and Swaint’s to Brownmark was a complete assignment of rights to Brownmark and therefore Brownmark has the locus standi to sue for infringement of the underlying copyright.

4.5 CREATIVE COMMONS

The controversies surrounding the right to licence go beyond just grant of exclusive or non-exclusive rights. The costs associated with drafting legal licensing agreements, the length of such legal documents, the adaptability of such document to machines (machine-readable versions) are issues surrounding the exercise of licensing rights and these issues may serve as disincentives or barriers to many. To address these issues, a non-profit organisation called ‘Creative Commons’ has developed a set of free and open licences that enables the sharing and use of creativity and knowledge through free legal tools. As noted in chapter two, open licences play a three faceted role of complementing, gap-filling and competition. (See 2.5.5 and 2.5.6). The licences developed by Creative Commons provide a simple, standardized authorization to the general public subject to stated conditions. These licences function based on copyright rules and allow copyright owners exercise their copyright from the default “all rights reserved” to “some rights reserved” and if they so wish “no rights reserved.” CC licences have been said to be the most effective of the open licenses.⁶⁰⁴ Since its introduction in 2001, usage has grown to 50 million in 2006, 400 million in 2010 and 882 million in 2014. The global impact and success of the licences is without question.⁶⁰⁵

⁶⁰³ See *Brownmark Films, LLC v. Comedy Partners*, 800 F. Supp. 2d 991 (D. Wis. 2011). Where the defendants contend that "unless all the other co-owners of the copyright joined in granting an exclusive right to" a party, all Brownmark obtained from Mr. Ciraldo and Mr. Swant was a non-exclusive license in WWITB, which is insufficient to obtain standing to sue for a copyright violation. (Def.'s' Br. at 9-10) (citing *Sybersound Records*, 517 F.3d at 1145-46). The court, however, is unpersuaded by the defendants' first argument.

⁶⁰⁴ Fitzgerald, et al., OAK Law Report above n 14, 10. 2006."The most widely used of the open content licensing systems is the suite of licences developed the Creative Commons (CC) project which was established in 2001 by Stanford University Law Professor Lawrence Lessig." See also, Lucie Guilbault & Christina Angelopoulos, *Open Content Licensing From Theory to Practice* 8 (Amsterdam University Press 2011). Where it was noted that “Among the numerous licensing models based on open content, the most successful application so far is the Creative Commons initiative (creativecommons.org), which was set up initially in the United States, but is now rapidly spreading across the globe. While the current copyright regime is serving the needs of intermediaries, the open content licensing model, especially the Creative Commons license, is directed mostly to individual authors.

⁶⁰⁵ Creative Commons, *State of the Commons*, <https://creativecommons.org/>.

4.5.1 Creative Commons Nigeria (CC Nigeria)

Nigeria has a Creative Commons presence. The Nigerian team is made up of experts in the legal profession and academia. The Nigerian Creative Commons affiliate has the vision “to encourage creativity through information and knowledge-sharing, and to encourage Creative Commons licensing in Nigeria.”⁶⁰⁶ CC Nigeria has also noted that “Creative Commons licensing model could serve as a strategic policy initiative for government to address some of the challenges to access to educational resources for both teachers and students”⁶⁰⁷ Currently, the Edo state government through her Edo State Open Data makes available through data.edostate.gov.ng a large number of dataset records under the Creative Commons Attribution 3.0 Licence⁶⁰⁸. If Creative Commons will gain grounds in Nigeria, there is the need for well-planned and sustained public enlightenment. This is due to the misapprehension in some quarters that Creative Commons is anti-copyright and supports the exploitation of right owners, thereby frustrating the traditional administration of copyright. In a recent workshop organised in Lagos, it was noted that

“adopting the Creative Commons model of copyright management at this time will only deal a big blow on Nigeria’s already threatened creative industries. I want to plead with those who want Nigeria to join the Creative Commons experiment to tarry a while. The copyright culture in our country is still being built. A sudden jump into the Creative Commons model at this point will send devastating mixed signals that would do significant harm to our creative industries. This is not the time.”⁶⁰⁹

The above view represents a misconception about open licensing particularly creative commons licences. As explained earlier at 3.9.2 open licences (inclusive of creative commons licences) are not anti-copyright but rather they fulfil a three faceted role of complementing, gap-filling and competition to the current copyright legal system. In this sense, embracing open licencing will not threaten the creative industries but will rather strengthen it. Targeted and consistent public awareness is what is required to disabuse the minds of people from the concept that creative

⁶⁰⁶ Creative Commons, Nigeria, <https://wiki.creativecommons.org/wiki/Nigeria>.

⁶⁰⁷ Ibid

⁶⁰⁸ Edo State Open Data, Terms of Use: License, <http://50.57.74.15/es/terms-of-use>. See where it was stated that “The data and information available through data.edostate.gov.ng, including any dataset records (meta-data), are licensed under the [Creative Commons By Attribution 3.0 Unported License \(CC-BY\)](https://creativecommons.org/licenses/by/3.0/legalcode). The text of this license is available at <https://creativecommons.org/licenses/by/3.0/legalcode> and is hereby incorporated by reference.... Edo State encourages others (such as civil society organizations and Development Partners) to contribute data to be available on data.edostate.gov.ng as Open Data. Data from other sources may be submitted to data.edostate.gov.ng provided that such data are licensed under CC-BY, are in the public domain, or are licensed under another license that ensures the interoperability of such data with data licensed under CC-BY.

⁶⁰⁹ Tony Okoroji, Nigeria is Not Ready For Creative Commons (June 23, 2015) Nigerian law Intellectual Property Watch <http://nlipw.com/nigeria-is-not-ready-for-creative-commons-tony-okoroji/>

commons licences are a threat to copyright administration. These licences actually strengthen copyright administration and go further to provide the much needed access to users.

4.5.2 Types of Licences

There are six licences. The choice of a licence depends on individual goals. Individuals would need to decide whether or not they intend to allow commercial use or not; allow derivative works or not and if derivatives are allowed whether they would require users to make the new works available under the same licensing terms (ShareAlike). Once you determine the scope of freedom, openness and what you seek to achieve with a work, licensing a work is as simple as selecting one of the six licences and then affixing the sign of the licence to let others know you have chosen to release your work under the terms of the specified licence. There are 4 categories of licenses with 6 combinations namely:

1. Attribution – This licence grants permission for exploitation of the work on the condition that due recognition be given the author, that is, the author be properly acknowledged as author. Under this licence a user may freely copy, distribute, re-use, adapt, sell, market, display in public, communicate to the public, and broadcast the work so long as due credit is given to the author. The licence is usually represented as “CC-BY”.⁶¹⁰ The World Bank is an example of an institution that has adopted a CC-BY licence.⁶¹¹ In the same vein, since 2011, the Australian Budget and associated documents have been released under a CC BY license.⁶¹²

2. Share Alike – This licence takes its inspiration from the “Copyleft movement”, the open source and free software movement (for example the GNU General Public Licence) which permits users free access to exploit (copy, use, re-use, mix, re-mix, adapt and even commercialize) software codes but places a condition of proper acknowledgement of the author and in addition, that derivatives of and from the work must be made available to the public on the same terms as the earlier work. The share-alike licence therefore grants permission for exploitation of a work on the conditions of proper acknowledgement and that derivatives must also be made available to the public on the same terms on which the initial work was granted.

⁶¹⁰ See Creative Commons, *About the Licenses: What our licenses do*, <http://creativecommons.org/licenses/>.

⁶¹¹ See World Bank, above n 119. See also Bank, Open Knowledge Repository. <http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:23164491~pagePK:64257043~piPK:437376~theSitePK:4607,00.html>

⁶¹² Department of Parliamentary Budget Office, *Portfolio Budget Statements 2012-13, Budget Related Paper No. 1.20d*, (2013).

This licence is usually represented as “CC-SA⁶¹³”. The popular Wikipedia is an example of an institution using the CC-BY-SA license.⁶¹⁴

3. Non Commercial – This licence permits users the right to exploit the work but restricts commercial use of the work. That is, you can copy, distribute, mix, re-mix, adapt and perform but do not commercialize the work. In essence it reserves the commercialization right of the author. It is usually represented as “CC-NC⁶¹⁵”. The Massachusetts Institute of Technology’s (MITOPEN COURSEWARE) is licensed under a non-commercial license.⁶¹⁶

4. No Derivatives- This licence grants access to the work but restricts any form of adaptation of the work. In other words, the user is allowed to copy and distribute but cannot re-use, re-mix or adapt the work. It is usually represented as “CC-ND⁶¹⁷”. The Creative Commons human readable summary of the Legal Code is an example of a document licensed under a no derivate license.⁶¹⁸ The Australian parliament uses this license.⁶¹⁹

These licences are distinct but in practice they are used and combined in the under-listed ways and have been represented in the shapes as indicated below.⁶²⁰



1. CC BY: Attribution: As noted earlier, this licence permits unrestricted use, save for acknowledging the author. It serves as the widest form of permission that can be given on a work under the CC licensing regime.



2. CC BY SA: Attribution and Share Alike: This licence grants what the attribution licence grants but adds on to it by imposing a condition that whatever is done on the work must be

⁶¹³ See Creative Commons, About the Licenses: What our licenses do. <http://creativecommons.org/licenses/>

⁶¹⁴ See Creative Commons, *Wikipedia + CC BY SA = Free Culture Win*, <http://creativecommons.org/weblog/entry/15411>. Where mike Linksvayer noted that the Wikimedia Foundation board had approved the adoption of the Creative Commons Attribution-ShareAlike license as the main content license for Wikipedia and other Wikimedia sites.

⁶¹⁵ See Creative Commons, About the Licenses. <http://creativecommons.org/licenses/>

⁶¹⁶ See MIT, *MITOPENCOURSEWARE*, <http://ocw.mit.edu/index.htm>.

See also MIT, Privacy and Terms of Use, <http://ocw.mit.edu/terms/>

⁶¹⁷ See Creative Commons, About the Licenses. <http://creativecommons.org/licenses/>

⁶¹⁸ See Creative Commons, *Attribution-NoDerivs 3.0 Unported (CC BY-ND 3.0)*, <http://creativecommons.org/licenses/by-nd/3.0/>.

⁶¹⁹ Creative Commons Australia, *The Australian Parliament goes CC – with v3.0*, <http://creativecommons.org.au/weblog/entry/301>.

⁶²⁰ See Creative Commons, *The Licenses* <http://creativecommons.org/licenses/>

licensed under similar terms thus granting the same permissions on this work, which the earlier work granted.



3. CC BY NC: Attribution but Non Commercial: This licence grants what attribution grants but restricts commercialisation of the work. That is, you are free to read, copy, distribute, mix, re-mix, adapt, do whatever but do not sell, market or make money from it.



4. CC BY ND: Attribution but No Derivatives This licence grants what attribution grants but restricts any form of adaptation of the work. That is, you are free to read, copy and even commercialise it but you may not mix, re-mix, re-use or adapt it.



5. CC BY NC SA: Attribution, Non Commercial and Share Alike: On this licence, exploitation is permitted on the grounds that attribution must be given, exploitation must be non-commercial and whatever adaptation are made must be made available to the public on the same terms as the original work. In a nutshell, copy, distribute, mix, re-mix, use, re-use, adapt etc. but do not sell, market or make money off it and make sure every new work is licensed under the same terms.



6. CC BY NC ND: Attribution Non Commercial and No Derivatives: This combination grants users permission to copy and distribute and that's about it. It prohibits commercialisation (selling, marketing and making money off the work) and adaptation (mixing and re-mixing) of the work. It is regarded as the strictest of all the licences as it doesn't grant re-use rights, thus making it Gratis but not Libre OA. The nature of this licence is not quite pro-Open Access but at least it grants access to copy and distribute for free.

SECTION II

This section of the chapter looks at the entrance of open access to the Nigerian system. It explores scholarly publishing in Nigeria and identifies several initiatives that have been introduced for purposes of granting access to developing countries. It highlights the progress made so far towards enabling open access in Nigeria and discusses the implications of open access to Nigeria and other developing countries.

4.6 OPEN ACCESS IN NIGERIA

“Nigeria does not lack literary talent, but still, books written by native authors and further still, published by Nigerian publishing houses, are incredibly rare.”⁶²¹ According to Nigerian poet and novelist Ben Okri, “The best writing is not about the writer, the best writing is absolutely not about the writer, it's about us, it's about the reader.”⁶²²

The African writer and reader is however confronted with several challenges, the writer faces the challenge of getting his work out to both a local and global audience and the reader faces the challenge of accessing works by fellow African. A lack of proper infrastructure to facility visibility and accessibility of Nigerian scholarly publication can be held accountable for the problems.

Nigeria has a large number of higher educational institutions both public and private as well as research institutions.⁶²³ Considering the high numbers, it is expected that a large amount of information and data ought to be generated and published in journal articles. Publishing the output of Nigerian based research could be achieved in two ways; the first being to publish in a local journal and the other is to publish in an international/foreign journal. The choice of where you publish often determines accessibility, visibility, impact and utility of the work. Most works published in Nigeria suffer low global and local visibility.⁶²⁴ On the other hand, works published in foreign journals are globally visible but most often inaccessible to Africans and those in developing countries due to the high costs of subscription and pay per view fees. Most people in the global north have access to most peer-reviewed journal articles through their institutions who are able to afford subscription fees but for those within the global south; the inability of virtually all universities and research institutions to keep up with the high subscription fees have

⁶²¹ Ana Zoria, *Nigeria's Publishing Industry: Telling our own stories* <http://www.pambazuka.net/en/category/books/93917>.

⁶²² Ben Okri, *F@T BEN OKRI*, 19 Jan 2015, 06:42 (2015) <http://first-thoughts.org/on/Ben+Okri/>.

⁶²³ National Universities Commission, *List of Approved Universities in Nigeria*, National Universities Commission 7 (2014) <http://www.nuc.edu.ng/nucsite/File/Monday%20Bulletin/MB%202014/MONDAY%20Bulletin%2003-02-2014.pdf>.

⁶²⁴ Christian, above n 164. See also J.I Ezema, *Trends in Electronic Journal Publishing in Africa: An Analysis of African Journal Online (AJOL)* 2010 Webology <http://www.webology.org/2010/v7n1/a74.html>.

necessitated cancellations and therefore they are unable to access peer-reviewed journal articles⁶²⁵.

There are Africans who publish in foreign journals and since these works are inaccessible to the average African, could the answer be to stop publishing in foreign journals? The promotion and assessment mechanism in the academic field has evolved a culture of “publish or perish” and places high premium on works published within certain journals, most of which are foreign journals⁶²⁶. This being the case, how then will an author be convinced not to publish in foreign journals when that is the pathway to promotion? To worsen matters is the fact that works published with local journals mostly lack visibility and accessibility and are only seen, used and known by members of a particular association.⁶²⁷

Those who are actually meant to read and put the knowledge to use are unable to see the journals due to weak distribution infrastructures and due to the fact that most local publishers are not linked to the global publishing network. Most of these works are still largely un-digitized and seat in some shelves where the knowledge though useful is not visible and therefore will not make the impact it should. Nigerians are therefore technically cut out from this all important intellectual discuss and from important information about issues and events. Even worse is that this inaccessibility is a deprivation of one’s fundamental right, that is, the right of access to knowledge⁶²⁸.

The issue is then to identify for purposes of those in the global south and probably the few in the global north who are unable to access needed information due to some form of restriction, how to address the problem of visibility and inaccessibility to knowledge.

4.7 SCHOLARLY PUBLISHING IN NIGERIA⁶²⁹

Journal Publishing has existed in Nigeria for a long time. The *West African Medical Journal* was established in Nigeria during the colonial era in the 1920s⁶³⁰. The journal of the Nigerian Field Society, the Nigerian Field, was first published in 1931 and is still being published.⁶³¹ The establishment of the University College, Ibadan in 1948 has been noted as what spiralled

⁶²⁵ Norrie, above n 57. See also Willinsky, above n 16, 7.

⁶²⁶ Davis, Publish-or-Perish Culture Promotes Scientific Narcissism, above n 43

⁶²⁷ Ezema, *Trends in Electronic Journal Publishing in Africa: An Analysis of African Journal Online (AJOL) Weblog* 2010 <http://www.webology.org/2010/v7n1/a74.html>.

⁶²⁸ Willinsky, above n 16, 143. Where he noted that "access to knowledge is a human right that is closely associated with the ability to defend"

⁶²⁹ This segment of Chapter four has been published by the author as Scholarly Publication in Nigeria: Implications of Open Access, 2015 6 (2) The WIPO Journal.

⁶³⁰ O.G Ajao & Ugwu B.T, ‘Some Problems Facing Scientific Medical Publication in Nigeria’ (2011) 1 *Journal of the West African College of Surgeons*.

⁶³¹ Nigerian Field Society, *The Nigerian Field Society*, <http://www.nigerianfield.org/>.

academic publishing in Nigeria. “From then till the late 1970s, Ibadan was the fountain of academic research, particularly in humanities.”⁶³² As at 2015, records from African Journal Online (AJOL), the largest collection of African journals show that it hosts 209 Nigerian Journals⁶³³.

In the early days of scholarly publishing in Nigeria, the publishing cycle with authors responsible for writing intellectual thoughts, publishers responsible for organising the logistics and financial components of the peer-review process, publication and marketing and libraries through subscription providing access was strictly adhered to⁶³⁴. However, the decline in the Nigerian economy and the education sector led to the “brain drain” syndrome,⁶³⁵ low quality and irregularity of journal articles, inability of Nigerian university libraries to afford journal subscriptions, as well as a general dissatisfaction in the Nigerian academic community leading to endless strike actions by academic staff unions.⁶³⁶ All of these brought about a gradual decay and a virtual collapse of scholarly publications in Nigeria⁶³⁷. The folding up of reputable journals and academic publisher such as the Journal of the Historical Society of Nigeria, a journal published by the oldest professional society in Nigeria were further indicators of the collapse in the industry.

Ever since this crisis, scholarly publication in Nigeria has been a survival of the fittest. The “publish or perish culture” have made it imperative for Nigerian academics to continue to publish⁶³⁸. Howbeit, quality has been sacrificed to satisfy the drive for publication at all cost. Many academics in Nigeria and most parts of Africa run the entire publication process from start to finish on their own and publications are sometimes made without going through any form of peer-review⁶³⁹. It should therefore not be surprising that the output from these journals would be questionable. This is further buttressed by the fact that most Nigerian authors have no access to

⁶³² Ayodejo Olukoju, ‘The Crisis of Research and Academic Publishing In Nigerian Universities’ (2004) *CiteSeer*.

⁶³³ AJOL, Nigeria, <http://www.ajol.info/index.php/index/browse/country?countryId=156>.

⁶³⁴ Mark Ware & Mabe, The STM Report, An overview of scientific and scholarly publishing. 14. 2012. At p.14 "research information, created by an author..., passes through the journal editorial office of the author's chosen journal to its journal publisher subscribing institutional libraries – often via a subscription agent..."

⁶³⁵ National Universities Commission NUC, *FG turning Brain Drain to Brain Gain*, (2014) 9 NUC Bulletin.

⁶³⁶ Niyi Akinnaso, *Still on ASUU vs Government*, PUNCH, 2013.

⁶³⁷ Nigeria Structural Adjustment Program: Policies, Implementation and Impact. No. 13053-UNI (1994) http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/1994/05/13/000009265_3961006113001/R/endered/PDF/multi0page.pdf.

⁶³⁸ Andrew Plume & Daphne ‘Van Weijen, Publish or Perish? The Rise of the Fractional Author’, (2014) *Research Trend*.

⁶³⁹ Olukoju, above n 624. See also, Ahmed Mohammed, *The Development of Academic Journals in Institutions of Higher Learning in Kano State, Nigeria Library Philosophy and Practice* (e-journal) at <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1215&context=libphilprac>.

research materials because University libraries are unable to afford Journal subscription fees to the major international Journal Publishers⁶⁴⁰.

The decay in the system culminated in the creation of a multi-dimensional access problem. Nigerian Academics could not access current research from the West and the research findings that managed to be published by Nigerians not having been indexed remained localized and were therefore not accessible and visible to the international community. As a result of this, these works no matter how brilliantly researched made little or no impact.

Journal publication that survived the decay adopted one of the under-listed three options:

1. Levied members with annual dues to sustain the journals or
2. Charged publication fees on every accepted manuscript before such papers were published or
3. Charged assessment fees on every manuscript even before assessment.

As would be expected, the third option was not very popular with prospective authors because of the risk of losing their money if the article was rejected. As a result, not many journals adopted that option⁶⁴¹.

Using either of these options, journals were published but a major challenge was that after publication, these works were not accessible, neither were they visible. Their impact and utility was very low partly because the works could not be located on the major indexing services such as Medline, PubMed, ISI Web of Science or Google. The implication was that both the local and international community could not discover such publications, particularly considering the fact that majority of journals in developing countries are not indexed⁶⁴². Therefore many of the journals in Nigeria are being encouraged to get indexed and to embrace the possibilities enabled by technological development and particularly the open access movement which strives to remove restrictions to access⁶⁴³.

4.8 NIGERIA INTRODUCED TO OPEN ACCESS

The global movement for access to knowledge (A2K) has been on-going now for several years⁶⁴⁴ but an off-shoot of the wider A2K movement known as the open access movement has focused on the need to provide free, immediate, online and unrestricted access to peer-reviewed literature

⁶⁴⁰ Utulu & Bolarinwa, above n 432..

⁶⁴¹ Olukoju, above n 624.

⁶⁴² Daisy Ouya, *Open Access Survey of Africa-Published Journals*, INASP (2006).

⁶⁴³ Ezema, above n 620. See where it says "The paper recommends that in order to enhance the visibility of African research outputs more journals publishers should be encouraged to join AJOL."

See also, AJOL, *African Journals Online*, <http://www.ajol.info/>.

⁶⁴⁴ Gaëlle & Amy, *Access to Knowledge In The Age of Intellectual Property*, above n 151.

and seeks to achieve this via establishing a new model for journal publishing that would grant users free use and reuse rights to peer-reviewed literature on the platform of the internet. It is also working at increasing access by seeking that authors make their work available to the world by depositing a pre or post print in a digital repository, that is, an online site that serves as an archive, a store where information is kept and where anyone with a computer and Internet connectivity is able to access the information kept therein. This new journal publication model is capable of addressing both the visibility and accessibility issues in the conventional publishing model.

This movement which started in the global north in 2002 has now found its way to Nigeria. In 2008, the first programme to sensitize Nigerians on open access took place in Nigeria⁶⁴⁵. The programme which was sponsored by the Electronic Information for Libraries Network (EIFL), the Department of Library and Information Sciences, Ahmadu Bello University and the Nigerian Universities Libraries Consortium (NULIB) was titled “Open Access Repositories: New Model for Scholarly Communication” and had 89 participants inclusive of policy makers from the academic and research field⁶⁴⁶. Others included experts in the Libraries and Information Sciences as well as Information Communication Technology (ICT) experts working within the knowledge development sector. In all, 45 different institutions were present. The meeting addressed the importance of open access noting that “Communicating scholarly information through open access repositories provide the added advantages of faster publishing opportunities, greater visibility for authors and institutions and cheaper access”⁶⁴⁷ and further noted the need for an open access policy for the nation. In 2009, another programme was held following-up on the earlier one with the theme “Open Access: Maximizing Research Quality and Impact” and it has been reported that as a result of these two workshops “two institutions: University of Jos and Ahmadu Bello University, Zaria have developed institutional repositories. (University of Jos institutional repository and Ahmadu Bello University’s institutional repository). In the Ahmadu Bello University, one of the Department’s has converted two of its journals from toll access journals to OA: The Samaru Journal of Information Studies and The Information Manager.⁶⁴⁸”

⁶⁴⁵ Gbaje, above n 164;

See also, UNESCO, *Overview of OA in Nigeria* (2013) UNESCO <http://www.unesco.org/new/en/communication-and-information/portals-and-platforms/goap/access-by-region/africa/nigeria/>.

⁶⁴⁶ See also, UNESCO, *Overview of OA in Nigeria* (2013) UNESCO <http://www.unesco.org/new/en/communication-and-information/portals-and-platforms/goap/access-by-region/africa/nigeria/>.

⁶⁴⁷ EIFL, *Strategic Approach to Open Access in Nigeria: International Workshop On Open Access Repositories: New Models For Scholarly Communication*. 28th - 29th April, 2008, Ahmadu Bello University, Zaria, Nigeria (Electronic Information for Libraries (eIFL) 2008) <http://www.eifl.net/20080512-strategic-approach-open-access-nigeria>.

⁶⁴⁸ UNESCO, *Overview of OA in Nigeria* (2013) <http://www.unesco.org/new/en/communication-and-information/portals-and-platforms/goap/access-by-region/africa/nigeria/>.

These are not the only journals providing open access in Nigeria. A number of universities are beginning to appreciate the importance of providing access to their research outputs and are developing institutional repositories while publishers are beginning to embrace open access publishing. The next section of this paper will look at Institutional repositories and open access journals in Nigeria.

4.9 INSTITUTIONAL REPOSITORIES IN NIGERIA

The number of Institutional repositories in Nigeria have begun a gradual but slow climb since 2009. The websites which tracks and registers all open access repositories; the Registry of Open Access Repositories⁶⁴⁹ (ROAR) as well as the Directory of Open Access Repositories⁶⁵⁰ (DOAJ) provide information on the status of repositories in Nigeria. The first Institutional repositories in Nigeria was set up by the university of Jos in 2009 and by the next year, two other Institutional repositories had been set up by the University of Nigeria and Covenant University on the 29th of August 2010 and 24th of November 2010 respectively. A search of the ROAR website indicates that there are 9 repositories, 8 of which use the DSpace software⁶⁵¹ and 1 uses the Eprint software⁶⁵². Both the DSpace and Eprint softwares are open source softwares developed to support the setting up and running of Institutional repositories. The two open softwares are both built in compliance with the interoperable standards prescribed by the Open Archive Initiative which aims to ensure interoperability by standardizing the method for inputting information and thereby facilitating efficient distribution of content⁶⁵³. Although the website lists 9 repositories, these repositories represent 6 organisations. In addition to the repositories mentioned in ROAR, DOAR lists amongst others the Kashim Ibrahim Library of the Ahmadu Bello University as having a repository which uses a Dspace software. The table below provides information on the status of repositories in Nigeria using the information from the ROAR and DOAR websites.

Status of Repositories in Nigeria

S/N	Name	Date	Software	Comment	Website
1.	University of Jos (UNIJOS)	19/05/2009	DSpace	421	ROAR
2.	University of Nigeria Nsukka (UNN)	29/08/2010		2989	ROAR
3.	Covenant University	24/11/2010	Eprint	3307	ROAR

⁶⁴⁹ ROARMAP, above n 78.

⁶⁵⁰ (DOAJ), above n 76.

⁶⁵¹ DSpace, *DSPACE*, <http://www.dspace.org/>.

⁶⁵² Eprint, *Eprint*, <http://www.eprints.org/software/>.

⁶⁵³ Open Archives, *Open Archive Initiative*, <http://www.openarchives.org/>.

4.	Federal University of Technology Akure (FUTA)	22/04/2012	DSpace	5130	ROAR
5.	University of Jos (UNIJOS)	12/07/2012	Dspace	5649	ROAR
6.	University of Nigeria	14/08/2012		5803	ROAR
7.	Federal University Oye Ekiti	23/02/2013	DSpace	6543	ROAR
8.	Michael Okpara University of Agriculture	25/07/2013	DSpace	7145	ROAR
9.	CU Repository	27/1/2014	DSpace	7818	ROAR
10.	Kashim Ibrahim Library, Ahmed Bello University	-	Dspace	-	DOAR

The quest to investigate on the issues and challenges to the development of open access in Nigeria, particularly through the self-archiving strategy has led to a few publications⁶⁵⁴. Literature with regard to this is still somewhat scanty and it is the hope of the author that this work will provide more information to what is currently available. The research paper prepared for the International Development Centre (IDRC) in Canada in 2008 examined the impact of the development of information and communication technology on how knowledge is shared in Nigeria and South Africa. Christian who authored the paper noted the role institutional repositories can play in the dissemination of knowledge and identified issues militating against the maximization of the opportunities provided by institutional repositories⁶⁵⁵. Ivwighreghweta and Onoriode of the Western Delta University in Nigeria, who sort to understand the usage of open access articles by lecturers in the University of Benin in Nigeria noted that the reasons for low profile of scientists in Africa is not unconnected to poor access to scientific publications and further noted that what is required is a platform providing unrestricted, worldwide, web-wide and free access to scientific publication⁶⁵⁶. Maximizing the opportunities provided by institutional repositories have been identified as tools for development capable of contributing to the

⁶⁵⁴ Christian, above n 164.

See also, C.P Uzuegbu, *Academic and Research Institutions Repository: a catalyst for access to development information in Africa*, IFLA(2012), <http://conference.ifla.org/past-wlic/2012/191-uzuegbu-en.pdf>.

See also, Ivwighreghweta & Onoriode, above n 432.

See also Ezema, above n 620.

See also, Gbaje, above n 164.

⁶⁵⁵ See Generally, Christian, above n 164. Issues identified includes, poor awareness of IR's, poor state of ICT, inadequate IR advocacy, poor funding, IP and Copyright issues.

⁶⁵⁶ Ivwighreghweta & Onoriode, above n 432. Where it was noted that "Most African countries cannot afford books... This is where OA comes in. In Africa, researchers, students and scholars in general get materials via OA. This way they are able to obtain the latest, updated materials..."

attainment of the Millennium Development Goals (MDGs) particularly in Africa. He illustrated how institutional repositories provide the platform of information dissemination which under the MDGs is a vital tool for development. The research calls for the adoption of policies for the establishment of institutional repositories by concerned institutions and possibly on a continental level⁶⁵⁷. Nigeria does not have any national open access policy and it is the objective of this research to develop a guide that would aid in the development of such a policy. It has been noted however that Covenant University has adopted a university wide open access mandate⁶⁵⁸.

When Queensland University of Technology adopted the first ever university wide open access mandate, Tom Cochrane noted the impact it had on authors and the increase in the number of deposits in the University's Institutional repository "QUT Eprint"⁶⁵⁹. The adoption of open access mandates have increased since then and so have deposits in Institutional repositories⁶⁶⁰.

There is a slow but growing realisation and appreciation of the importance and value of open access in Nigeria, particularly in the academic sphere. The need for stronger advocacy and strategic engagement with the strategies that enable open access is imperative if the research community in Nigeria will maximize the opportunities made available through open access and particularly through self-archiving.

4.10 OA JOURNALS IN NIGERIA

Journals that avail users the opportunity and freedom to use and reuse peer-reviewed literatures are often indexed in the Directory of Open Access Journal (DOAJ). This website provides an index of most open access journals and currently lists thirty eight (38) journals and one thousand, one hundred and sixty seven (1167) articles published in Nigeria which provide open access. Amongst these journals are African Journal Online (AJOL)⁶⁶¹, Bioline International⁶⁶², Academic Online⁶⁶³, and Academia Publishing⁶⁶⁴ amongst others. Some of these journals are listed as journals and providers which means that they actually serve as both journals and hosts to several journals. The AJOL for instance "is the world's largest and pre-eminent collection of peer-

⁶⁵⁷ C.P Uzuegbu, *Academic and Research Institutions Repository: a catalyst for access to development information in Africa*, IFLA (2012), <http://conference.ifla.org/past-wlic/2012/191-uzuegbu-en.pdf>. See page 1 where it notes "that an African-wide policy on IRs creation by concerned institutions, its visibility and interoperability should be made and signed by African countries through organs like the African Union (AU)..."

⁶⁵⁸ UNESCO, *Overview of OA in Nigeria* (2013) <http://www.unesco.org/new/en/communication-and-information/portals-and-platforms/goap/access-by-region/africa/nigeria/>. The policy was adopted in January 2011 mandating all refereed publications in Journals, conferences and books to be deposited in the University's repository

⁶⁵⁹ Cochrane & Callan, above n 104.

⁶⁶⁰ Harnad, et al., above n 55.

⁶⁶¹ AJOL, African Journals Online <http://www.ajol.info/>. <http://www.ajol.info/>

⁶⁶² Bioline International, *Bioline International*, <http://www.bioline.org.br/journals>.

⁶⁶³ Academic Journals, *Academic Journals*, <http://www.academicjournals.org/>.

⁶⁶⁴ Academia Publishing, *Academia Publishing*, <http://www.academiapublishing.org/>.

reviewed, African-published scholarly journals”. It is based in South Africa, and currently hosts 496 journals, 9247 issues, 105655 abstracts and 100430 full texts. Of the 496 journals, 186 are open access. Nigeria has 214 of the 496 journals spanning through virtually all the academic fields⁶⁶⁵. These journals are a mix of hybrid and delayed open access journals.

4.10.1 Open Access and Cost implications

Open access journals provide access to peer-reviewed literature at no charge, that is, free of charge to users. It is however without dispute that the cost of producing peer-reviewed journals is not free. The cost of peer-review, editing, printing, marketing and other sundry costs are involved. This cost under the open access model is covered by the adoption of different business models. Some journals charge an article processing charge (APC) to cover the cost of production (BioMed Central uses this business model)⁶⁶⁶. BioMed Central, one of the world’s leading open access commercial publishers with over 258 peer-reviewed open access journals, 482 members in 52 countries charges an APC for each paper to cover the entire publication process. Other open access journals do not charge article processing fees but deploys other strategies for purposes of cost and production. The Murdoch University Law Review is an example.⁶⁶⁷ This journal operates on the open journal system, an open source software freely available to journals worldwide.⁶⁶⁸ The directory of open access journals (DOAJ) indicates that there are 1054 journals registered to Nigeria and of that number, 32 of them have indicated that they charge APC while 6 do not charge any APC.⁶⁶⁹

In acknowledging the inequalities between the global north and the global south, a fund waiver scheme called “open access waiver fund” was instituted in favour of certain least developed and developing countries by BioMed Central. Nigeria is however not on the list of such countries and may not draw on such privilege. Another strategy to ease the payment of the APC is that authors who are part of the BioMed Central Membership program do not need to pay the APC as such fees are covered by their institutions.⁶⁷⁰ Currently, there are 2 Nigerian institutions listed as members, namely Obafemi Awolowo University⁶⁷¹ and the University of Benin.⁶⁷²

⁶⁶⁵ AJOL, Nigeria <http://www.ajol.info/index.php/index/browse/country?countryId=156>.

⁶⁶⁶ BioMed Central, *Article-Processing Charge*, BioMed Central, <http://www.biomedcentral.com/authors/apc>.

⁶⁶⁷ Murdoch University, *Murdoch University Law Review*, <https://mdulr.murdoch.edu.au/index.php/mdulr>.

⁶⁶⁸ Public Knowledge Project, *Open Journal System*, <http://pkp.sfu.ca/ojs/>.

⁶⁶⁹ (DOAJ), above n 76, particularly at publication charges.

⁶⁷⁰ BioMed Central, *Article-Processing Charge*, BioMed Central, <http://www.biomedcentral.com/authors/apc>.

⁶⁷¹ OAU, *Obafemi Awolowo University*, <http://www.oauife.edu.ng/>.

⁶⁷² UNIBEN, *University of Benin*, <http://www.uniben.edu/>.

4.11 OPENING ACCESS TO DEVELOPING COUNTRIES

Africa and most of the other developing countries are starving for knowledge.⁶⁷³ Not because knowledge is not available but because it has been inaccessible due amongst other things to the high cost of subscription which virtually no developing country is able to afford.⁶⁷⁴ Open access therefore comes as a much needed panacea to people in developing countries and the wider the access gate is opened the more information is made available to the public. Whereas the goal is free, immediate, unrestricted, online access to all peer-reviewed literature, several initiatives have been put in place in Africa and other developing countries that have enabled greater access to knowledge. It may not have fully opened up the access gate but it definitely has shifted from an entirely closed gate.⁶⁷⁵ This section of the chapter will explore the initiatives that have enabled such opening up of access to knowledge.

4.11.1 Health InterNetwork Access to Research Initiative: (HINARI)

The need to improve the state of health in the developing world as well as the growing gap between academics and researchers in the developed and developing countries to access important scientific peer-reviewed articles prompted both the then Secretary General of the United Nations, Kofi Annan as well as the Director General of the World Health Organization to make a call for the building of partnerships that would facilitate the improvement of health in the developing world⁶⁷⁶. It was to this call that the six major publishers, namely, Elsevier, Springer, Blackwell, Harcourt Worldwide STM Group, Wolters Kluwer and John Wiley responded to on the 9th of July 2001 in London and set up the Health Inter Network Access to Research Initiative (HINARI) with the aim of providing free or very low cost online access to the major journals in biomedical and health sciences to local, not-for-profit institutions in developing countries. Today the partnering publishers have grown from 6 to about 160 and they supply in excess of about 42,000 information materials.⁶⁷⁷

The publishers in implementing this initiative put in place a structure that would identify bonafide academic and research institutions. This had to be done because the idea was not to provide global access, neither was it to provide free access, rather it was to open up access by

⁶⁷³ Lou Frenzel, *Drowning in Information But Starved for Knowledge*, (2011) Electronic Design <http://electronicdesign.com/blog/drowning-information-starved-knowledge>.

⁶⁷⁴ The InterAcademy Partnership IAP, *IAP Statement on Access to Scientific Information* (2003) <http://www.interacademies.net/10878/13916.aspx>. "Access to the vast and varied literature... is essential to advances in human health,... agriculture, and the preservation of ... our life... Yet most scientists and research laboratories in developing countries cannot afford the journal subscriptions"

⁶⁷⁵ Kunle Ola, *Understanding Open Access for Africa* SSRN 2476739 http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2476739.

⁶⁷⁶ WHO, *Publishers' Statement of Intent* (2014) <http://www.who.int/hinari/statementofintent/en/>.

⁶⁷⁷ WHO, above n 83.

providing low cost access and where it deems fit to provide free access.⁶⁷⁸ The metrics used in determining countries that would fall within the two tiered access system of either free or low cost access was whether such countries were listed by the World Bank as low or lower-middle income countries.⁶⁷⁹ The access granted was to be restricted to only biomedical and health information. Access authentication was also put into the HINARI access structure. Nigeria feel into the free access stream within the HINARI access structure.⁶⁸⁰

Beneficiaries of this initiative were expected to have computers with high speed Internet connections of at least 56 bandwidths. They were also expected to comply with registration formalities.⁶⁸¹

At the time, this initiative was an opening to the closed door. It surely did not provide clear cut open access as we have it today but it at least provided some form of opening to the prior toll and closed access. The challenges with the initiative was that access was provided to only specific institutions and even within the institutions it was highly restricted and thus not open to everyone. Even worse was the fact that it could only be accessed at specific locations and thus ease of working from different locations was not available. The access provided was highly restricted in that it was narrowed down to only biomedical and health information. The other fields were excluded. The Internet and computer requirements were other challenges, particularly when considering the poor Internet infrastructure in Africa and the bad power situation. Nonetheless, it was a step out of the dark room where the access doors were entirely closed.

4.11.2 International Network for the Availability of Scientific Publication (INASP)

INASP is a charity organization set up in the United Kingdom in 1992 with the goal that developing countries should be able to access the world's wealth of scientific information. It works with a global network of partners to improve access, production and use of research information and knowledge.⁶⁸² INASP currently operates within over 70 countries and has over 1800 partners. It supports librarians, IT staff, editors, policymakers and works closely with the different country partners to provide online scholarly literature to countries across Africa, Asia and Latin America. In the area of furthering the cause of open access, INASP works closely with

⁶⁷⁸ Anyaoku E.N & Anunobi C.V, 'Measuring HINARI use in Nigeria through a citation analysis of Nigerian Journal of Clinical Practice' (2014) 31 *Health Information and Libraries Journal*.

⁶⁷⁹ The World Bank, *Data & Statistics: Country Groups*, <http://econ.worldbank.org/WBSITE/EXTERNAL/DATASTATISTICS/0,,contentMDK:20421402~menuPK:64133156~pagePK:64133150~piPK:64133175~theSitePK:239419,00.html>.

⁶⁸⁰ HINARI, *HINARI Research in Health: Nigeria* https://extranet.who.int/hinari/en/browse_institutions.php?cntry=81.

⁶⁸¹ Yann Schemm, *Leading the way with HINARI* <http://exchanges.wiley.com/blog/2015/04/15/leading-the-way-with-hinari/>.

⁶⁸² INASP, *About*, <http://www.inasp.info/en/about/>.

libraries to provide them with access to millions of journal articles.⁶⁸³ INASP also focuses on interpersonal development of authors by providing AuthorAids, an initiative which provides capacity building to authors and which assists them in the process of publication.⁶⁸⁴ This initiative affords beneficiary authors the opportunity for visibility and high impact on their work. The 2012/2013 report of the organization tells the success story of two AuthorAids recipients who successfully published their research findings in reputable journals through the help of AuthorAids.⁶⁸⁵ One of the landmark successes of INASP was the launch in 1998-99 of the African Journal Online⁶⁸⁶.

4.11.3 African Journal Online (AJOL)

This is the largest collection of African peer-reviewed journals and it is indexed in the Directory of Open Access Journals.⁶⁸⁷ AJOL became necessary to address the dearth of platforms providing visibility for knowledge developed by African to Africans and the global community. AJOL thus became the first African online journal dedicated to advancing African knowledge.⁶⁸⁸ By means of this platform it seeks to transform African Knowledge to African Development by increasing the potential accessibility, visibility, impact and utility of African research outputs. It is a platform on which Africans can showcase their works and in which Africans can search for works by other Africans.⁶⁸⁹ The old saying that “he who blows the piper dictates the tune” underscores the vision of AJOL as an African concern taking her destiny in her own hands. On the website of AJOL it notes as follows that:

At the same time as online academic resources from the developed Global North are made available to Africa (such as HINARI, AGORA and OARE), there needs to be corresponding online availability of information from Africa. Important areas of research in Africa are not necessarily covered by publications from the developed world. African countries need to collectively play a greater role in the global online scholarly environment. African researchers also need access to their own continent's scholarly publications.

⁶⁸³ INASP, *Publishers*, <http://www.inasp.info/en/network/publishers/>.

⁶⁸⁴ AUTHORAID, *Supporting Developing Country Research in Publishing Their Work: What is AuthorAID* <http://www.authoraid.info/en/about/>.

⁶⁸⁵ INASP, INASP Annual Review. 2012-13. http://www.inasp.info/uploads/filer_public/2013/10/24/2012-2013_annual_review.pdf. See pages 10 & 11 of the review for Rhouné Ochako (Kenya) and Bezaye Taye (Ethiopia).

⁶⁸⁶ Ibid at page 7 See the History of the Organization.

⁶⁸⁷ AJOL, African Journals Online <http://www.ajol.info/>.

⁶⁸⁸ Margaret Crampton, *An African Vision for African Journals OnLine (AJOL)* INASP Newsletter at <http://r4d.dfid.gov.uk/PDF/Outputs/Peri/No-29-Newsletter.pdf>.

⁶⁸⁹ Sioux Cumming, *African Journals Online* INASP Newsletter <http://r4d.dfid.gov.uk/PDF/Outputs/Peri/No-29-Newsletter.pdf>.

Mainly due to difficulties accessing them, African-published research papers have been under-utilised, under-valued and under-cited in the international and African research arenas. The internet is a good way to change this, but many hundreds of worthy, peer-reviewed scholarly journals publishing from Africa cannot host their content online in isolation because of resource limitations and the digital divide.

Valuable information has not reached the people who need it.⁶⁹⁰

AJOL achieves her vision by freely hosting African journals and currently hosts over 496 peer-reviewed Journals in over 30 African countries. About 186 of these journals are open access journals. The journals are not restricted to any particular field. They cover the medical and health sciences as well as social sciences, humanities, law, agriculture and virtually all fields. AJOL maximizes the benefits of the open environment by operating solely on open source softwares. It uses the open journal system (OJS) developed by the Public Knowledge Project in Canada and runs the PHP scripting language as well as MySQL for its Database Management System. Its Web server uses the Apache software and Linux is the operating System on which it runs.⁶⁹¹

4.11.4 Access to Global Online Research in Agriculture (AGORA)

Several other initiatives have been birth and are advancing the cause of not just access to knowledge but free access to knowledge. There is the Access to Global Online Research in Agriculture (AGORA) which was sponsored by the Food and Agriculture Organisation of the United Nations (FAO). This initiative is focused on providing the output of research on issues around food, agriculture, environmental sciences and related social sciences and is designed to enhance scholarship in developing countries. It provides a collection of more than 3500 key journals and 3300 books to 2500 institutions in over 116 countries⁶⁹².

4.11.5 Online Access to Research in the Environment (OARE)

This is another initiative focused on providing access to knowledge. This time, knowledge about the Environment. It was initiated in 2006 by the United Nations Environment Programme in partnership with the major publishers. It currently has over 5710 peer-reviewed scientific journals made available by about 461 of its partners to over 100 eligible low income countries. This initiative provides the world's largest collection of environmental scientific research and has

⁶⁹⁰ AJOL, *About AJOL: Why is AJOL needed?*, <http://www.ajol.info/index.php/ajol/pages/view/AboutAJOL>.

⁶⁹¹ Public Knowledge Project, *Open Journal System*, <http://pkp.sfu.ca/ojs/>. The Open Journal Systems (OJS) is a management and publishing system aimed at expanding and improving access to research

⁶⁹² Access to Global Online Research In Agriculture, *About Agora* (2014) <http://www.aginternetwork.org/en/>.

the vision of providing access to these information, improving the quality and effectiveness of environmental sciences, research, education and training in low income countries⁶⁹³.

4.11.6 Access to Research for Development and Innovation (ARDI)

There is also the Access to Research for Development and Innovation coordinated by the World Intellectual Property Organization in partnership with the major publishers for purposes of increasing availability to scientific and technical information in developing countries. It currently partners with about 17 publishers and has about 10,000 journals available to over 107 developing countries⁶⁹⁴.

4.11.7 Siyavula

This is another Initiative focused on opening up the access gate to knowledge. Siyavula is not an initiative of any of the UN agencies. It is rather a private based African initiative situated in South Africa which provides educational resources to students at no cost. It seeks to join hands in the global action towards access to knowledge by developing and providing for free, educational resources to students on the platform of the internet⁶⁹⁵.

4.11.8 The African Legal Information Institute (African LII)

It provides free access to Kenyan legal resources and by this is helping to shape African Law and provides access to legal knowledge to all willing minds⁶⁹⁶.

4.11.9 Social Science Research Network

The world's largest repository, the Social Science Research Network (SSRN) recently set up a journal dedicated strictly to African Law works. It was sponsored by 7 law schools, six of which are American law schools and one is an African Law School. The Law African eJournal which was recently set up has received several visits and over 50,000 downloads⁶⁹⁷. SSRN hosts several other eJournals dedicated to African works⁶⁹⁸.

All of these initiatives provide a wider gate for access to knowledge, some merely provide better opportunities for access to knowledge through lower price regimes (also referred to by Barbara Kirsop, Subbiah Arunachalam and Leslie Chan as donor access⁶⁹⁹ and by John Willinsky as per

⁶⁹³ OARE, *Online Access to Research in the Environment* <http://www.unep.org/oare/AboutOARE/tabid/129711/language/en-US/Default.aspx>.

⁶⁹⁴ ARDI, *Access to Research for Development and Innovation* <http://www.wipo.int/ardi/en/>.

⁶⁹⁵ SIYAVULA, *Who We are Our Story* <http://siyavula.com/who-we-are/our-story/>.

⁶⁹⁶ African Legal Information Institute (African LII), *African law* (2014) <http://www.africanlii.org/>.

⁶⁹⁷ SSRN, *Announcing New LSN African Law* (2014) <http://www.ssrn.com/update/lsn/lsnann/annA004.html>.

⁶⁹⁸ SSRN, *Social Science Research Network* <http://www.ssrn.com/en/>.

⁶⁹⁹ Barbara Kirsop, et al., *Access to Scientific Knowledge for Sustainable Development: Options for Developing Countries* (2007) *ARIADNE* at <http://www.ariadne.ac.uk/issue52/kirsop-et-al>.

capita open access⁷⁰⁰), while others comply with the expectation set for open access as contained in the Budapest, Bethesda and Berlin statements and provide to users free, online, permanent and unrestricted use and reuse rights to their peer-reviewed literatures. These access gates pave a way for Nigerians to understand, join and contribute in the international discussion and also to freely build upon available knowledge in the interest of Nigeria and the global community. What if any are the implications of the available access.

4.12 OPEN ACCESS IMPLICATIONS TO NIGERIA AND DEVELOPING COUNTRIES

Up until now, we have considered the impact of open access as a concept on access to knowledge and have listed a number of initiatives that have been developed to further availability and accessibility to the output of scientific research. This next section will look at the likely implications of open access to Nigeria and other developing countries.

4.13 LIKELY EFFECTS [POSITIVELY OR NEGATIVELY]

4.13.1 Increased Accessibility, Visibility, Impact and Utility

Open access has the potential to increase accessibility, visibility, impact and utility of an author's work. These are four positive effects which though different are intertwined. The potential for these four effects is possible considering that once an author is able to upload his/her work through self-archiving or is able to publishing it via an open access journal, the work becomes freely available on the Internet and anyone with Internet connectivity, a computer device and for those in developing countries, the requisite power supply and basic computer literacy, that information becomes not only available but accessible. This also means that the work becomes visible on a global scale.⁷⁰¹ It is no more only the members of a certain association or elite group that have the privilege to read or interact with the knowledge, this time, the Internet provides global visibility to that particular work and creates the possibility for people from all over the world to gain from the knowledge, refer to it in their research and this in turn contributes to impact factors for both the author and his institution and provides the platform and possibility for the maximal utility of the work.⁷⁰²

4.13.2 Knowledge Sharing

⁷⁰⁰ Willinsky, above n 16, 215-216.

⁷⁰¹ Brian Gutterman, Internet as a catalyst for change: access, development, freedoms and innovation. (2011) Internet Governance Forum (IGF).

See also, Strangelove, Computer-Mediated Communication Magazine, (1994).

See also, Leavenworth Stuart, *Michelle Obama urges open internet access in China speech at* <http://www.smh.com.au/world/michelle-obama-urges-open-internet-access-in-china-speech-20140323-hv1vb.html>.

⁷⁰² Harnad, et al., above n 55.

Other possible positive impacts for developing countries include what was captured in the BOAI “sharing the knowledge of the rich with the poor and the poor with the rich”.⁷⁰³ Put another way, *sharing the knowledge of members of the developed countries with members of the developing countries and the knowledge of member of the developing countries with the knowledge of the members of the developed countries*. I have suggested this new slant because the terms “rich” and “poor” is relative, and without a doubt, so is “developed” and “developing” countries but since the article in question is knowledge, an ephemeral commodity, which is not easily quantifiable, the cloak of “rich” and “poor” appears to cast aspersion on the quality of knowledge with regards to “knowledge of the rich” and “knowledge of the poor” and has the possibility of giving an impression that knowledge of the rich is rich knowledge and that knowledge of the poor is poor knowledge. The possibility of such an interpretation could be sending a superiority/inferiority signal, thus laying the foundations on a wrong footing. It is however important not to lose focus on the actual intent of the initiative, which is the provision of the possibility of a platform for sharing knowledge, which brings with it limitless opportunities for development and is an important advantage to members of developing countries⁷⁰⁴.

4.13.3 Access to the World’s Library

Open access will provide developing countries with the possibility for access to the vast resources of the world’s wealth of knowledge, access to the World’s Library.⁷⁰⁵ An access which before now was locked up and for which institutions in developing countries could not afford, meaning that her people were locked out and were unable to access needed research materials.⁷⁰⁶

4.13.4 Global and Local

Open access provides the platform for global and local visibility to works authored by members of developing countries. Global visibility was particularly practically impossible prior to the open access initiative. Most journals published in developing countries were circulated within the associations that produced them and what compounded the problem was that the major

⁷⁰³ Budapest Open Access Initiative, above n 18.

⁷⁰⁴ See generally, Michael Finger & Philip Schuler, *Poor People's Knowledge Promoting Intellectual Property in Developing Countries* (World Bank and Oxford University Press 2003).

⁷⁰⁵ See Ola, Understanding Open Access for Africa above n 667, 17.

⁷⁰⁶ M.O. Okoye & A.N. Ejikeme, ‘Open Access, Institutional Repositories, and Scholarly Publishing: The Role of Librarians in South Eastern Nigeria’ (2011) *Library Philosophy and Practice*.

See also, Datonye Dennis Alasia, ‘The Impact of the Open Access Movement on Medical Based Scholarly Publishing in Nigeria’ (2007) 12 *First Monday*.

See also, EIFL, Strategic Approach to Open Access in Nigeria: International Workshop On Open Access Repositories: New Models For Scholarly Communication. 28th - 29th April, 2008, Ahmadu Bello University, Zaria, Nigeria. 2008.

See also, Gbaje, above n 164.

See also, UNESCO, Overview of OA in Nigeria (2013) <http://www.unesco.org/new/en/communication-and-information/portals-and-platforms/goap/access-by-region/africa/nigeria/>.

publisher were not aware of such works and even when aware rarely indexed such works amongst their collection thus they were not within the rank and file of materials that could be located if a search was conducted.⁷⁰⁷ Thanks to the Internet and to open access databases and indexes, works authored by members of developing countries can now enjoy both global and local visibility⁷⁰⁸. The possibility for local visibility is particularly interesting, because prior to the advent of open access, works authored within the same developing country jurisdictions were usually not visible due to poor channels of distribution and circulation and due to the fact that these works were not indexed in the major commercial indexes for journal articles⁷⁰⁹.

4.13.5 Digitization and Preservation of Works/Heritage

The practice in so many developing countries is to conduct research be it thesis and dissertation, research articles, government commissioned research or some other form of research and the output of these research are then locked up in some cabinet where they rot away and no one has access to them.⁷¹⁰ Open access provides several advantages to such works, firstly is the prospect for digitization and preservation of such works. Digitized works cannot be torn, burnt or eaten up by termites, they are therefore better preserved.⁷¹¹ It is true that digitized works can be destroyed due to corruption of the device on which such information is held but this is often taken care of by backing up such documents.⁷¹² Open access also provides such work the possibility of been read by anyone in the world and thus the product of such research is able to enjoy not only global visibility but has the potentials of been maximally utilized. In preserving works, one of the fundamental things achieved is the preservation of knowledge and for Nigerian's and nations which rich cultural heritage, preservation of knowledge provides an opportunity to preserve the cultural heritage of a people.⁷¹³ In a nutshell, open access provides the opportunity for bringing alive works that were virtually dead and for preserving works that will in turn preserve the cultural heritage of a people, heritage which in many cases are slowly gliding into extinction.

⁷⁰⁷ Olukoju, above n 624.

⁷⁰⁸ Fitzgerald, et al., above n 248, 4.

⁷⁰⁹ Barbara Kirsop, et al., *Towards Open and Equitable Access to Research and Knowledge for Development* PLOS MED 8(3) at <http://www.plosmedicine.org/article/fetchObject.action?uri=info%3Adoi%2F10.1371%2Fjournal.pmed.1001016&representation=PDF>.

⁷¹⁰ Willinsky, above n 16.

See also, Forest Horton, *Public Access to Government Information and Information Literacy Training as Basic Human Rights*, (2002); Read, Maximizing the Value of Public Sector Information for Scientific and Socioeconomic Development in Africa.

⁷¹¹ DDC Outsourcing Solutions, *5 reasons to digitise your documents* (2014) <http://www.ddcos.com/5-reasons-to-digitise-your-documents/>.

⁷¹² Bart Ooghe & Dries Moreels, 'Analysing selection for Digitisation: Current Practices and Common Incentives', (2009) 15 *D-Lib Magazine*.

⁷¹³ Matusiak K.K & T Johnston, 'Digitization for Preservation and Access: Restoring the Usefulness of the Nitrate Negative Collection at the American Geographical Society Library'. (2014) 77 *The American Archivist*, 241.

4.13.6 Avoiding Duplicity

In the absence of a platform like open access which freely shares the output of research, duplication is inevitable. In so many organisations whether in developed or developing countries, the duplication of research is an unfortunate incidence.⁷¹⁴ So often, what organisation A is researching on is what organisation B has worked on and may have produced credible and useful reports and data. However, because of the lack of a system to freely share such information and data, the same research is duplicated and scarce resources which could have been deployed to some other highly needed areas are re-invested into the same research which simply amounts to re-inventing the wheels and wasting tax-payers hard earned money.⁷¹⁵

4.13.7 Learning Without Barriers

Open access through a related initiative, open educational resources afford members of developing countries the opportunity to learn from minds they otherwise would not have had access to. Examples abound with organisations such as KHAN Academy that provides video recordings on you tube for free use and reuse on virtually any topic within the sciences. What is even more interesting is that these educational resources are provided for all strata of the society, even for those at the elementary level. A look at the Khan Academy website shows that education resources are even available for stages as early as Grade 3. The academy states that her mission is to provide 'a free world-class education for anyone anywhere'. "The website features thousands of educational resources, including a personalized learning dashboard, over 100,000 exercise problems, and over 4000 micro lectures via video tutorials stored on YouTube teaching mathematics, history, healthcare, medicine, finance, physics, general chemistry, biology, astronomy, economics, cosmology, organic chemistry, American civics, art history, macroeconomics, microeconomics, and computer science. All resources are available for free to anyone around the world. Khan Academy reaches about 10,000,000 students per month and has delivered over 300,000,000 lessons."⁷¹⁶

Similarly, we have several other initiatives that provide the opportunity for free learning via the internet. There is the Wikiversity closely associated with Wikipedia⁷¹⁷, the Open School of

⁷¹⁴ Nkwede J.O, 'Approaches for Poverty Alleviation and Sustainable Development in Nigeria: A Study of Ebonyi State Community Based Poverty Reduction Agency (EB-CPRA)'. (2013) 2 *International Journal of Social Science Studies* 7. See also, NSW Department of Education and Communities, *Research Partnership*, <http://www.dec.nsw.gov.au/about-us/plans-reports-and-statistics/research-partnerships>.

⁷¹⁵ See, Opafunso Z.O, 'An Assessment of the Impact of Government Intervention Projects on Poverty Alleviation/Reduction in Ekiti State, Nigeria', (2014) 5 *Mediterranean Journal of Social Sciences*, 1.

⁷¹⁶ Khan Academy, *Our Mission*, <https://www.khanacademy.org/about>.

⁷¹⁷ wikiversity, http://en.wikiversity.org/wiki/Wikiversity:Main_Page.

Learning (P2PU) run by the Creative Commons⁷¹⁸ and CopyrightX providing lectures prepared and delivered by Prof William Fisher of Harvard⁷¹⁹. All of these initiatives provide high quality standard education at no cost to any willing mind and allows the reuse of these materials. Learning within these parameters basically has no limit. You can learn when you want to and how you want to. You are able to control the use of your resources, if it is a video, you may stop the video, take it back, listen again and in some instances you are able to type in your questions and receive feedback from the moderators. The innovation to knowledge acquisition and learning is simply transformative and affords unprecedented learning opportunities to willing minds.⁷²⁰

4.14 POSSIBLE NEGATIVE EFFECTS

Engaging with any initiative often has its pros and cons. Open access apparently is no exception, therefore on the flip side of the impact, could an initiative such as this have any negative effects? Open access in its contextual form is meant to provide an avalanche of information and should provide it at the click of the mouse via the Internet. What negative effects could it have?

4.14.1 Consumption Partners

The first negative effect is the tendency to turn developing countries into mere consumption partners in the knowledge creation and sharing relationship. Although this may not be the objective, but the likelihood of its occurrence seems apparent and this is so considering that the vast majority of information in the global north is already digitized and online and that the current stock of information in the world's major libraries are made up of writings from the global north.⁷²¹ The simple reasoning is that based on probability, if there are 10 balls in a basket with 9 of them red and only 1 is blue, the probability of my picking a blue ball is only 1 out of 10. This is the same probability rule with accessing knowledge from the open access pool. What is likely to be accessed is determined by the input and as earlier noted, the global north is responsible for generating the majority of information and thus, the information likely to be located and accessed will often be that from the global north.

It is clear that open access affords the opportunity for all to share, use and where permitted reuse information, but when one considers what is within the pool of the world's vast resources of

⁷¹⁸ P2PU, *School of Open*, <https://p2pu.org/en/schools/school-of-open/>.

⁷¹⁹ CopyrightX, <http://blogs.law.harvard.edu/copyrightx/>.

⁷²⁰ See, Lewis, above n 132, 497-498. The author refers to it as disruptive innovation and notes that it makes products easier to access and cheaper to buy.

⁷²¹ R.D. Christy & V.L. Bogan, *Financial Inclusion, Innovation, and Investments: Biotechnology and Capital Markets Working for the Poor* (World Scientific Publishing Company. 2011) 144. The Scopus database was used to measure knowledge based on countries and it was noted that North America (The United States and Canada) was responsible for the majority of knowledge output. They accounted for about 36%.

knowledge, there is a tendency that developing countries would become more of knowledge consumers than knowledge contributors. This is so because there is already the compliant of knowledge explosion⁷²² (also referred to as infobesity⁷²³ and infoxication⁷²⁴) and there already exist within developing countries, a tendency to tilt the educational system in favour of western educational materials.⁷²⁵

It is also important to think about the fact that before developing countries are able to digitize and make their knowledge fully available, there is the fear that the knowledge accessible (that is knowledge within the global north) is the knowledge that would be accessed and utilized and that being the case, a pattern of knowledge consumption by members of the developing countries may have been established.

4.14.2 Cultural re-orientation/Loss of Cultural Heritage

Open access from a global perspective should work towards promoting a knowledge sharing relationship that is balanced and symbiotic in nature, not one that is lopsided⁷²⁶. It is a relationship which BOAI describes as sharing knowledge and not merely consuming knowledge. This concern is of particular interest when consideration is given to how Hollywood has invaded the cultural lives of many nations, influencing cultural and indigenous ideologies and sometimes eroding and even eradicating such cultures.⁷²⁷ This concern of a cultural re-orientation and a

⁷²² See A. Toffler, *Future Shock* (Bantam Books. 1990) 89. Where he referred to the impact of knowledge explosion. See also, Dougal Hind, *What good is information?* <http://aeon.co/magazine/living-together/the-problem-with-too-much-information/>.

⁷²³ Paul, et al., above n 313.

⁷²⁴ See Manuel Area & Teresa Pessoa, *From the Solid to the Liquid: New Literacies for the Cultural Changes of Web 2.0* (2012) *Comunicar: Scientific Journal of Media Education* DOI: 10.3916/C38-2011-02-01 <http://www.revistacomunicar.com/pdf/preprint/38/En-01-PRE-12378.pdf>. Where it was noted that "One of the most remarkable phenomena marking the start of this century is the excess of information generated by the exponential increase of that information...This has been dubbed «infoxication»"

See also, John. Moravec, *Infoxication 2.0*, (2008) *Education Futures* <http://www.educationfutures.com/2008/10/24/infoxication-20/>.

⁷²⁵ Edward Shizha, *Reclaiming Our Indigenous Voices: The Problem with Postcolonial Sub-Saharan African School Curriculum*, (2013) 2 *Journal of Indigenous Social Development*.

⁷²⁶ See Kirsop, et al., above at 691. "Exchange of research findings must be bi-directional since research information generated in emerging countries is crucial to solving global problems ... Fortunately, the establishment of IRs in the developing world ... and the conversion to OA of journals ... help close the south-north digital divide that is too often considered unimportant and ignored by the development communities"

⁷²⁷ See, Olivia A. Cole, *Hollywood and the Shaping of perception of Racism* (2013) <https://oliviaacole.wordpress.com/2013/12/24/hollywood-and-the-shaping-of-perceptions-about-racism/>. "It is a known fact that the media we consume shapes our perception of the world: after all, media has economic, political, social and aesthetic purposes."

See also, Mark Weber, *Hollywood's Agenda, and the Power Behind it* http://www.ihr.org/hollywoodagenda_weber.html. "But his remark was another reminder of Hollywood's tremendous, global influence, and of how misleading its imagery can be."

See also, Douglas S. Winnail, *How The Media Mold The World, Tomorrow's World* (2003) <http://www.tomorrowworld.org/magazines/2003/january-february/how-the-media-mold-the-world>. "this small group of liberal-minded social revolutionaries has turned the Hollywood dream factory into a "poison factory" that attacks religion, assaults the legitimacy of the family, promotes sexual perversions and glorifies ugliness..."

possible loss of cultural heritage through the abundant availability, unrestricted accessibility and constant exposure to knowledge generated in the global north pose concerns to developing countries.⁷²⁸

4.14.3 Digital Divide

The other challenge lies in the fact that open access is structurally built to function technologically and it is widely known that the global south suffers from technological retardation and that the digital divide amongst other factors have de-capacitated the global south from operating at the level of the global north.⁷²⁹ One of the two major pillars of open access is the Internet.⁷³⁰ Now if open access is structured to work based on a technological leg which the global south is known not to have, the question than arises, if the global north actually contemplated the participation of the global south? One may answer that it is expected that the global south will eventually catch up with technological advancements and connect with the global move towards open access.

The rationality of catching up is however in question, when consideration is given to the rate of technological growth in the global north and the fact that people within the global north are barely able to keep pace with the technological changes⁷³¹. This being the case, how then can it be reasonable expected for the global south to catch up with the technological advancements in the global north?

The problems associated with open access and the digital divide is further compounded by a lack of regular power supply in most developing countries and it is even worsened by the lack of basic computer literacy.⁷³² It must be clearly noted that all these challenges are no fault of those

⁷²⁸ Deborah Yakubu Dangana, *Nigeria: How Western Culture Erodes Values Among Nigerian Youths* <http://allafrica.com/stories/201408081141.html>. "Man is essentially, the product of his culture...Nigeria which is made up of rich and diverse cultural values is beginning to lose most its cultural ideals especially through the adoption of foreign culture showcased through the mass media."

⁷²⁹ Stephen Graham, 'Bridging Urban Digital Divides? Urban Polarisation and Information and Communications Technologies (ICTs)', (2002) 39 *Urban Studies*, 39-40. "The societal diffusion of information and communication technologies (ICTs) remain starkly uneven at all scales."

See also, Wenhong Chen & Barry Wellman, 'The Global Digital Divide – Within And Between Countries', (2004) 1 *IT & Society*, 18. "Telecommunications policies, infrastructures and education are prerequisites for marginalized communities to participate in the information age. High costs, English language dominance, the lack of relevant content, and the lack of technological support are barriers for disadvantaged communities using computers and the Internet."

⁷³⁰ Ola, above n 10, 113-115." The advent of digital technology and the internet altered the information sharing system and...no doubt influenced the open access movement"

⁷³¹ Strangelove, above n 461.

⁷³² J.Y Oricha & G.A Olarinoye, 'Analysis of Interrelated Factors Affecting Efficiency and Stability of Power Supply in Nigeria', (2012) 2 *International Journal of Energy Engineering*, 1.

See also, E.O George & J.E Oseni, 'The Relationship Between Electricity Power And Unemployment Rates In Nigeria', (2012) 2 *Australian Journal of Business and Management Research* 10.

who have initiated the idea of open access. In fact, the idea is intended to particularly provide platforms and a uniform playing ground for all regardless of location, nationality, economic or social status. However, in taking advantage of these platforms it is important for anyone engaging with the concept to understand the complexities around utilizing them and where necessary erect structures for the preservation and widest possible utility for the platforms. The aim is to ensure that open access does not amount to a creativity killer by its provision of free and re-useable information. The concern is to ensure that researchers can look up works that have already been researched and yet take the next step to build upon it. The concern is for teachers to look up materials that have already been created and not just copy and paste them but take the time to adapt them to the local needs, improve upon them and also make them available for others use and reuse thereby adding value to the content and positively engaging in knowledge development. The concern is to ensure that developing countries do not become mere consumers of the already available and free knowledge but actual contributors to the vast wealth of the world's knowledge. The purpose of these concerns is not to distance developing countries from open access, that will only adversely affect the countries concerned but rather it is to build a consciousness for strategic engagement with open access to the end that the initiative will serve as a propelling force for development and will also ensure that the world's library which has now been opened up to everyone can serve as a mirror to reflect not only views of the global north but also that of the global south.

4.15 CONCLUSION

The possibilities made available by open access are numerous. That free online unrestricted access to journal articles is possible provides like never before accessibility, visibility, impact and maximal utility on the output of research findings. These possibilities are particularly important to members of developing countries who prior to the open access era had been shot out from the world's library. Shot out from accessing journal articles and shot out by poor infrastructures frustrating visibility of their publications. This lock out, causing a lack of access to knowledge and heightened by the trio barriers of price, technical and legal is what the open access movement is taking steps to address through its several initiatives. These initiatives open up the access gates that were shot and provide opportunities for all willing minds to access available information. Caution must however be taken by those in the global south who appear prone to

See also Emwanta M & Nwalo K.I, 'Influence of Computer Literacy and Subject Background on Use of Electronic Resources by Undergraduate Students in Universities in South-western Nigeria', (2012) 5 *International Journal of Library and Information Science*.

See also, Ogunsola L.A, et al., 'Information Literacy In Nigerian Higher Institutions – Any Role For Librarians?', (2011) 4 *Ozean Journal of Social Sciences*.

becoming consuming partners in the open access knowledge market if proper strategies are not put in place to effectively harness, contribute and engage with the dynamics of open access. Open access no doubt provides an avalanche of information and the more of one's information is put into the global pool, the more available such knowledge become and also the possibility for such knowledge achieving maximal impact. If this avalanche of information unfortunately breeds a sense of complacency in anyone but particularly those in the global south and leads them to not develop their own knowledge, it could lead to a steady eradication of local knowledge, culture, heritage, creativity and innovation. This could bring about a gradual re-colonization, this time not one forcefully annexing the physical territories but this time a willing surrender of the mind through lazy assimilation of ideas and information.

The central purport of open access is to democratize access to knowledge thereby enabling willing minds to explore without barriers. Maximizing the benefits of open access can be best achieved by engaging as contributors and not mere consumers to the pool of information within the open access to knowledge hemisphere.

5. OBJECTIVE

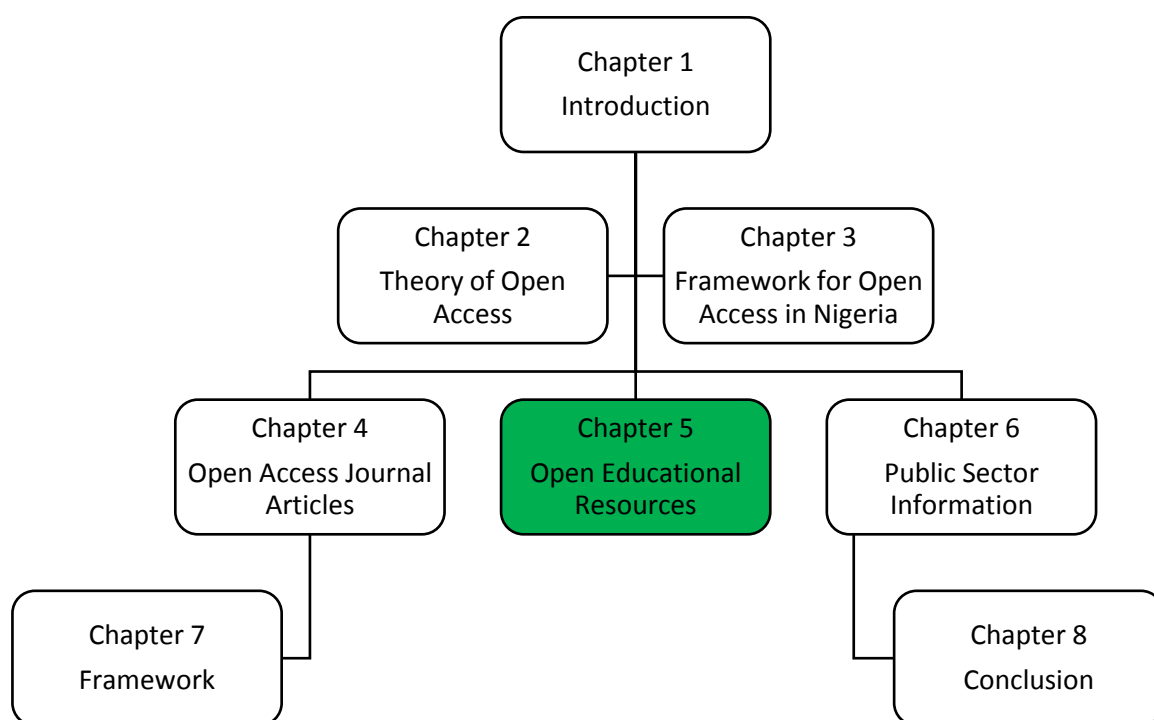
This chapter seeks to situate open educational resources as an alternative route to achieving access to education and to situate Nigeria as a Nation that can utilise OER to boost the Nigerian education sector. It therefore explores the definitions of open educational resources as well as the rationale for building tools that would grant free access to educational resources against the background of the evolution of open educational resources. The components of OER, “Open, Educational and Resources” are analysed in light of the rationale of OER. The role of the law with regards to open educational resources is explained with emphasis on licensing and policies. Challenges faced in developing and using OER is also addressed and suggestions are made on how best to avoid loop holes. OER’s and Massive Open Online Courses (MOOC’s) are also highlighted and the conclusion provides a glimpse into the future of OER.

Aims & Objectives

1. To demonstrate the potential benefits of the open access movement to Nigeria’s national development.
2. To investigate, explain and propose a legal, regulatory and policy framework for Nigeria that would enable open access to the output of journal articles, open educational resources and public sector information.
3. To situate Nigeria within the current Open Access Movement by engaging in local pragmatic projects capable of advancing the development of Nigerians, other developing countries and the world at large. (For instance the establishment of institutional repositories in most Nigerian Tertiary Institutions.)

Research Questions

1. What role(s) can open access play in Nigeria’s national development?
2. What are the possible challenges to the implementation of open access in Nigeria?
3. What legal, regulatory and policy frameworks are required or needed to be strengthened for the successful implementation of open access in Nigeria?



5.1 INTRODUCTION

The transformative and yet disruptive nature of Information Communication Technology (ICT) and the Internet on teaching, learning, research and the general pedagogy of education is a fundamental issue for today's society. ICT, with its attendant electronic devices, applications, software, programs and the ubiquitous Internet has become an integral part of today's society. It influences virtually every fabric of society and is constantly changing the way things are done. The manner in which it provides platforms for easy creation and sharing of data has introduced new platforms and dimensions to teaching, learning, research and education in general. ICT is fundamental to development in a knowledge driven economy and can be utilised in addressing multi-faceted socio-economic, political and cultural challenges if strategically deployed.

Education for all is important.⁷³³ It is one of the Millennium Development Goals (MDG's) and particular emphasis is on the girl child due to the high illiteracy rate among them⁷³⁴. Although Illiteracy has been successfully addressed in a number of developing nations where they are able to boast of an above 95% literacy level, this is not the case in several developing countries.⁷³⁵

⁷³³ EFA Global Monitoring Report 2015: Education for all 2000-2015: Achievements and Challenges. (2015).

⁷³⁴ UNESCO, *International Literacy Data*, Unesco (2013) Institute for Statistics <http://www.uis.unesco.org/literacy/Pages/data-release-map-2013.aspx>.

⁷³⁵ See generally, Hans Botnen Eide, *Literacy rates are rising – but not fast enough* <http://efareport.wordpress.com/2012/05/31/literacy-rates-are-rising-but-not-fast-enough/>. Norway-100%,

Luembourg-100%, Finland-100%, Andorra-100%, Greenland-100%, North Korea-100%, Russia-99.7%, USA-99%, UK-99%, Ireland-99%, Switzerland-99%, Sweden-99%, Japan-99%, New Zealand-99%, Australia-96%.

See also, Wikipedia, *List of countries by literacy rate*, http://en.wikipedia.org/wiki/List_of_countries_by_literacy_rate.

The countries with the highest need for education seem to be facing the greatest challenges to accessing education.⁷³⁶ Thirteen countries account for the highest levels of illiteracy globally and Nigeria is one of those countries.⁷³⁷ The challenges faced in the pursuit for education for all in these countries include lack of political will on the part of government,⁷³⁸ poverty, corruption, lack of infrastructure,⁷³⁹ war⁷⁴⁰ and the growing trend of terrorism exemplified by the activities of Boko Haram within the northern part of Nigeria, activities which are frustrating the strategies that are being put in place to address illiteracy.⁷⁴¹

On the 14th of April, 2014, an additional layer to Nigeria's many challenges was laid when 276 female students preparing for their senior secondary school certificate examinations were kidnapped by Boko-Haram, a terrorist group who operate with the ideology that "western education is a sin". This group is responsible for several other terrorist attacks in Nigeria aimed amongst other things at frustrating western education in Nigeria.⁷⁴²

⁷³⁶ The foreword to the EFA 2015 reports notes that "There are still 58 million children out of school globally and around 100 million children who do not complete primary education. Inequality in education has increased, with the poorest and most disadvantaged shouldering the heaviest burden. The world's poorest children are four times more likely not to go to school than the world's richest children, and five times more likely not to complete primary school. Conflict remains a steep barrier, with a high and growing proportion of out-of-school children living in conflict zones. Overall, the poor quality of learning at primary level still has millions of children leaving school without basic skills."

⁷³⁷ Alechenu, above n 153.

See also, UNESCO, above n 152.

⁷³⁸ S.O Labo-Popoola, et al., 'Universal Basic Education in Nigeria: Challenges and Way Forward', (2009) 6 *Pakistan Journal of Social Sciences* 252. See where it was noted that "...In Nigeria, like other countries in the world, efforts are often made to shape the direction and dimension of the educational system for capacity building through articulated policy... However, the ability of education to achieve the objective of mankind development depends entirely on the government policies and the political will on the part of the government to translate the policies into meaningful actions..."

⁷³⁹ Ige Akindele, 'Challenges Facing the Achievement of Education for All (EFA) and Education Related Millennium Development Goals (MDG) in Nigeria' (2014) 3 *Journal of Poverty, Investment and Development* 71. The author identified and discussed the following challenges facing the achievement of Education for all in Nigeria; limited access to schools, inadequate infrastructural facilities in schools, inadequate fund and teachers, corruption, increase in population, inappropriate planning and implementation, and wastage. See specifically, page 71 where the author noted in his recommendations that "There is need for corruption which has assumed a disturbing dimension in the country, to be curtailed. Those involved in the act should be reprimanded to serve as deterrent to others and improve the image of the country at international level. Existing laws and agencies in charge of corruption should be allowed to perform their roles without any form of interference."

⁷⁴⁰ See generally Brian Lai & Clayto Thyne, 'The Effet of Civil War on Education, 1980-97', (2007) 44 *Journal of Peace Research*.

See also, Mark Tran, *War denying millions of children an education* <http://www.theguardian.com/global-development/2013/jul/12/war-denying-children-education>.

⁷⁴¹ Irin, Nigeria: *School attendance down after Boko Haram attacks* <http://www.irinnews.org/report/95327/nigeria-school-attendance-down-after-boko-haram-attacks>.

⁷⁴² Faith Karimi & Vladimir Duthiers, *Nigerians demand government do more to bring home kidnapped girls*, CNN(2014) <http://edition.cnn.com/2014/05/01/world/africa/nigeria-abducted-girls/>.

See also, Aminu Abubakar, Factsheet: How Many Schoolgirls Did Boko Haram Abduct And How Many Are Still Missing?, (2014) Africa Check <http://africacheck.org/factsheets/factsheet-how-many-schoolgirls-did-boko-haram-abduct-and-how-many-are-still-missing/>.

An illiterate person lacks education and is figuratively in darkness. Education provides the platform for light, it illuminates the mind, increases a person's self-esteem, provides an escape route from poverty and opens the door to immense opportunities, hence the goal of education for all.⁷⁴³ All humans are entitled to basic education but not all humans have access to education.⁷⁴⁴ Whilst there is a push to ensure education for all, activities of organisations like Boko Haram have frightened and are still frightening many illiterate minds. One of the girls who escaped from the Boko Haram kidnappers was interviewed by CNN. During the interview she declined to show her face due to fear of being tracked down. The unknown face noted that due to her fears she will not be returning to school.⁷⁴⁵

These clandestine activities allow the reign of illiteracy and enthrone "darkness". Education for all is about turning on the light but many factors including corruption, war, poverty, poor infrastructural facilities, lack of proper planning, budgeting, budgetary allocation, implementation and terrorism, are destroying the structures providing "light", that is, education. The goal of education for all is a goal to turn on the light and is a goal that must not be frustrated. If conventional strategies to accessing knowledge are being frustrated, it is imperative on all well-meaning persons to seek alternative strategies, such as those provided by ICT and the Internet in delivering quality education. Open Educational Resources (OER) is one of such strategies.

Education is a right, it is an empowerment tool and it is no surprise that the Obama Administration has committed \$2 billion dollars in support of open educational resources (OER) which are tools that enable easy access, availability, use and reuse rights to educational resources. These tools address lack of access to knowledge and education and help in actualising one of the fundamental rights; the right to education.⁷⁴⁶

Mandela captured the importance of education when he noted that, "Education is the most powerful weapon which you can use to change the world" and that "Education is the great engine of personal development. It is through education that the daughter of a peasant can

⁷⁴³ Alwed Ekka, *True Education Enlightens People* Power Education System at <https://alwedekka.wordpress.com/2010/10/24/true-education-enlightens-people/>. "Education is important because it enlightens people"

⁷⁴⁴ UNESCO, *A Human Rights-Based Approach to Education For All: A framework for the realization of children's right to education and rights within education* (UNESCO. 2007). See the foreword on page xi where Vernor Munoz the United Nations Special Rapporteur on the Right to Education noted that "While the right to education – like all human rights – is universal and inalienable, several conventions have enshrined it in international law, thereby placing binding commitments on ratifying States."

⁷⁴⁵ Nima Elbagir & Lillian Leposo, *CNN exclusive: Nigerian schoolgirl describes escape from Boko Haram* <http://edition.cnn.com/2014/05/11/world/africa/nigeria-escaped-schoolgirl-speaks/>.

⁷⁴⁶ See Article 26, UN General Assembly, UDHR Universal Declaration of Human Rights, 10 December 1948, 217 A (III), <http://www.unhcr.org/refworld/docid/3ae6b3712c.html> (1948).

become a doctor, that the son of a mineworker can become the head of the mine, that a child of farmworkers can become the president of a great nation.”⁷⁴⁷ It is probably this freedom, enlightenment and empowerment the terrorist group Boko Haram is opposed to.

Mandela’s statements are reinforced when cognisance is taken of the fact that making information easily accessible with the least restriction has been the pursuit of many initiatives such as the Access to Knowledge (A2K) movement which has taken giant strides in advocating for greater access to knowledge as well as the Open Access (OA) movement which continue to push for greater access to the output of academic research in the nature of journals and articles.

The influence of the access to knowledge movement has spread out to the educational sector and can be linked to the right to education as provided in several international charters including the Universal Declaration for Human Rights (UDHR) which at Article 26 underscores the importance of education.⁷⁴⁸ Access to education has been linked to better living standards, improved health care and good governance to mention just a few.⁷⁴⁹ However without access to knowledge, education is a mirage and this is of great importance to all humanity but of a pressing nature to those from developing countries.

Open Educational Resources have been developed as tools and a means of addressing lack of access to educational materials globally and are a technological response to education in an era with unprecedented growth in technology and its effect on human daily activities. They provide an almost instantaneous solution to the financial, technical and access challenges faced by the educational system. The imperatives for developing these tools are not unconnected to the enabling possibilities provided by Information Communication Technology (ICT) in particular the Internet, for information dissemination and distribution. Others factors that have necessitated the development of OER include lack of access due to financial inability on the part of many students and researchers to afford the ever rising cost of educational materials;⁷⁵⁰ Intellectual property protections and technological restrictions (technological protection measures and digital rights management) such as passwords, tracking and software compatibility issues.

⁷⁴⁷ Mandela, above n 510.

⁷⁴⁸ UDHR above n 738.

⁷⁴⁹ Wallstam, et al., *Dying For Change Poor People's Experience Of Health And Ill-Health, A Joint Undertaking Between Who And World Bank* http://www.who.int/hdp/publications/dying_change.pdf.

⁷⁵⁰ Edwards, above n 185.

See also, Cable Green, *OER K-12 Bill Passes in U.S. Washington State* at <http://creativecommons.org/weblog/entry/31756>.

See also, Cable Green, *The Impact of Open Textbooks at OpenStax College* <http://creativecommons.org/tag/open-textbooks>.

5.2 DEFINITION OF OER

There are several definitions of OER. This section provides some of the definitions which will reflect the different perspectives of OER. Regardless of the perspective, fundamental issues run through each of these definitions, and will be explained.

The build up to the term OER can be linked to two terms “learning object” and “Open Courseware”. In 1994, Wayne Hodgins birthed the learning object term which found deeper expression as educators and instructional designers began to make use of it.⁷⁵¹ The term learning objects refer to digital materials that can be created for use and re-use in a variety of pedagogical instances.⁷⁵²

The term Open Courseware comes from a Massachusetts Institute of Technology (MIT) initiative through which most of its educational course materials are openly made available for use and reuse.⁷⁵³ It was the first of its kind and was named MIT Open Course Ware (OCW).⁷⁵⁴ The open courseware consortium has emerged as an off-shoot of the MIT OCW under the leadership of MIT and the Hewlett Foundation. The OCW consortium website provides useful information on OCW projects carried on in different parts of the world especially in developing countries.⁷⁵⁵

The term OER was however first coined at a UNESCO meeting held in 2002 in Paris, where educators meet in response to the feedbacks, impacts and inspirations from Open Courseware and decided on the need for greater access to educational resources for all of mankind especially to those from disadvantaged regions.⁷⁵⁶ Johnstone noted that the meeting defined OER as “the open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes”.⁷⁵⁷

⁷⁵¹ OECD, *Giving Knowledge for Free: The Emergence Of Open Educational Resources* (OECD Publishing, 2007) 30.

⁷⁵² See generally, Stephen Downes, *Learning Objects: Resources for distance education worldwide*, (2001) 2 *The International Review of Research in Open and Distributed Learning (IRRODL)*.
See also, J.L Moore, et al., ‘e-Learning, online learning, and distance learning environments: Are they the same?’, (2011) 14 *Internet and Higher Education*.

⁷⁵³ (MIT) Massachusetts Institute of Technology, *About OCW* <http://ocw.mit.edu/about/>. The site currently hosts over 2150 courses and has had over 125 million visitors.

⁷⁵⁴ Sally Johnstone, *Open Educational Resources Serve the World*, (2005) 3 *Educase Quarterly*.

⁷⁵⁵ (MIT) Massachusetts Institute of Technology, *About the OpenCourseWare Consortium*, <http://ocw.mit.edu/about/ocw-consortium/>.

⁷⁵⁶ UNESCO, *Open Educational Resources* <http://www.unesco.org/new/en/communication-and-information/access-to-knowledge/open-educational-resources/>.

⁷⁵⁷ Sally Johnstone, *Open Educational Resources Conversation in Cyberspace*, (UNESCO Publishing, 2009) 30.

UNESCO defines OER as “teaching, learning or research materials that are in the public domain or released with an intellectual property license that allows for free use, adaptation, and distribution.”⁷⁵⁸

The 2012 PARIS OER declaration defines the term as “teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions”.⁷⁵⁹

In a report commissioned by the Organisation for Economic Co-operation and Development (OECD) OER was defined as “The open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes”⁷⁶⁰

A definition of OER commonly used is: “open educational resources are digitised materials offered freely and openly for educators, students and self-learners to use and reuse for teaching, learning and research”.⁷⁶¹

In the opinion of Atkins and as found on the William and Flora Hewlett Foundation website, “OER are teaching, learning and research resources that reside in the public domain or have been released under an intellectual property license that permit their free use or re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, softwares and any other tools, materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge”⁷⁶²

The definitions provided above all explain OER from similar but different perspectives. There are however fundamentals issues when considering what an OER is. These fundamentals include the following:

5.2.1 Content

Characteristic of any OER is the element of providing usable and reusable resources/content for educational purposes and they must be such that meet educational needs. These resources

⁷⁵⁸ UNESCO, Open Educational Resources above n 748

⁷⁵⁹ UNESCO World Open Educational Resources (OER) Congress (2012) held in Paris, June 20-22, 2012

⁷⁶⁰ OECD, above 743, 30.

⁷⁶¹ Ibid.

⁷⁶² Daniel E Atkins, et al., *A Review of the Open Educational Resources (OER) Movement: Achievements, Challenges, and New Opportunities* Prepared by Atkins, Brown & Hammond. <http://www.hewlett.org/uploads/files/ReviewoftheOERMovement.pdf>. See P.4

come in different languages depending on the source of creation but may be translated, adapted and modified to meet specific needs. These resources vary in quality, style and packaging and may contain single topics, multiple topics, single courses, full courses, course materials, modules, textbooks, streaming videos, test sample and answers, softwares and any other tools. The onus is on the institutions or individuals to first locate and then appropriately adapt these resources.⁷⁶³

5.2.2 Target Actors

The traditional model for creating educational materials have been for teachers to develop these materials and for students to use them. Sharing educational materials under the traditional model was common but was geographically restricted.⁷⁶⁴ In today's ICT world, the development of educational resources has taken a totally different dimensions. Both teachers, students and independent minds are actively involved in the development of educational resources.⁷⁶⁵ A simple search on the internet of an educational related topic is most likely to reveal several resources from professors (teachers), fellow students and from individuals who are neither teachers nor students (independent minds). Some of the definitions of OER infer a teacher creates, student use model; others suggest an all-inclusive creation model where students and teachers are seen both as creators and users. Understanding and adapting to the changes brought by technology to the educational sector would take some time, hence it is understandable and expected that the teacher creates and student use model would continue to exist but with time the all-inclusive creation and use model is likely to become predominant. OER is best maximized when all available parties (teachers, students and independent minds) are involved in the creation, use and reuse of educational resources.

5.2.3 Platform/Format

⁷⁶³ Neil Butcher, Asha Kanwar, Stamenka Uvalic-Trumbic, *A Basic Guide to Open Educational Resources (OER)*, A Report Commissioned by the Commonwealth of Learning and the UNESCO, (COL & UNESCO, 2011) 12. Where it was noted that " the primary responsibility for finding the right materials to use and for using them to support effective education, still resides with the institutions and educators..."

⁷⁶⁴ Fadokun James Banji, *Open Education Resources and Teacher Professional Development in Nigeria: Prospects and Challenges, a paper delivered at the 7th Pan-Commonwealth Forum on Open Learning (PCF7) at <http://pcfpapers.colfinder.org/bitstream/handle/5678/125/Paper%20460%20%20%28Supplementary%20File%209.pdf?sequence=1>*. See the abstract which notes that OER amongst other things obviates demographic, economic and geographical educational boundaries.

⁷⁶⁵ Ilkka Tuomi, 'Open Educational Resources and the Transformation of Education' (2013) 48 *European Journal of Education* 70 (2013). 'A major promise of OER is that the creation and refinement of both learning content and the underlying pedagogical approaches can benefit from the distributed co-creation model enabled by open licences. In principle, a rich developer base facilitates the creation of resources. In practice, the benefits may depend on the type of content and resource developed...a knowledge-based economy is characterised by the fact that no single individual is able to know as much as all social actors know together.'

Information Communication Technology has enabled easy digitization, dissemination and distribution of millions of materials. One of the fundamental principles of the OER movement is built on distribution via the Internet and some definitions have tilted to this model.⁷⁶⁶ The issue here is that the digital divide between the developed western nations and the developing as well as the least developed nations place the latter group at the disadvantaged position with regards to accessing needed content.⁷⁶⁷ The irony is that the greater need for OER rests with those who do not have easy access to the Internet. It may therefore be difficult or inappropriate at this stage to limit the format for OER to digitized materials as this may defeat the purpose.

5.2.4 Intellectual Property (IP)

IP provides the legal framework that regulates how content is used and reused. The general rule for created content is that they are protected under intellectual property regimes which prohibit exploitation without prior consent.⁷⁶⁸ Where creators of educational resources intend that such resources be open educational resources, an active step must be taken to ensure that this happen. This is very important because by default, created contents are protected under proprietary rights and are therefore closed, that is, not freely available for use and reuse.⁷⁶⁹ To make it open, creators have several options, they may choose to use works within the public domain (a free zone where no Intellectual Property Rights exist on contents) or apply an open licence to the work allowing for free access, use and reuse or whatever permission is intended to be granted. (See 2.5.6).

5.2.5 Commercial or Non-Commercial

Use of a work is deemed commercial when use is for profit and non-commercial when it is used not-for-profit. The line between for profit and not for profit use often become blurred especially with educational institutions that are registered as not-for-profit making entities but yet charge some kind of fees. This raises issues as to whether or not use by these institutions would fall

⁷⁶⁶ Budapest Open Access Initiative, above n 18. Where it was noted that "An old tradition and a new technology have converged to make possible an unprecedented public good... The new technology is the internet."

⁷⁶⁷ Wenhong Chen & Barry Wellman, 'The Global Digital Divide – Within And Between Countries', (2004) 1 *IT & Society*, 18

⁷⁶⁸ Ola, above n 213.

⁷⁶⁹ See, Liang, above n 598 v1.2 43. 'Every open content license therefore asserts the copyright of the author and states that without a license from the author, any user using the work would be in violation of copyright.'

See also, Lucie Guilbault & Christina Angelopoulos, *Open Content Licensing* (Amsterdam University Press. 2011) 8. "This new licensing model purports to rectify the shortcomings of the copyright regime by allowing, through contracts increased access to and use of artistic and scientific works"

within commercial or non-commercial. As seen in two of the definitions above (UNESCO⁷⁷⁰ and OECD⁷⁷¹) use within the OER context need be for non-commercial purposes.

The legal sharing mechanism under which OER operates is open licensing and the focus of open licensing just like that of open source software is not to prohibit or even discourage commercialization but rather to enable access for use as well as reuse leading to further development.⁷⁷² It may therefore serve the wider interest if OER's are neutral sensitive to the issue of "commercial or non-commercial." OER should therefore not be restricted to non-commercial use as such restrictions are capable of limiting the enabling ability of the contents being created. Rather OER should focus on providing right of access, use and re-use and not limit the potential ability of the re-use right.

5.3 COMPONENTS OF OPEN EDUCATIONAL RESOURCES

This section of the chapter examines three components of OER, that is, *open, educational and resources*. They are examined as individual concepts within the broader meaning of the OER movement and identified with what they stand for and how they impact the society but specifically the education sector.

A critical look at definitions provided above shows that the term is quite broad and vague. What exactly does it cover, what does it entail, what are the ambits and limits? According to Johnstone, OER has been interpreted to include the following:

- "Learning resources- courseware, content modules, learning objects, learner-support and assessment tools, online learning communities.
- Resources to support teachers - tools for teachers and support materials to enable them create, adapt, and use OER, as well as training materials for teachers and other teaching tools.
- Resources to assure the quality of education and educational practices."⁷⁷³

5.3.1 Open

Educational resources captured in tangible medium may comprise literary works, computer softwares, sound recordings or some other form of works and are therefore works that enjoy

⁷⁷⁰ Johnstone, above n 749.

⁷⁷¹ OECD, above 743.

⁷⁷² Stallman, above 288.

⁷⁷³ Johnstone, above 746.

copyright protection from a legal perspective. These works enjoy all the inherent bundle of rights attributable to copyright inclusive of the right to make available to the public.⁷⁷⁴ In this sense, such works may be made available or offered to the public on commercial or non-commercial terms at the discretion of the author or copyright owner. They may be made available in hard copy, soft copy, pdf or word version. They may be locked up within the traditional publishing system or may be licensed for use and re-use.

In the context of OER, the term open requires that educational resources are not just merely created, published and made available but also structured to be freely open for viewing, use, reuse, adaptation, improvement, distribution and are to be shared among other things. In essence, authors or copyright owners are expected to exercise their discretion to make their educational resources available on terms that would allow access, use and reuse of such works. In practice, authors apply a licence to the work enabling would be users identify the work as one free for access, use and reuse subject to conditions where applicable.

Open within the OER context plays a role on the implications of rights granted on educational materials, it clarifies amongst other things the scope of access, use and reuse that has been permitted, its effect on the grantor (the one who granted the rights) whether any right still accrues to the copyright owner and the extent to which the materials are exploitable.⁷⁷⁵

The views are divergent as to the interpretation of open in OER. Walker opined that open should be “convenient, effective, affordable, sustainable and available to every learner and teacher worldwide.”⁷⁷⁶ Daniel referring to D’Antoni says it must have the 4A’s, accessibility, appropriateness, accreditation and affordability.⁷⁷⁷ Downes appears to favour the view that open ought to be at no cost to the consumers. He says, “It is not clear that resources which require some sort of payment by the user- whether that payment be subscription fees, contribution in kind, or even something simple, such as user registration- ought to be called ‘open’. Even when

⁷⁷⁴ See Article 6(1) on the Right of distribution, WIPO Copyright Treaty, adopted in Geneva on December 20, 1996, http://www.wipo.int/treaties/en/ip/wct/pdf/trtdocs_wo033.pdf WCT (1996). "Authors of literary and artistic works shall enjoy the exclusive right of authorizing the making available to the public of the original and copies of their works through sale or other transfer of ownership." See also, articles 8(1), 12(1) and 14WPPT (1996). See also, article 14(1) (September 9, 1886). which notes that "authors of literary and artistic works shall have the exclusive right of authorizing...the distribution of the work..."

⁷⁷⁵ Alek Kwi, *Open Lesson launched in Poland with 30 workshops* European Open Edu Policy Project <http://oerpolicy.eu/open-lesson-do-it-yourself-workshop-materials-on-open-education/>. ‘the kids let it go a little bit and stopped being copyright extremist. What is more, the teacher used our scenario also to discuss how to protect one’s personal data on Facebook, and why this is so important.’

⁷⁷⁶ OECD, above n 743.

⁷⁷⁷ John Daniel, et al., *eLearning and Free Open Source Software the Key to Global Mass Higher Education*, http://www.col.org/PublicationDocuments/pub_JDspeeches_Vol2_web.pdf, 2 COL (2006).

the cost is low – or ‘affordable’ – the payment represents some sort of opportunity cost on the part of the user, an exchange rather than sharing.”⁷⁷⁸

In Richard Stallman’s opinion, open would need to comply with his “four freedoms” namely;

1. The freedom to run the program, for any purpose
2. The freedom to study how the program works and adapt it to your needs.
3. The freedom to redistribute copies so you can help your neighbour
4. The freedom to improve the program and release your improvement to the public, so that the whole community benefits.⁷⁷⁹

Tuomi distinguishes between two domains (social and technical) where ‘open’ has fundamental consequences. On the social side, he refers to Stallman’s four freedoms where he said “A program is free software if users have all of these freedoms. Thus you should be free to redistribute copies, either with or without modifications, either gratis or charging a fee for distribution, to anyone anywhere. Being free to do these things means (among other things) that you do not have to ask or pay for permission.”⁷⁸⁰

On the other hand, the technical side is characterised by technical interoperability and functionality in contrast to the social side which is fundamentally motivated by the expected social benefits and ethical considerations related to human freedoms. In this domain, the interest is that products must be technically compatible and able to work with one another. Developing programs that work on restricted systems builds a technical divide and raises the issue of interoperability and functionality. An acceptable ‘Open’ within the OER movement would be required to be non-specialised in the technical sense. It would be required to conform to open standards, that is, standards that can operate and communicate with one another regardless of the format.⁷⁸¹

Whereas, some are of the opinion that ‘Open’ ought to be non-commercial,⁷⁸² others are of the view that the commerciality or non-commerciality of an OER is immaterial as one of the freedoms the user should have is a choice as to commercial or non-commercial distribution. As

⁷⁷⁸ Stephen Downes, *Models for Sustainable Open Educational Resources* <http://www.oecd.org/edu/ceeri/36781698.pdf>.

⁷⁷⁹ Stallman, above 288.

⁷⁸⁰ Ilkka Tuomi, *Open Educational Resources: What they are and why do they matter. (2006) 8 Report prepared for the OECD* http://www.meaningprocessing.com/personalPages/tuomi/articles/OpenEducationalResources_OECDreport.pdf

⁷⁸¹ Anne Fitzgerald & Kylie Pappalardo, ‘Open Standards in Government’, in Brian Fitzgerald ed., *Access to Public Sector Information: Law, Technology & Policy*, (Sydney University Press, 2010) 304.

⁷⁸² Downes, above n 770.

to whether or not the work would be in the public domain will be determined by the type of licence granted. What is sacrosanct is that ‘Open’ must be free to access, use and reuse.

The different opinions reflect an apparent interest in ensuring that all of humanity have equal opportunities for development and that access barriers constituting hindrances to self-actualisation is done away with as much as possible. Walker and Daniel agree that open in the OER context should be easy to access, appropriate, cost friendly and sustainable. Downes wants them to be at no cost to the consumer, Stallman’s four freedoms capture Walker and Daniel’s views but goes further to provide that open would be required to be adaptable and redistributable. Tuomi’s social and technical perspective encapsulates the views of Walker, Daniel and Stallman. Open within the OER context seeks to ensure that educational resources are available, accessible, affordable, reusable, adaptable and distributable within accepted legal frameworks.

5.3.2 Educational

Education refers to the process of receiving or giving systematic instruction, especially at a school. This term is subject to multiple interpretations. The Federal Communications Commission’s (FCC) second report and Order (FCC 03-101, released on the 30th of April, 2003) amended its rules to give clarity to the meaning and definition of educational purposes but did not define the term⁷⁸³. In the case of *NCAA v Kansas Dept. of Revenue*, McFarland J gave an indication of the meaning of the term when he noted that educational refers to organized curriculum of classes and courses involving the systematic teaching and learning process.⁷⁸⁴ In an attempt to clarify the meaning of the word, the judge referred to the K.A.R 9219-75 which provides that educational institutions are not organisations that merely provide a series of classes or instructions on one topic, vocation or skill... impart knowledge to the public in a general manner through tours, seminars...⁷⁸⁵

Whereas the case was to establish if NCAA qualified as an educational institution, from the decision of McFarland, important facts on the word “educational” can be elicited to the effect that education refers to a process where organized teaching and learning is communicated. It could be through classes, courses, instructions on one or more topics, on vocations or skills. It should involve impartation of knowledge or information.

⁷⁸³ Federal Communications Commission, *Federal Communications Commission’s (FCC) Second report and Order (FCC 03-101, released on the 30th of April, 2003)* 47 C.F.R. § 54.500(b). at http://www.sl.universalservice.org/reference/educational_purposes.asp.

⁷⁸⁴ *The National Collegiate Athletic Association V Kansas Department of Revenue*, 781 P.2d 726, 245 Kan. 553, (Supreme Court).

⁷⁸⁵ Ibid

The content involved in delivering education is regulated by IP laws which by default restricts use and reuse of such materials. In recognition of the importance of education to the common good and public interest, the national copyright laws of most countries provide limitations and exceptions to copyright as well as compulsory licensing.⁷⁸⁶ These provisions specify certain circumstances, such as educational purposes, where it would allow for the use of copyright protected materials without the need for prior permission. These provisions are often expressed within the doctrine of fair use and fair dealing depending on the jurisdiction.⁷⁸⁷

Educational purpose from the context of the United States Copyright Law,⁷⁸⁸ allow for teaching (including multiple copies for classroom use), scholarship, or research. The Copyright laws of Canada⁷⁸⁹, Nigeria⁷⁹⁰ and South Africa⁷⁹¹ amongst many others exclude from copyright infringement, use without prior consent, of copyright protected work when it is used for educational purposes. The provisions of the three countries under 'fair dealing' all have similar slants but are however different. While the Canadian Copyright Act provides for "research or private study"⁷⁹², that of Nigeria provides for "research and private use"⁷⁹³ and South Africa's Copyright Act combines both providing for "research or private study, personal or private use"⁷⁹⁴.

What is however common in all the legislation is the acknowledgement of the importance of education, the allowance for 'use' provided by each legislation and the exclusion from infringement of such use. None of the legislation however define what educational purpose is but give an indication on what is excluded from copyright infringement under the auspices of educational purposes.

Considering the allowances provided for 'use' under national legislation via limitations, exceptions and compulsory licenses, one may have thought that with such provisions, OER's have been catered for and further initiatives in this respect would be unnecessary. In reality, the

⁷⁸⁶ See P.B Hugenoltz & Ruth.L Okediji, *Conceiving an International Instrument on Limitations and Exceptions to Copyright* (Institute for Information Law & University of Minnesota, Law School, 2008) 19. Where it was noted that "In all likelihood, the term applies first and foremost to statutory limitations that curtail the rights of right holders in specific circumstances to cater for the interests of certain user groups or the public at large."

⁷⁸⁷ Reichman & Okediji, above n 160. See where it noted that "Questions about unauthorized reproductions of published research results in scientific journals were typically resolved by limitations and exceptions in the domestic copyright laws, especially a fair use exception in the United States and a private use exception in European copyright laws"

⁷⁸⁸ Section 107, The United States of America, Copyright Act of 1976 Title 17 of United States Code (1976).

⁷⁸⁹ Canadian Copyright Act, C-42 (1985).

⁷⁹⁰ Nigerian Copyright Act, Cap C28 (2004).

⁷⁹¹ South African Copyright Act No.98 of 1978 (1978).

⁷⁹² Canadian Copyright Act, Section 29, C-42 (1985).

⁷⁹³ Nigerian Copyright Act, Second Schedule, Cap C28 (2004).

⁷⁹⁴ South African Copyright Act, Section 12(1)a, (1978).

scope of both concepts are different. While limitations and exceptions are focused on “*limited use and reuse*”, OER’s are focused on “*unlimited use and reuse*”. OER’s provide a platform for unrestricted exercise of the human mind by the removal of barriers that could inhibit the creation, development, adaptation, translation, use and reuse of educational resources.

As can be deduced from the provisions in the above referred legislation, ‘educational’ would entail research, teaching, private study, private use, personal use and scholarship. In the context of OER, educational purpose transcends use within the formal educational settings. It contemplates the non-formals considering that learning extends beyond formal settings and resources used within the non-formal settings are on all four instances of OER⁷⁹⁵. Educational would therefore include teachers, students, adult education learners, distance learning education providers and receivers, private researchers, and curious minds.

5.3.3 Resources

Resources imply a pool from which can be drawn that which is required. They come in different forms and in this era of Information Communication technology where technological development has penetrated virtually all sectors, resources may be categorized into digital and non-digital resources.⁷⁹⁶

Non-digital resources are depletable with use. On the contrary, digital resources are not depletable as increased usage do not reduce its amounts but rather increases its value.⁷⁹⁷

Resources in the OER context could therefore be understood as “resources that produce services that anyone can enjoy, without reducing the enjoyment of others”⁷⁹⁸

5.4 RATIONALE FOR OER

If one were to consider the schools of thought positing that a stronger IP regime incentivizes creativity and innovation⁷⁹⁹, one may then wonder why educational resources (which are primarily contents enjoying IP protection) should be made open as this may adversely affect

⁷⁹⁵ OECD, above n 743.

⁷⁹⁶ David W. Barnes, ‘Congestible Intellectual Property and Impure Public Goods’ (2011) 9 *Northwestern Journal of Technology and Intellectual Property* 533. See where it was noted that “The conventional economics of intellectual property law is based on public goods theory. The information embodied in intellectual property has two characteristics that distinguish it from tangible property. Like other public goods, copyrighted expressions and patented inventions are non-rivalrous and non-excludable.”

⁷⁹⁷ Suber, above n 45.

⁷⁹⁸ OECD, above n 743.

⁷⁹⁹ See Fitzgerald Brian, ‘Copyright 2010: The Need For Better Negotiability/Usability Principles’, in Greg Hearn & David Rooney (eds.), *Knowledge Policy Challenges for the 21st Century*, (Edward Elgar, 2008) 152-161, 152. Where he noted “As the mantra goes, copyright law is needed as an incentive or a reward for creators in a world where it is hard to control information”.

creativity and innovation? Expressing the same thoughts in a different way; in an environment with strongly rooted consciousness of intellectual property protection for creativity and innovation, some may wonder why anyone will make freely available and grant others the right to use and reuse educational materials. The underlying rationale for such acts could be understood from the combination of several factors including the following:

5.4.1 Technological Advancements

This refers to advancements in information communication technology, the Internet, newer and more sophisticated hardware and software, broadband networks and other ICT infrastructures. The combined effect of these gadgets, the softwares and hardwares and the platform of the internet have given interested individuals the opportunity for easier engagement in the process of producing and sharing content, thus bringing about the creation and distribution of content in an unprecedented dimension.⁸⁰⁰ The argument in favour of free distribution of digital content is that outside the cost of Internet connection, sharing is virtually at no cost.⁸⁰¹ The current technologies responsible for production and dissemination of information has enabled the production and dissemination of multiple copies at little or no cost. This is one of the pillars that enables open educational resources. The cost, time and quality implications involved in producing and disseminating information under previous technologies like the printing press has changed with the introduction of personal computers and the Internet.⁸⁰²

5.4.2 Cost

The increase in the cost of quality education and educational materials has excluded many from access to education. Open educational resources avail the opportunity of access to use and reuse quality educational resources at no cost. OER is therefore able to mitigate the rising cost of educational materials and subscription fees.⁸⁰³ These costs have become prohibitive and place students' debt at one of the highest in America⁸⁰⁴. It also stands as a hindrance to students, researchers, teachers and learners' interested in gaining access to useful and needed materials. On the other hand, the Internet is empowering the creation of new models such as open access publishing for the provision of access to knowledge.⁸⁰⁵ Governments are recognizing the economic advantage of adopting OER policies and the huge savings they are able to make. A

⁸⁰⁰ Bollier, above n 177, 3-4. 2008.

⁸⁰¹ Suber, Open Access Overview: Focusing on open access to peer-reviewed research articles and their preprints, <http://www.earlham.edu/~peters/fos/overview.htm>.

⁸⁰² Joel Waldfogel, The Four P's Of Digital Distribution In The Internet Era: Piracy, Pricing, Pie-Splitting, And Pipe Control, (2010) 7 *Student's Guides to the U.S. Government Series* 3, 17.

⁸⁰³ Norrie, above n 57.

⁸⁰⁴ Edwards, above n 185.

⁸⁰⁵ Gutterman, above n 693, 41 2011.

staff with the Creative Commons, Cable Green explained the cost efficiency and effectiveness of adopting OER strategies by using his home state of Washington as an example. He noted that his state spends \$130 million per year buying textbooks for about 1 million students, that is, \$130 per child.⁸⁰⁶ He suggests that instead of spending \$130 million per year, it can be reduced to 10 million per year by adopting OER policies where a “Request For Proposal” would be put out for each book on the condition that books would be licensed under a Creative Commons licence and thus the Intellectual Property (IP) would belong to the state, more so that it has been created with taxpayers funds. Doing this will afford the students the opportunity to not only access the materials but also to own copies. Cable estimates that the cost of making the materials available in e-version, paper print and other running cost would not be more than \$10 million yearly thus enabling a saving of about \$120 million yearly.⁸⁰⁷

5.4.3 Adult Education

As governments of the world strive to attain the Millennium Development Goal (MDG) of Universal Primary Education, more adults are showing interest in obtaining basic education and with economic resources dwindling globally, affordability is an issue. The other issue with adult education is the time and convenience. Most adult students have little time to spare as they are parents and workers. Technology provides them the opportunity to learn at their convenience and in the comfort of their home while open educational resources address the challenges of affordability of educational materials.

5.4.4 Growing Competition between Higher Educational Institutions

High educational institutions that provide open educational resources are able to showcase the quality of their educational materials. This serves as some form of advertisement and it breeds healthy competitions amongst the higher educational institutions.

5.4.5 Altruistic Reasons

Not all authors are centred on the revenue they will generate from their writing. In fact, a lot of authors write basically for tenure purposes while others do so for the mere pleasure of it. They love to write and they would be satisfied knowing that others have read it and that it is able to help them.⁸⁰⁸ It is for this reason people licence their works and authorize not just the use but

⁸⁰⁶ Green, OER K-12 Bill Passes in U.S. Washington State above n 742.

⁸⁰⁷ Simon Owens, *The Growing Adoption of Creative Commons Textbooks*, US News, 2013.

⁸⁰⁸ Peter Suber, *Open Access to Science and Scholarship*, <http://legacy.earlham.edu/~peters/writing/wsis.htm>. Where he noted that “Over time, journal revenue grew but authors continued in the tradition of writing articles for impact, not for money. Books were different because they often paid royalties. For articles, authors were amply paid by advancing knowledge and advancing their careers.

also the reuse of their work through reproduction, public performance, translation, adaptation, and other means.

5.4.6 A Social Responsibility Through Which The Common Good Is Served

An intrinsic characteristic of any OER is the interest to serve the common good and this is achieved by ensuring that all OER content must be open for “use and reuse”. It must be shareable and adaptable and no barriers should stand in the way of these intrinsic characteristics of any OER⁸⁰⁹. The Free Open Source Software Movement (FOSS) is an organisation and a platform that has spearheaded the ideology of sharing and they are strong advocates for the Access to Knowledge (A2K) movement. They continue to raise awareness on the need to share and that sharing is in the interest of the common good for all of humanity.

OER is built on the FOSS’s sharing culture which allows not only free access to the use of softwares but go even further to provide the source codes thus allowing would be users to alter the software for personal and even proprietary needs and further requires that such alterations be made available on the same term for other would be users, thus ensuring not only a channel for continued access but entrenching a culture of sharing as against a locked up one.⁸¹⁰

5.4.7 New Business Models created on the Platform of the Internet

Technology affords the opportunity of delivering education via new business models in contradistinction to the old business model.⁸¹¹ Initiatives like Khan Academy are able to offer first class education for free. These are new business models enabled by the internet providing quality educational services using open educational resources. If a new business model avails the opportunity to get it for free why pay for it?

See also, Corydon Ireland, *Scholarly Access to all*, (15 July 2014) Harvard Gazette <http://news.harvard.edu/gazette/story/2014/07/scholarly-access-to-all/>. Where it was noted that

“The idea of reaching that larger audience is attractive. “Scholars write journal articles for impact, not money,” said Suber. That’s been true since the mid-17th century, when the first academic journals appeared in London and in Paris, he said. “The custom grew up that scholars are not paid for their articles.” This puts scholars among the few creative professionals, like lawmakers and judges, who are not paid for what they write.

“Yet they’re eager to publish anyway,” said Suber. “They voluntarily — even eagerly — give away their work to publishers who do not buy it or pay royalties on it.” Academics get other rewards for their scholarship, such as tenure and peer recognition. They also get attention, which helps build academic careers.”

⁸⁰⁹ See generally Susan D’Antoni, Open Educational Resources: The Way Forward, Deliberations of an International Community of Interest. (2008) <http://www.pontydysgu.org/wp-content/uploads/2008/03/oer-way-forward-final-version-for-printing.pdf>.

⁸¹⁰ Stallman, above n 288.

⁸¹¹ Bollier, above n 177, 3-4. 2008.

5.4.8 It Has Been Mandated By My Employers

Governments, employers and funding organisations are beginning to understand the value and importance of OER and are issuing policies requiring the development of OER. In such instance, these OER are developed in compliance with these policies.

5.4.9 Easy Accessibility to a New Licensing Model Allowing for Development of OER

The development of open licensing and the ease in applying them on educational materials help in copyright clearance and resolves copyright uncertainties.⁸¹² Educational resources are managed under the broad Intellectual Property regime, specifically under copyright which controls “use and reuse” subject to limitations and exceptions.⁸¹³ Open content licensing (a license granting permission in advance to would be user based on specified conditions) is a tool that can be used to remove barriers to access. The introduction of standard licenses by the Creative Commons has been very useful in simplifying rights clearance and enable users to “use and reuse” without violating current legal provisions.⁸¹⁴

5.5 THE ROLE OF THE LAW AND OPEN EDUCATIONAL RESOURCES

The law provides standard, is an enabler and a disabler serving public and private interests. Copyright laws protect private interest by incentivizing creation and innovation. It also caters for public interest through limitations and exceptions to copyright. The rules of copyright are also able to enable use and reuse through open licensing and at the same time can be used as a disabler by simply doing nothing with copyright which is restrictive by default or by the application of a restrictive license (NC-ND) restricting commercial use and reuse rights.⁸¹⁵

5.5.1 As an Enabler

In South Africa, the Department of Basic Education, (the agency responsible for schools) embraced a policy which enabled the free distribution of science and maths textbooks to all

⁸¹² Creative Commons, *About the Licenses: What our licenses do* <http://creativecommons.org/licenses/>

⁸¹³ See Divisions 3, 4 and 4A of the Australian Copyright Act 1968 Act No. 63 of 1968 as amended Act No 63 (1968).

See Sections 40-47A (Division 3), Sections 45-47A (Division 4), Sections 47AB-47H (Division 4A).

See also, Sections 29-32.2 of the C-42 (1985).

See also, S.107-122 Title 17 of United States Code (1976). See Specifically Section 107 for Fair use, 108-112, 117, 119, 121 ad 122 for other limitations on exclusive rights to copyright.

See also, the second schedule to the Cap C28 (2004).

See also, sections 12-19 of the (1978).

⁸¹⁴ Fitzgerald, above n 376, 3.

⁸¹⁵ Brian Fitzgerald, *Open Content Licensing (OCL) for Open Educational Resources: A paper commissioned by the OECD's Centre for Educational Research and Innovation (CERI) for the project on Open Educational Resources*, (2007) 7.

schools within the country.⁸¹⁶ The resources distributed included comprehensive set of workbooks and teacher's guides in both English and Afrikaans.⁸¹⁷ Siyavula's open education project which operates an open license is what permitted and enabled the government of South Africa to freely print and distribute the educational materials all across South Africa.⁸¹⁸ Without this open license, that is, the legal authorisation, the South African government would have been in violation of copyright laws.

5.5.2 As a Standard

The law governs societal behaviour to ensure peace and harmony. Without laws, everyone would do what seems right to him or her.⁸¹⁹ Some may describe such a state as freedom; where each person expresses himself or herself without reservation and without consideration of others. The lack of consideration of others is where the problem comes in. Although freedom is important, the exercise of freedom by A should not impinge on the freedom of B nor cause harm to B. Where this happens, a problem arises and resolution is required. The mode of settlement is usually determined based on set of rules which the people have agreed would govern and regulate their behaviours.⁸²⁰

5.6 IP THE LEGAL FRAMEWORK FOR OER

Access to education, sharing of knowledge and dissemination of information is governed by different but similar national legislation (usually the national copyright laws) as well as several international conventions such as the Berne Convention,⁸²¹ TRIPS⁸²² and the WIPO Internet Treaties⁸²³. These laws are connected in some way to several fields of law. Intellectual Property (IP) laws however play a major role in the regulation of the exploitation of creativity and

⁸¹⁶ Rob Farrow, *National uptake of Siyavula textbooks in South Africa* (2014) <http://oermap.org/evidence/national-uptake-of-siyavula-textbooks-in-south-africa/>.

⁸¹⁷ Institute for the Study of Knowledge Management in Education (ISKME), *Siyavula: Building Communities to Support Teacher Use Localization and Sharing of OER* <http://www.iskme.org/our-work/siyavula-project-formative-and-summative-research-study>.

⁸¹⁸ See SIYAVULA, above n 687. "Because the knowledge was openly-licensed, the government was able to print and distribute millions of copies of these books at a fraction of the usual cost. Suddenly knowledge was being shipped in crates and trucks to every corner of the land."

⁸¹⁹ The Holy Bible : Authorized King James Version, containing the Old and New Testaments. 1984, Judges 21:25.

⁸²⁰ H.L.A. Hart, *Law, Liberty, and Morality* (Stanford University Press. 1963) 14, 47. "In this field, its function, as we see it, is to preserve public order and decency, to protect the citizen from what is offensive or injurious, and to provide sufficient safeguards against exploitation and corruption of others..." "Recognition of individual liberty as a value involves, as a minimum, acceptance of the principle that the individual may do what he wants, even if others are distressed when they learn what it is that he does - unless, of course, there are other good grounds for forbidding it." Respectively.

⁸²¹ (September 9, 1886).

⁸²² World Trade Organization (WTO), Agreement on Trade-Related Aspects of Intellectual Property Rights (World Trade Organization (WTO) ed., 1994).

⁸²³ WIPO, above n 253.

innovation and have to a large extent determined the scope of access and sharing of knowledge and information within the knowledge economy.⁸²⁴

The World Intellectual Property Organisation (WIPO) refers to Intellectual Property as “creations of the mind: inventions, literary and artistic works, and symbols, names, images and designs used in commerce.”⁸²⁵ IP can be divided into two, Industrial Property and Copyright. Whilst Industrial property covers inventions, trademarks, industrial designs and geographical indications of sources; Copyright on the other hand covers literary, artistic and musical works (traditional copyright) as well as sound recordings, performances, and broadcasts referred to as neighbouring rights or rights related to copyright.

IP laws are crucial to OER because the contents, softwares, methodologies and platforms created and used in the field of OER are covered by intellectual property laws.

5.7 LAW IN THE PRIVATE AND PUBLIC INTEREST

While copyright is an exclusive right which restricts exploitation subject to the grant of permission, statutory/compulsory licence, or through limitations and exceptions to copyright;⁸²⁶ patents are exclusive rights granted in exchange for the disclosure of the technical workings of an invention⁸²⁷ and trademarks are distinctive signs which identify certain goods or services as those from a specific source.

These laws control the exploitation of the products of knowledge by granting exclusive rights to the owners which rights are tantamount to restricting access, use and re-use of creativity and innovation subject to the allowances granted by the law. These laws are double edged. On one side, it incentivizes creators or innovators to bring about further creativity and innovation and on the other hand, it protects these creations and innovations by locking them behind paywalls with IP rights, technological protection measures (TPM) as well as digital rights management (DRM) from would be and willing users.⁸²⁸

⁸²⁴ Internet Industry Association (IIA), *Principles for a Digital Economy: A manifesto on internet policy and regulation with principles and recommendations to guide decision making* <http://iia.net.au/sites/default/files/manifesto-2010-6.pdf>.

⁸²⁵ WIPO, *What is Intellectual Property*, available <http://www.wipo.int/about-ip/en/>.

⁸²⁶ Ola, Copyright Collective Administration in Nigeria: Lessons for Africa above n.54, 4.

⁸²⁷ Kinsella, above n 496, 3.

⁸²⁸ Daniel Cahoy, *Property Right V Public Access* <http://news.smeal.psu.edu/news-release-archives/2009/june-2009/smeal-professor-awarded-fulbright-research-chair>. Where he noted that IP protection incentivises further research but on the flip side also locks up important information.

5.8 LAW AS AN ENABLER AND DISABLER

The A2k, FOSS and OA movements acknowledge the importance of the law but also acknowledges the way and manner in which the law has and is still been used as a platform for restricting access to knowledge. The Open Source Software movement is perhaps the inspiration behind the viral advocacy for free access and sharing of information. The genius within the Open Source software movement is the idea of the grant of prior approval,⁸²⁹ leveraged on the principles of Intellectual Property's proprietary rights, particularly copyright which grant owners the right to control exploitation of a work subject to certain exceptions and limitations.⁸³⁰ In this sense, the law in its current state constitutes a disabler than an enabler and thus the need for developing mechanisms that are capable of working within the current legal framework and at the same time would fulfil the vision and mission of making provision for access, use and re-use of knowledge via the internet at a near zero cost.⁸³¹

The core of OER is for it to be useable and reusable without restrictions. The open licensing mechanism has proved very useful in this regard and Creative Commons licenses have been the focal point. It can therefore be said that OER builds upon the ideals of the A2k, FOSS and OA movements and utilizes tools such as open licenses and policies to facilitate the creation and sharing of educational resources in the interest of all willing users and at the same time conforming to the requirements of the legal system. It is however the hope that our current legal framework will be amended to reflect the current societal realities which now tilts in favour of a sharing culture in contrast to the former restrictive/closed framework. (See 2.5.6 and 3.9.2).

5.9 LICENSING

Right owners and users often have to come to an agreement on the use of created or innovated works. Legal instruments are often drafted to reflect the terms and conditions between the right owners and users. The impracticability for right owners to regulate and administer all their works have necessitated the use of collecting societies to negotiate and grant licenses as well as, collect and distribute royalties on their behalf.⁸³² The terms of some licenses are often very restrictive and sometimes prohibitive. The professional fees associated with concluding the licensing negotiations is often huge and could serve as a deterrence to otherwise interested users.

⁸²⁹ Fitzgerald, A short Overview of Creative Commons, above n 376, 10-11.

⁸³⁰ Ola, Copyright Collective Administration in Nigeria Lessons for Africa above n 54, 4.

⁸³¹ Waldfoegel, above n 794, 17.

⁸³² Ola, Copyright Collective Administration in Nigeria: Lessons for Africa above n.54, 8.

The movements towards free and open access, use and reuse have initiated licensing regimes that would achieve the legal necessities and at the same time overcome the challenges associated with legal fees, lengthy documentations and easy comprehension of the documents. The FOSS movement's licensing regime started of the process, with Richard Stallman's GNU Project releasing a GNU General Public Licence (GNU GPL). David Wiley converted FOSS's code oriented licence from code to content and came up with an "Open Publication Licence (OPL)" birthing the Open Content Licence.⁸³³ It is on these infrastructures Creative Commons Licences are built.⁸³⁴ Creative Commons has been discussed earlier in Chapter 4 at 4.5. It is however noteworthy to stress that a CC licence is one that provides the legal legitimacy and enables the sharing and use of knowledge and creativity. The permits granted are amenable to the wishes of the licensor who may place conditions on the grant of a permit. The architecture of this licensing model encourages a shift from the "all rights reserved" to a "some rights reserved" or a "no rights reserved" regime. One major aim of this licensing model is the provision of copyright compliant licences that are simple, standardized and free in the interest of the general public. The licenses seek to take away the fears and worries about copyright infringement by providing permission in advance to would be users.⁸³⁵

5.10 POLICIES

Achieving the vision of OER must be a collective effort. Leaving it to individuals will make the task a difficult one. The adoption of policies in favour of OER by organisations, institutions and governments would provide a spring board for OER. Policies are like well-constructed roads that aid easy movement from one point to the other. What an individual will struggle to achieve with regards to an idea by oneself is often easily accomplished when an institutional policy with regards to such idea is in place. The experience with institutional repositories and the issuance of mandates is a testimony to the effect institutional policies can have on an idea and not just on the idea but also on those who are both for and against such ideas. A clear example is that of Siyavula's open education policy which when embraced by the South African department of education enabled the free distribution of school textbooks to students all across South Africa.⁸³⁶ TESSA is another policy initiative that seeks amongst other things to bring together

⁸³³ Till Kreutzer, 'User-Related Assets and Drawbacks of Open Content Licensing', in Lucie Guilbault & Christina Angelopoulos (eds) *Open Content Licensing From Theory to Practice* (Amsterdam University Press, 2011) 109.

⁸³⁴ Esther Hoorn, Contributing to Conversational Copyright: Creative Commons Licenses and Cultural Heritage Institutions, in Lucie Guilbault & Christina Angelopoulos (eds) *Open Content Licensing From Theory to Practice* (Amsterdam University Press, 2011) 206.

⁸³⁵ Fitzgerald, A Short Overview of Creative Commons above n 376, 3.

⁸³⁶ Michael Carrol, *Creative Commons Licenses Opening Access to Education in Sub-Saharan Africa and India*, (2015) Creative Commons <http://us.creativecommons.org/archives/1062>.

teachers and teacher educators from across sub-Saharan Africa and offers a range of open educational resources in different languages.⁸³⁷ The “High Level Workshop on OpenupEd OER and MOOCs for the National Open University of Nigeria” is another example of policy initiatives aimed at encouraging better understanding of OER and encouraging active participation in OER. The workshop was noted as a “first step to NOUN’s roadmap of converting all of its 1800 courses to be completely OERized and MOOC formatted”⁸³⁸

5.11 THE IMPACT OF OPEN EDUCATIONAL RESOURCES

OER is not just a concept in the minds of some overzealous individuals. It is now widely accepted by governments, the public and private sector and is continually making great impact on not just the part of the students, but also on educators, government and independent learners. This section will highlight the growing acceptance and spread of OER and how it is impacting on everyday life.

5.11.1 OER Africa

This is an initiative that plays a leading role in supporting establishments across Africa in the understanding, development and use of OER in enhancing teaching and learning. It provides useful access to information and serves as a hub for locating relevant OER.⁸³⁹ It was established by the South African Institute for Distance Education (Saide) and provides information on a wide range of issues. Through her partnerships with universities in Africa, OER Africa has been able to successfully share OER between Higher Educational Institutions.⁸⁴⁰ This development is particularly important for Africa because of the lack of visibility of African works between Africans and Africans and Africans and the rest of the world.

5.11.2 African Virtual University (AVU)

This is a Pan African intergovernmental organisation established by charter with the mandate of significantly increasing access to quality higher education and training through the innovative use of information technologies. This charter has been signed by 18 African governments. The AVU operates from Nairobi, Kenya and Dakar Senegal, where it has its head and regional offices respectively. AVU was launched in 1997 as a World Bank project and later became an intergovernmental organisation in 2003. AVU has the unique ability to work across the multi-

⁸³⁷ TESSA, *Primary Education Materials*, <http://www.tessafrica.net/>.

⁸³⁸ UNESCO, *High Level Workshop on OpenupEd OER and MOOCs for the National Open University of Nigeria* (2014) <http://en.unesco.org/events/high-level-workshop-openup-ed-oer-and-moocs-national-open-university-nigeria>.

⁸³⁹ OER Africa, *Building African Education Capacity through Openness*, <http://www.oerafrica.org/Home/tabid/36/Default.aspx>.

⁸⁴⁰ Aurelia J. Schultz, *Back to School: Open Educational Resources in Africa* <http://creativecommons.org/weblog/entry/17273>.

lingual borders of Africa and has trained over 43,000 students since inception in 1997.⁸⁴¹ AVU has an OER architecture “through which the creation, organization, dissemination and utilization of OERs is expected to lead to the development of a dynamic, rational and comprehensive strategy for collaborative partnerships for African higher education and training institutions”. AVU has a repository which hosts the majority of AVU materials. In collaboration with the African Development Bank and the UNDP a number of professional courses have been developed and released as OER. These materials are available and accessible through the repository.⁸⁴²

5.11.3 Siyavula

Siyavula Education is an African OER success story that has impacted all of South Africa. With the aid of a Shuttleworth fellowship, the organisation was born and willing minds were able to share knowledge, produce them using the open licensing system and make them freely available online. This freedom is what enabled the South African government to put out these open educational resources and distribute them freely to millions of students.⁸⁴³

5.11.4 Writing Commons

This is an open education platform that provides free comprehensive, peer-reviewed, award-winning Open Text for students and faculty in college level courses that require writing and research. The mission is to help college students improve their writing, research and critical thinking and this is done by publishing a variety of web texts on writing pedagogy. The topics covered include writing, processes, information literacy, research methods and methodologies, collaboration, genres, style and new media. It was founded in 2008 by Joe Moxley and has been widely adopted. In 2013, 1,277, 591 users visited writing commons.⁸⁴⁴

5.11.5 OERisation of Four Courses in Kenya

UNESCO and the University of Nairobi, Kenya successfully collaborated to transform four courses from static texts into dynamic online learning resources and these materials have been

⁸⁴¹ African Virtual University, *About: Introduction*, <http://www.avu.org/About-AVU/introduction.html>.

⁸⁴² African Virtual University, *The AVU OER Repository*, <http://www.avu.org/the-avu-oir-repository.html>.

⁸⁴³ Institute for the Study of Knowledge Management in Education (ISKME), above n 808.

See also, SIYAVULA, *Who We are Our Story*, above 687.

See also, Farrow, above n 807.

See also, Carrol, above n 827.

⁸⁴⁴ Writing Commons, *About*, <http://writingcommons.org/about>.

released under an open license that permits users to freely and legitimately access, use and reuse these materials. These four courses which are currently hosted in the OER commons platform are as follows:

- Information Studies; a course unit offered to masters students at the school of Biological and Physical Sciences,
- Introduction to Business and Entrepreneurship; a course unit offered to undergraduate students at the college of Biological;
- Physical Sciences, Audit and Control; a course unit offered to both undergraduate and master's students in different departments at the College of Biological
- Physical Sciences and Database Systems; a course unit offered to both undergraduate and graduate masters students in different departments at the College of Biological and Physical Sciences.⁸⁴⁵

5.11.6 NOUN & UNESCO

The National Open University of Nigeria is in collaboration with UNESCO to deepen understanding and facilitate the development of OER in Nigeria. In furtherance of the collaboration, UNESCO organised an intensive workshop on OER and MOOCs in Nigeria for the purposes of significantly enhancing the quality and access to higher education for thousands of Nigerian and African students. The workshop was attended by 30 senior faculty members of NOUN and was held from the 10-11 of September, 2014.⁸⁴⁶

5.11.7 MIT

The MIT OpenCourseWare (MIT OCW) contains virtually all of MIT's course content and is open and available to the world. The site contains 2150 courses and has received over 125 million visitors.⁸⁴⁷ The MIT OCW receives an average of 1 million visitors per month with translation receiving about 500,000 more. Educators, students, self-learners and others are among the visitors.⁸⁴⁸

5.11.8 Obama Administration

⁸⁴⁵ UNESCO, *The University of Nairobi enhances education for all with Open Educational Resources* (2015) Media Services http://www.unesco.org/new/en/media-services/single-view/news/oerisation_at_university_of_nairobi_kenya/#.VdKbi_mqgko.

⁸⁴⁶ UNESCO, *Massive Open Education Opportunities at the National Open University of Nigeria* (2014) http://www.unesco.org/new/en/communication-and-information/resources/news-and-in-focus-articles/all-news/news/massive_open_education_opportunities_at_the_national_open_university_of_nigeria/#.VVBqdvmqgk.

⁸⁴⁷ MIT, *Mitopencourseware* above n 609

⁸⁴⁸ MIT, *Site Statistics*, <http://ocw.mit.edu/about/site-statistics/>.

The importance of OER was underscored when the Obama administration pledged \$2 billion in its support. The amount released through the *Trade Adjustment Assistance Community College and Career Training Grant Program (TAACCCT)* is towards the development of educational materials that would be open and available to all learners. A condition of the grant is that all materials produced must be licensed under a Creative Commons 3.0 attribution license.⁸⁴⁹ This decision was prompted by the growing concern about the increased cost of education for the average student in the United States of America and the level of student indebtedness which now surpasses auto and credit card debts.⁸⁵⁰ This policy has brought about further development of OER which have been made freely available to students, thereby cutting down on the need to purchase text books and other educational resources.

5.11.9 British Columbia

In 2012, British Columbia announced its OER policy by supporting the creation of 40 open textbook for the 40 most popular first and second year courses.⁸⁵¹

5.11.10 California

Governor Jerry Brown of California assented to two bills in support of OER. The bills provide for the creation of free, openly licensed digital textbooks for the 50 most popular lower-division college courses offered by California colleges.⁸⁵²

5.11.11 OpenStax College

The OpenStax College, an OER initiative of Connexions currently run at Rice University, is creating high-quality, peer-reviewed open textbooks available under a Creative Commons Attribution license (CC BY), allowing anyone to reuse, revise, remix and redistribute the books. Two of the textbooks have been downloaded over 110,000 times, by about 1.5 million learners and adopted by over 200 schools.⁸⁵³

5.11.12 US Book Project

Hilary Clinton launched the Open Book Project an initiative which provides access to OER in Arabic. The initiative supports the creation of OER in Arabic language and the translation of

⁸⁴⁹ Timothy Vollmer, *New Federal Education Fund Makes Available \$2 Billion To Create Oer Resources In Community Colleges* at <http://creativecommons.org/weblog/entry/26100>.

⁸⁵⁰ Edwards, above n 185

⁸⁵¹ Green, above n 200.

⁸⁵² Timothy Vollmer, *California passes groundbreaking open textbook legislation* <http://creativecommons.org/weblog/entry/34288>.

⁸⁵³ See also, Cable Green, *The Impact of Open Textbooks at OpenStax College* (2013) <http://creativecommons.org/tag/open-textbooks>.

existing OER into Arabic. It also offers training and support to governments, educators and students to put existing OER to use and to develop their own.⁸⁵⁴

5.11.13 World Bank

The World Bank announced its adoption of an open access policy requiring that all research outputs and knowledge products published by the Bank be licensed under a Creative Commons attribution license (CC BY) as a default and as a first phase of the policy, the Bank on the 10th of April, 2012 launched the Open Knowledge Repository⁸⁵⁵ with more than 2,000 books, articles, reports and research papers under a CC BY license,⁸⁵⁶ thus making those materials freely available and accessible to the general public.⁸⁵⁷

Access to using, reusing and distributing these materials have reduced the cost of educational materials significantly. In the words of Green, “These adoptions represent real savings for over 30,000 students in classes around the world. OpenStax College estimates that it has saved these students more than \$3 million (USD) so far.” On the part of educators, it makes the job of building teaching materials easier as each educator need not re-invent the wheel but can simply adapt available OER. On the part of government, adopting OER will result in huge savings in the long run.⁸⁵⁸

The words of Clinton while providing the rationale for the US book Project is instructive. She said “Talent is universal, but opportunity is not. It’s incumbent upon all of us to keep opening doors of opportunity, because walking through it may be a young man or young woman who becomes a medical researcher and discovers a cure for a terrible disease, becomes an entrepreneur, or becomes a professor who then creates the next generation of those who contribute.”⁸⁵⁹

OER continues to make financial impacts by the savings it makes possible and impacts on the social lives of many in developing countries through the opportunities it gives to study freely (without cost and at ones convenience) under some of the greatest minds. These opportunities before now were the exclusive preserve of the rich and for those in the western society. OER is beginning to bridge the gap and it is hoped that one day the divide would no more exist.

⁸⁵⁴ Cable Green, *US Department of State Unveils Open Book Project* <http://creativecommons.org/weblog/entry/36421>.

⁸⁵⁵ World Bank, above n 147.

⁸⁵⁶ Creative Commons, About the Licenses Creative Commons, About the Licenses <http://creativecommons.org/licenses/>

⁸⁵⁷ World Bank, above n 119.

⁸⁵⁸ Owens, above n 799

⁸⁵⁹ Hilary Clinton, *The Open Book Project*, U.S Department of State (2013) <http://www.state.gov/p/nea/openbook/>.

5.12 OER BY AND FOR DEVELOPING COUNTRIES

One of the focal objectives of OER Africa, the African Virtual University, Siyavula and several other OER initiatives that have been birth in Africa is to ensure that Africans are able to develop and share their knowledge and to contribute to global knowledge.⁸⁶⁰ Developing OER will require a purposeful, targeted and structured approach. OER will not happen by default. Most national laws allow use of copyright materials under limitations and exceptions or some form of compulsory or statutory licensing for educational purposes. However, permission is granted mostly for use, while reuse and other forms of adaptation are excluded. OER bridges these gaps by ensuring that the gains exemplified from the impacts made by OER so far can be replicated in Nigeria, the rest of Africa, other developing countries and indeed around the world, thereby eradicating (if possible) or at least reducing lack of access to education, illiteracy, poverty, poor health care and agriculture.

Developing countries stand at an advantaged position when it comes to developing OER because the OER movement is no more at its embryonic state and the possible fear of whether or not this initiative is workable is not an issue. The structures have been laid, millions of educational resources have been developed, used, reused, translated, adapted and distributed around the world. The following are therefore suggested for developing OER by developing countries:

5.12.1 Locate, Adapt and Build

Millions of OER have been developed already. Developing countries only need to locate the appropriate resource, translate where necessary and adapt them to the local needs. The MIT's OCW and KHAN Academy will come in very useful here. The courses have been translated into many languages including Spanish, Portuguese, Simplified Chinese, Traditional Chinese, Thai, Persian, Turkish, and Korean.⁸⁶¹

5.12.2 OER Databases

Considering the vast amount of OER already developed and located on different websites, searching for these resources can be frustrating. To therefore maximize time, make the best out of already created OER, and to locate the most relevant resources, it would be best to search

⁸⁶⁰ Examples of other OER initiatives in Africa include but are not limited to the following:

- 1) ACEMaths Project www.oerafrica.org/acemaths;
- 2) Free Courseware Project, <http://freecourseware.uwc.ac.za/>;
- 3) African Health OER Network, <http://www.oerafrica.org/healthoer>; and
- 4) MERLOT African Network, <http://man.merlot.org/index.html>

⁸⁶¹ MIT, Site Statistics above n 839; See also, Khan Academy, Our Mission above n 708

through OER databases which contain repositories such as [Curriki](#),⁸⁶² [OER Commons](#),⁸⁶³ [LeMill](#),⁸⁶⁴ [Connexions](#),⁸⁶⁵ [OpenCourseWare Consortium](#),⁸⁶⁶ [Index of OCW Websites](#),⁸⁶⁷ [JorumOpen](#),⁸⁶⁸ [The Encyclopedia of Life](#)⁸⁶⁹

Developing countries may wish to explore joining one of the existing consortiums. This will afford the opportunity for guidance in developing OER and to work with tested personnel.

It may also be useful to register and take as many massive open online courses (MOOCS) to obtain more knowledge on specific areas and methods. These courses will also afford the opportunity of acquiring firsthand experience of how OERs are used and their multi-dimensional capabilities.⁸⁷⁰

5.12.3 Be Innovative-Tell Your Own Story

No one ought to be able to tell your story better than you can. Unfortunately, this is not the case for most developing countries, whose stories are told by others and as you can expect, these stories no matter how sincerely delivered would still reflect the perspective of the story teller.⁸⁷¹

OER provides the platform for developing countries to write and tell their own stories. It provides the opportunity to develop teaching and learning tools that are tailored to local needs. In reality, developing countries already have content; such as teaching modules, articles, books, reports and others. The platform for sharing this knowledge has been the gap. University of Nairobi recently released four of her courses as OER under open licences and Nigeria is working with the UNESCO to do the same.⁸⁷²

Inspiration can be gotten from Prof Ng's experience who noted that "I put one of my courses online and it reached an audience of 100,000 students," he says. "To put that number into context, I used to teach 400 students a year at Stanford that means that to reach a comparable sized audience I would have had to teach at Stanford for 250 years."⁸⁷³ Developing OER and

⁸⁶² *Curriki*, <http://www.curriki.org/>.

⁸⁶³ *OER Commons*, <http://www.oercommons.org/>.

⁸⁶⁴ *LeMill*, <http://lemill.net/>.

⁸⁶⁵ *Connexions*, <http://cnx.org/>.

⁸⁶⁶ *Open Courseware Consortium*, <http://www.ocwconsortium.org/>.

⁸⁶⁷ *OpenCourseware Websites*, <http://www.ocwconsortium.org/courses/ocwsites>.

⁸⁶⁸ *Jorum*, <http://www.jorum.ac.uk/>.

⁸⁶⁹ *Encyclopedia of Life*, <http://eol.org/>.

⁸⁷⁰ See OpenupEd, *Our framework*, <http://www.openuped.eu/mooc-features>.

⁸⁷¹ Chimamanda Ngozi Adichie, *The danger of a single story* TEDGlobal at http://www.ted.com/talks/chimamanda_adichie_the_danger_of_a_single_story?language=en. 'if we hear only a single story about another person or country, we risk a critical misunderstanding.'

⁸⁷² UNESCO, above n 836.

See also, UNESCO, above n 829.

⁸⁷³ David Grossman, *Massive Open Online Courses - Threat or Opportunity?* <http://www.bbc.co.uk/news/education-23069542>.

making them available have the potentials of reaching the world. The challenges of finances, technical know-how, and time on the part of academics, government support, donor support and general awareness are issues that must also be addressed in developing countries if OER would succeed.

5.13 OER CHALLENGES

In developing resources that are considered 'OER', developers are faced with several issues including, right clearance, universality of resources, cultural appropriateness, uncertainty as to choice of open licence and the digital divide. Similarly, would be users are faced with issues of having to scavenge and locate purpose specific OER within reasonable time, taking cognisance of the fact that most of these materials are online. Some users are also faced with the challenge of adapting the material due to ICT skill deficiencies. Developing countries are faced with inability to access online available materials due to lack of infrastructural facilities. Finding ways to surmount these challenges is crucial to the continued success of OER.

5.13.1 Rights Clearance

Good and qualitative research often involve the work of others. Isaac Newton put it succinctly when he noted that “if I have seen farther it is by standing on the shoulders of giants”.⁸⁷⁴ OERs is often made up of works from multiple authors. This is the very reason why it is imperative for OER developers to ensure that whatever is being put out as an OER material has obtained all the requisite authorizations.

Educational resources are proprietary by default and although the current legal framework provides limitations and exceptions to copyright allowing the use of copyright work for educational purposes, it is important to note that use is strictly for educational purpose only.⁸⁷⁵

In developing OER, the issues are usually to determine what is been used and how to either obtain appropriate authorisation for use where authorisation is required and to give the required credit to whom it is due. This issue of right clearance often serves as a bottleneck to the development of OER.

Rights clearance is very important in the development of OER because users of OER act on the belief that such materials are non-infringing materials. A duty is therefore placed on all OER developers to ensure that the proper legal freedoms exist in the content that is being put out as

⁸⁷⁴ Newton, n 229.

⁸⁷⁵ See the Second Schedule to the Nigerian Copyright Act, Cap C28 (2004).

OER.⁸⁷⁶ The process of rights clearance can be cumbersome, expensive and often confusing. Open content licensing provides a convenient solution to these legal challenges by satisfying the legal requirements and providing requisite permission in advance to would be users. The Creative Commons licences are a very good example of open content licences.⁸⁷⁷

5.13.2 Uncertainty as to Choice of Open Licence

The choice of the licence to affix to a work is an important decision which should be made with understanding. This is because the application of a CC license implies that you have granted permission to everyone to use your work for the full duration of copyright on the work. The choice of what licence you will apply depends largely on the freedom you are minded to give. It is however fundamental to know that materials considered OER must bear licenses that permit use and reuse rights. A number of resources have been developed to help in determining the most appropriate licenses. Some of these resources include the flow chart developed by CC Australia,⁸⁷⁸ a compilation by Creative Commons headquarters,⁸⁷⁹ case studies which may be used for reference purposes and could serve as useful guides,⁸⁸⁰ the CC community through her discussion lists⁸⁸¹ and also be engaging the services of a legal professional.

5.13.3 Digital Divide & Inability to Access Online Available Materials Due to Lack of Infrastructural Facilities & Lack of ICT Skills

The problem of the digital divide, lack of ICT infrastructure and issues of interoperability constitutes a major barrier to access.⁸⁸² It is one thing for OER to be freely available online and it is another for the intended audiences to be able to access the OER online. Inability to access freely available online material is a major challenge to members of some countries, particularly those from developing, least developed and under-developed countries.⁸⁸³

Lack of technical skills to develop and adapt OER also constitutes a major hindrance to the development and utility of OER. The creation of several resources require not just putting words and ideas together but it requires a skilful, dynamic and artistic presentation which in

⁸⁷⁶ Fitzgerald, above n 376, 14 (2007). "We need to be clear that the person or entity that provides permission under a Creative Commons license is indeed the copyright owner."

⁸⁷⁷ See, Fitzgerald, A Short Overview of Creative Commons, above n 376; See also, Creative Commons, About the Licenses above n 847; See also, Owens, US News, above n 799.

⁸⁷⁸ CC Australia, *Which Creative Commons licence is right for me? poster*, <http://creativecommons.org.au/learn/factsheets/licensing-flowchart/>.

⁸⁷⁹ Creative Commons, *Examples of Creative Commons License Use*, <http://creativecommons.org/examples>.

⁸⁸⁰ Creative Commons, *The Power of Open*, <http://thepowerofopen.org/>.

⁸⁸¹ Creative Commons, *Contact*, <http://creativecommons.org/contact#discuss>.

⁸⁸² Wenhong Chen & Wellman, above n 759.

⁸⁸³ Kirsop, et al., above n 691.

several ways give life to the actual knowledge that is sort to be communicated. These technical skills used in communicating letters, alphabets, sounds, words, images and graphs are often more impacting than the actual message being passed across.⁸⁸⁴ Technical skills are vehicles that aid in effective delivery of communication. The lack of these skills in many academics have brought about challenges in developing OER and where they have been developed they are often inappropriate and fail to achieve the desired purpose. Purposefully learning and re-learning these technical skills which include presentation styles, better computer appreciation, use of Microsoft Office software [word, power-point and excel] as well as other softwares will help in addressing some of these technical challenges. The need for continuous learning cannot be over-emphasized seeing that technology keeps evolving and the mode of delivering messages must be dynamic.

5.13.4 Universality of Resources & Cultural Appropriateness

Developers often have a target audience in mind when developing resources. The multi-cultural nature of the world means that what is trash to one may be gold to another and what is regarded as of no value to one may be highly regarded to some others.⁸⁸⁵ For example, in the Indian Culture, The Cow is sacred and worshipped and must not be killed but other people see the Cow as a mere animal that is used for food as beef.⁸⁸⁶ Similarly, in the development of OER, these challenges arise and this is so because of the nature of the Internet where information uploaded in China can be retrieved in any other part of the world. The information uploaded in China is uploaded with probably a Chinese cultural slant and this is understandable as the views of individuals are greatly influenced by culture. Therefore it is not for developers to develop OER that are globally applicable but it is rather that user/developer, that is, users who then become developers should work at appropriately adapting the OERs to suit their local/particular needs.⁸⁸⁷ Some have advanced the idea that OER when developed should be tested within the locality of creation and within the initial target groups and where proved successful can be

⁸⁸⁴ Sherwyn P. Morreale, et al., 'Why Communication is Important: A Rationale for the Centrality of the Study of Communication', (2000) 29 *Journal of the Association for Communication Administration* 6-7.

⁸⁸⁵ Joshua Reno, 'Your Trash is Someone's Treasure: The Politics of value at a Michigan Landfill', (2009) 14 *Journal of Material Culture* 29.

⁸⁸⁶ G Agoramoorthy & M.J. Hsu, 'The Significance Of Cows In Indian Society Between Sacredness And Economy', (2012) 18 *Anthropological Notebooks* 5.

⁸⁸⁷ Neil Butcher et al, above n 755, 12.'In the final analysis, responsibility for assuring the quality of OER used in teaching and learning environments will reside with the institution, programme/course coordinators, and individual educators responsible for delivery of education.'

extended.⁸⁸⁸ The drawback to these thoughts are that once a resource is put up on the internet as an OER, it is available not just to a localised few but to the entire world.⁸⁸⁹

5.13.5 Locating OER

Another issue is the challenge of locating appropriate OER by interested users. Considering how search engines work, a seeking user would often input the available detail about a resource and hit search. This will bring out thousands and a times millions of related information. The 'how' to sort through these information is often a challenge since time is always of the essence. Working through dedicated sites where specialised OER can be located and have been stored would be useful. Below is a list of OER databases that could serve as useful starting points:

1. [Curriki](#),⁸⁹⁰
2. [OER Commons](#),⁸⁹¹
3. [LeMill](#),⁸⁹²
4. [Connexions](#),⁸⁹³
5. [OpenCourseWare Consortium](#),⁸⁹⁴
6. [Index of OCW Websites](#),⁸⁹⁵
7. [JorumOpen](#),⁸⁹⁶
8. [The Encyclopedia of Life](#)⁸⁹⁷

5.14 OER & MOOCS

MOOCs stands for 'Massive Open Online Courses' and represents a model of delivering online courses to hundreds of thousands of interested minds via the internet. Coursera, EdX, Udacity, Blackboard, Udemy and Educase are examples of MOOC providers.

⁸⁸⁸ Paul Albright, *Open Educational Resources: Open Content for Higher Education, Forum 1 Final Report of The Virtual University*, February 2006, UNESCO http://www.unesco.org/ieep/virtualuniversity/forumsfiche.php?queryforumspages_id=23. 'You can't create educational materials that function effectively in every single context any more than you can write software that runs on every single platform... [W]e should focus on solving specific instruction problems, and make sure that our solution at least works for someone. Then other developers can 'port' our materials to their 'platform', or in other words, other instructional designers can adapt our materials to solve local instructional problems.' "An alternative view was that OER should be created and tested locally before advancing to the global stage. With this approach, OER would develop in a local or community context first before becoming a global resource. The comparison used was that, "The education resource community is akin to any marketplace – there tends to be a domestic marketplace first and if the product is good then that quickly extends beyond borders.'

⁸⁸⁹ Downes, above n 770.

⁸⁹⁰ Curriki above n 853

⁸⁹¹ OER Commons above n 854

⁸⁹² LeMill above n 855

⁸⁹³ Connexions above n 856

⁸⁹⁴ OPEN COURSEWARE CONSORTIUM above n 857

⁸⁹⁵ OPENCOURSEWARE WEBSITES above n 858

⁸⁹⁶ Jorum above n 859

⁸⁹⁷ Encyclopedia of Life above n 860

Whereas traditional online education requires enrolment, payment of tuition fees, assignments and assessment leading to award of credits, MOOCs are usually (but not always) free, award no credits (some give a badge to acknowledge attendance) and have very high indication of interest. See. http://www.nytimes.com/2012/11/04/education/edlife/massive-open-online-courses-are-multiplying-at-a-rapid-pace.html?_r=0

MOOC is defined in Wikipedia as “a type of online course aimed at large scale participation and open access via the web. MOOCs are a recent development in the area of distance education, and a progression of the kind of open education ideals suggested by open educational resources. Though the design of participation in a MOOC may be similar to college or university courses, MOOCs typically do not offer credits awarded to paying students at schools. However, assessment of learning may be done for certification”

Sir John Daniel makes a distinction between two types of MOOCs, the cMOOCs and the xMOOCs. In his opinion, cMOOC's are focused on knowledge creation while xMOOC's focus on knowledge duplication. The hype with regard to MOOCs have been in respect of xMOOC's which gained centre stage in North America's educational system in 2012. Although the hype is not unconnected to North America's world-wide media influence, the impact of MOOCs on participants and providers have played a critical role in the hype. A case in point is that of Prof Ng, one of the founders of Coursera and a Professor at Stanford who put up his lectures online and was able to reach 100,000 students as against his usually 400 students yearly. Prof Ng said “to put that number into context, I used to teach 400 students a year at Stanford, that means that to reach a comparable sized audience I would have had to teach at Stanford for 250 years”. MOOCs have the capacity of impacting in a multiplying dimension.

On the flip side, if one Professor is able to teach 100,000 students, the implications could be grave when it comes to jobs and employments. The number of Professors needed may reduce and so could the number of Universities. The one thing though is that the high cost of education would likely drop significantly. The question then is where do we go from here and how can all these interests be accommodated?

MOOCs are not altogether a new phenomenon. Some argue that it is a re-cloned form of online distance learning. MOOCs play a significant role in the face of today's digital world and works alongside Open Distance Learning (ODL), Open education and OER's. MOOCs apparently are not anti-OER in that they seek “to make knowledge the common property of humankind, and to find a business model that generates money for doing it” See. P.18 See Daniel. OER and MOOCs are however different in structure. While OER is content or resource based; MOOCs

are course based but they both seek to make knowledge available to curious minds. A major difference between MOOCs and OER is that while all OERs are free/open source in structure, MOOCs are not necessarily free/open source.

Providers and participants of MOOCs need to be aware of the legal implications associated with providing, and using these massive open online courses. MOOCs may be built using purely OER, thus those resources are free to use but may also be built with a mix. In such cases, the final output is a work containing proprietary interest with Intellectual Property laws coming to the fore. The issue is for creators to clarify the type of resources been made available and to identify the rights that exist on such resources. Where there are rights, clearance needs to be obtained. A convenient option in the spirit of openness is to stick to contents/resources that are licensed under one of the open licensing regimes and to licence the materials within the courses under an open licence.

5.15 FUTURE OF OER

Where OER will go from here cannot be accurately predicted. The fact that educational resources are open and freely available for curious minds to tinker with provides the world an endless opportunity for development and transformation. It is also already changing the educational system, with initiatives like MOOCs providing alternative ways of providing courses to students. It is also already impacting on the cost of education through its free availability of resources. Whether MOOCs will one day translate into award of degrees is still not yet certain but the dynamic changes taking place within the educational sector with the quick adoption of open courses by several universities is an indication that open education has come to stay.

On the social side, globalisation has contributed to a decline in most indigenous languages in favour of the major languages especially, the English language. Whether this is good or bad is not the focus here. OER provides the platform for preservation of languages and the culture. Using the OER platform, knowledge can be provided in creative ways about indigenous languages and cultures and this information can be further developed by other contributors. The usefulness of this type of information will be most valuable to nationals in diasporas who are desirous of learning their language or teaching their children the language. Other interested learners would also have the opportunity to do so.

At the introduction of this article I referred to the quotation by Nelson Mandela that “education is the most powerful weapon which you can use to change the world”. The OER movement has

begun a global change and seeks to put this weapon in the hands of every willing mind by providing unrestricted and unlimited opportunities to educational resources.

6. OBJECTIVES

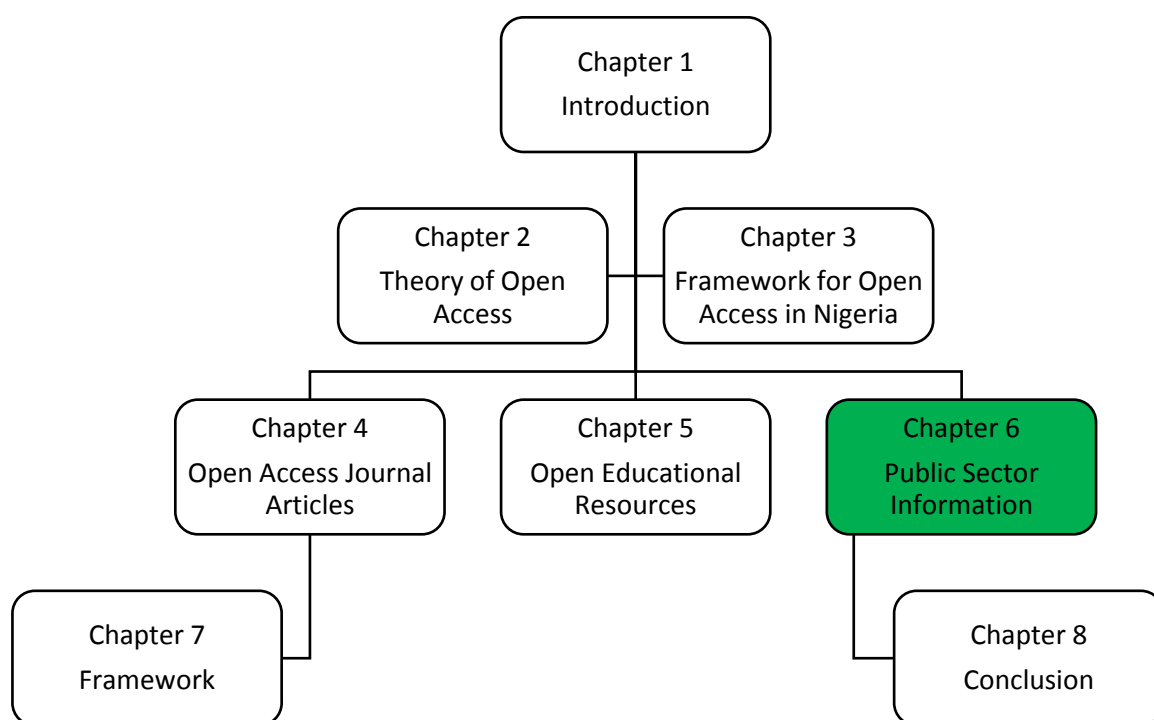
The aim of this chapter is to underscore the idea that government information is primarily funded by tax payers and the least government can do is provide access to the information the taxer payers have funded. The chapter examines the meaning of Public Sector Information, situates it within the broader access to knowledge discussions and investigates the linkage between PSI and the law. It highlights the importance of operating an open government, the economic contributions it brings to economies through creativity, innovation and the development of value added services. It also examines International perspectives on information management. Nigeria's information management framework is discussed and clarifications are made with regards to the distinctions between Public Sector Information (PSI) and Freedom of Information (FOI). The chapter is concluded with data which bring alive the value of access to public sector information.

Aims and Objectives

1. To demonstrate the potential benefits of the open access movement to Nigeria's national development.
2. To investigate, explain and propose a legal, regulatory and policy framework for Nigeria that would enable open access to the output of journal articles, open educational resources and public sector information.
3. To situate Nigeria within the current Open Access Movement by engaging in local pragmatic projects capable of advancing the development of Nigerians, other developing countries and the world at large. (For instance the establishment of institutional repositories in most Nigerian Tertiary Institutions.)

Research Questions

1. What role(s) can open access play in Nigeria's national development?
2. What are the possible challenges to the implementation of open access in Nigeria?
3. What legal, regulatory and policy frameworks are required or needed to be strengthened for the successful implementation of open access in Nigeria?



6.1 INTRODUCTION

Information has become the most important commodity in this new brave world. The reign of a global knowledge economy coupled with technological advancements like the internet, the World Wide Web, Web 2.0 and many other technological discoveries and inventions have contributed to the ascendancy of information as the most important commodity in this generation and information within the custody of government is an important part of the information structure.⁸⁹⁸ Public Sector Information refer to government held information which are information collated, generated, sourced and funded in part or fully by tax payers.

The fact that we have travelled through several eras and are now in the information era which powers the knowledge economy is no more new. The trade currency of the world today is information which can also be referred to as content or knowledge.⁸⁹⁹ The sayings, “knowledge is power”⁹⁰⁰; “Information is key”⁹⁰¹ and “my people perish for a lack of knowledge”⁹⁰² couldn’t be

⁸⁹⁸ The Economist, *Knowledge is Power: Do we need a new competition policy for the new economy?* (21 September 2000) <http://www.economist.com/node/375597>. Do we need a new competition policy for the new economy? 2000. The article noted that “Whatever the outcome of the battle between Microsoft and the American government, some economists worry that because of the very nature of information and knowledge, which form the building bricks of the new economy, more and more monopolies like Microsoft are likely to emerge.”

⁸⁹⁹ Kunle Ola, ‘Evolution and Future Trends of Copyright in Nigeria’, in Brian Fitzgerald & John Gilchrist (eds), *Copyright Perspectives* 122, (Springers International Publishing, 2015). The author emphasizing on the importance of access to information noted that “Acquiring knowledge is therefore imperative for development and the currency to acquiring knowledge is access. No knowledge no development, no access, no knowledge.”

⁹⁰⁰ See generally, J. Henry, *Knowledge is Power: Francis Bacon and the Method of Science* (Icon. 2002)

more relevant in this generation. The concern today about information revolves amongst other things around the how to access, use and re-use public sector information within legally accepted boundaries. These concerns have been discussed at several fora and have become topical internationally. The governments of the United States of America⁹⁰³, European Union⁹⁰⁴, United Kingdom⁹⁰⁵, Canada⁹⁰⁶, New Zealand⁹⁰⁷, Australia⁹⁰⁸ and Brazil⁹⁰⁹ have all embraced the principles enabling access, use and re-use of public sector information and continue to build better frameworks and principles that would enable access, use and re-use of their public sector information. After 51 years of independence and several years of lobby, Nigeria has passed a freedom of information bill which provides a legal regime for access to information subject to issues of confidentiality, intellectual property rights, right of privacy and national security⁹¹⁰.

In a speech delivered at the University of Westminster, the Former Prime Minister of the United Kingdom, the Rt Hon. Gordon Brown MP, said “this is the century of information. Our ability to compete in the global economy, to protect ourselves against crime and terrorist attack,

⁹⁰¹ Subbiah Arunachalam, *Information Poverty The Story: How the Internet is failing the developed world* <http://www.abc.net.au/science/slab/infopoverty/story.htm>. The author, at the Science Communication for the Next Millennium Ninth International Conference of the International Federation of Science Editors in Egypt June 1998 noted that “If we agree that it is very important for researchers to get to know what is happening around the world as well as to let others know what they are doing, that **information is key** (emphasis mine) to the growth of knowledge, and dissemination of information is crucial for the scientific enterprise, then scientists in the developing world are currently being starved of opportunities and vital resources. I would not be surprised if very soon the gulf between the scientifically advanced nations and the others widens even further.”

⁹⁰² The Holy Bible : Authorized King James Version, containing the Old and New Testaments. 1984, Hosea 4:6.

⁹⁰³ Coordination of Federal Information Policy (2002) available <http://www.archives.gov/about/laws/fed-information-policy.html>.

⁹⁰⁴ Directive 2013/37/EU of the European Parliament and of the Council of 26 June 2013 <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02003L0098-20130717&from=EN>. The 2003 EU directive was amended in 2013. See DIRECTIVE 2013/37/EU of 26 June 2013 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:175:0001:0008:EN:PDF>.

⁹⁰⁵ The National Archives, *Who we are*, <http://www.nationalarchives.gov.uk/about/who-we-are.htm>.

See also, OPSI, *Office of Public Sector Information*, <http://www.opsi.gov.uk/psi/>.

See also, The National Archives, *Open Government Licenses for Public Sector Information*, <http://www.nationalarchives.gov.uk/doc/open-government-licence/version/2/>.

See also, The National Archives, *legislation.gov.uk, About Us*, <http://www.legislation.gov.uk/aboutus>.

⁹⁰⁶ Government of Canada, *Minister Holder Announces New Open Access Policy for Research* (2015) <http://www.science.gc.ca/default.asp?lang=En&n=415B5097-1>.

⁹⁰⁷ See also, New Zealand Government NZ, *New Zealand Data and Information Management Principles* (2011) <http://ict.govt.nz/guidance-and-resources/open-government/new-zealand-data-and-information-management-princi/>.

⁹⁰⁸ Office of the Australian Information Commission Australian Government, *Information Policy Report*, <http://www.oaic.gov.au/information-policy/information-policy-resources/information-policy-reports/>.

See also, Queensland Government, *Information Management Policy Framework* (2009) <http://www.qgcio.qld.gov.au/products/qgea-documents/548-information/2349-information-management-policy-framework>.

⁹⁰⁹ Federal Government Brazil, *Open Data*, <http://dados.gov.br/noticia/dados-abertos-permitem-que-cidadaos-conheciam-melhor-as-acoas-e-os-resultados-do-mj/>.

⁹¹⁰ Freedom of Information Act 2011.

depends not just on natural wealth or on walls or fences but on our ability to use information.”⁹¹¹
This statement was captured in “Information matters”, a government document jointly signed by the heads of the Cabinet Office, National Archive and National Audit Office in which it was noted that “Public servants are... guardians of public sector information, not the owners of it, and we will be judged by how well we manage this invaluable asset”⁹¹²

Thomas Paine in his 1776 publication titled *Common Sense* noted that society is the expression of our wants and aspiration and that it is an aggregation of the true identity of a people. Government on the other hand he said is a mechanism set up to manage the attendant effect of an increased population of a people within a society.⁹¹³

The need to maintain the sanity and sanctity of society in spite of an increased population is one of the imperatives of any government. Government is meant to provide structural and managerial services as well as organise and represent the people. Governments’ exist to fashion out and seek the most appropriate means of protecting and advancing the public interest through effective and efficient mechanisms.

Government addresses and manages societal challenges; they gather information about citizens’ attitude and reaction to varied issues, they gather information about multiple subjects such as the environment, health, education, road, security, agriculture and several other subjects. These information which are gathered on a daily basis include reports of meetings, traffic information, census data, vehicle registration information, birth registration, death registration, school registration, geo-spatial information, postal codes and many more. These information enables government to take decisions and form policies on a wide range of issues which in turn encourages statistical analysis, research and development. These information kept in the custody of government comprise some of the largest stock of available but inaccessible information. Government holds these information in trust for the people and have a duty to make it available and accessible for use and reuse. By making information available and accessible for use and

⁹¹¹ Cabinet Office, *Information Matters*, Speech by the Prime Minister, the Rt Hon. Gordon Brown MP at Liberty, University of Westminster, October 2007 4 (Cabinet Office ed., Cabinet Office 2007). <http://www.nationalarchives.gov.uk/documents/information-matters.pdf>.

⁹¹² Ibid at 2. See the Foreword to the document jointly signed by Sir Gus O'Donnell Cabinet Secretary and Head of the Cabinet Office; Sir John Bourn, Comptroller and Auditor General and Natalie Ceeney, CEO, The National Archives.

⁹¹³ Thomas Paine, *Common Sense* (Philadelphia: Printed. Norwich: Re-printed and sold by Judah P. Spooner, and by T. Green, in New-London, 1776). “Society is produced by our wants, and government by our wickedness; the former promotes our happiness positively by uniting our affections, the latter negatively by restraining our vices. The one encourages intercourse, the other creates distinctions. The first is a patron, the last a punisher. Society in every state is a blessing, but government even in its best state is but a necessary evil in its worst state an intolerable one; for when we suffer, or are exposed to the same miseries by a government, which we might expect in a country without government, our calamities is heightened by reflecting that we furnish the means by which we suffer! Government, like dress, is the badge of lost innocence;”

reuse, it maximizes the value of such information by creating new markets and uses which are able to drive creativity and innovation.⁹¹⁴

Government cannot function in isolation of her people. Government is really about the people, it is about the active participation of citizens, accountability, transparency and openness.⁹¹⁵ The reality however is that many citizens are cut off from the information flow channel. Access to information within the direct or indirect control of government enable citizenry participation in governance and also enables them make contributions to the society by turning around the information into value added services and resources. The incentive to provide these services is even stronger when the information is freely accessible. Therefore, making this information available and accessible for use and reuse at a near zero price is imperative for development in this information age.

Considering this pivotal role and position of government over the people, it is clear that government through her public servants and the public service platform stands at a vintaged position as information collators, generators and providers and can be regarded as the biggest single producer and holder of a large variety of information, which can be referred to as government information or public sector information⁹¹⁶.

6.2 DEFINITION AND SCOPE OF PSI

Public Sector information refers to information within the custody of the public service of a government inclusive of materials created as a result of public funding.⁹¹⁷ The OECD particularly defines the term as “information, including information products and services, generated, created, collected, processed, preserved, maintained, disseminated, or funded by or for the Government or public institution.⁹¹⁸” These materials include legislation, judicial decisions, regulations, reports, official gazettes, policy documents, memoranda’s, minutes, proceedings and reports of meetings, draft bills, submissions, public registers, maps, datasets, meteorological and geospatial information, census report, budget, fiscal policy and several other informational

⁹¹⁴ See Carol Tullo, ‘Charting Success And Navigating The Challenges In The PSI World’, in Brian Fitzgerald (ed) *Access to Public Sector Information: Law, Technology & Policy* (Sydney University Press, 2010) 159.

⁹¹⁵ Jeremy De Beer, et al, *Innovation & Intellectual Property Collaborative Dynamics in Africa* (UCT Press, 2014) 8. It was noted that “Early brainstorming around the idea of open development has centred around principles of collaboration, participation and inclusiveness in the political, legal, economic, social, cultural, technological and other institutions.”

⁹¹⁶ Fitzgerald Anne, ‘Open Access and Public Sector Information: Policy Developments In Australia and Key Jurisdictions’, in Brian Fitzgerald (ed) *Access to Public Sector Information: Law, Technology & Policy* (Sydney University Press, 2010) 65.

⁹¹⁷ Elizabeth, above n 212. See also, Digital Broadband Content: Public Sector Information And Content. (2006).

⁹¹⁸ OECD, *Recommendation of the Council for Enhanced Access and More Effective Use of Public Sector Information*. [C(2008) 36](2008), <http://www.oecd.org/internet/ieconomy/40826024.pdf>.

materials that enable citizens to be better informed of their environment, the activities and decisions of their elected leaders.⁹¹⁹

Public sector information in the context of the public service is quite wide and has been described by Corbin as the “PSI complexity”⁹²⁰. The public service is a mixture of several components inclusive of the federal or central government, state or regional government, quasi or non-quasi-governmental structures with or without autonomy, it could refer to local governments, councils, wards and agencies specifically set up by statute, order or some form of law. Information emanating from any of these sources inclusive of sources such as government owned public sector companies or from private sector companies funded by government are information generated based on tax payer monies and hence may be regarded as public sector information.

Government being the big structure it is, is able to gather information in multifaceted ways; through its own platform, by directly procuring them from citizens, by mandating collation of it for instance through population census exercises, vaccination exercises, statistical surveys, birth, death, marriage, vehicle and company registrations.⁹²¹ These collated information in the custody of government, is information gathered from the people for the people and should be available to the people to access, use and re-use.⁹²² The exact extent of access, use and reuse to certain information are however precluded due to reasons of national security, privacy, confidentiality and intellectual property rights protection. These exclusions shall be explained later in the chapter. The definition of PSI encapsulates information under the direct or indirect control of government in the broadest sense but at the same time recognises the limitations placed on releasing certain information due to statutory or common law prohibitions. This chapter therefore discusses PSI from the broadest perspective but takes into cognisance the aforementioned legal limitations.

The non-universality and limitations to the scope of PSI is apparent when considering the peculiarities and differences in administering and running governments in different countries. What is however similar and underpins PSI is its relevance to the society. PSI must therefore be

⁹¹⁹ Fitzgerald Anne, Open Access and Public Sector Information, above n 906.

⁹²⁰ Corbin Chris, ‘PSI Policy Principles: European Best Practice’, in Brian Fitzgerald (ed) *Access to Public Sector Information: Law, Technology & Policy* (Sydney University Press, 2010) 165.

⁹²¹ Administrative Review Council, *The Coercive Information-Gathering Powers of Government Agencies: Report No: 48 of May 2008*. The preface to the report notes that “Coercive information-gathering powers are important administrative and regulatory devices for government. At the national level in Australia many agencies use them to compel the provision of information, the production of documents and the answering of questions.”

⁹²² See Maureen Heninger, ‘The Value and Challenges of Public Sector Information’, (2013) 5 *Cosmopolitan Civil Societies Journal* 75. Where it was noted that “There is a notion that all government information belongs to its citizens because it is derived through governmental processes and therefore should be freely accessible and re-useable by them.”

seen to be country sensitive. In general, the public sector is considered to be made up of organisations or institutions funded by tax payers, carrying out designated public functions as well as organisations funded fully or partly by government to carry out activities.⁹²³ Information produced by such organisations form PSI. These information may be of administrative or non-administrative nature; information with particular interest to a class of persons or economic information, that is, information to which when value is added (Value Added Services) it becomes marketable. Information in the public sector sphere is not limited to physical documents. It includes both physical and digital information, information represented in the form of writing, sound, visual and audio-visual.

6.3 IMPORTANCE OF ENABLING ACCESS TO PSI

Information provides society with multi-dimensional navigating tools and draws all of society to itself through a flow that has no particular rhythm. This information may flow from the people to government, the government to government, the government to the people or from the people to the people. Its ease of flow enables development, accountability, transparency, openness, citizen participation, inclusion, good governance and security⁹²⁴.

The Declaration of Human Rights guarantees several rights to all humans such as the rights to freedom of expression, thoughts, opinion, conscience, religion, basic education, fair hearing, association, to seek, receive and impart information, to participate in the cultural life of the community and to share in scientific advancements and its benefits as well as several other rights⁹²⁵. Following from these rights, access to information is a fundamental right of all humans.⁹²⁶ Governments have noted the need to make information available to their citizens for use and reuse as this enables greater citizen participation, transparency of governance, promotion of democratic ideals and values, (equality, democracy, openness), government accountability and transparency and it allows for commercial development through value added services that are developed from information and knowledge made available and accessible and which allows for

⁹²³ See the definition section of Public Sector Management Act 1994 A1994-37. Where it defines public sector to mean “all government agencies and public employees.” See also Ian Lienert, *Where Does the Public Sector End and the Private Sector Begin: An IMF Working Paper for the Fiscal Affairs Department*, WP/09/122, International Monetary Fund (2009) <http://www.imf.org/external/pubs/ft/wp/2009/wp09122.pdf>. Where the author noted that “the public sector is defined as the sum of units comprising “government” and public enterprises.”

⁹²⁴ Elizabeth, above n 212, 603.

⁹²⁵ Universal Declaration of Human Rights, 10 December 1948, 217 A (III), <http://www.unhcr.org/refworld/docid/3ae6b3712c.html> (1948).

⁹²⁶ Marco Ricolfi, *LAPSI Conceptual Framework No.1 Charging Policy: A Conceptual Framework for EU Guidance to the Member States*, LAPSI (2012) www.ec.europa.eu/newsroom/dae/document.cfm?doc_id=8345. See paragraph 14 where he noted that “Subsidiarity and constitutional rights are interlinked and the constitutional underpinnings of Freedom of Information (FOIA) and access legislation also are pretty well settled; their connection with cost issues is not necessarily so clear, though. The link to Fundamental Human Rights (including the EU Charter) would, at least at first glance, seem more remote.”

re-use⁹²⁷. Governments in recognition of the impact and dynamic nature of the Internet and the World Wide Web are adopting these platforms for information dissemination.⁹²⁸

Making information in the public sector readily available and accessible to the general public is crucial to national development. The reality is that not all of such information can be made available due to legal restrictions such as privacy, confidentiality, intellectual property protection, national security and such other considerations. Assuming information that falls within these category is excluded, there is still a lot of public sector information, that is, information with no legal restrictions, that is, “publicly accessible information, the use of which would not infringe any legal right, or any obligation of confidentiality”⁹²⁹. This class of information are of great value and if made available by public sector information holders for use and reuse, they would enhance both the public and private sector, as well as governmental and individual well-being.

6.3.1 Consumer Protection

The importance of enabling PSI could be construed from an economic or non-economic perspective. The latter perspective is best understood by looking at the protection of customers. Legislation protecting consumers provide for certain terms which must be complied with to protect the interest of consumers. It also provides for remedies in the event that a consumer has been wrongly treated. One of the best ways to protect the interest of the consumer is to provide adequate information as at when due and in all available formats. The availability of information to consumers puts them in a position to take informed decisions. For example, information that a particular Health Provider is under interrogation for certain illegal activities will enable users the opportunity to make informed decisions as to whether or not to continue with the services of such health providers. Information about the activities of a certain elected officer will help

⁹²⁷ Open Government Working Group, *Eight Principles of Open Government Data* (2007) https://public.resource.org/8_principles.html.

See also, OECD, Recommendation of the Council for Enhanced Access and More Effective Use of Public Sector Information. [C(2008) 36]. 2008. Where it was noted that the aim is "to increase returns on public investments in public sector information and increase economic and social benefits from better access and wider use and re-use in particular through more efficient distribution..."

See also, United Nations, *United Nations E-Government Survey 2014: E-Government For The Future We Want*, (2014) http://unpan3.un.org/egovkb/Portals/egovkb/Documents/un/2014-Survey/E-Gov_Complete_Survey-2014.pdf.

"The recent recognition of the importance of Open Government Data (OGD) in meeting the rights of individuals, businesses and civil organisations to access and use government information to engage in policy making...is significant"

⁹²⁸ The White House, *Office of E-Government and Information Technology* (2002) <http://www.whitehouse.gov/omb/e-gov/>.

⁹²⁹ UNESCO, *The UNESCO Recommendation on Promotion and Use of Multilingualism and Universal Access to Cyberspace*, UNESCO (2004) http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/official_documents/Eng%20-%20Recommendation%20concerning%20the%20Promotion%20and%20Use%20of%20Multilingualism%20and%20Universal%20Access%20to%20Cyberspace.pdf.

determine if such officer is worthy of continued electoral support. The point is that access to information enables the making of qualitative decisions.

From the economic perspective, a large portion of PSI form the raw materials for value added services. Meteorological data is a good example. The US government makes these information available to the general public and it has built an economically viable navigation industry employing millions and making turn-overs in the billions.⁹³⁰

6.3.2 Transparency in Governance

Transparency is manifest through timely freedom of access to information. This enables good governance, curbs corruption and other illegal activities. Uhler noted that “the more information that is openly available from the government and about the government, the less likely it will be that government is able to hide illegal acts, corruption and misrule. Conversely, excessive secrecy breeds tyranny”⁹³¹

6.3.3 Promotion of Democratic Ideals

Qualitative participation in governance by members of the society is a fundamental part of democracy.⁹³² The recognition of the equality of all citizens as well as openness are integral parts of the democratic mechanism.⁹³³ Qualitative participation is however best achieved when information is made available and accessible and the people are fully and duly informed. Protest or support for certain decisions of government is basically determined by access to information on such issues by the general public, therefore access to public sector information promotes democratic ideals.⁹³⁴

⁹³⁰ See Open Data for Economic Growth (2014) <http://www.worldbank.org/content/dam/Worldbank/document/Open-Data-for-Economic-Growth.pdf>. Where it was noted that “A study of the importance of the global positioning system to the US economy found that it was difficult to estimate the total economic value of GPS because it had become so pervasive and because it was still increasing at a high rate. However the best estimate as of June 2011 was that there were \$96 billion in annual direct economic benefits attributable to GPS and 3.3 million US jobs were dependent on it: the agriculture sector alone had productivity and cost-saving gains of \$19.9 billion a year due to GPS.”

⁹³¹ Paul Uhler, ‘Policy Guidelines for the Development and Promotion of Governmental Public Domain Information’, in Brian Fitzgerald (ed) *Access to Public Sector Information: Law, Technology & Policy* (Sydney University Press, 2010) 216.

⁹³² Anks Michels, ‘Innovations in democratic governance: how does citizen participation contribute to a better democracy?’, (2011) 77 *International Review of Administrative Sciences* 275. See where it was noted that “Citizen participation is usually considered a valuable element of democratic citizenship and democratic decision-making. Many theorists claim that citizen participation has positive effects on the quality of democracy.”

⁹³³ Congress, Declaration of Independence. 1776.

⁹³⁴ J. DeBardeleben & J. Pammett, *Activating the Citizen: Dilemmas of Participation in Europe and Canada* (Palgrave Macmillan, 2009) 17-41. See generally the chapter on “Citizen Participation and Democratic Deficits: Considerations from the Perspective of Democratic Theory by Mark E Warren and specifically at page 17 where he noted that “Governments should be responsive to citizens as a consequence of citizen participation, through elections, pressure, public deliberation, petitioning, or other conduits. For these forms of participation to function

6.3.4 Enhances Public Health, Safety and General Social Welfare

The free flow of information has been attributed as one of the key factors that aided in Nigeria's ability to arrest the unfortunate Ebola virus imported into Nigeria by Patrick Sawyer from Liberia⁹³⁵. Bankole noted that "We were in our office on Friday evening when we got word that Ebola had come to Lagos. 24 hours later, Ebolafacts.com went live. In the next week, the infographic website explaining the causes, symptoms and preventive measures to be taken against Ebola would be seen by hundreds of thousands of Nigerians across the website, Twitter and Facebook".

The government does not belong to those who govern it. Those in position of power are merely servants to the generality of people and are to represent the public interest.⁹³⁶ Provision of basic amenities such as healthcare facilities, security, welfare, education, good roads and water are some of the responsibilities of leaders. In most developing countries where there is a high level of lack of access to public sector information, there is a trend where political candidates promise the people these basic amenities for their votes and once elected they renege on their promises.⁹³⁷ One would expect that such persons would be voted out at the next election but due to a lack of access to public sector information, such leaders are able to deceive the uninformed publics. Access to PSI would enable ordinary citizens determine whether or not the electoral promises made have been fulfilled and if not they are thus empowered with facts to challenge government and this enhances public health, security and general social welfare.⁹³⁸

democratically, all affected by the decisions of a government should have the opportunity to influence those decisions, in proportion to their stake in the outcome"

⁹³⁵ Oluwafemi Bankole, *Nigeria: How Information Conquered Ebola* (2014) <http://techcabal.com/2014/10/20/nigeria-information-conquered-ebola/>.

⁹³⁶ T. Jefferson, et al., *The Writings of Thomas Jefferson* (Issued under the auspices of the Thomas Jefferson Memorial Association of the United States. 1904). Thomas Jefferson in his writing, *Politics & Government* noted in Section 5: *The Sovereignty of the People* that "The purpose of government is to enable the people of a nation to live in safety and happiness. Government exists for the interests of the governed, not for the governors. As Benjamin Franklin wrote, "In free governments the rulers are the servants and the people their superiors and sovereigns." The ultimate powers in a society, therefore, rest in the people themselves, and they should exercise those powers, either directly or through representatives, in every way they are competent and that is practicable."

⁹³⁷ Raymond Tatalovic, 'Presidents and Promises: From Campaign Pledge to Presidential Performance' (1986) 48 *The Journal of Politics* 189. In this review of Jeff Fishel's work, it was noted that "Especially after election day, when a president must govern the entire nation, there is a special urgency to detail what public policy exactly means. But the best-laid plans sometimes are deemed irrelevant due to unanticipated events which force the president to make selective reversals in his policy agenda. Political pressures to accommodate the electorate (not the party) increase as the mid-term elections come and as concern mounts about his re-election prospects"

⁹³⁸ Patrick McGroarty, *Muhammadu Buhari Defeats Goodluck Jonathan in Nigeria Election* <http://www.wsj.com/articles/officials-tally-remaining-votes-in-nigeria-presidential-election-1427796882>. See where it was noted that "The result reflects the government's failure to tackle the Boko Haram threat and to spread oil wealth more equitably across a deeply divided nation."

6.3.5 Serves Essential Scientific And Technical Research Function

Some of the most expensive scientific and technical researches are carried out by government agencies. The data collated during the research as well as the reports of the research form very important information capable of enhancing innovation, creativity and development. The challenge often encountered by those eager to innovate, create and develop is that of a lack of access to these information. When access is granted, re-use rights may be withheld with technological protection measures requiring some payments and thereby restricting the use and re-use of such contents. For these reasons many governments are taking positive steps to ensure that the output of funded research is freely available for use and reuse.⁹³⁹

6.3.6 Socio-Political Development

Access to PSI has the potential of closing the information gap between the information rich and the information poor. It therefore provides social development to specific communities which also extends in principle to the entire world. This is achieved by means of expanding access to the amount and quality of information available to the ordinary person.

6.3.7 Pragmatic Feedback

Government is able to get pragmatic feedback from citizens when PSI is made accessible in a format that is easily retrievable. The need for the PSI to be accessible not just on a government website but in a retrievable and easily searchable format is crucial. With billions of data stored online, it is imperative that information storage patterns be compatible.

6.3.8 Sense of Duty

The subconscious awareness created by ready accessibility and availability of public sector information to the citizenry, raises caution in the mind of government officials to be up and doing on their jobs and this in turn sets in motion a sense of duty to service. **Accountability**

The knowledge that every policy made and decision taken is openly available and would most likely be scrutinized by the people builds a sense of accountability on government officer holders. This is pertinent because poor decisions may cause protests, litigations, civil unrest or some form of reaction by the people. The mere awareness of this, raises the accountability bar for government and its officials.

⁹³⁹ See, Federal Ministry of Health, *National Strategic Health Development Plan (NSHDP 2010-2015)*, <http://www.health.gov.ng/doc/NSHDP.pdf>. See also, NIH, NIH Public Access Policy above n 109. See also RCUK, *RCUK Policy on Open Access* above n 144. See also, ARC, *ARC Open Access Policy* above n 118. See also, ERC, *Open Access Guidelines for Researchers Funded by the ERC* above n 145. See also, Government of Canada, above n 543.

6.3.10 Reduced Cost

Government agencies often expend tax payers' monies carrying out the same findings. This is often done due to a lack of interagency collaboration and more often due to a lack of knowledge by each agency of the activities of the other. This lack of knowledge is not unconnected with the absence of an information sharing system between government agencies which often results in duplication of activities, research findings and public funds. Interoperable and easy access to public sector information will no doubt reduce government expenditure and save tax payers monies.

In a white paper prepared for UNESCO, the US National Commission on Libraries and Information Science and the National Forum on Information Literacy, Horton highlighted five main uses of public service information as follows:

- “1. To document for public accountability purposes how government conducts its business;
2. To inform public policy-makers and program managers so that they can do their job better;
3. to inform the general public so that it can do a wide variety of things with the information, such as apply for benefits for which they are entitled under the nation's laws, comply with various laws, obtain permits, and so forth;
4. to provide citizens with an independent, unmediated way to know what the government is doing, beyond reliance on the popular media, scholarly journals, and trade magazines, and which the public is paying for with its taxpayer dollars; and
5. To provide the internal information necessary for conduct of an agency's responsibility.”

According to Horton (2002) some of the imperatives for enabling access, use and re-use of public information and knowledge resources are as follows:

- i. “Sustaining the competitive competency of the country's businesses and industries, in both domestic and global marketplaces;
- ii. Attaining the highest levels of educational excellence for all the nation's children and adults in a lifelong learning context;
- iii. Enabling citizens to participate more effectively in all facets of a democratic society;

- iv. Informing public officials at all levels of government so that they can enact better laws, formulate and enact enlightened public policies, monitor the programs they authorize effectively, and govern fairly, equitably, and wisely; and,
- v. Enhancing the quality of life of all a country's citizens, including responsibility to the special government information needs of disadvantaged and disabled individuals.”⁹⁴⁰

Accessibility to public sector information has numerous values in the hands of the public. One of the most striking value of PSI's is the power it gives to the citizens. The power to be informed and to make informed decisions on whom to represent them and where such representatives fail, access to PSI will provide the needed evidence. Similarly, policies that are unacceptable can be widely criticised and rejected with demands for reversal, maintaining the status quo or some form of adjustments. Access to PSI allow citizens to participate in governance. This was exemplified in the 2015 Nigerian election when a government in power was voted out of office by the people.⁹⁴¹

PSI represents some of the largest volume of raw materials with which the private sector transacts its businesses. When value added services are inputted on these raw materials they become commercial commodities that provide solutions and pleasure and they also generate additional funds to the government through tax that is paid.⁹⁴²

PSI serves as the databank for a lot of businesses and non-governmental organisations (NGO) who are desirous of providing some form of service to the community. Access to the number of people in a community, gender, health situation, layout, mapping, land size and other demographic information go along away in aiding these organisations provide highly needed

⁹⁴⁰ Horton, above n 702.

⁹⁴¹ Ehis Okpamen, *Goodluck Jonathan Becomes Nigeria's First President To Be Voted Out Of Office* <http://venturesafrica.com/goodluck-jonathan-becomes-nigerias-first-president-to-be-voted-out-of-office/>.

See also, Japhet Alakam, *60 Reasons I won't vote for Jonathan-Soyinka* <http://www.vanguardngr.com/2015/02/60-reasons-wont-vote-jonathan-soyinka/>. See where Wole Soyinka, noted that “Why I will not vote for this government or encourage anybody to vote for the continuation of this present government is simply because your colleagues, numbering over 200 were kidnapped; we sent them on a mission – education, enlightenment, examination, to rub minds with their peers and they disappeared and the government of the nation failed to show leadership...“There has been failure of leadership.”

⁹⁴² Stott, *Open Data for Economic Growth* (2014) <http://www.worldbank.org/content/dam/Worldbank/document/Open-Data-for-Economic-Growth.pdf>. See page 12 where it was noted that “Revenues from the publication of data are nil, but the data may lead to increased levels of customer engagement and loyalty, with revenue gains. There is also the opportunity to sell value-added services based on the supplier's intimate understanding of the data”

services.⁹⁴³ Access to PSI will enable anyone anywhere in the world access information about that government and this increases the opportunity for social development, particularly education.

6.4 GLOBAL OUTLOOK ON PSI

In addressing the concept of access, use and re-use of PSI, cognisance must be taken of the peculiarity of each country to issues such as freedom of Information, the spread of Internet coverage, internet usage, band-width and general infrastructural issues that form the backbone for easy access to use and re-use of information. The above mentioned issues provide indications as to the level of development of individual countries as well as provide a clue to the information dissemination policy disposition of such countries. In light of the above, it may be important to appreciate the impracticability of assessing all countries based on the level of access it grants or the use and re-use right it offers to its general public. However, these factors are indicators of where a particular country is at with regards to sharing of public sector information and provides the opportunity for proffering suggestions for expanding access to public sector information and for building an environment for better access to knowledge.

The practice in most government establishments prior to the advent of the movement for access to, use and re-use of public sector information was that most government establishment considered information within their custody as privileged information and hence kept them safely under locks and inaccessible to the public. The freedom of information movement altered this position by providing a platform to obtain requisite information on a request and need to know basis. The current movement builds on the “request and need to know” principles of the freedom of information and goes further to establish a default where public sector information is made freely available and accessible without the requirement for request; free from all governmental bureaucratic challenges, technological barriers and where possible at a zero or marginal cost to users. This is made possible by the strategic abilities of the internet which have been embraced around the world and which enables anyone with a computer and an internet connection, access whatever information has been uploaded on the internet. Government agencies are therefore able to make available via the World Wide Web most of their information and anyone with an internet connection will be able to access the materials. However the ability to fully access data provided by government is in question, as "most of the information relevant

⁹⁴³ Henninger, above n 912. “In general terms governments have recognised the transformational potential of access to their own data to drive efficiency in the public sector, to provide better and new community services and basic infrastructure. There are many examples of the use of OGD to deliver weather and transport and environmental impact benefits, to support national and international economies, the development of technological innovations, and the contribution of new knowledge”

to the rulemaking process remain locked away in computer files that are images of printed documents, which cannot be easily reused”⁹⁴⁴ Also observed is the fact that the right to use and re-use these materials is mostly restricted and where allowed the terms permitting use/reuse are often times unclear to users’. The need to therefore clarify these ambiguities through properly thought out information policies by government is imperative. The reality is that the value of PSI increases when price, technical and intellectual property (more particularly copyright) restrictions on access and re-use are removed and it is made available in user friendly digital formats downloadable from internet websites.⁹⁴⁵ The policies and strategies adopted by different nations to enable greater access to public sector information will now be considered.

6.4.1 United States

Dissemination of information generated by or under the influence of the United States government is actively encouraged by the absence of copyright on all information generated by the federal government⁹⁴⁶. This model amongst other things is what encourages within the United States a gravitation towards more openness and has enabled free dissemination of government generated, funded and held information. Section 105 of the Act particularly provides that copyright protection is not available for any work of the United States Government. It therefore places these works in the public domain and allows for free and unrestricted use by all interested users. It is however important to note that this section does not extend to states within the United States. One of the famous year 2000 circular’s issued by the Office of Management and Budget (OMB), Circular A-130 established the data access and re-use policy framework for executive branch departments and agencies of the US federal government⁹⁴⁷. The document acknowledged the government as the largest single producer, collector, consumer and disseminator of information and took cognisance of the role of free flowing information in the strengthening of a democratic nation. It further pointed out that government information is a valuable national resource which provides the public with requisite knowledge [past, present, and future] about the government, society, and the economy⁹⁴⁸.

On the 21st of January, 2009, President Obama in a “Memorandum on Transparency and Open Government⁹⁴⁹” expressed his determination to establish a more open government and noted

⁹⁴⁴ Ed Felten, et al., ‘Government Data and the Invisible Hand’ (2009) 11 *Yale Journal of Law and Technology* 160, 164.

⁹⁴⁵ Ibid. at.164

⁹⁴⁶ Title 17 of United States Code (1976).

⁹⁴⁷ (OMB), Circular No. A-130, Revised, (Transmittal Memorandum No. 4) (November 28, 2000), Memorandum For Heads Of Executive Departments And Agencies (United States Office of Management and Budget ed., 2000).

⁹⁴⁸ Ibid. at. para 7, Considerations and Assumptions.

⁹⁴⁹ (OMB), Memorandum on Transparency and Open Government, (United States Office of Management and Budget ed., 2009).

that government should be transparent, participatory and collaborative. He therefore directed the OMB to issue an “Open Government Directive⁹⁵⁰” which was issued on the 8th of December, 2009. The directive instructed executive departments and agencies to take specific actions to implement the principles of transparency, participation, and collaboration, as set forth in the President’s Memorandum⁹⁵¹.

Prior to the 2009 Open Government Directive, the National Institute of Health in 2008 had issued an open access policy mandating that all research funded by the agency should be made available on the PubMed Central website⁹⁵² where it becomes globally, freely, available and accessible⁹⁵³.

6.4.2 European Union

The European Union has been at the forefront of expanding the access gate to knowledge and has adopted mechanisms for information dissemination, administration and management within the European Union. The European Commission Vice-President Neelie Kroes said: "Opening up public data means opening up business opportunities, creating jobs and building communities. I welcome the Council's agreement to this culture change."⁹⁵⁴ The press release made reference to the Public Sector Information directive which was issued on the 17th of November, 2003, as EU Directive 2003/98/EC on the re-use of public sector information⁹⁵⁵. The Directive which came into force on the 31st of December 2003 addressed materials in the custody of public sector organisations at all tiers of governments including national, regional local, ministries, agencies, municipalities and entities funded in part or wholly from tax payers funds⁹⁵⁶. This directive focused on maximizing the economic possibilities inherent in public sector information. The directive encouraged members to make as much information available for re-use as possible and encouraged that such re-useable information by made available in electronically compatible formats, at no cost and where inevitable at a near zero cost and that whatever cost must be charged should not exceed the cost of production and a reasonable return on investment⁹⁵⁷.

⁹⁵⁰ (OMB), Open Government Directive (United States Office of Management and Budget ed., 2009).

⁹⁵¹ (OMB), Open Government (United States Office of Management and Budget ed., 2009).

⁹⁵² PubMed, above n 519

⁹⁵³ NIH, NIH Public Access Policy above n 141

⁹⁵⁴ European Union, Commission Welcomes Member States' Endorsement Of Eu Open Data Rules (2013) http://europa.eu/rapid/press-release_IP-13-316_en.htm.

⁹⁵⁵ Directive 2003/98/EC Of The European Parliament and of The Council On The Re-Use Of Public Sector Information, (2003)<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:345:0090:0096:EN:PDF>.

⁹⁵⁶ Ibid. at Article 2 (1&2)

⁹⁵⁷ Ibid. at Article 6

In 2013 the PSI directive was revised⁹⁵⁸. The intent of the revision was to open up the market for services based on PSI by the inclusion of new bodies in the scope of the application of the directive such as libraries (including university libraries), museums and archives; limiting the fees that can be charged by the public authorities at the marginal costs as a rule;⁹⁵⁹ introducing independent oversight over re-use rules in the Member States and making machine-readable formats for information held by public authorities the norm⁹⁶⁰.

This review builds on the strong policies set out in 2003 but makes certain clarifications. In addition to the definition section, it strategically identifies public sector information as documents within the scope of public task by public sector bodies, but notes that such public task must however be transparent and subject to review⁹⁶¹. The revision also noted that documents restricted from the access regime in member states by virtue of national security, defence, public security, statistical or commercial confidentiality, and personal data are excluded from the scope of Public Sector Information⁹⁶². Also excluded are documents held by educational and research establishments but notes that university libraries are not included⁹⁶³.

It provides an improvement on the mode of release of information by stipulating the inclusion of meta-data and that such information be released in machine readable formats in addition to other open formats⁹⁶⁴. It further clarifies that machine readable format means “a file format structured so that software applications can easily identify, recognize and extract specific data, including individual statements of fact, and their internal structure⁹⁶⁵”.

In July of 2014, the Commission published guidelines for the purposes of helping Member states transpose the revised 2013 PSI directives and to indicate best practices in several fields of importance for the re-use of public sector information. The guidelines recommend the use of

⁹⁵⁸ Directive 2013/37/EU of the European Parliament and of the Council of 26 June 2013 L 175 1 27.6.2013 <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02003L0098-20130717&from=EN>.

⁹⁵⁹ Marco Ricolfi et al, LAPSI Position Paper No3: The “Licensing” of Public Sector Information, LAPSI www.ec.europa.eu/newsroom/dae/document.cfm?doc_id=8344. See p.5 where he notes that “once the costs necessary to generate, collect and maintain PSI are incurred, it does not make any difference whether the re-user makes a profit from re-use. No marginal cost is incurred by the PSIH just because there is an additional re-user.”

⁹⁶⁰ European Union, Revision of the PSI Directive, 2012 (Newsroom Editor ed.) <http://ec.europa.eu/digital-agenda/en/news/revision-psi-directive>.

⁹⁶¹ Directive 2013/37/EU, above n 947, Article 1 (2) a

⁹⁶² Ibid. at. Article 1 (2) c, ca, cb, cc

⁹⁶³ Ibid. at. Article 1 (2) e

⁹⁶⁴ Ibid. at. See Article 5 (1)

⁹⁶⁵ Ibid. at. See Article 2 (6)

available open standard licences, datasets and how to make them more readily re-useable and the application of marginal cost rules in charging for the re-use of documents⁹⁶⁶.

6.4.3 United Nations

The United Nations was established in 1945 after the second war and is a multinational intergovernmental platform that promotes international peace and security, social progress, better living standards and human rights. It carries out its daily operations through several bodies such as the General Assembly, the Security Council and the Economic and Social Council. “The organisation works on a broad range of fundamental issues, from sustainable development, environment and refugees protection, disaster relief, counter terrorism, disarmament and non-proliferation, to promoting democracy, human rights, gender equality and the advancement of women, governance, economic and social development and international health, clearing landmines, expanding food production, and more...,”⁹⁶⁷ The Economic and Social Council through the United Nations Department of Economic and Social Affairs (UNDESA) and the Division for Public Administration and Development Management (DPADM) oversees the United Nations Public Administration Programme (UNPAP) which amongst other things support open governance data and services⁹⁶⁸. Open Government Data has been one of the focal points of the DPADM as it seeks to offer online government service for purposes of strengthening participatory governance. OGD provides a platform for greater citizenry participation as it “allows citizens to monitor data streams and thereby improves the accountability and transparency of government. OGD also allows citizens to be aware of important issues and to be part of the decision-making process to address policy issues (e-participation). DPADM's work on open government is divided into four pillars: policies and regulatory framework; organizational framework; channels & modalities; and case studies.”⁹⁶⁹

The United Nations is evidently not a sovereign nation, it is not one of the member states but rather it is an umbrella body that compiles, generates and analyses a broad range of data and information from which member states can freely draw upon in taking policy decisions. It also uses these data and information to coordinate issues of common interest between member states. It provides practical steps on how to implement issues at national levels. One of such

⁹⁶⁶ EU European Union, Commission Notice: 'Guidelines on recommended standard licences, datasets and charging for the re-use of documents' (Newsroom Editor ed., 2014). <https://ec.europa.eu/digital-agenda/en/news/commission-notice-guidelines-recommended-standard-licences-datasets-and-charging-re-use>.

⁹⁶⁷ United Nations, *UN at a Glance*, <http://www.un.org/en/aboutun/index.shtml>.

⁹⁶⁸ United Nations, *The United Nations Committee of Experts on Public Administration (CEPA)*, <http://www.unpan.org/cepa.asp>.

⁹⁶⁹ United Nations, *UN Public Administration Programme: Open Government Data and Services*, <http://www.unpan.org/DPADM/Themes/OpenGovernmentDataandServices/tabid/1536/language/en-US/Default.aspx>.

practical steps is the Guidelines on Open Government Data for Citizen Engagement. This guideline issued in 2013 provides relevant information on Open government data and helps member states in designing, implementing and sustaining open government data initiatives. It provides practical and easy-to-understand road-maps which policy makers and technologists may adopt or adapt as the case may be. Although the central target of the document is tailored to the needs and constraints of developing countries, it can be used by anyone interested in opening up data. “It contains the core principles of openness, best practices and case studies, checklists, step-by-step guidelines and practical policy recommendations”⁹⁷⁰.

The United Nation as an organisation is yet to adopt an organisation wide policy that enables accessibility, availability, use and reuse of knowledge products generated under its supervision. It however is a strong supporter for the use and reuse of information it generates. In the governance lab, it was noted that “The United Nations has been opening up statistical and programmatic data for years now, and as experts learn more about the field of open data, it is important to reflect on the opportunities to maximize open data adoption within the UN”⁹⁷¹. The guideline referred to above, provides an express prior permission for use and reuse subject to attribution.⁹⁷² In 2013, the United Nations Education and Scientific Cultural Organisation (UNESCO) adopted a policy which provides unrestricted access to millions of its digital publications to the general publication. It was noted that the new policy will enable increased visibility, accessibility and distribution of the agency’s publications⁹⁷³. Although the World Bank is not one of the traditional UN agencies but rather a specialized UN agency, it nonetheless has noted the importance of openness⁹⁷⁴ and transparency in national, economic and social development. In 2012, the World Bank President, Robert B Zoellick remarked that the Bank is “opening up more and more”⁹⁷⁵. He further noted that “making our knowledge widely and readily available will empower others to come up with solutions to the world’s toughest problems”⁹⁷⁶. The adoption of the CC-BY licence as the standard licensing model for works made available through World Bank’s Open Knowledge Repository testifies to the Banks

⁹⁷⁰ United Nations Department for Economic and Social Affairs, *Guidelines on Open Government Data for Citizen Engagement*, ST/ESA/PAD/SER.E/177, <http://workspace.unpan.org/sites/Internet/Documents/Guidelines%20on%20OGDCE%20May17%202013.pdf>.

⁹⁷¹ GOVLAB, *Open Data and the United Nations: Experts reflect on current Open Data challenges within the UN and outline a path forward* (2014) <http://thegovlab.org/open-data-and-the-united-nations-experts-reflect-on-current-open-data-challenges-within-the-un-and-outline-a-path-forward/>.

⁹⁷² United Nations Department for Economic and Social Affairs, above n 958, 3, where it states " (the Guidelines on OGDCE) may be used, reused, copied, distributed, adopted, and adapted..."

⁹⁷³ UNESCO, *UNESCO Adopts Open Access Policy* (2013) <http://openscience.com/unesco-adopts-open-access-policy/>.

⁹⁷⁴ United Nations UN, *Structure and Organisation*, <http://www.un.org/en/aboutun/structure/index.shtml>.

⁹⁷⁵ World Bank, *World Bank Announces Open Access Policy for Research and Knowledge, Launches Open Knowledge Repository*, Press Release No:2012/379/EXTOP (2012).

⁹⁷⁶ World Bank, above n 119.

commitment to make available and enable use and reuse of their data.⁹⁷⁷ The guidelines and policies by UN agencies are clear manifestations of the commitment of the United Nations to openness, transparency, collaboration and greater citizenry participation in governance and development.

6.4.4 The Organisation for Economic Co-operation and Development (OECD)

OECD was established in 1961 with headquarters in Paris, France. It currently has 34 members and it seeks to promote policies that foster socio-economic development of the global community⁹⁷⁸. In recognition of the need to optimize the value of publicly funded research amongst other things, the organisation made the Declaration on Access to Research Data from Public Funding and committed to working towards the establishment of access regimes for publicly funded digital research data⁹⁷⁹. As a result of this ministerial declaration by Ministers of Science and technology of OECD member states, the OECD was mandated to develop a set of guidelines which would provide a platform that would enable cost efficient and effective access to digital products of research data generated from public funding. The guideline was developed and approved by the OECD Council on the 14th of December, 2006⁹⁸⁰. The organisation as a further step to both the declaration and the guideline mandated the Committee for Information, Computer and Communication Policy to review policies regarding access, use and reuse of public sector information. A report by the working party on the information economy was presented to the Council in June 2015⁹⁸¹. The recommendation of the committee was adopted as the OECD Recommendation of the Council for Enhanced Access and More effective use of Public Sector Information [C(2008)36] by the OECD Council at the 1172nd session on the 30th of April 2008⁹⁸².

The guidelines of 2006 adopted the principles and objectives laid out in the 2004 declaration. It addressed issues of Openness, Transparency, Legal conformity, Formal responsibility, Professionalism, Protection of Intellectual Property, Interoperability, Quality and Security,

⁹⁷⁷ World Bank, Open Knowledge Repository above n 147

⁹⁷⁸ OECD, *About the OECD*, <http://www.oecd.org/about/>.

⁹⁷⁹ OECD, Declaration on Access to Research Data from Public Funding: 30 March 2004 [C(2004)31/REV1]; . 2004.

⁹⁸⁰ OECD, *Recommendation of the Council concerning Access to Research Data from Public Funding: 14 December 2006 - C(2006)184* (2006), <http://webnet.oecd.org/OECDACTS/Instruments/ShowInstrumentView.aspx?InstrumentID=159&Lang=en&Book=False>.

⁹⁸¹ OECD, Digital Broadband Content: Public Sector Information And Content. 2006.

⁹⁸² OECD, Recommendation of the Council for Enhanced Access and More Effective Use of Public Sector Information. [C(2008) 36]. 2008.

Efficiency and Accountability. The 2008 recommendation built on the guidelines and introduced the issues of re-use. It emphasized the need for interoperability addressing new technologies and long-term preservation, international access and use, citizenry participation through Public Private Partnership, best practice, and provides mechanisms for redress.

**HARMONISATION OF THE 2006 OECD GUIDELINES
AND THE 2008 OECD RECOMMENDATIONS.**

S/N	DECLARATION/GUIDELINES	RECOMMENDATION ON ENHANCED USE OF PSI	COMMENTS
1.	Openness	Openness	Common to both.
2.	Transparency	Access & Transparent condition for re-use	Common to both, but re-use is introduced in the latter.
3.	Legal conformity	Redress Mechanism	Working towards similar ends.
4.	Quality and Security	Quality	Common to both.
5.	Professionalism	Integrity	Upholds the same ideal.
6.	Protection of Intellectual Property	Copyright Pricing	Aims at the same thing but the scope of the former is wider than the latter.
7.	Interoperability	New Technologies and Long-term preservation.	Pursues the same goal.
8.	Formal responsibility	Best Practice	Similar focus
9.	Efficiency	Asset Lists	

10.	Accountability	Public Private Partnership	
11.		International access and use	
12.		Competition	

Author generated table

The 2005 reports titled “Digital Broadband Content: Public Sector Information and Content”⁹⁸³ presented by the working party on Information Economy as well as the recommendation of the Council dealing with enhanced access and more effective use of public sector information particularly addresses the issue of reuse rights and takes cognisance of the fact that access to use and reuse public sector information increases the return on public investment, increases social and economic development through better access and wider use and re-use rights which is particularly made possible through the avenues which the internet and technology has provided for efficient distribution, enhanced innovation and the development of new uses.⁹⁸⁴ The development of new uses which is enabled by re-use rights is particularly important as it aids the development of new knowledge products and services (value added products and services) and provides the opportunity for healthy competition among re-users of information. Enhanced access to public sector information not only maximizes the use of such information but provides the opportunity for collaboration, greater citizen participation leading to better governance as well as social and economic developments.

6.4.5 United Kingdom

The flow of information within the public sector in the United Kingdom is governed by crown copyright⁹⁸⁵. The government of the United Kingdom has however been proactive in making policies that would enhance access for the use and re-use of public sector information⁹⁸⁶. The Office of Public Sector Information (OPSI) which is a part of the National Archive is at the heart of UK’s information policy. It is responsible for setting standards, creating platforms for

⁹⁸³ OECD, Digital Broadband Content: Public Sector Information And Content. 2006.

⁹⁸⁴ Ricolfi above n 952, 1 where he noted that “However, there is no doubt that the licensing policies adopted by public sector information holders (PSIHs) directly affect two of the items expressly mentioned in Art. 13(2): the extent of re-use of public sector information and its increase rate.”

⁹⁸⁵ See Section 163, Copyright, Designs and Patents Act C.48 (1988)tp://www.legislation.gov.uk/ukpga/1988/48/data.pdf See also, Archives, legislation.gov.uk, About Us. where it was noted that , "Her Majesty’s Stationery Office (HMSO) was founded in 1786. It is the holder of Crown copyright and has been the official printer and publisher of all Acts of Parliament since 1889". See generally, The National Archives, *Crown Copyright*, <http://www.nationalarchives.gov.uk/information-management/re-using-public-sector-information/copyright/crown-copyright/>.

⁹⁸⁶ GOV.UK, *10 Policies About Government Efficiency, Transparency And Accountability* <https://www.gov.uk/government/policies?topics%5B%5D=government-efficiency-transparency-and-accountability>.

access to government held information and encouraging the use and re-use of such information. The office provides a number of services to the general public and enables curious minds locate, use, re-use, share and add value to public sector information.⁹⁸⁷

The UK government has developed a licensing framework for dissemination of public sector information known as the UK Government Licensing Framework.⁹⁸⁸ Under this framework, it has adopted an open government licence which permits the use and re-use of public sector information and grants a worldwide, royalty-free, perpetual, non-exclusive licence to the licensee subject to a few conditions⁹⁸⁹.

The leadership of the government of the United Kingdom has shown understanding of the relevance of enabling access to public sector information. In a speech at the University of Westminster in 2007, Gordon Brown noted that “this is the century of information. Our ability to compete in the global economy, to protect ourselves against crime and terrorist attack, depends not just on natural wealth or in walls or fences but on our ability to use information... If government is to maintain the confidence of the public and to operate accountably and efficiently, then our management of information must be no less than excellent.”⁹⁹⁰ The current leadership of the United Kingdom led by Prime Minister, David Cameron have also demonstrated Government’s commitment to enabling access to public sector information. The Prime Minister noted that “Greater transparency across Government is at the heart of our shared commitment to enable the public to hold politicians and public bodies to account; to reduce the deficit and deliver better value for money in public spending; and to realise significant economic benefits by enabling businesses and no-profit organizations to build innovative applications and websites using public data”⁹⁹¹

It is clear that the government of the United Kingdom appreciates the value that access to public sector information is capable of contributing to global development. The potentials in public sector information are better and easily harnessed when government’s like those in the United Kingdom understand and appreciate the nexus between access to PSI and economic, social and political developments. By creating platforms for individuals and groups to access, use and reuse

⁹⁸⁷ OPSI, Office of Public Sector Information <http://www.opsi.gov.uk/psi/>.

⁹⁸⁸ The National Archives, *UK Government Licensing Framework for Public Sector Information* (2013), <http://www.nationalarchives.gov.uk/documents/information-management/uk-government-licensing-framework.pdf>.

⁹⁸⁹ The National Archives, *Open Government Licence for Public Sector Information*, <http://www.nationalarchives.gov.uk/doc/open-government-licence/>.

⁹⁹⁰ Office, Information Matters, Speech by the Prime Minister, the Rt Hon. Gordon Brown MP at Liberty, University of Westminster, October 2007 4, . 2007.

⁹⁹¹ Simon Rogers, *Government data: Full Text of David Cameron's Letter Pledging to Open Up The Datasets* (2010) <http://www.theguardian.com/news/datablog/2010/jun/01/government-data-david-cameron-letter>.

government held information, people are able to express the genius within them by rearranging and realigning this information to bring about value added services, new businesses and new lines of discussion.⁹⁹²

6.4.6 New Zealand

In 2008, the government of New Zealand released the Digital Strategy 2.0 which amongst other things expressed the commitment of the government to “making public information accessible to everyone... and open up authoritative data sources for others to use, while protecting privacy and the security of information”⁹⁹³. The strategy noted the growing relevance of digital technology in every facet of the society and noted the need for high speed broadband, enhanced IT training, digital and online security and access to government held information. Prior to the Digital strategy 2.0, government information was regulated under eleven guiding principles set out within the “Policy Framework for Government held Information (PFGHI)”⁹⁹⁴. The growth in the dependence on digital technology quickly elicited the inadequacies in the policy, for example, the policy made no provision for “licensing publicly available information, offering it for re-use or for ensuring secure management of personal government-held information.”⁹⁹⁵ These inadequacies prompted the government to review the policy framework and in line with her open and transparent perspective, the cabinet on the 8th of August 2011 approved new principles for regulating New Zealand’s information system⁹⁹⁶. The new policy addressed issues of ready availability and openness of government data and information for public access. Unlike the 1997 policy, the 2011 policy addresses the issue of re-use rights noting that “data and information can be discovered, shared, used and re-used over time and through technology change. Copyright works are licensed for re-use and open access to and re-use of non-copyright materials is enabled, in accordance with the New Zealand Government Open Access and Licensing framework”⁹⁹⁷. The policy discourages fee charging for access to use and re-use of government held information. The combined effect of the Digital Strategy 2.0 and the 2011 updated

⁹⁹² See generally, Ed Mayo & Tom Steinberg, *The Power of Information: An Independent Review* (2007) <http://www.opsi.gov.uk/advice/poi/power-of-information-review.pdf>.

⁹⁹³ Digital Strategy 2.0. (2008) <http://www.aotearoapeoplesnetwork.org/sites/aotearoapeoplesnetwork.org/files/Digital-Strategy.pdf>.

⁹⁹⁴ New Zealand Government, *Policy framework for New Zealand Government-held information* (1997) http://www.ssc.govt.nz/Documents/policy_framework_for_Government_.htm. The 11 policies are as follows: availability, ownership, coverage, preservation, pricing, quality, copyright, integrity, stewardship, privacy and collection.

⁹⁹⁵ Keitha Booth, *NZ Government Information Policy and Data Re-Use Project Background Paper*, in Brian Fitzgerald (ed) *Access to Public Sector Information: Law, Technology & Policy* (Sydney University Press, 2010) 139.

⁹⁹⁶ New Zealand Government, *New Zealand Data and Information Management Principles* (2011) <https://ict.govt.nz/guidance-and-resources/open-government/new-zealand-data-and-information-management-principles/>.

⁹⁹⁷ New Zealand Cabinet, *Open Government*, CAB Min (11) 29/12 (Cabinet Office ed., 2011).

information policy provides a strong policy framework for New Zealand to harness the possibilities made available through digital technology and to support the growth of creativity, innovation and development as a whole through the use and re-use of government held data and information.

6.4.7 Australia

The office of the Australian Information Commissioner (OAIC) is responsible for Australia's information management policies⁹⁹⁸. Although the OAIC is a recent creation, Australia has been committed to the principles of sharing information having passed her freedom of information Act in 1982⁹⁹⁹. In the same vein, it has been noted that “from the emergence of the World Wide Web in the early 1990's, the Australian government embraced the internet as a medium for communicating with citizens, civil society and business¹⁰⁰⁰” The importance of providing access to use and re-use public sector information was emphasized in a 2008 report that reviewed the National Innovation System¹⁰⁰¹. In the report it was noted that “Good information is crucial to the efficiency of markets and the ability of discerning consumers to drive innovation by providers.¹⁰⁰²” The report amongst other things recommended the establishment of a National Information Strategy to maximize the flow of information in the Australian economy¹⁰⁰³. The report further noted in recommendation 7.14 that “to the maximum extent practicable, information, research and content funded by Australian governments -including national collections- should be made freely available over the internet as part of the global public commons.¹⁰⁰⁴” The government's response to the 2008 Venturous Report was documented in a white paper titled “Powering Ideas: An Innovation Agenda for the 21st century” and released as part of the 2009 budget. The response by government was generally supportive of the recommendations and particularly noted that “Better information produces better decisions. The Australian Government controls mountains of information, and it is determined to make more of this vast national resource accessible to citizens, business people, researchers and policy-

⁹⁹⁸ Australian Information Commissioner Act 2010 Act No.52 of 2010 C2014C00382 <http://www.comlaw.gov.au/Details/C2014C00382>.

See also, Office of the Australian Information Commissioner OAIC, *About us*, <http://www.oaic.gov.au/home/about-us>.

⁹⁹⁹ Freedom of Information Act 1982 Act No.3 of 1982 (1982).

¹⁰⁰⁰ See, Fitzgerald Anne, above n 906, 49.

¹⁰⁰¹ Terry Cutler, Venturous Australia Report: Building Strength in innovation http://www.trade.nsw.gov.au/_data/assets/pdf_file/0006/55383/NIS_review_Web3.pdf. The review was commissioned by Hon. Senator Kim Carr, Minister for Innovation, Industry, Science and Research on the 22nd of January 2008.

¹⁰⁰² Ibid at 101.

¹⁰⁰³ Ibid at 115, See Recommendation 7.7.

¹⁰⁰⁴ Ibid at 118.

makers.¹⁰⁰⁵ It is in furtherance of this determination, that the Office of the Australian Commissioner for Information was established in 2011 to maximize and optimize amongst other things access to use and re-use public sector information. Several government agencies like the Australian Bureau of Statistics¹⁰⁰⁶, the Bureau of Meteorology and Geoscience Australia¹⁰⁰⁷ have adopted strategies that allow for free flow of information. In the same vein since 2011, the Australian Budget and other associated documents have been made available to the general public by the parliament under a CC BY licence. Similarly, all information on the Australian National Data Service website is also licensed under a CC BY licence except where otherwise noted. This particular organisation seeks to “make Australia’s research data collections more valuable by managing, connecting, enabling discovery and supporting reuse of this data¹⁰⁰⁸”

Australia’s resolve to make available for use and re-use, public sector information is not in doubt. Consequent upon the “Venturous Australia report¹⁰⁰⁹” and the response of government through “Powering ideas¹⁰¹⁰” the steps taken by government to ensure free and open flow of information speaks volume.

6.4.8 Nigeria

Access to freely use and re-use information generated and held by government is a challenge in Nigeria. On the 28th of May 2011, Nigeria after 51 years of independence and several years of lobbying¹⁰¹¹ passed the Freedom of Information Act, 2011¹⁰¹². The passage of this act legalises the rights of each Nigerian to access information howbeit subject to certain limitations. Providing citizens with “the right to know”, underpins the fundamental principles of democracy. It is the hallmark of any administration that seeks to follow “the four magic words of

¹⁰⁰⁵ Commonwealth of Australia, Powering Ideas An Innovation Agenda for the 21st Century (2009) http://sydney.edu.au/documents/about/higher_education/2012/20120308%20PoweringIdeas.pdf.

¹⁰⁰⁶ See Australian Bureau of Statistics, *ABS Copyright*, (2010) <http://www.abs.gov.au/websitedbs/D3310114.nsf/Home/%A9+Copyright?opendocument#from-banner=GB>.

All information on the ABS website is licenced under a CC BY licence except otherwise stated.

¹⁰⁰⁷ Bureau of Meteorology, *Copyright Notice: Your Rights To Use Material On Bureau Websites* <http://www.bom.gov.au/other/copyright.shtml?ref=fr>.

¹⁰⁰⁸ Australian National Research Services ANDS, *About Us*, <http://www.ands.org.au/about-ands.html>.

¹⁰⁰⁹ Cutler, above n 988.

¹⁰¹⁰ Commonwealth of Australia, above n 992

¹⁰¹¹ Article 19, *Memorandum on the Nigerian Freedom of Information Bill* (2000) <http://www.article19.org/data/files/pdfs/analysis/nigeria.foi.00.pdf>. This memorandum expressing support for the passage of the FOI bill in Nigeria was published in 2000. It noted that “Information is the oxygen of democracy, we therefore fully support the initiative to introduce FOI legislation in Nigeria”

See also, Article 19, *The Public's Right to Know Principles on Freedom of Information Legislation* (1999) <http://www.article19.org/data/files/pdfs/standards/righttoknow.pdf>.

See also, Article 19 & Media Rights Agenda, *Unshackling the Nigerian Media*, (1997) <http://www.article19.org/data/files/pdfs/publications/nigeria-unshackling-the-media.pdf>.

¹⁰¹² Freedom of Information Act, 2011 FOI Act, (2011).

development” namely accountability, transparency, participation and inclusion¹⁰¹³. The issue of access to information can be viewed from two standpoints, the first being the right to access, that is to use information and the second being the right to re-use information. It is important to make this distinction because the legal regime which the FOI Act in Nigeria establishes allows for restrictive access to use and does not provide re-use rights. The global campaigns with regards to public sector information focuses on both “access to use and re-use” as seen in the analysis above of the United Nations, European Union, OECD, United States, United Kingdom, Australia and New Zealand.

Nigeria currently has no national policy that covers both use and re-use rights but has increased efforts to provide the general public with public sector information through E-Governance. This has been principally aimed at increasing and improving transparency as well as the flow of information within government ministries, departments and agencies (MDA’s); between government and its citizens and the citizens to government. The Nigeria Extractive Industries Transparency Initiative (NEITI) set up in 2004 under the administration of the former President Olusegun Obasanjo is an example of an initiative seeking to build transparency by government¹⁰¹⁴. The passage of the Public Procurement Act¹⁰¹⁵ as well as the establishment of the Bureau of Public Procurement an agency saddled with the responsibility of ensuring fairness, competition, transparency, accountability and probity in the procurement process is another example of government’s drive to run an accountable, transparent, open and inclusive government¹⁰¹⁶. These initiatives are laudable and they have provided a form of window for transparency, and for the citizens to know and probably to be involved in governance. These initiatives as well as the FOI Act do not however provide Nigerians with the needed opportunities to build upon and turnaround available and accessible information. These information are the building blocks and navigational tools used by curious minds in developing value added services and products which in turn develops and strengthens creativity industries as well as national innovation systems.

Although there is no national policy in the above respect, one of the state governments, namely Edo State recently has set up an Open Data Portal under its Open Government Initiative.¹⁰¹⁷

¹⁰¹³ Thomas Carothers & Saskia Brechenmacher, *The Four Magic Words of Development*, (2014) World Bank <http://blogs.worldbank.org/publicsphere/four-magic-words-development-tom-carothers-and-saskia-brechenmacher>.

¹⁰¹⁴The Presidency, *Nigeria Extractive Industries Transparency Initiative (NEITI)* <http://neiti.org.ng/index.php?q=pages/about-neiti>.

¹⁰¹⁵ Public Procurement Act 2007 Act No.14 (2007).

¹⁰¹⁶ Bureau of Public Procurement, *About BPP* http://www.bpp.gov.ng/index.php?option=com_content&view=article&id=110&Itemid=740.

¹⁰¹⁷ Edo State Open Data Portal, *Terms of Use*, <http://www.data.edostate.gov.ng/terms-of-use>.

The portal is the official data repository for the state government and provides an easy way for the public to find, access and reuse public datasets. The first phase of the initiative which commenced in 2011 is what culminated in the launch of the Open Data Portal in September 2013. The focus of the initiative is “to establish a broader framework for an Open Government ecosystem in the state.”¹⁰¹⁸ It is said to be the first sub-national portal in Africa and it contains more than 100 data sets which is freely available and accessible to the public for use and re-use.¹⁰¹⁹ The data and information available on the site is licensed under a Creative Commons attribution (CC-BY) licence.¹⁰²⁰ It has been reported that the “Edo State Open Data Portal is now being reused by the developer’s community and is providing citizens of Edo state with free access to high-value, government data.”¹⁰²¹

6.5 NIGERIA’S FREEDOM OF INFORMATION ACT-STRUCTURE (FOIA)

The passage of the FOI Act is a victory to the general public and particularly to the Nigerian media industry who have suffered severely at the hands of many dictatorial leaders.¹⁰²² The FOIA was initiated as a private bill in 1999 when the then President declined a request by Media Rights Agenda to initiate it as an executive bill.¹⁰²³ The struggle for the now FOIA took so many years during which many activist’s had to pay the ultimate price in their quest to ensure there was free speech.¹⁰²⁴ The Chairman of Thisday Newspapers, defending the media against an allegation that the media had been sympathetic to Boko Haram in the coverage of the sect’s insurgency, explained that Freedom of Information is “the right of a citizen to ask for information on how

¹⁰¹⁸ Lyudmila Bujoreanu, et al., *Open Government Initiative In Edo State : Fostering An Ecosystem Of Collaboration And Transparency: Perspectives On Social Development: Briefing Notes From Nigeria*, (2014) Washington, Dc: World Bank Group, <http://documents.worldbank.org/curated/en/2014/05/19694128/open-government-initiative-edo-state-fostering-ecosystem-collaboration-transparency>. See the introductory section on page 1

¹⁰¹⁹ Ibid at. 11

¹⁰²⁰ Edo State Open Data Portal, above n 1004.

¹⁰²¹ Lyudmila Bujoreanu, et al., *Open Government Initiative in Edo State : Fostering an Ecosystem of Collaboration and Transparency* (2014), <https://openknowledge.worldbank.org/handle/10986/18713>.

¹⁰²² Dan Agbese, When the sun set in Nigeria: Dele Giwa’s awful murder (Committee to Protect Journalists, CPJ 2009). Years after the awful murder of a renowned Journalist, (Dele Giwa), The Editor in Chief of Newswatch tells of the persecutions journalist suffered at the hands of military dictators. “The country was shocked by the cruelty of the killing and the instrument of death. Nigeria did not have a history of murdering journalists. We were working under the military government, but while the military man might shave your head, break a bottle off it, or rough you up, there had been no killings of journalists....We had no choice but to press on despite the odds. Newswatch was banned for six months in 1987 by the Babangida administration for the grave offense of doing what all good and serious publications must do—put the interests of the public and the nation above the narrow interests of the few men in the corridors of power. The magazine’s offense was that it had violated the Official Secrets Act by running stories revealing the recommendations of a presidential commission devising a unique political system for the country. At the time of the publication, there was no law forbidding the press from publishing a public document even if that document had not been officially released to the public. Three times the editors of the magazine were detained.”

¹⁰²³ Bayo Oladeji, *The Importance of Freedom of Information Act*, <http://leadership.ng/blogposts/390236/importance-freedom-information-act>.

¹⁰²⁴ CPJ, *10 Journalists Killed in Nigeria since 1992/Motive Confirmed*, Committee to Protect Journalists, <https://www.cpj.org/killed/africa/nigeria/>.

he is governed and thereby be in a position to hold government accountable. As an Act, it is therefore one of the most important tools citizens and reporters can have in demanding for transparency and accountability in governance.¹⁰²⁵ As noted earlier the Freedom of Information Act 2011 has no legal framework for reuse rights. The act was structured to provide access to use information. The FOI clearly does not provide all possible access but considering where Nigerian's have come from, it is worth celebrating and can be one of the building blocks for greater access.

The FOIA gives every Nigerian the legal right to access or request information, records and documents held by government bodies and private bodies carrying out public functions¹⁰²⁶. These include the three arms of government, the executive, legislative and judiciary as well as the three tiers of government namely, Federal, State and Local governments.¹⁰²⁷ Applicants are not required to demonstrate any specific interest in the information they seek,¹⁰²⁸ and such applicants are entitled to institute proceedings in court to compel compliance.¹⁰²⁹ The procedure for applying for information, the time for granting or refusing an application, transfer of an application, extension of time limit for granting or refusing an application, what can be done when access is refused and the fees payable are all covered under Sections 3, 4, 5, 6, 7 and 8 of the Act respectively.

Public institutions are mandated to facilitate access to information by properly documenting and keeping information about all its activities, operations and businesses. These institutions are to ensure that the information is widely disseminated and made readily available through various means including print, electronic, online sources and at the office of the public institution.¹⁰³⁰

The act makes an attempt at striking a balance between making information more freely available and national security,¹⁰³¹ protecting public records,¹⁰³² as well as the protection of personal privacy,¹⁰³³ and Intellectual property rights.¹⁰³⁴ It also protects serving public officers from adverse consequences for disclosing certain kinds of official information without authorization.¹⁰³⁵

¹⁰²⁵ Oladeji, above n 1010.

¹⁰²⁶ See Section 1(1), FOI Act, (2011).

¹⁰²⁷ Ibid Section 2(7)

¹⁰²⁸ Ibid Section 1(2)

¹⁰²⁹ Ibid Section 1(3)

¹⁰³⁰ Ibid Section 2 (1, 2 & 4)

¹⁰³¹ Ibid Section 11(1)

¹⁰³² Ibid Section 12

¹⁰³³ Ibid Section 14

¹⁰³⁴ Ibid Section 15

¹⁰³⁵ Ibid See section 27 as well as the explanatory notes to the FOI Act.

6.5.1 Nigeria's FOIA-Implementation

Although the legislation on freedom of information is common place globally, its passage in Nigeria stirred understandable celebration across Nigeria.¹⁰³⁶ A few years have rolled by now and the implementation of the FOIA has attracted mixed reactions from the government, the people and the courts. Some government agencies still act as if the repealed Official Secrets Act is still in force. Several demands have been declined and the courts may have complicated matters by its interpretation on applicability of the FOIA.¹⁰³⁷ As can be expected a great number of requests have been granted but there have been instances where government agencies have refused requests for information. In such cases, the FOIA which entitles an applicant to institute a proceeding to compel the grant of the request has been activated. Below are examples of FOIA implementation.

Adekoya V Governor of Ogun State: It has been reported that the Federal High Court in Abeokuta resumed hearing on Tuesday, November 4, 2014 on a Freedom of Information application instituted by a famous Ogun State businessman, Adekoya Boladale seeking the court to grant an order of mandamus on the State Governor, Senator Ibikunle Amosun, the State

¹⁰³⁶ See Elliot Ross, *Nigeria's New FOIA: Reporters Enjoy New Freedoms In A Long-Repressive Society* http://www.cjr.org/behind_the_news/nigerias_new_foia.php. Where he noted that "Journalism in Nigeria has never been easy work, and the new Freedom of Information Act (FOIA), which finally became law in May twelve years after the bill was first drafted, isn't about to change that overnight. But having struggled through decades of repression under military rule, advocates of press freedom in Nigeria are in unusually optimistic mood... Senior figures in Nigerian journalism have celebrated the law's passing, but stress that the work of opening up their country has only just begun."

See also, Lanre Idowu, *Nigeria's new FOI law brings celebration, challenges* (Committee to Protect Journalists 2011). Where it was noted that "There is a deserved celebration in the Nigerian media over the recently passed Freedom of Information Act, which provides citizens with broad access to public records and information held by a public official or institution. It is the climax of an 11-year struggle to pass such a law in the Nigerian parliament."

¹⁰³⁷ The Citizen, *Undermining Freedom of Information Act-Punch* <http://thecitizenng.com/public-affairs/undermining-freedom-of-information-act-punch/>.

"WHEN in May 2011, Nigeria joined the league of countries that had passed the Freedom of Information Act, the event was widely celebrated by advocates of truth and transparency in governance...But more than three years after the Act came into effect, its expected benefits, especially the opportunity for an informed citizenry to participate better in democratic decision-making, remain elusive. The use of the Act has run into the sands. Just as it was in the pre-FOI Act era, government activities are still grossly veiled in obscurity...It was rightly observed recently that Federal Government agencies were still behaving as if the Official Secrets Act, implicitly repealed by the FOI Act, was still in operation. Some state governments, claiming that the law needed to be domesticated in their domain, have refused to grant access to those seeking information about their activities. Our judiciary is not helping matters either with its conflicting rulings on the national applicability of the law. As a result, the FOI Act is operating at a very rudimentary level with public officials still holding on tenaciously to the archaic practice of keeping government activities away from the public space. In 2013, at the height of the N255 million bullet-proof car controversy involving Stella Oduah, then the Aviation Minister, a Lagos-based lawyer, Femi Falana, requested the details of the purchase, including budgetary approvals from the authorities. The Nigerian Civil Aviation Authority declined. Falana had also made such demands in respect of the five per cent fuel levy collected by the Federal Roads Maintenance Agency on every litre of petrol and diesel sold at the pump since 2007. It was also to no avail."

Commissioner for works, Arc. Adegbite Olamilekan and the Commissioner for Finance, information on the state debt record and contracts awarded.¹⁰³⁸

Osita Okechukwu V Petroleum Resources Minister: It has also been reported that a member of the All Progressive Congress, Osita Okechukwu has instituted a proceeding before the Federal High Court in Abuja against the Petroleum Resources Minister, Mrs Diezani Alison Madueke over her refusal to grant access for requested information in respect of Nigeria's crude oil swap variant and the certification of subsidy for the importation of kerosene and Premium Motor Spirit (PMS) into the country by the Nigerian National Petroleum Corporation (NNPC) since January 2012¹⁰³⁹.

India Garba V SA to Governor of Benue State: Similarly, Honorable Justice S.O. Itodo of the Makurdi High Court has given the Special Adviser to the Governor of Benue State, 14 days from the 9th of October, 2014 to furnish the plaintiff- Major India Garba with the requested information.¹⁰⁴⁰ The plaintiff was compelled to institute the proceeding after his request dated the 30th day of July, 2012 for details of revenue allocation to Vandeikya Area Council from January 2010 to July 30th 2012 was denied. In delivering his judgement, his lordship noted that the refusal to release the information was tantamount to a violation of Section 4 (a) and 7 (1) of the FOIA 2011.

6.5.2 National Applicability of FOIA

The national applicability of the FOIA across the federation of Nigeria has been considered by the courts and have brought about opposing judgements.¹⁰⁴¹

In an FOIA application between **Yomi Ogunlola V Clerk of Oyo State**, before Justice S.A Akinteye of the Ibadan High Court it was held that the Act has general application throughout the entire federation of Nigeria and therefore “does not need to be domesticated by any state before taking effect in all states across the federation.¹⁰⁴²” Mr Yomi Ogunlola on the 23rd of July, 2012 had requested to know the source of funding for the trip of the wives of legislators’ having regard to the fact that these women were neither public nor civil servants. In response, the Clerk in a letter dated July 25, 2012 informed that the FOI Act was not presently applicable in Oyo State because it had not been domesticated by the state. It was based on this response that

¹⁰³⁸ Joseph Emmanuel, *Ogun State Govt fined by Court Over Freedom of Information Act* (2014) <http://www.thetrentonline.com/foi-ogun-state-govt-fined-court/>.

¹⁰³⁹ Sahara Reporters, *Freedom Of Information: APC Chieftain Drags Alison-Madueke To Court* (2014) Sahara Reporters <http://saharareporters.com/2014/09/24/freedom-information-apc-chieftain-drags-alison-madueke-to-court>.

¹⁰⁴⁰ *India Garba V SA to Governor Benue State* MHC/2565M/2012, (Makurdi High Court 9th October, 2014).

¹⁰⁴¹ Davidson Iriekpen, *Nigeria: In Conflicting Judgement, Court Says FOI Act Not Binding On States* AllAfrica <http://allafrica.com/stories/201411030673.html>.

¹⁰⁴² *Yomi Ogunlola V Clerk of the Oyo State House of Assembly*, (High Court Ibadan).

Ogunlola approached the court seeking the court's determination as to whether the FOIA required domestication to be applicable in the respective states of the federation. In his judgement, Justice Adekeye noted that "the supreme court had made it clear that the National assembly has the legal competence to make laws for the peace, order and good government of Nigeria that is applicable to all states of Nigeria without infringing on the autonomy of the states, if such a legislation is designed to correct a malaise plaguing the country."¹⁰⁴³

In an interesting twist from Justice Adekeye's decision as noted above, Justice Okon Abang of the Federal High Court of Lagos in **Legal Defence and Assistance Project Limited/GTE V AG Lagos State & 5 Others** has ruled that the FOIA is non-binding on the 36 states of the federation. He explained that since the Act was passed by the National Assembly, it binds the federal government and her agencies. The judge further noted that the FOIA is not a residual law, neither is it on the concurrent list of the Constitution. He noted that the houses of assembly of the states were empowered to make laws for their respective states and as a result the FOIA enacted by the federal legislature was non-binding on the states.¹⁰⁴⁴

It is clear from all of the above that the FOIA provides Nigeria and Nigerians with a framework for access to knowledge. The challenge is that this access is restricted to "use rights" and considering where Nigeria has come from, this form of access is worth celebrating and have indeed been a cause for celebration. Notwithstanding the celebration, if Nigeria is going to maximize the potentials of her people in this globalized and knowledge based economy and if she truly seeks for a global scale development where creativity and innovation plays a significant role, then it is imperative that a framework providing not just use rights be in place but one which also enables access to reuse rights.

The campaign for free and open access to public sector information is not without criticism. Breton has said that "the view is widespread that more transparency in institutions leads to better outcomes. That, however, is surely too enthusiastic a view."¹⁰⁴⁵ Others have noted that it would enhance the activities of whistle-blowers, may infringe on laws, bordering on intellectual property, particularly copyright and patent, privacy laws, confidentiality, business interests, national interest and national security¹⁰⁴⁶. In consideration of the above views, it may be argued that the platform which FOI provides is already a cause of concern and should be able to cater

¹⁰⁴³ Ibid

¹⁰⁴⁴ Legal Defence and Assistance Project Limited/GTE V AG Lagos State & 5 Others, (Federal High Court of Lagos).

¹⁰⁴⁵ Albert Breton, et al., *The Economics of Transparency in Politics* (Albert Breton, et al. eds., Ashgate Press, 2007).

¹⁰⁴⁶ Frank Bannister & Regina Connolly, *The Trouble with Transparency: A Critical Review of Openness in e-Government*, (2011) 3 Policy & Internet.

for all issues relating to access to public sector information. This section of the chapter will therefore address public sector information in the light of the above issues and make a distinction between them and explain how PSI operates within the sphere of these issues.

6.5.3 PSI and FOI

Whereas, freedom of information refers to the right of all citizens to access government held information by requesting for it, the philosophy to public sector information is that all citizens should have the right to access government held information without the requirement of having to ask for the information as the information should be made available online and there will therefore be no need to request for it. Interested users will only need to connect to the internet and access it. Therefore information under FOI is not available to the public by default but under PSI it is by default available to the public.

Whereas, freedom of information provide users with the right to use government held information and nothing more, public sector information goes further to provide not just the right to use but the right to reuse such government held information. The objective of FOI, which is to enable the right of citizens to know, thereby creating a conducive environment for transparency, accountability, greater citizenry participation and inclusion is fully encapsulated within the objectives of PSI. The objective of PSI is however broader as it contains that of the FOI and also focuses on building on the accessible and available government information. It seeks to encourage economic development through value added services developed by the reuse of government held information. In the same vein it also seeks to develop and strengthen the creative industries and innovation systems by providing raw materials (data) for further creativity and innovations¹⁰⁴⁷.

6.5.4 PSI and Intellectual Property Law

(Licensing, copyright and policy issues): Whilst PSI advocates for free and open access to use and reuse information in the custody and under the direct or indirect supervision of government, it fully recognises and respects the legal framework that protect works of creativity and innovation under the regime of intellectual property. The strategy that has been adopted to ensure access to government held information with IP protection is licensing. Licensing in a simple form is the grant of permission or authorization subject to terms and conditions. The

¹⁰⁴⁷ See The Sources of Innovation and Creativity: National Center on Education and the Economy (NCEE) Research Summary and Final Report (2005) <http://www.ncee.org/wp-content/uploads/2010/04/Sources-of-Innovation-Creativity.pdf> 3-4, Where knowledge was identified as one of the three components for creativity and where knowledge was described “as all the relevant information that an individual brings to bear on a problem.” See also, Newton, n 229. Which emphasizes the importance of collaboration and building on the works of others.

cost, technicalities and other legal issues surrounding licenses has led to the development of free and open licences¹⁰⁴⁸. The Creative Commons licences have been the most effective and impacting of these licenses¹⁰⁴⁹. There are however other licencing models which clarify the rights that are available to the general public. The open movement has been proactive to ensure compatibility in the licenses that have been issued.¹⁰⁵⁰

6.5.5 PSI and Privacy Law/Issues; Confidentiality

A large portion of the information in government custody is about individuals and these information are protected under privacy laws. These information include general medical, educational, financial and employment records. The law also recognises the need for confidentiality which exists between doctors and patients, lawyers and clients, journalists and source as well as between spiritual leaders and their members. Access to the above type of information is not within the contemplation of PSI as this type of information is legally protected and therefore excluded. Where individuals attempt to hide fraud under the guise of privacy or confidentiality the law provides for processes where warrants and orders may be issued and information would be obtained as deemed necessary.¹⁰⁵¹

6.5.6 PSI and Government Business Interest

Deregulation of government run business has brought about greater efficiency and effectiveness in the system. The former bottleneck of bureaucracy and lack of government funding having been removed from the way has allowed most of these agencies to blossom. The campaign for free and open access to government-held information may therefore not go down well with agencies whose trading product is information. The simple argument would be if we give away for free our trading product, then how would we generate funds and how would the agency continue to operate. It is for this reason that the European Union in developing its policies for access to public sector information as recognised the need to address pricing. It is generally

¹⁰⁴⁸ Free Software Foundation, *GNU Free Documentation License* <http://www.gnu.org/licenses/fdl.html>.

See also, Stallman, above n 288.

¹⁰⁴⁹ Guilbault & Angelopoulos, *Open Content Licensing From Theory to Practice* (Amsterdam University Press, 2011) 8. Where it was noted that "Among the numerous licensing models based on open content, the most successful application so far is the Creative Commons initiative"

¹⁰⁵⁰ European Commission, *Open-Source Software: Licence Compatibility and Interoperability*, Joinup <https://joinup.ec.europa.eu/software/page/licence-compatibility-and-interoperability%20>.

"Determining whether the various licences involved are compatible is important when the aim is to redistribute the application to third parties: under what open source licence should it be distributed? Is this always possible?"

¹⁰⁵¹ ACT Australian Capital Territory Government, *Open Data Policy: Draft Proactive Information Disclosure (Open Data) Policy* <http://actgov.github.io/opendatapolicy/> (GitHub). The policy provides for exemptions from public disclosure which includes issues of privacy, commercial confidentiality, security and Cabinet Data. It also notes that the publication of data must not breach legislation or security classifications and that staff should be aware unauthorised disclosure could breach several legislation including Public Sector Management Act 1994, Privacy Act 1988, Health Records (Privacy and Access) Act 1997, The Territory Workplace Privacy Act 2011, The Territory Children and Young People Act 2008 or the Territory Public Interest Disclosure Act 2012.

recommended that as much as practicable all government information is to be made available and accessible free of charge, at a near zero cost or at the least minimum cost. Where a cost applies it should not be beyond the cost of production and a reasonable amount to cover administration costs.¹⁰⁵² In a country like Nigeria where a number of the government agencies trade in government held information, for instance the Corporate Affairs Commission, It would be quite difficult to expect the agency to make available and accessible all the information in her custody for free. The pricing model adopted by the EU when dealing with particular types of PSI would be a model Nigeria can study and adapt.

6.5.7 PSI and National Interest/National Security

When Snowden leaked classified information in the United States and about many other nations, the explanation was that “the more information he saw about what he viewed as ... mass surveillance, the more disillusioned he became. He says quite explicitly that he thought that (President Barack) Obama would roll back some of these programs when he came into the White House, and when this didn’t happen, essentially Snowden decided he would take things into his own hands, and become a whistle-blower.¹⁰⁵³” Every citizen has the “right to know” and is guaranteed the freedom of expression and liberty. Nonetheless, there must be mutual respect for the right of others. Government’s operation require a high level of intelligence and surveillance to uphold the national interest and for purposes of national security. The laws of each land support prioritization of making decisions and policies based on national interest and national security. It is for this reason that individual citizens who work in positions where they handle privileged information are sworn to an oath of secrecy and they have no right to take laws into their hands as Snowden did because such decisions affect not just the individual but the entire nation.¹⁰⁵⁴ Access to Public Sector Information takes cognisance of this fact and adds to its exclusion list information which are considered to be restricted due to national interest or national security.

¹⁰⁵² European Union, Commission Notice: 'Guidelines on recommended standard licences, datasets and charging for the re-use of documents' (2014) <https://ec.europa.eu/digital-agenda/en/news/commission-notice-guidelines-recommended-standard-licences-datasets-and-charging-re-use>. The guideline expands upon Article 6 of Directive 2003/98/EC of the European Parliament and the of the Council of 17 November 2003 on the re-use of public sector information which covers the principles governing charging and states at Article 6 (1) that “where charges are made for the re-use of documents, those charges shall be limited to the marginal costs incurred for their reproduction, provision and dissemination.” The guidelines provides guidance to agencies who charge fees and notes that although Article 6 (2) exempts public sector bodies that generate revenue to cover a substantial part of their costs, it does not however prevent them from implementing a wilful zero-cost policy. It allows for documents to be made available for re-use free of charge. At the same time it limits any charges to the marginal costs incurred for the reproduction, provision and dissemination of documents.

¹⁰⁵³ Mark Morgenstein, *Edward Snowden: World's most wanted man, says new book*, (2014) CNN <http://edition.cnn.com/2014/02/02/world/europe/uk-snowden-book/>.

¹⁰⁵⁴ Miller, above n 280. See where he noted that "That moral decision to tell the public about spying that affects all of us has been costly, but it was the right thing to do and I have no regrets."

The importance of access to public sector information cannot be contested when cognisance is taken of its effect on creativity, innovation and good governance. The need however for balance has been highlighted in the discussion above about national security, Intellectual property rights, and with privacy and confidentiality issues. The dynamics of accessing public sector information has its own challenges but the importance of accessing such information cannot be over emphasized. The three stories told here-under brings to live the importance of access to information particularly public sector information.

6.6 NIGERIAN CASE STUDIES

6.6.1 Fuel Crisis

The Federal Government, minded to tackle the high cost of subsidizing petrol decided to remove the subsidy it had earlier applied to the product. This action sparked violent protest amongst the citizenry.¹⁰⁵⁵ Civil liberty organisations and other faith groups pulled together relevant information on the Nigerian oil sector, the Nigerian economy, the history of fuel price increases, the trend of corruption amongst government officials and the non-compliance by government to earlier promises and commitments.¹⁰⁵⁶

There was a viral spree of the information via social media and within days, millions had rallied together to assert their rights and protest the new policy. The information in the hands of the ordinary citizen sparked an awareness as well as dissatisfaction and it stirred individuals and groups to take active steps to hold the government accountable. The protesters demanded reversal of the removal of the subsidy and argued that the removal is untimely considering the poor state of the average Nigerian.¹⁰⁵⁷ In addition, the protesters raised complaints about the lack of basic amenities which should have been provided in the first place but rather government officials had mismanaged and enriched themselves with the available resources.¹⁰⁵⁸ They were therefore minded that the additional income generated by the subsidy removal would be used to line the same corrupt leaders' pockets.¹⁰⁵⁹ These series of protest compelled government to reduce the price that had been increased against the will of the people. This was a victory for the people. By means of access of relevant information held by government, the people were able to

¹⁰⁵⁵ Busch Gary, *The Full Story of the Fuel Subsidy Crisis* http://www.ocnus.net/artman2/publish/Editorial_10/The-Full-Story-of-the-Fuel-Subsidy-Crisis.shtml.

¹⁰⁵⁶ Aljazeera, *Nigeria Police Crack Down On Fuel Protests* (5 January 2012) Aljazeera, <http://www.aljazeera.com/news/africa/2012/01/201214141913862546.html>.

¹⁰⁵⁷ Ndujihe Clifford, *Fuel Subsidy Crisis: Labour Versus Govt; Who Blinks First?* (6 January 2012) Vanguard <http://www.vanguardngr.com/2012/01/fuel-subsidy-crisislabour-versus-govt-who-blinks-first/>.

¹⁰⁵⁸ Ibid.

¹⁰⁵⁹ Wikipedia, *Occupy Nigeria*, https://en.wikipedia.org/wiki/Occupy_Nigeria.

hold government accountable and participate in the process of decision making by demanding a reversal of the policy.

Oftentimes, protests end up in loss of life and property. Should this be so? Is the grant of access to PSI tantamount to instigating violence and should the fear of these negative consequences forestall the exercise of the rights of citizens? No doubt, the negative consequences are not desirable and violent acts leading to wanton destruction of lives and property must be condemned. It must however be noted that if that is the price that must be paid for freedom and good governance it may not be a too high price in the hope that once good governance is established, the reign of stability and progress can be entrenched.

6.6.2 Bring Back Our Girls

276 girls preparing to seat for their final exams were kidnapped in Northern Nigeria on the 14th of April, 2014 by an Islamic terrorist group known as Boko Haram¹⁰⁶⁰. Access to government-held information enabled the people know that Nigeria's Federal Government was telling lies.¹⁰⁶¹ The nonchalance of government and the lackadaisical attitude of the media prompted the people to do something¹⁰⁶². On the 23rd of April, Ibrahim M Abdullahi, a Nigerian lawyer decided to send out a tweet "bringbackourgirls"¹⁰⁶³. He heard these words from a former Nigerian Minister of Education and former Vice President of the World Bank, Obiageli Ezekwesili at the World Book Capital, a UNESCO program held in Port Harcourt. The program was also used as an opportunity to pressurize government to take positive actions in respect of the kidnapped Chibok girls. She particularly urged the audience to "make a collective demand for our daughters to be released for our daughters to be rescued..."¹⁰⁶⁴ As a result of that singular tweet, now retweeted over 1.3 million times, the world has focused its attention on Nigeria and the Nigerian government has taken visible steps¹⁰⁶⁵ to address the kidnap of the Chibok girls¹⁰⁶⁵.

¹⁰⁶⁰ Aminu Abubakar, Factsheet: How Many Schoolgirls Did Boko Haram Abduct And How Many Are Still Missing? 2014 <https://africacheck.org/factsheets/factsheet-how-many-schoolgirls-did-boko-haram-abduct-and-how-many-are-still-missing/>.

¹⁰⁶¹ Jina Moore, *The Nigerian Government Has Lied About Finding The Kidnapped Girls Before* <http://www.buzzfeed.com/jinamoore/12-things-the-nigerian-government-has-said-and-sometimes-had#.mmDYB2kqwm>.

See also, Collins Nduka, *Army Lied Again! Rescued Girls Aren't Chibok Girls – and their Parents are Livid - See more at:* <http://www.xclusive.ie/army-lied-again-rescued-girls-arent-chibok-girls-and-their-parents-are-livid/#sthash.ORjSpkPY.dpuf> at <http://www.xclusive.ie/army-lied-again-rescued-girls-arent-chibok-girls-and-their-parents-are-livid/>.

¹⁰⁶² Faith Karimi & Vladimir Duthiers, Nigerians Demand Government Do More To Bring Home Kidnapped Girls 2014 CNN <http://edition.cnn.com/2014/05/01/world/africa/nigeria-abducted-girls/>.

¹⁰⁶³ BBC Trending, #BBCtrending: The Creator Of #Bringbackourgirls (2014) <http://www.bbc.com/news/blogs-trending-27315124>.

¹⁰⁶⁴ Miranda Neubauer, #BringBackOurGirls: How a Hashtag Took Hold, TECHPRESIDENT (2014) <http://techpresident.com/news/24996/bringbackourgirls-how-hashtag-took-hold>.

¹⁰⁶⁵ BBC Trending, above n 1050. Where it was noted that "#BringBackOurGirls...has so far been tweeted 1.3 million times"

Federal government confronted with the media barrage had no choice but to wake up to her responsibilities. The social media in this instance became the tool for communication that inspired global solidarity and eventually forced the hands of government to take steps, unfortunately it still hasn't yielded the desired result. The 276 Chibok girls are yet to be found and Nigerians have expressed their displeasure by voting out the government in power.¹⁰⁶⁶ This was due to access to government-held information. Making information available to the people brings about citizenry participation and transparency. The social media tool as well as other communication tools are continually being used as platform to engage government and bring about the needed changes in government. In this case it was the simple tweet, "bringbackourgirls."

6.6.3 "Nigeria's Ebola Outbreak"

The Ebola epidemic outbreak of 2014 has been the largest in history and has affected multiple countries globally including Liberia, Senegal, Spain, the United States, Guinea, Sierra Leone, Mali and Nigeria.¹⁰⁶⁷ The outbreak in Nigeria has been traced to the July 2014 when the dreaded virus was imported into Nigeria by a Liberian diplomat, Patrick Sawyer.¹⁰⁶⁸ On arrival at the International Airport he fainted and was taken to First Consultants Hospital where he eventually became a ticking bomb to the whole of Nigeria. Although First Consultant Hospital is not a government or publicly funded institution, the information about Patrick Sawyer was of national interest and the initiative of Dr Sella Ameyo Adadevoh to provide information about his health status and insist on his being kept at the hospital despite several threats to her has been noted as what saved Nigeria from a potential catastrophe.¹⁰⁶⁹ The bravery of the hospital staff some of whom eventually paid the ultimate price and access to information has been attributed as factors

¹⁰⁶⁶ Leena Hoffman, *Nigeria elections: Voters did not forget the Chibok girls taken by Boko Haram* at <http://www.independent.co.uk/voices/nigeria-elections-voters-did-not-forget-the-chibok-girls-taken-by-boko-haram-10147559.html>. It has been reported that "Jonathan lost because he spent most of his campaign running away from the record of his five-year presidency – which was marked by levels of corruption and economic mismanagement that were gargantuan even by Nigerian standards. His failure to tackle the Boko Haram crisis and rescue the Chibok girls was not forgotten."

¹⁰⁶⁷ Centers for Disease Control and Prevention, *Countries with Cases of Ebola* (2014) <http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/distribution-map.html#areas>.

¹⁰⁶⁸ Katherine Harmon Courage, *How Did Nigeria Quash Its Ebola Outbreak So Quickly?* (2014) <http://www.scientificamerican.com/article/how-did-nigeria-quash-its-ebola-outbreak-so-quickly/>.

¹⁰⁶⁹ Jonathan Cohn, *The Heroic, Tragic Story of the Doctor Who Saved Nigeria From Ebola* <http://www.newrepublic.com/article/119956/doctor-stella-adadevoh-isolated-ebola-case-stopped-nigeria-outbreak>. See where it was noted that "She recognized the significance of the symptoms, given Sawyer's travel history, and ordered him into isolation. Then she notified public health officials that she had a possible case of Ebola on her hands."

See also, Adenike Orenuga, *Revealed: How Dr. Adadevoh saved Nigerian lives from Ebola* (2014) Daily Post <http://dailypost.ng/2014/08/20/revealed-dr-adadevoh-saved-nigerian-lives-ebola/>.

See also, Jenny Booth, *Praise for doctor who 'saved Nigeria from ebola'* <http://www.thetimes.co.uk/tto/news/world/africa/article4242172.ece>.

that helped nip in the bud what could have easily become an unmitigated outbreak.¹⁰⁷⁰ It was reported that “information played a key role, for everyone else- that is people not medically or operationally involved in the Ebola prevention effort.”¹⁰⁷¹ Paul Mershak, Manager for Nigeria of the Tearsfund’s HIV Project has noted that “spreading the right information about the virus has been key to Nigeria’s Ebola Success Story and our partners have played an important and valuable role in educating people in a timely way.”¹⁰⁷² The World Health Organisation has commended Nigeria’s response to the Ebola outbreak and also stated that “a strong public awareness campaigns, teamed with early engagement of traditional, religious and community leaders, also played a key role in the successful containment of this outbreak.”¹⁰⁷³ The reality is that all these efforts were made because that singular sensitive information was made available.

Shortly after Patrick Sawyer’s arrival in Nigeria, an information centre on Ebola facts had come alive. It was focused on enlightening the general public about Ebola and its effect. It particularly noted that “Ebola is a very scary disease, it kills most of the time and has no cure, the good news is that you don’t have to get it.”¹⁰⁷⁴ The development of such websites are some of the value added services that are spurn from public sector information. This particular website provided the opportunity for citizens to enjoy the right to know what was happening in their country, how government was handling the problem and even more how each citizen could protect themselves from the deadly virus. Thanks to the dedication of the hospital’s medical team and the effective information network, millions of Nigerians were saved from the deadly virus.

6.7 CONCLUSION

This chapter has pointed out that government holds some of the largest and most important information. In today’s knowledge economy, information is an essential commodity in virtually all spheres of life. Access to this information which has been referred to as public sector information is crucial as it creates an enabling environment for accountability, transparency, participation and inclusion. The passage of the FOIA in Nigeria in 2011 established a legal framework for the right to access and use information which in turn as brought about a new era giving the people the right to know. This Act however has left out an important component of access to information, which is the right to reuse information. This right enables developing

¹⁰⁷⁰ Nicholas Kristof, *Bring Back Our Girls*, (2014) The New York Times http://www.nytimes.com/2014/05/04/opinion/sunday/kristof-bring-back-our-girls.html?_r=0.

¹⁰⁷¹ Oluwafemi Bankole, *Nigeria: How Information Conquered Ebola*, (2014) Techcabal <http://techcabal.com/2014/10/20/nigeria-information-conquered-ebola/>.

¹⁰⁷² Tearfund, *Church Helps Nigeria Beat Ebola* (2014) http://www.tearfund.org/en/latest/2014/11/church_helps_nigeria_beat_ebola/.

¹⁰⁷³ World Health Organization, *WHO declares end of Ebola outbreak in Nigeria* (2014) <http://www.who.int/mediacentre/news/statements/2014/nigeria-ends-ebola/en/>.

¹⁰⁷⁴ Big Cabal Media, *Ebola Facts* (2014) <http://www.ebolafacts.com/>.

communities to build upon government-held information and thereby provide the society with value added products. It encourages the growth of strong creative industries and viable innovation systems. The three stories about Nigeria's struggle with the 2011 fuel crisis, the kidnap of the Chibok girls by Boko haram which stirred a globally campaign tagged "BringBackOurGirls" and the Ebola outbreak which Nigeria conquered is an evidence of how the flow of information to citizens can aid good governance, compel government to take the right steps or reverse a wrong decision.

Nigeria's progress with the passage of the FOIA bill is a step in the right direction and must be built upon to ensure a national open government policy. The open government policy currently been implemented in Edo State can serve as a guide for a national policy initiative.

PART IV: OPEN ACCESS: PRECEPTS AND PROSPECTS.

Part 1 laid out the foundation for the entire research. Part II explored the framework for open access to knowledge in Nigeria and Part III analysed the three pillars of open access.

Part IV pulls together the global experiences provided in Part III taking cognisance of the lacunas in the current framework for open access to knowledge in Nigeria and provides guidelines for the development of frameworks that can enable open access to knowledge in Nigeria. The framework addresses legal, regulatory and policy concerns and have been purposefully crafted as guidelines which can be further developed to suit different interests and stakeholders.

CHAPTER 7: GUIDELINES FOR DEVELOPING A FRAMEWORK FOR ACCESS TO KNOWLEDGE IN NIGERIA

7. OBJECTIVE

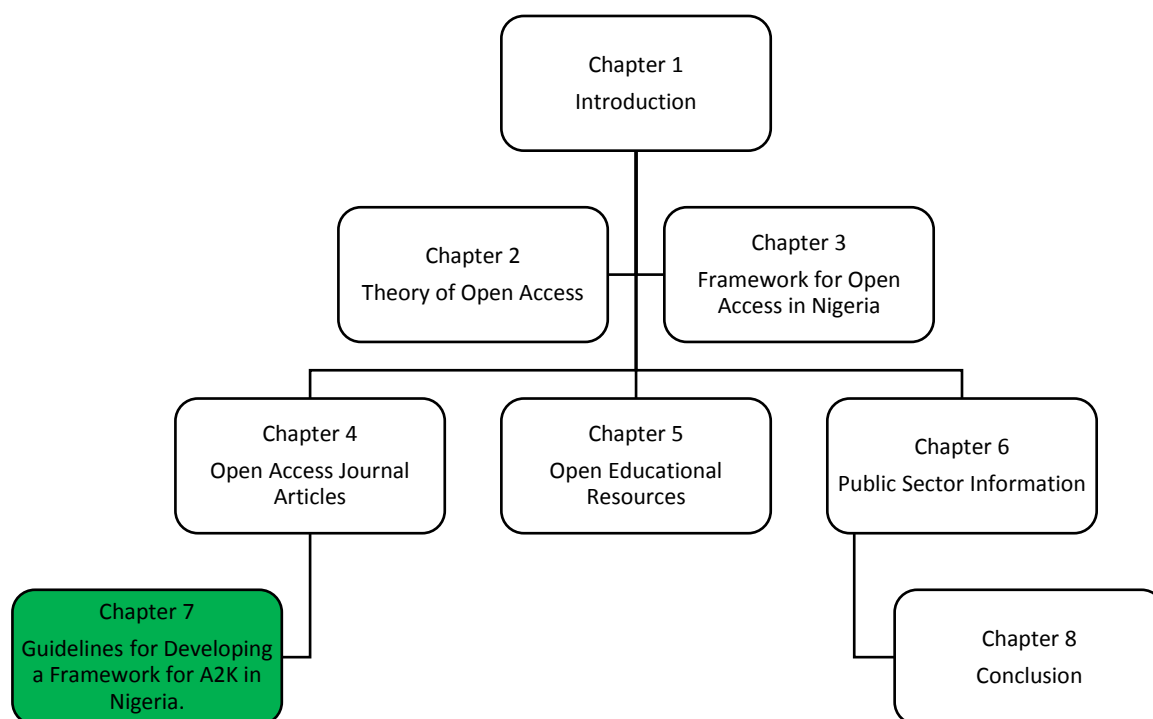
The focus of this chapter is to provide guidelines that may be used in the development of Nigeria's open access to knowledge framework. It also provides drafts that may be adapted by government, academic institutions and private organisations for purposes of implementing initiatives that may enable open access to knowledge.

Aims & Objectives

2. To investigate, explain and propose a legal, regulatory and policy framework for Nigeria that would enable open access to the output of journal articles, open educational resources and public sector information.

Research Questions

3. What legal, regulatory and policy frameworks are required or needed to be strengthened for the successful implementation of open access in Nigeria?



7.1 INTRODUCTION

The previous chapters have investigated and explained the growing need for open access to knowledge in a knowledge driven economy. Chapter three identified a number of Nigeria's governmental Ministries, Departments and Agencies (MDA's) with research oriented mandates

and noted that most of these agencies appear to be aware of the importance of research and the role that information dissemination plays in national development. However most of these MDA's do not have a structure to enable access to the information in their custody. While researching agencies with a semblance of a structure, it was discovered that they were either non-functional or scarcely populated.

Chapter four investigated and explained the dynamics and challenges around accessing academic journals and articles. It provided insight to policies and frameworks adopted and implemented by international and national bodies. The lessons from these frameworks and strategies may not all be relevant to Nigeria but they can be adapted where suitable to the development of Nigeria's open access to knowledge framework.

Chapter five noted the fact that the growing cost of education continues to pose major challenges to students, parents, academic institutions and government and the impracticability of keeping up with these high costs have necessitated the discovery of new ways to addressing access to educational resources. The chapter which investigated and explained open educational resources identified several strategies that had been developed to enable greater access to education, the underpinning structures for these strategies can play a key role in the development of an open access to knowledge framework for Nigeria.

Chapter six also noted that the clamour for accountability, transparency, greater citizenry participation and inclusion by the people from government continues to heighten the necessity for open governance, a major component of which is, access to use and reuse of public sector information. The policies, principles, strategies and frameworks developed nationally and internationally were examined.

Chapter three identified the lacuna in what can be referred to as Nigeria's current open access to knowledge framework. Chapters four, five and six have investigated and explained three veritable tools, namely open access journal articles, open educational resources and public sector information that have successfully been used nationally and internationally in addressing the global access problem. This chapter suggests that these initiative are not sufficient because the initiatives

cannot stand alone¹⁰⁷⁵. They require a framework on which they will stand for efficient and effective operation¹⁰⁷⁶. The afore mentioned chapters have been able to highlight the importance

¹⁰⁷⁵ See Generally, Gaëlle & Amy, Access to Knowledge In The Age of Intellectual Property above n 151,18.

¹⁰⁷⁶ C. Armstrong, *Access to Knowledge in Africa: The Role of Copyright* (UCT Press, 2010) 3. Where it was noted "it is essential to ensure that legal and policy frameworks are well suited to...improve the future of education in Africa."

of information as a national resource and strategic asset to any government, her people and her partners. To however ensure maximal and optimal utilization of this national resource and strategic asset, a systemized and sustainable structure for managing information throughout its life cycle ought to be established.

An open repository framework is the suggested pathway. Setting up open repositories and applying the principles provided in this chapter will enable development. In implementing the setting up and development of open repositories cognisance must however be taken of the sensitivities and differences between the three major fields discussed in this research namely journal articles, open educational resources and public sector information. The necessary tools to addressing these sensitivities and differences is at the core of this chapter.

Fortunately, the development of open source repository softwares such as Dspace provide open, free and interoperable platforms that enable global visibility of work. Leveraging on such technologies will enable the establishment of open repositories in a quick and cost effective manner. This works in tandem with aim and objective (3) which states “to situate Nigeria within the current Open Access Movement by engaging in local pragmatic projects capable of advancing the development of Nigerians, other developing countries and the world at large. (For instance the establishment of institutional repositories in most Nigerian Tertiary Institutions.)” See 1.13. This will promote stability, certainty, openness and interoperability, reduce costs, improve services, support mission needs, safeguard personal information, improve services, increase operational efficiencies and increase public access to valuable government information.

The goal is to not just provide fish but to teach how to fish. It is the hope of this research that teachers, learners and curious minds are empowered with the appropriate tools to look inward and build what works best for their local communities and make such works accessible to the global community.

This chapter provides some guidelines that may be used in the development of Nigeria’s open access to knowledge framework and provides drafts that may be adopted by government, academic institutions and private organisations for purposes of implementing initiatives that may lead to access to knowledge. In providing these guidelines, the importance of licensing is underscored as a central theme that would run through all the frameworks. It then examines each of the initiatives, that is, Open Access to Journal articles, Open Educational Resources and Public Sector Information. It also examines an international treaty option using the Access to Knowledge (A2K) draft treaty as its case study.

7.2 WHAT IS A FRAMEWORK?

It is a document detailing how an action may be carried out. It provides samples and simplifies the adaptation and implementation of actions. “It is not a detailed hypothesis or set of hypotheses; rather, it is a suggested point of view... A good framework is one that sounds reasonably plausible relative to available scientific data... It is unlikely to be correct in all the details. A framework often contains unstated (and often unrecognized) assumptions, but this is unavoidable.”¹⁰⁷⁷ It is a supporting or underlying structure.¹⁰⁷⁸ A framework refers to interlinked systems or items supporting an action, a process or/and an approach. It serves as a guide and is modifiable to meet various types of objectives. A framework is meant to provide a broad overview, outline, or skeleton of an issue¹⁰⁷⁹.

7.3 WHY DEVELOP A FRAMEWORK

Managing people and systems could become complicated when there are no laid down standards. Developing standards is an integral part of any organisation, particularly government who operate through her Ministries, Departments and Agencies (MDA)¹⁰⁸⁰. These different segments of government (MDA’s) are meant to work towards the same goal but are often unaware of what other segments are doing and of how actions are being implemented. It is not uncommon to have multiple agencies of government working on the same issues and for the same goal but due to lack of interface and the unavailability of a functioning central structure, agencies of government are made to reinvent the wheel and the issue(s) in question may then have to be re-developed and re-implemented using different structures and strategies. This often results in duplicity of human effort, loss of manpower time, duplicity of tax payer’s funds and a lack of uniformity of policies and strategies¹⁰⁸¹. The development of a framework provides a uniform standard and thereby makes it easier to work within complex settings. It encourages coercion by bringing together various components as one and thereby compels a team to implement issues in a uniform way. It also therefore allows for a unified system of checks and balances.

¹⁰⁷⁷ Francis Crick & Christof Koch, ‘A Framework For Consciousness’,(2003) 6 *Nature Neuroscience*.

¹⁰⁷⁸ Catherine Soanes & Sara Hawker, *Compact Oxford English Dictionary* (Oxford University Press 2005).

¹⁰⁷⁹ The Law Dictionary, *What is Framework*, <http://thelawdictionary.org/framework/>.

¹⁰⁸⁰ R. F. Ola, *Local administration in Nigeria* (Kegan Paul International. 1984).

¹⁰⁸¹ Ola, Understanding Open Access for Africa, above n 667.

7.4 KEY STAKEHOLDERS FOR THE FRAMEWORK

In a country like Nigeria which is a federation with 36 states and a federal capital,¹⁰⁸² the stakeholders for a framework will depend on the issue. In the context of this research which focuses on open access to knowledge and narrows down on Open Access to Journals and articles, Open Data, Public Sector Information and Open Educational Resources, the key stakeholders include but are not limited to the under-listed:-

- i. government,
- ii. universities,
- iii. research institutions,
- iv. libraries
- v. international and inter-governmental organisations,
- vi. teachers,
- vii. students,
- viii. independent researchers,
- ix. journalists and
- x. curious minds (which includes user publics)

7.5 SCOPE OF THE FRAMEWORK

It is important to predetermine the proposed reach of the framework. Whilst it is desirous to conquer the entire world, it is important to come to terms with the reality that the whole world is a huge task and therefore delineating boundaries is a crucial part of any strategy. Setting out benchmarks can make the development and implementation of an action a lot clearer and possibly easier. Clarity as to scope is required in developing legislation, budgets, government white papers, government departments, ministries and agencies. It is also important in establishing a system for issuing, assessing, verifying and vetting. They are required in virtually every area of life. This research focuses on legal, regulatory and policy frameworks and therefore provides clarity as to how far it may go and at the same time restricts her scope to the identified research focused areas.

7.6 LEGAL FRAMEWORK

A Legal Framework provides justification and authorization. It therefore avoids arbitrariness and ensures sustainability. In developing a legal framework for open access to knowledge, it should ensure it provides for use and reuse of works. As explained in earlier chapter, expressions in

¹⁰⁸² Nigeria, About Nigeria <https://en.wikipedia.org/wiki/Nigeria>.

written form are generally protected as literary works by copyright laws.¹⁰⁸³ These laws protect the works of authors from unauthorized use. It is however this same works that need to be disseminated and since it must be done within the confines of legally accepted rules and with due regard for the legal system, a framework that provides an enabling environment for use and reuse and at the same time gives due respect to the legal system is required.¹⁰⁸⁴ Developing such a legally acceptable and appropriate strategy, structure and standards is the central focus in developing a legal framework and open licensing is what has been globally adopted in addressing this issue.¹⁰⁸⁵

7.7 REGULATORY FRAMEWORK

When structures and standards are established, a major milestone is accomplished, but the challenges of compliance, monitoring and evaluation arise. A system that provide standards but provide no checks and balances to such standards is set to fail.¹⁰⁸⁶ The process that facilitates checks and balances is what the regulatory framework addresses and it addresses it from both a process and positional point of view. Process in the sense that it would analysis how the checks and balances may be implemented and positional, from the point of view that it will advise on what type of offices, officers, ministries, departments and agencies should be responsible for its administration.

7.8 POLICY FRAMEWORK

A policy establishes a settled way of doing things for certain people. It is a world-wide notice that those to whom the policy applies are expected to do things in a certain way. Whenever more than one person is involved in an action, it is important that expectations and the steps to bringing about the action be clearly expressed to all the persons involved in the development and implementation of the action. Without clearly expressed expectations and how the action may be developed or implemented, there is the tendency for confusion. The development of clear expressions of expectations and how actions may be developed and implemented can be referred to as policies. Policies may be made and used by individuals, organisations and nations. It also

¹⁰⁸³ Ola, Copyright Collective Administration in Nigeria Lessons for Africa above n 54, 5. Where he noted that "Copyright controls the grant of rights in respect of certain 'works'—works such literary works..."

¹⁰⁸⁴ Lessig, above n 48.

¹⁰⁸⁵ Brian Fitzgerald, above n 376.

¹⁰⁸⁶ G. A. Maxwell, 'Checks And Balances: The Role Of Managers In Work–Life Balance Policies And Practices', (2005) 12 *Journal of Retailing and Consumer Services* (2005). "managers apparently play a pivotal role in translating...policies into practice and in ensuring there are appropriate checks and balances in the management of such practices."

provides amongst many other things, a platform for otherwise weaker parties to negotiate with stronger parties¹⁰⁸⁷.

7.9 FEATURES OF THE FRAMEWORK

The development of policies, legislation, regulations and other structures by individuals or organisations, private or public is aimed at the achievement of goals. The strategy adopted for development and implementation varies just as all humans are different but there are certain features which are expected in most frameworks. Although the presence of these features are not sacrosanct their presence in any framework boosts the value of such frameworks. Below are some of the features:

7.9.1 Title of the Framework

The title provides an idea of what the issue or action is all about. It gives the reader and the general public a bird eye preview of what is expected in the larger document. It is always therefore useful to title a framework and use titles that portray the central theme of the framework. See for an example the title of the OAK Law Project Report No.1 which is titled as follows:

“Creating a Legal Framework for Copyright Management of Open Access within the Australian Academic and Research Sector”¹⁰⁸⁸

This title provides clarity to any reader of what is expected in the larger text. It points the reader to the fact that the central theme of creating a legal framework is within the context of Copyright Management of Open Access but that it is restricted to the Australian Academic and Research Sector. A clear title aids researchers in locating relevant materials and thereby enhances the potential impact of such works considering the fact that once more people are able to easily search and locate the work, more people are likely to be able to read, cite, use and reuse the work.

7.9.2 Purpose

Expressing the underlying rationale for pursuing a framework is crucial to every framework. It is purpose that gives meaning to an activity. Organisations may be carrying out the exact same activity but for different reasons. Understanding the underlying rationale prompting the organisations to carry out the actions is what gives true meaning to the activities. Understanding the purpose, the rationale, the reason, the why a thing is done strengthens and sharpens an

¹⁰⁸⁷ Suber, above n 45. Where it was said that " It makes a huge difference who can say "take it or leave it" in a negotiation"

¹⁰⁸⁸ Fitzgerald, et al., OAK Law Report above n 14.

individual's resolve and dedication. In the words of Myles Munroe, "Where purpose is not known, abuse is inevitable. Without purpose activity has no meaning and time and energy are misused"¹⁰⁸⁹ It is therefore advisable to develop purpose specific statements or adapt from organisations with identical or similar purposes. The purpose statement of an organisation is often expressed through their aims, objectives and goals. It is therefore important to clearly enunciate the purpose of any framework. Below are examples of purpose statements.

Example 1: United States Government Memorandum for Heads of Executive Departments and Agencies on Management of Federal Information Resources.

"This Circular establishes policy for the management of Federal information resources. OMB includes procedural and analytic guidelines for implementing specific aspects of these policies as appendices"¹⁰⁹⁰.

Example 2: The Amended 2013 EU Directive on Public Sector Information¹⁰⁹¹.

"Since the objectives of the proposed action, namely to facilitate the creation of Community-wide information products and services based on public sector documents, to enhance an effective cross-border use of public sector documents by private companies for added-value information products and services and to limit distortions of competition on the Community market, cannot be sufficiently achieved by the Member States and can therefore, in view of the intrinsic Community scope and impact of the said action, be better achieved at Community level, the Community may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty. In accordance with the principle of proportionality, as set out in that Article, this Directive does not go beyond what is necessary in order to achieve those objectives. This Directive should achieve minimum harmonisation, thereby avoiding further disparities between the Member States in dealing with the re-use of public sector documents"

Example 3: See also the purpose statement by the New South Wales Government with regards to its NSW Government Open Data Policy¹⁰⁹².

"The purpose of the NSW Government Open Data Policy is to:

¹⁰⁸⁹ M. Munroe, *Rediscovering the Kingdom: Ancient Hope for Our 21st Century World* (ReadHowYouWant.com, Limited. 2010) 116.

¹⁰⁹⁰ (OMB), Circular No. A-130, Revised, (Transmittal Memorandum No. 4) (November 28, 2000), Memorandum For Heads Of Executive Departments And Agencies. 2000.

¹⁰⁹¹ Directive 2013/37/EU, above n 947

¹⁰⁹² New South Wales Government, *NSW Government Open Data Policy* (2013), <http://www.finance.nsw.gov.au/ict/sites/default/files/NSW%20Government%20Open%20Data%20Policy%201.0.pdf>.

Simplify and facilitate the release of appropriate data by NSW Government agencies;
Make explicit the NSW Government's commitment to open data and open government;
Create a practical policy framework that enables high-value datasets to be released to the public;
Help agencies in understanding community and industry priorities for open data; and
Support the Government Information (Public Access) Act 2009 (NSW) (GIPAA) and promote simple and efficient compliance with the requirements set out in that Act.”

7.9.3 Applicability and Scope

Providing clarity as to how far the intended action or process will go and to whom it is directed is an important part in the development of any framework. In making this clarification it is however important to make provision for unforeseen circumstances. In defining the scope and applicability of any framework, cognisance must be taken of cultural, economic, technological and other related factors which may have effect on the development of an open access to knowledge framework. For instance, in developing such a framework in Nigeria and in other nations endowed with a rich folklore heritage, it will be important to duly regard the cultural believes and factor these believes into whatever frameworks are being developed. In some instances, it must be clearly spelt out that certain groups are excluded or certain privileges are given to certain groups. Disregard of local beliefs and practices could be very antithetical to the success of an idea and could inhibit its implementation. It would also be crucial to identify who the target audiences are and who may be excluded. These target audiences have been identified earlier in the section above on key stakeholders for the framework. The example hereunder on scope is that of the New Zealand Government Open Access Licensing Framework (NZGOAL)¹⁰⁹³

SCOPE

7. NZGOAL applies to State Services agencies. “State Services” is the term for a broad range of organisations that serve as instruments of the Crown in respect of the Government of New Zealand. It consists of:

- (a) all Public Service departments;
- (b) other departments that are not part of the Public Service;
- (c) all Crown entities (except tertiary education institutions);
- (d) a variety of organisations included in the Government's annual financial

¹⁰⁹³ NZGOAL, *New Zealand Government Open Access and Licensing framework (NZGOAL)* (2010) <https://ict.govt.nz/assets/Uploads/Documents/NZGOAL.pdf>.

statements by virtue of being listed in the Fourth Schedule to the Public Finance Act 1989; and

(e) the Reserve Bank of New Zealand.

8. NZGOAL covers both:

(a) copyright works; and

(b) non-copyright material,

that are produced by or for such agencies, appropriate for release to the public or sections of the public and which those agencies are entitled to:

(c) in the case of copyright works, license (or sub-license) for re-use; and

(d) in the case of non-copyright material, release for re-use.

9. NZGOAL does not limit or otherwise affect the obligations of any agency or the rights of any person under the Official Information Act 1982, the Public Records Act 2005, the Privacy Act 1993 or any other legislation. Except for its guidance on anonymization of datasets and other material which, once stripped of personal information, might be licensed or released, NZGOAL does not apply to personal information.

10. While NZGOAL does apply to datasets, it does not apply to software which, for example, an agency owns and may wish to release on open source terms. In such circumstances, open source software licences should be used.

7.9.4 Definitions

Understanding the meaning of words and terminologies in a document is paramount in optimizing the utility of such documents. Many of these terms used in the open movement are new. They include open access, open government, open data, open educational resources, Creative Commons, open licensing, open folklore, libre open access, gratis open access, delayed open access journal, green and gold open access and several other words. Most of these terms are not defined in the conventional dictionaries because they are new additions to the world's diction due to recent discoveries, innovations and developmental researches. It is therefore always important to provide a definition section within the framework.¹⁰⁹⁴ This section is therefore meant to provide clarification on ambiguous or unknown terms that are used in the document. Experts in the field will often know the terms without any trouble but the focus of

¹⁰⁹⁴ See the Glossary of words at the Appendix section for a definition of terminologies used in the open movement.

any document is not only on the experts in the field but included are members of the general public.

7.9.5 Commencement Date

In developing a framework, tracking the timelines of how and when certain decisions are made could be important, it is therefore important for the framework to have a commencement date. It would usually be the date after the appropriate authority has granted the requisite approvals. The style in which the date is expressed is not of critical importance. The expression of the date would however usually conform to the drafting style of the organisation or nation. What is important is that the actual dates when the framework was approved, executed and deemed to take effect be clearly expressed. If these dates are one and the same, it should be so stated and if the dates are different, the different dates should be indicated accordingly. See the table below capturing a single date inserted into the New South Wales Open Data Policy to indicate the commencement date.¹⁰⁹⁵.

Document history (NSW)

Date	Version No	Description	Author
September 2013	1.0	Final	Department of Finance and Services

Source: New South Wales Government.

See also another table which provides multiple dates indicating the timeline for the United Kingdom Government Licensing Framework for Public Sector Information.¹⁰⁹⁶

Document Control & Change Summary

Version	Date	Author/Editor	Change Summary
1.0	30/09/2010	TNA	First published edition
2.0	29/07/2011	TNA	Second published edition
3.0	28/06/2013	TNA	Third published edition
4.0	01/09/2013	TNA	Fourth published edition
4.1	30/10/2014	TNA	Updated to reflect launch of OGLv3.0

Source: UK, The National Archives

¹⁰⁹⁵ New South Wales Government, above n 1079, 201

¹⁰⁹⁶ The National Archives, above n 975.

The above examples have adopted a tabular form in tracing the timelines of the commencement and amendments of the policy documents. As mentioned earlier, the expression of the commencement date need not follow any particular format. The indication of the date is what is paramount. Another example of how the date may be expressed is seen in the United States, National Institute of Health's (NIH) policy. It captures the relevant dates in the under stated manner.

The Policy applies to any manuscript that:

Is peer-reviewed; and, is accepted for publication in a journal on or after April 7, 2008; and, arises from: any direct funding from an NIH grant or cooperative agreement active in Fiscal Year 2008 or beyond, or; any direct funding from an NIH contract signed on or after April 7, 2008...¹⁰⁹⁷

7.9.6 Governing Principles

Individuals and Organisations operate based on certain guiding principles. These principles determine mode of operation, priorities and influences to a great deal the kind of partners to collaborate with. It is also instrumental to the general decision making process. A framework should capture the governing principles the organisation would wish to be guided by. Putting this information out will help prospective partners know and understand the idiosyncrasies of particular organisations. These principles are often captured within the overarching policy statements of the organisation. The United Nation's Department of Economic and Social Affairs's Guideline on Open Government Data for Citizen Engagement issued in 2013 captures the governing principles of the organisation¹⁰⁹⁸. In a 2006 court case which bordered on the recognition of access to information as a human right by the Inter-American Court of Human Rights, the need to include essential principles within frameworks was noted by the courts. The court enunciated the need to design an access to information regime which would include essential principles¹⁰⁹⁹. In the UN guideline referred to above,¹¹⁰⁰ the principles referred to by the court were expressed as follows:

“Wide active legal standing: All people can request it and it is not necessary to specify the motives for doing so

Wide Passive legal standing: It is the duty of the state to provide the information requested, spanning all its bodies and authorities, not only the administrative ones.

¹⁰⁹⁷ NIH, NIH Public Access Policy, above n 141.

¹⁰⁹⁸ United Nations Department for Economic and Social Affairs, above n 958.

¹⁰⁹⁹ Claude-Reyes et al. v. Chile, (Inter-American Court of Human Rights September 19, 2006).

¹¹⁰⁰ United Nations Department for Economic and Social Affairs above n 958.

Principle of maximum disclosure: It establishes the presumption that all information is accessible, subject to a restricted system of exceptions

Objective of the right: The information covers all types of storage or recovery systems, including films, microfiches, videos, photographs and more

The State's positive obligation to hand over information: The requested information must be provided and/or the negative backed-up, in case it classes as one of the legitimate exceptions

Juridical resources to guarantee the exercise: It implies the need to guarantee it through adequate juridical protection so that protection can be obtained in a quick and facilitated manner”

7.9.7 Action Plan

An Implementation strategy should be developed and captured in the framework. It is not enough to come up with lofty ideas of what is to be achieved. Equally important is how the idea will be implemented, the step by step strategy or at least a rough map of an implementation strategy. Failure to develop and make such a plan is planning to fail¹¹⁰¹. The implementation strategy can always be sharpened, revamped and redeveloped to accommodate new ideas, recent changes and include unforeseen circumstances. When the Budapest Open Access Initiative was developed in 2001¹¹⁰², it included two implementation strategies, that is, self-archiving and open access journals and noted that “there is no need to favour one of these solutions over the others for all disciplines or nations, or stop looking for other creative alternatives.¹¹⁰³” Providing these implementation strategies in the framework provide the needed tools for implementation and helps the general public avoid the problem of wrong, misdirected or incomplete implementation. Please find below the action plan provided in the Budapest Open Access Treaty.

“Open access to peer-reviewed journal literature is the goal. Self-archiving (I.) and a new generation of open-access journals (II.) are the ways to attain this goal. They are not only direct and effective means to this end, they are within the reach of scholars themselves, immediately, and need not wait on changes brought about by markets or legislation. While we endorse the two strategies just outlined, we also encourage experimentation with further ways to make the transition from the present methods of dissemination to open access.

¹¹⁰¹ Churchill Winston has been attributed as the one who said, “If you fail to plan, you are planning to fail”.

¹¹⁰² Suber, Timeline of the Open Access Movement above n 488.

¹¹⁰³ Budapest Open Access Initiative, above n 18.

Flexibility, experimentation, and adaptation to local circumstances are the best ways to assure that progress in diverse settings will be rapid, secure, and long-lived”.

7.9.8 Licensing Framework

In developing a framework for access to knowledge anywhere in the world, content is central. Bill Gates captured it succinctly when in 1996 he said, “Content is King”¹¹⁰⁴. It is the life line of knowledge, the end product of the author’s creativity, the raw material from the author and for the publisher, the pursuit of users and the general public. As discussed earlier in Chapters 3, 4, 5 and 6, content is protected under the legal regime of Intellectual Property and more particularly copyright which covers literary works (journal articles, books, reports and other types of written works). Also covered by copyright are musical, artistic and dramatic works¹¹⁰⁵. Rights related to copyright, also called neighbouring rights cover the entrepreneurial aspects of the product of copyright such as cinematograph films, sound recording, broadcast and performances¹¹⁰⁶. The focus of this research is however majorly on literary works and the bundle of rights attached to the author or owner of literary works¹¹⁰⁷. It however does not exclude the other type of works because more and more content is being made available as audio-visual works and therefore capture most of the other rights under copyright. Understanding copyright is therefore paramount in developing a framework that would enable open access to the product of knowledge, be it a purely literary product or a combination of several works.

As explained earlier, copyright is that right which allows the author to prohibit others from exploiting a work without due authorization¹¹⁰⁸. This authorization would often come in the form of the grant of a licence. It is therefore important that in the development of a framework, the basics of copyright must be understood, clarification made as to ownership of works and the rights attached to such works. It is also important to ascertain if access will be granted on a fee paying basis or it would be made available for free. One of the most important aspects of an open access to knowledge framework would be making provision for the grant of authorization (licensing) and the type(s) of authorization. Providing for this would not only establish a legal platform for the operation of the framework but it will allay any fears of uncertainty as to what

¹¹⁰⁴ Bailey, Content is King by Bill Gates, above n 2.

¹¹⁰⁵ See Section 1(1) of the, Cap C28 (2004). It provides for works eligible for copyright. See also, Part III, Section 31, of the Act No. 63 of 1968 as amended Act No 63 (1968). Providing for the nature, duration and ownership of copyright in works inclusive of copyright in original literary, dramatic, musical and artistic works.

¹¹⁰⁶ WIPO, Understanding Copyright and Related Rights 16 § 909 (E) (WIPO.).

¹¹⁰⁷ Gervais, above n 308, 2, 10 and 11. See Page 2 where he says " The fragmentation of rights may be defined as the fact that copyright and related rights are expressed as a bundle of rights applicable to various types of use..."

¹¹⁰⁸ Litman, above n 281, 204, 13, 14 and 81.

can be done and what can be used by current and prospective users. The licensing framework should therefore put into consideration and capture the following issues:

7.9.8.1 Management of Copyright

As explained above, in developing an access to knowledge framework, understanding and managing copyright is crucial.

7.9.8.2 Clarify Rights

Once a work has been identified, it is important to clarify what rights are likely to be exploited. This is important because copyright is comprised of a bundle of rights and therefore works may enjoy multiple rights. With each right comes distinct privileges which enjoy distinct protection. Therefore, unbundling these rights by clarifying them will help in identifying what type of authorization should be sought and obtained.

7.9.8.3 Payment

The goal of a more open world is that all content be available for free. It is however currently impracticable for all content to be freely available. It is therefore important for the framework to indicate what is free and what is not and for the framework to express its goal as to payments.

7.9.8.4 Licences

The grant of authorisation for works is often done through licencing and a licence is a document evidencing the authorization granted. The current copyright legal framework has a default *all rights reserved* and authors are able through this exclusive right to exclude others from accessing, using and reusing the work. It is therefore important that a framework focused on open access to knowledge should shift the default to *no rights reserved* or *some rights reserved*¹¹⁰⁹. This is achievable through the instrumentality of licensing via the law of contract and would enable users' free access to use and reuse knowledge. The choice of what open licence to adopt would depend on the organisation but the Creative Commons (CC) licences has been noted as the most effective of the open licences¹¹¹⁰. There are several other licences which can be adapted including GNU

¹¹⁰⁹ Fitzgerald, above n 14, 4 & 5. He noted that "The key to seamless access to knowledge – through open access, new business models or e commerce mechanisms – is to work out how that permission process can be automated".

¹¹¹⁰ Guilbault & Angelopoulos, above n 1036.

General Public Licence,¹¹¹¹ the UK Government Licensing Framework for Public Sector Information,¹¹¹² the Open Government Licence,¹¹¹³ and the New Zealand Government Open Access and Licensing Framework (NZGOAL).¹¹¹⁴

The above are the general factors to be considered in the development of any open access to knowledge framework. These factors are broad enough to capture most of the issues that may arise with respect to open access to knowledge. However, it is important to note that the different fields within the open movement and the access to knowledge movement may require special slants to the general factors discussed above. This next segment will consider issues pertinent to each of the three areas mentioned above.

7.10 OPEN ACCESS FRAMEWORK

Chapter four explained Journal articles and noted that it plays a major role in academic research¹¹¹⁵. It further noted that they are instrumental to knowledge development on a global scale and forms part of the critical building blocks used in evaluating competence and progress in the academic world. It is critical to academic tenure, promotion and research. The economic successes and the many millions of dollars attributed to the publishing industry is not unconnected to journal articles¹¹¹⁶. It is a major life line for the publishing industry and forms a major part of the content used by the publishing industry¹¹¹⁷. The issues surrounding creation, production, distribution, access to use and reuse content expressed via journal articles are multi-faceted and affect many parties. It is therefore important to consider these issues, factors and parties when crafting a framework that would enable access to these journal articles. Yes, access to journal articles is imperative in this age for development but access must be obtained within the confines of the law and with due regard for the legal system. An effective open access framework would necessarily factor in most of the issues already discussed but should pay attention to the following:

7.10.1 Academic and Research Communities

The academic and research community constitute the core of those who generate majority of the content in journal articles and are therefore major stakeholders when it comes to journal articles. They are not only responsible for generating the ideas that crystalizes in the creation of the

¹¹¹¹ Free Software Foundation, above n 1035

¹¹¹² The National Archives, above n 975.

¹¹¹³ The National Archives, above n 976.

¹¹¹⁴ NZGOAL, above n 1080.

¹¹¹⁵ Suber, Open Access above n 12, 44. Where he noted that "for 350 years, scholars have willingly, even eagerly published journal articles without payments"

¹¹¹⁶ Hebdo, above n 249.

¹¹¹⁷ IPA, above n 250.

content, but are also responsible for its quality assurance through the peer-review mechanism process¹¹¹⁸ and are equally the major consumer market through her staff, students and researchers¹¹¹⁹. It therefore important for these institutions to develop policy statements that drive their individual open access initiatives. There are several examples to help in developing such policies for example

1. National Institute of Health (NIH) in the United States¹¹²⁰,
2. Australian Research Council (ARC)¹¹²¹,
3. European Research Council (ERC)¹¹²² and the
4. Research Council UK¹¹²³.

7.10.2 Institutional Repository

Accessing content from a convenient place and at the time of ones choosing is central to the success of any open access framework. Institutional repositories provide a convenient platform for anytime and any-place access, however, populating the repository is the task because the value of a repository increases with its volume¹¹²⁴. It is therefore important for the framework to provide for the creation, maintenance and deposit of contents into the repository. It should also provide for terms of access to use and reuse of such contents. These are best achieved by developing a policy statement by the individual or organisation on institutional repositories (IR). The IR Policy may be drafted in a way that deposits into the repository by staff, students, researchers, members or beneficiaries are mandatory or persuasive. The choice of whether the policy should be mandatory or persuasive would be left to each individual entity. It may however be best to make it mandatory as research has shown that the level of deposits drastically increases with a mandate,¹¹²⁵ and it will eventually serve the greater good. There are ready examples of Institutional repository policies which can be studied and adapted as the need arises. Examples of IR policies include

¹¹¹⁸ Smith, above n 179.

¹¹¹⁹ Ray Spier, 'The History Of The Peer-Review Process', (2002) 20 *Trends In Biotechnology*.

¹¹²⁰ NIH, NIH Public Access Policy above n 109

¹¹²¹ ARC, ARC Open Access Policy above n 118

¹¹²² ERC, above n 145.

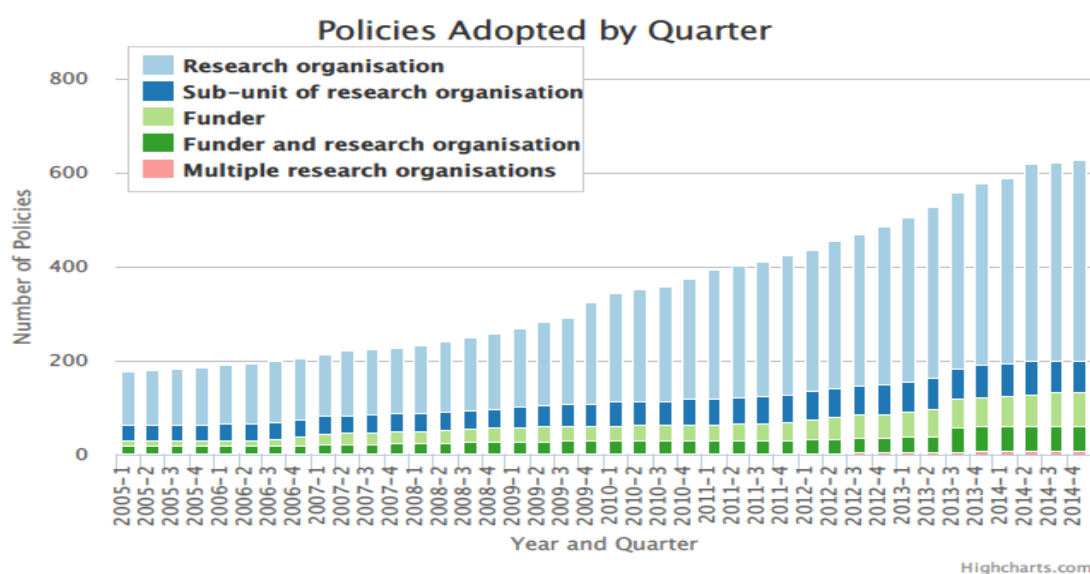
¹¹²³ RCUK, above n 144..

¹¹²⁴ Swan & Brown, above n 90, 70. Where it was noted that the "current open access archives contain so little content. Once the volume of research deposited in these archives increases, usage will rise." See also, Harnad & McGovern, *Bulletin of the American Society for Information Science and Technology*, (2009)."The measure of that success is accordingly the proportion of the faculty's annual journal article output being deposited in the IR"

¹¹²⁵ Arthur Sale, *Comparison of content policies for institutional repositories in Australia* 2006 <http://firstmonday.org/ojs/index.php/fm/article/view/1324/1244>. "a requirement to deposit research output into a repository coupled with effective author support policies works in Australia and delivers high levels of content"

1. The IR policy by the Queensland University of Technology,¹¹²⁶
2. The Institutional Research Repository Policy of the University of Otago,¹¹²⁷
3. The University of South Africa¹¹²⁸ and that of
4. The Covenant University in Nigeria.¹¹²⁹

Useful information on IR policies can be obtained from the Registry of Open Access Repositories¹¹³⁰, Registry of Open Access Repositories Mandates and Policies (ROARMAP)¹¹³¹ as well as from the Directory of Open Access Repositories¹¹³². IR's will be particularly instrumental for Nigeria and other developing countries because it provides immediate access to information¹¹³³. Granted it may not provide the published version, but it provides without any delay immediate access to at least read information of cutting edge technology, recently discovered issues and a host of other information. Most Nigerian libraries are unable to afford the cost of subscriptions to the major publishers and are therefore cut off from the global information flow channel. Establishing functional IR's re-establishes this link. Access is a fundamental need and IR's provides a functional and immediate platform for access¹¹³⁴. It is little wonder that the number of IR policies have continually been on the increase as indicated in the graph obtained from the ROARMAP website¹¹³⁵.



¹¹²⁶ Queensland University of Technology, QUT ePrints above n 112.

¹¹²⁷ University of Otago, *Institutional Research Repository Policy* <http://www.otago.ac.nz/administration/policies/otago014455.html>.

¹¹²⁸ UNISA, Unisa Institutional Repository above n 74.

¹¹²⁹ Covenant University, Covenant University Repository above n 99

¹¹³⁰ ROAR, Registry of Open Access Repositories above n 77

¹¹³¹ ROARMAP, above n 78.

¹¹³² OpenDOAR, Directory of Open Access Repositories, above n 433

¹¹³³ Harnad, et al., The Green and Gold Roads to Open Access, above n 26

¹¹³⁴ Harnad, above n 87.

¹¹³⁵ ROARMAP, above n 78.

Source: ROARMAP Website

7.11 FRAMEWORK FOR OPEN EDUCATIONAL RESOURCES

In Chapter 5, it was noted that the reign of the knowledge economy has brought to the fore the growing relevance of education and that this relevance has been recognized¹¹³⁶, stated¹¹³⁷ and restated¹¹³⁸ as fundamental rights of every citizen of the nations of the world. It was also noted that the internet coupled with digital technology is changing the dynamics of formal education all over the world and that these changes are quite drastic in the global north due to infrastructural, technological and general developmental advancements. Unfortunately, it is not the same story in the global south and this is not unconnected to the slow pace of technological and infrastructural development. This world-wide change is however inevitable as it is already making globally impact. The cost effectiveness of the strategy, the time it saves, the waste it avoids, the inclusiveness it engenders, its far reaching capacity and capabilities coupled with its ability to serve as a preserver of culture are some of the underpinning rationales why the OER strategy is a must have for any organisation that takes education seriously. To properly embrace OER and make the best of it, the general factors discussed above must be noted but the following considerations would also be useful in a framework.

7.11.1 Understanding OER

As discussed earlier in Chapter 5, Open Educational Resources are teaching, learning and research materials in any medium that reside in the public domain and have been released under an open licence that permits access, use, repurposing, reuse and redistribution by others with no or limited restriction¹¹³⁹. It is important to be able to distinguish OER from other types of information, to understand that it is inclusive of all types of teaching, learning and research materials. It is also important to understand the extent of use that is fundamentally permitted. The right to use and reuse must be present as it is an intrinsic part of the OER strategy.

7.11.2 Purpose

¹¹³⁶ See Article 13.1, UN General Assembly, International Covenant on Economic, Social and Cultural Rights, 16 December 1966, United Nations, Treaty Series, vol. 993, p. 3, : <http://www.unhcr.org/refworld/docid/3ae6b36c0.html>. United Nations, Treaty Series, Vol. 993 ICESCR (1966). Article 13.1 recognises the right of everyone to education.

¹¹³⁷ See Article 26.1, Universal Declaration of Human Rights, 10 December 1948, 217 A (III), <http://www.unhcr.org/refworld/docid/3ae6b3712c.html>. (1948). Article 26.1 states that "everyone has the right to education"

¹¹³⁸ UNESCO, *The UNESCO Recommendation on Promotion and Use of Multilingualism and Universal Access to Cyberspace* 15 October 2003 http://portal.unesco.org/en/ev.php-URL_ID=17717&URL_DO=DO_TOPIC&URL_SECTION=201.html.

¹¹³⁹ Atkins, et al., above n 754.

Identifying why the organisation is developing an OER framework is important. Equally important is that the aims and objective should fit into the global vision for the development of OER. The fundamental objective of the OER initiative or strategy is to build a culture that encourages communal development, use and reuse of educational materials through production, use and adaptation of OER thereby providing the mainstream educational system with qualitative teaching, learning and research materials at a near zero cost.

7.11.3 Intellectual Property

The publishing industry produces the textbooks that are used in the educational system and ensures that their investments are protected by copyright which by default prohibits use without permission. Any OER strategy that fails to address this issue has left out a fundamental ingredient of what makes OER what it is. In addressing the permission issue, open licensing (discussed above) has been developed and incorporated to shift the prohibited default to a permitted default and thereby provides a standardised way of obtaining permission as well as stating whatever restrictions may exist as to access, use, repurposing, reusing or redistributing creative works. An OER framework must therefore address IP issues by adopting a relevant open license. Licensing has been treated earlier. It is the same principle that applies.

7.11.4 Scope

The educational system is a wide sector encompassing government, higher education institutions, academic staff, students bodies and regulatory/accreditation bodies.¹¹⁴⁰ It is important that all these groups be factored into the development of an OER strategy.

7.11.5 Government's Role

In chapter 3 the Federal Ministry of Education and a number of her agencies were analysed and it was noted that government plays a major role in the educational system of Nigeria's education. The success of an OER framework in Nigeria will therefore be made easier with the buy-in of government. In chapter 3 we noted that government is responsible amongst many other things for funding public schools, colleges and universities and would definitely wish to receive the highest yield for her investment. The current trend of price increases in journal subscription fees have left most higher education institutions in Nigeria completely disconnected from access to academic journals and indeed from the world of research¹¹⁴¹. The big names in the global north

¹¹⁴⁰ COL & UNESCO, *Guidelines for Open Educational Resources (OER) in High Education* (2011) http://www.col.org/PublicationDocuments/Guidelines_OER_HE.pdf.

¹¹⁴¹ Alasia, above n 698. See also, Utulu & Bolarinwa, above n 432.

are now complaining about their inability to keep up with these high prices.¹¹⁴² The OER initiative offers a viable alternative and since government is often responsible for making and implementing policies, it is of great value that strong advocacy be made to government on this issue and through government, policies that would affect the higher education systems can be put in place. Such policies should focus on the following:

- i) Promote the development of open educational resources.
- ii) Actively encourage the use of open educational resources in all public schools.
- iii) Incentivize the creation of open educational resources
- iv) Provision of training on how to develop open educational resources.
- v) Adopt open licences for all works created and repurposed by public servants.
- vi) Adopt open standard policies to enable interoperability regardless of the platform.
- vii) Provide special funding for the creation of open educational resources.
- viii) Promote the development of basic infrastructures (for example power) to support the internet and digital technology.
- ix) Promote the development of better ICT technology infrastructures. (Fibre optics, microwave, broadband, lastma for better internet connectivity, speed and download)
- x) Encourage local participation in Massive Open Online Courses (MOOC's)
- xi) Encourage the local development of MOOC's on indigenous issues.
- xii) Support the sustainable development and sharing of quality learning materials.

7.11.6 Higher Education Institutions

Higher Education Institutions enjoy the advantage of being corporate entities in comparison to individuals when it comes to educational policy issues. An Individual will find it very difficult to make the scale of impact that any of the HEI's will be able to make. This is so taking cognisance of the platform on which they operate. HEI's are responsible for developing and implementing the type of courses they teach. They develop their curriculum and they have the academic freedom to choose the texts they wish to use. The presentation styles, the choice to hold face to face or online classes is all part of the freedom HEI's are entitled to. With this freedom comes the responsibility to ensure that the educational system is provided with the best opportunities that exist. Considering the many challenges in the current educational system inclusive of, the high cost of textbooks, the high cost of fees, the rising number of applicants and the trend towards globalization in the educational system, Open Educational Resources provide a viable

¹¹⁴² Norrie, above n 57.

alternative to challenges and advance the current educational system. The following under-listed issues will be useful in crafting an OER framework in Nigeria.

1. **Develop individual institutional strategies on how to integrate OER:** An easy way to achieve this is to view the strategy of a university that has already adopted one. The MIT Open Courseware is a good example¹¹⁴³. It has been adopted by many other institutions and the contents have been mirrored by many other websites and translated into various languages¹¹⁴⁴.
2. **Provide adequate funding for the development, acquisition and adaptation of high quality learning and teaching materials:** Considering the fact that a huge amount of educational resources are already openly available, HEI's interested in OER should adequately fund the development, acquisition and adaptation of these materials.
3. **Incentive System:** Establish an incentive system (promotion, tenure, appointments) for developing and adapting OER's.
4. **Institutional Repository:** Provide an effective and efficient institutional repository for the OER's.
5. **OER Textbooks:** Encourage use of OER textbooks as the recommended texts.
6. **Publishing as OER:** Promote the publication of educational, learning and other teaching materials as OER within the institution.
7. **Quality Control:** Establish a quality control mechanism for the contents that are developed and adapted. This will ensure that OER's are not substandard materials.
8. **Adopt an institution wide licensing framework:** It is important for staff members to know that copyright and other Intellectual property issues have been catered for on an institutional level. The uncertainty on the part of staff and students as to copyright infringement could be a major hindrance to getting involved in developing and adapting OER's. An institutional licensing framework, preferable one that is open such as the Creative Commons attribution licence puts such fears to rest.
9. **Active and continuous capacity building for staff and students:** HEI's will need to actively engage with staff and students on a regular basis. The process of getting people on board a vision is not always easy but with persistence, interaction and networking, people begin to see the relevance and advantages. When staff and student are exposed to what others are doing and have done, it often serves as a challenge and inspiration.

¹¹⁴³ MIT, above n 609.

¹¹⁴⁴ MIT, About the OpenCourseWare Consortium above n 747.

10. **Provide the needed ICT infrastructure and training:** It has been shown in a research that lack of ICT infrastructure and training are amongst some of the factors that discourage academic staff from embracing a culture of sharing on the open platform¹¹⁴⁵. Without these infrastructures and the requisite training, HEI's will find it next to impossible to make any success in implementing an OER strategy.

11. **Review Institutional OER policies regularly:** Due to human dynamism, environmental and technological changes and taking cognisance of the role of these factors especially technology in the development, use, reuse and adaptation of OER's, it would be instructive for HEI's to regularly review their policies and practices. It is also important to assess what has worked well and what has not worked.

7.11.7 Academic Staff

The value of Open Educational Resources is directly linked to the volume of content made available. Academic staff members play a major role in content development. They are mostly the ones who write, review, edit and make comments on school textbooks. They are responsible for preparing the curriculum, the course outlines, assessment tools, choosing the textbooks and other teaching and learning materials. Combining all these often place a heavy burden on academic staff and yet they need to address the different cultural needs of students and get themselves updated with relevant ICT skills.

The integration of OER into the academic system rests heavily on the shoulders of academic staff. The choice of what OER to select, acquire, adapt and repurpose is on them. The job of ensuring that the materials are properly adapted to suit the specific institutional need is also that of the academic staff. It can be conveniently concluded that the quality of OER in most HEI's depend on academic staff members. In view of the important roles and responsibilities on academic staff members the following are suggested in developing an OER framework in Nigeria.

1. **Understand OER:** Academic staff members will not develop, adapt or truly engage with OER if they do not understand it. It is therefore important that they get to understand what it is and its purpose. It is also important to understand how to develop them and

¹¹⁴⁵ Okoye & Ejikeme, *Library Philosophy and Practice* (e-journal) (2011). See also Ivwighreghweta & Onoriode, above n 432.

use them. A simple way to understand what they are and how to use them is to go online and explore existing ones such as Khan Academy which has a lot of resources.¹¹⁴⁶

2. **Develop requisite OER skills:** The vast amount of OER on the internet can be confusing to anyone who does not understand how to sieve out important information from the vast stock¹¹⁴⁷. This is a skill that must be developed and constantly honed.
3. **Begin to Publish OER:** To achieve this it may be best to start with small materials such as course outlines, course information booklets, teaching notes, slides, course assessment tools and summaries. If it is possible, it is advisable to collaborate with others and work as a team, preferable with those who may have published previously.
4. **Maximize the use of existing OER:** The time it takes to develop teaching and learning materials can be saved by exploring and adapting existing OER. There is no need to re-invent the wheel when what is required already exists. The important thing to note is that after adapting the existing OER, ensure that the adapted work is also made available. That way, the OER global bank is made richer.
5. **Enlist students in the crusade:** Students appear to understand today's technology better than the teachers. This may be due to the fact that these technologies emerged in their generation thereby making the students savvier. It may also be due to the fact that students have more time at their disposal to discover how to maximize the technology. It would be therefore useful to constantly enlist the support of students on the OER development team.
6. **Feedback mechanism:** Develop a practice of providing feedback on the OER acquired, adapted and developed. This will ensure that the quality of OER is at its highest. It will also help in identifying effective ways of managing OER.

7.11.8 Students

Students have always played a major role in the education system. Today the role they play has been expanded and is continually expanding. Students post explanations of topics on YouTube which are accessible to the whole world. Students provide commentaries to recommended texts and also provide several other learning aids online. Students have a role to play in developing, using, reusing and adapting OER's. To effectively play this role, cognisance should be taken of the following:

¹¹⁴⁶ Khan Academy, Our Mission above n 708.

¹¹⁴⁷ See generally, Toffler, *Future Shock*. (Bantam Books, 1990);

See also, Paul, et al., Infobesity above n 303.

See also, Moravec, Infoxication above n 716.

1. **Understand Open Educational Resources:** Students should endeavour to gain clear insights on the how to develop, use, reuse and adapt open educational resources.
2. **Advocate for the development, use and adaptation of OER:** Students have a strong voice for advocacy. This voice should be used to advocate for the development, use and adaptation of OER. It is advisable that the students maximize the use of social media in their advocacy.
3. **Encourage the student community to publish OER works:** Students have tutorial and discussion groups. The materials they produce in these groups are useful contents that can be published as OER works.
4. **Encourage the student community to comment on OER works thereby participating in quality assurance of OER works:** The recommended OER texts as well as other OER materials can be analysed by students. Where improvements can be made, students are encouraged to do so as this will improve the quality of the OER materials.
5. **Adopt the platform of social network for OER:** Most students appear to understand the social media network and do the majority of their communication via it. Communicating OER materials via social media may therefore be appealing to students. This platform will also be very useful for advocacy and for communication comments on other analysed or revised OER materials.
6. **Encourage students to join local and international OER networks:** Learning from other OER groups can be very inspirational. Students are therefore advised to look out for both local and international OER networks.
7. **Understand Intellectual Property and particularly Copyright issues:** In this day and age where students are always downloading music, files and other forms of content online and they look for whatever means possible to get these content including via “illegal downloads”, not many students really understand the underpinnings of copyright. It is therefore important to get some basic understanding on how copyright interacts with OER.

7.11.9 Supervisory ministries, agencies and accreditation bodies

Government plays a major role in the regulation of the educational system. It does this by formulating and coordinating education policies. It prescribes and ensures maintenance of a minimum standard of educational quality throughout the nation. It encourages domestic and international cooperation on educational matters and it also oversees the development of curricula and syllabuses. The federal and state ministries of education in Nigeria are responsible

for delivering sound education for public good. They are to ensure that education is used as a tool that enables access to knowledge and that fosters the development of all Nigerians. The federal government carries out its education mandate through the instrumentality of a number of parastatal or agencies. These agencies include the National Universities Commission¹¹⁴⁸, National Commission for Colleges of Education, National Board for Technical Education and Nigerian Education Research and Development Council.¹¹⁴⁹

Considering the critical role of these supervisory ministries, agencies and accreditation bodies in regulating the day to day affairs of education in a country, OER is a veritable tool that these agencies can adopt and it has the potential of not only reducing the high cost of education on the part of government but it also has high potentials of increasing the quality of education as well as the number of citizens who can be provided with access to quality educational resources. In developing an OER framework these entities would need to pay attention to the following:

1. **Understand OER:** Policy makers must understand their subject matters as much as possible. To this end, capacity building on the subject of what is OER and other related issues should be undertaken by policy makers. A simple and possibly cheap way to go about it is to visit the UNESCO website¹¹⁵⁰, or that of the Commonwealth of Learning¹¹⁵¹. Accessing the wealth of information on the Annual Trend Report is another useful way of developing useful knowledge on OER¹¹⁵². There are several other useful resources available on the internet all for free. It has a host of useful materials that explain OER in details.
2. **Explore existing OER policies:** Many countries and organisation have already adopted OER policies and these policies are available as references to others who wish to develop their own policies. These policies are not meant to be copied verbatim but rather should serve as guides in the development of localised OER policies.
3. **Study the successes and failures of existing OER policies:** When others have made attempts at an effort and have failed or succeeded, they make it easier for those coming behind to cross the same hurdle with ease but those coming behind must reach out for the requisite information and learn from the successes and failures of others. In developing OER policies, it is very important to understudy what has failed and what has succeeded. Not all circumstances are the same so it is important to understand that

¹¹⁴⁸ Cap N.81 Laws of the Federation of Nigeria (LFN) (2004).

¹¹⁴⁹ Nigeria, Federal Ministry of Education above n 381.

¹¹⁵⁰ UNESCO, <http://en.unesco.org/>.

¹¹⁵¹ COL, *Publications*, <http://www.col.org/resources/publications/Pages/default.aspx>.

¹¹⁵² Gorissen Et al, *Trend Report: Open Educational Resources 2013*, OER Knowledge Cloud, <https://oerknowledgecloud.org/?q=content/trend-report-open-educational-resources-2013>.

applying the same rules under different circumstances may not produce the same result. It is however still very useful to understudy these failures and successes and adapt them as may be deemed fit.

4. **Provide incentives for the development of OER:** Initiatives that would encourage the development of OER should be put in place such as access to funding for OER, access to training for OER, promotion and tenure appointment based on OER publications. An example is the Obama administrations pledge of \$2 billion dollars toward the development of OER¹¹⁵³.
5. **Strategic Engagement with HEI:** An assessment of the local circumstances is important in the development and implementation of OER policies. It may not be realistic to legislate the development, use and reuse of OER but a strategic engagement with the management of HEI's can begin the process of the change in culture. Where outright legislation is possible this would be more effective but the important thing is to understand the local circumstances and approach the development and implementation of an OER framework with these circumstances in mind.
6. **Licensing Regime:** Adopt a national open licencing regime. See the licensing frameworks for the United Kingdom¹¹⁵⁴ and that of New Zealand¹¹⁵⁵.
7. **Establish a monitoring mechanism:** The possibility of low quality content becomes high if there are no quality assurance and recognition mechanisms. It is therefore important that the monitoring role of these agencies be extended to cover quality assurances of the content made available as OER.

7.12 PUBLIC SECTOR INFORMATION FRAMEWORK

In Chapter 6 we discussed that government holds some of the largest stock of information and that these information serves educational, research, technological, meteorological and several other purposes¹¹⁵⁶. It is noteworthy that information in the custody of government is generated principally from funds attributed or connected to tax payers. This means that tax payers actually pay for the information generated, collated and stored by government. This being the case, it is only logical that he who pays for an item should have access to the item. This is the rationale for requiring that information held by government be made available to the general public. This idea is not however oblivious of the fact that certain information in the custody of government serve certain purposes which will make it improper and a times impossible for such information to be

¹¹⁵³ Vollmer, above n 840.

¹¹⁵⁴ The National Archives, above n 975.

¹¹⁵⁵ NZGOAL, above n 1080.

¹¹⁵⁶ Fitzgerald Anne, above n 906.

disclosed to the general public and even where it may be disclosed, it would have to be at a cost.¹¹⁵⁷ Information falling within this category include those for national security, personal medical details, information protected under an intellectual property regime and under privacy laws.

The quest for information by citizens is a major part of democracy with underpinning ideals of citizenry participation, transparency, accountability and openness¹¹⁵⁸. In Chapter 6 we also noted that the concept of openness in government via the platform of open government, open data and public sector information has some similarity with the well-known freedom of information (FOI) movement but it is markedly different. Whereas FOI provides access on an “ask and receive basis”, the PSI framework advocates that information be openly made available by default. That is, there should be no need to ask. All that would be required is the desire to search for the information, a computer and internet connection. To successfully develop such a framework for Nigeria, the general factors discussed earlier must be noted but the following factors will also need to be considered and the following steps taken.

7.13 FACTORS TO CONSIDER

7.13.1 Transparency

Government is about the people, therefore the proposed plan for implementing an access regime should be laid bare before the people. The plan should not be shrouded with high sounding words characteristic of bureaucratic complexities. The plan however complex should be set out in as plain a language as possible. The step by step process of how to obtain access should be explained in no unequivocal terms. If fees are to be paid and if there are limitations to use and reuse, it must be clearly spelt and laid out.

7.13.2 Participation

Opportunities for participation should be provided. This is the hallmark of a democratic system. Participation is made possible when the people can freely comment on policies, improve a draft, add to an online creation and ensure their voices are heard, their style added and their frustrations ventilated in a systematic but lawful manner.

7.13.3 Collaboration

Too many agencies of government continue to re-invent the wheel because of a lack of institutional collaboration. Information which forms a major bedrock in the management of

¹¹⁵⁷ Marco Ricolfi, above n 921

¹¹⁵⁸ Carothers & Brechenmacher, above n 1000

people and resources is best maximized where strong collaborations exist between relevant government agencies and users. Providing an enabling environment for collaboration either through a systemic submission mechanism of information or through deposits and retrievals in and from a central governmental repository, will be an important part of the framework. Collaboration is however not limited to government to government relationship. It should extend to government and non-profits, as well as private organisations. The general public should also be made active players in this collaboration.

7.13.4 Accountability

A credible feedback mechanism allowing the public verify and assess the promises of a strategy either by government or any entity against the eventual actions will strengthen the credibility of the framework. Accountability is a fundamental entitlement of the people from any government. Accountability however, is not the responsibility of only the government. All parties within the process must exercise and demonstrate a sense of accountability, be they the creators, developers, maintainers, users or re-users of information.

7.13.5 Openness

Government and private entities may not be able to disclose all the information they hold due to matters of security, privacy or intellectual property protections. The information that falls outside the purview of the above mentioned information are still a large stock of information which if made properly available and accessible will spur development in no small way. Making these kind of information not just available but openly accessible, that is ensuring no restrictions are placed on such information is important for the success of the framework. Openness is best achieved by adopting an open government initiative.¹¹⁵⁹ The open government initiatives of the United States,¹¹⁶⁰ Australia,¹¹⁶¹ and the United Kingdom,¹¹⁶² as well as the Open Government Declaration of the Open Government Partnership¹¹⁶³ endorsed by over 65 nations provide useful tools on openness in government.¹¹⁶⁴ These initiatives from the afore-mentioned nations provide the

¹¹⁵⁹ Jeremy De Beer above n 915, 9. Where it was noted that “It can even be argued that openness breeds more openness, so that it is a game-changing force for unlocking innovation and creativity.”

¹¹⁶⁰ The White House, *Open Government Initiative*, <http://www.whitehouse.gov/open>.

¹¹⁶¹ AusGOAL, *Australian Governments Open Access and Licensing Framework*, <http://www.ausgoal.gov.au/overview>.

¹¹⁶² DATA.GOV.UK, *Opening up Government*, <http://data.gov.uk/>.

¹¹⁶³ Open Government Partnership, *Open Government Declaration*, <http://www.opengovpartnership.org/about/open-government-declaration>.

¹¹⁶⁴ See the example of the Open Government Partnership, *Australia*, <http://www.opengovpartnership.org/country/australia>.

See also that of the Open Government Partnership, *United States of America*, <http://www.opengovpartnership.org/country/united-states>.

See also the Open Government Partnership, *United Kingdom*, <http://www.opengovpartnership.org/country/united-kingdom>.

building blocks that enable the development of country specific open initiatives. The choice of what open initiative is to be adopted will best be determined by each locality on a case by case basis.

7.13.6 Legal Conformity (Use and Reuse Rights)

The legal framework that protects information is quite detailed. It is therefore important that there be unequivocal clarity as to what can and cannot be done with the information that is put out. The major points of clarity will border on the right to use and reuse information. Frameworks that provide for use and reuse rights capture the entire essence of open movement. It is however noteworthy that not all structures can presently provide both use and reuse rights. It is therefore important for each entity to examine their institutional objective and assess what they are legally able to provide. Although the vanguard for open, advocates for 100% openness, it is nonetheless accommodating of frameworks that are only able to provide partial openness, that is, only 'use rights'.

7.13.7 Intellectual Property Protection

Understanding IP can make the difference between a well-structured framework and a badly structured framework. No matter how well intentioned an objective, if it offends the letter and spirit of the law, it is illegal. Obtaining the relevant consent, focusing on works within the public domain, clarifying what rights in a work are required and identifying the most effective licensing model to adopt are factors to be deliberated upon and properly considered.

7.13.8 Interoperability

The format in which an information is made accessible must be one that can easily interact with other formats. Providing information via restricted and exclusive formats make such information technically inaccessible due to the fact that the formats are not interoperable. Although it may appear minute, it is imperative for the framework to pay attention to all details that may directly or indirectly restrict access and must therefore ensure that the formats in which information will be available are interoperable.

7.13.9 Cost

It is preferable that every possible barrier to access inclusive of cost barriers be removed. Not all information providers are however currently making the information within their custody available and accessible for free. The reason for placing cost varies from one entity to the other. It will be instructive for the framework to contain information as to whether or not access is provided at no cost and if at a cost, what the cost will be or is likely to be and if possible provide

a standardized mode of ascertaining cost. Absolute freedom as to price is the goal but where this is not possible, the cost should be as close as possible to the cost of production plus a fair value.

7.13.10 Sustainability

Policy initiatives achieve optimal impact when built around or upon enduring and credible platforms.¹¹⁶⁵ It is one thing to make policies and it is another to ensure its sustainability. For open access to achieve its goal, it is important that policies enabling open access are reliable and dependable over time and should be independent of political partisanship and governmental bureaucracy. Too often policies are made and changed causing instability. To avoid the many uncertainties, high-handedness and arbitrary changes associated with policies, especially government related policies, it would be wise to set up independent sustainable infrastructures to protect the right to access, use and reuse of knowledge. This may be achieved by the introduction of an independent and autonomous body.

7.14 STEPS TO BE TAKEN

7.14.1 Publish Government Information Online

To ensure that access is truly available, government should work towards making information available online. The trouble of having to travel to an office, wait till a file is located and undergo the painstaking bureaucracies of government can be avoided by publishing the information online. This will save cost, time and manpower. It will also encourage development and creativity, as the ready availability of this information holds the potential to push the frontiers of knowledge, research, creativity and innovation. Publishing such information will be best achieved on a central government portal. Where this is not immediately achievable, each government agency should ensure that the information they hold are available on their individual websites and that such information are not locked up within restricted areas of the website, such as areas designated for staff only.

7.14.2 Provide Quality Information

The information that would be made available should be of high quality. It should not be the draft copy but rather the final and approved copy. This does not take away the possibility of providing access to the draft copies but it should be clearly indicated that such copies are drafts. The links to this information should be properly maintained and government should avoid the

¹¹⁶⁵ John C.V. Pezzey and Michael A. Toman, *The Economics of Sustainability: A Review of Journal Articles* (January 2002) Resources for the Future <http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-DP-02-03.pdf> See page 2 where it notes that “sustainability involves some concern for intergenerational equity or fairness in the long-term decision-making of a whole society.”

practice of taking down links. If links must be taken down, a redirection should be provided to help in locating the information. The quality and integrity of information is very essential.

7.14.3 Create and Institutionalise an Open Government Culture

Making information available online should be made the standard practice. A deadline for making information available should be set. The format and quality of information uploaded should be standardized. A system for maintaining and updating the information should be put in place. Where possible, a specific officer(s) should be designated to oversee the implementation of this task. As each entity deems fit, a new agency may be set up to administer the implementation of this task. On the other hand, it may be fused into the responsibility of an existing agency, ministry or department.

7.14.4 Create awareness about Public Sector Information

To maximize the potential of PSI it is important that people know they have access to use and reuse information held by government. Public awareness by the public, private and civil societies is important.

At the beginning of this chapter we considered general factors for developing a framework for open access to knowledge in Nigeria. We also highlighted specific factors to be considered in developing a framework with respect to the three different fields considered in this research. The next section of this paper discusses the option of adopting an international treaty path way for the development of an open access to knowledge framework in Nigeria.

7.15 INTERNATIONAL TREATIES

Another pathway to develop a framework is through International treaties.

“An international treaty like other legal documents is a textual specifications of legal obligations. Just as statutes result both from laws governing the legislative process and set forth rules of law for citizens to follow, a treaty results both from a general process governed by rules of law and itself sets forth particular rules of law.”¹¹⁶⁶

Member states who ratify such treaties agree to be bound by them.¹¹⁶⁷ Some states then go on to domesticate these laws by enacting an adapted version of the treaty as part of their national laws.

¹¹⁶⁶ John K Setear, ‘An Iterative Perspective On Treaties: A Synthesis Of International Relations Theory And International Law’, (1996) 37 *Harv. Int’l. L. J.* 139.

¹¹⁶⁷ United Nations, Vienna Convention on the Law of Treaties, 23 May 1969, United Nations, Treaty Series, vol. 1155, p. 331, (1969). See Article 26 which states that “Every treaty is binding upon the parties to it and must be performed by them in good faith.” As well as the preamble which states that “Considering the fundamental role of treaties in the history of international relations, Recognizing the ever-increasing importance of treaties as a source of

Nigeria for example provides for domestication of international treaties before such treaties can be enforced in Nigeria.¹¹⁶⁸ A major incentive for the international treaty path way is its global applicability.¹¹⁶⁹ There has been the push to capture the essence of the open movement as an international instrument through the draft treaty on Access to Knowledge.¹¹⁷⁰

7.15.1 WIPO Development Agenda

The World Intellectual Property Organisation (WIPO) has been instrumental in the vanguard for access to knowledge. It captures the need for improved access to knowledge amongst the 45 recommendations under the WIPO development agenda adopted at WIPO's General Assembly in 2007.¹¹⁷¹ Cluster C of the agenda particularly focuses on Technology Transfer, Information and Communication Technologies and Access to Knowledge. It specifically provides in recommendation 19 for WIPO "to initiate discussions on how, within WIPO's mandate, to further facilitate access to knowledge and technology for developing countries and LDCs to foster creativity and innovation and to strengthen such existing activities within WIPO". A manifestation of WIPO's development agenda's support for access to knowledge is the Marrakesh Treaty.

7.15.2 Marrakesh Treaty

international law and as a means of developing peaceful co-operation among nations, whatever their constitutional and social systems" See also, H.L.A. Hart, *The Concept Of Law* (Clarendon Press. 1961) 219.

"Why are treaties binding?" is a question usually answered by the superficial assertion that "treaties are binding because states have agreed to be bound." This explanation has its counterpart in domestic law. Contracts, which are often regarded as analogous to treaties, are also said to be binding because the parties have agreed to be bound.

¹¹⁶⁸ See The Constitution of the Federal Republic of Nigeria (1999) Section 12(1) It states that "No treaty between the Federation and other country shall have the force of law except to the extent to which any such treaty has been enacted into law by the National Assembly."

See also, Olawale Adebambo, *Domesticating international treaties* (2013) The Nation <http://thenationonlineng.net/new/domesticating-international-treaties/>.

¹¹⁶⁹ Setear, above n 1150. See page 215 where John noted that "Treaties may not only mandate meetings among all the parties to a treaty but may also direct efforts by particular parties embroiled in specific disputes. The Provision of treaties often include specific mechanisms..." See also, pages 166-167 where he noted that "the rule of the law of treaties, rather than being "treaties are binding everywhere in all circumstances is actually treaties are binding, except when terminated by fundamental change in circumstances or by inconsistency with a peremptory norm"

¹¹⁷⁰ WIPO, *The Third Access to Knowledge (A2K3) Conference* (2008) WIPOMAGAZINE http://www.wipo.int/wipo_magazine/en/2008/06/article_0007.html. The magazine noted that the conference was "Organized by ten international partners, the Third Access to Knowledge (A2K3) Conference, held in Geneva from September 8 to 10, attracted over 400 participants"

¹¹⁷¹ WIPO, Member States Adopt a Development Agenda for WIPO, Geneva, October 1, 2007, PR/2007/521 http://www.wipo.int/pressroom/en/articles/2007/article_0071.html (2007).

"The Director General of the World Intellectual Property Organization, Dr. Kamil Idris, welcomed a decision by WIPO member states on Friday, September 28, 2007 to adopt a Development Agenda consisting of a series of recommendations to enhance the development dimension of the Organization's activities. The recommendations include a set of 45 agreed proposals covering six clusters..."

Dr. Idris said, "This is a historic day for the Organization and its member states. The adoption of the Development Agenda is testimony to the international community's commitment to promote the evolution of an IP system that addresses the needs and concerns of all countries."

In 2013, a treaty that would enable better access to knowledge for Visually Impaired Persons (VIPs) was adopted by WIPO.¹¹⁷² The Diplomatic conference leading to its adoption brought together more than 600 negotiators from WIPO's 186 member. The treaty called the *Marrakesh Treaty to Facilitate Access to Published Works for Persons who are Blind, Visually Impaired, or otherwise Print Disabled*, enables reproduction, distribution and the making available of published works in compatible formats for VIPs.¹¹⁷³ The treaty has been reported as the first of its kind. Other copyright treaties have focused on minimum requirements to be granted to copyright owners and the minimum requirements for enforcing such copyright but this treaty requires member states to grant certain rights to VIPs thereby curtailing the traditional rights of copyright owners.¹¹⁷⁴ The treaty addresses a major access to knowledge challenge and requires contracting parties to domesticate the treaty as national laws permitting reproduction, distribution and making available of published works in accessible formats through limitations and exceptions to the rights of copyright owners.

WIPO is not alone in the access to knowledge movement. The World Trade Organisation (WTO) and World Health Organisation have both been identified with the access to knowledge movement. The rallying point for these organizations has been the draft A2K treaty.¹¹⁷⁵

¹¹⁷² Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled, adopted by the Diplomatic Conference to Conclude a Treaty to Facilitate Access to Published Works by Visually Impaired Persons and Persons with Print Disabilities on June 27, 2013 http://www.wipo.int/edocs/lexdocs/treaties/en/marrakesh/trt_marrakesh_001en.pdf.

¹¹⁷³ WIPO, *Summary of the Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled (MVT) (2013)*, (2013).

See also, WIPO, Historic Treaty Adopted, Boosts Access to Books for Visually Impaired Persons Worldwide, Marrakesh/Geneva, June 27, 2013, PR/2013/741 http://www.wipo.int/pressroom/en/articles/2013/article_0017.html. (WIPO ed., 2013). Where the Director General, Dr Francis Gurry said, "it is a historic treaty that will lead to real benefits for the visually impaired. It was also reported that "According to the World Health Organization, there are more than 314 million blind and visually impaired persons in the world, 90 percent of whom live in developing countries."

¹¹⁷⁴ Michael Carrol, *PIJIP's Marrakesh Treaty Event – Teaching Resource and Thanks* <http://infojustice.org/archives/30682>.

"The treaty is the first of its kind. A series of multilateral agreements on intellectual property have established the minimum rights that Member States must grant to authors, inventors or other owners. Other bilateral and plurilateral agreements have focused on minimum requirements for enforcing these rights. Now, this treaty pushes in the opposite direction by requiring Member States to cut back on the scope of protection under copyright law so as to allow "authorized entities" within their territory to make print resources available to the blind and print disabled without the consent of the publisher or other copyright owner. Currently less than 2% of the published literature is available to this population in an accessible format. The negotiation was particularly hard fought because of the larger context concerning the future direction of international intellectual property law." Justin Hughes, Ruth Okediji and Luis Villaruel were the key negotiators representing the United States, African delegation and Ecuador respectively.

¹¹⁷⁵ See the WIPO, above n 1154. The A2K Challenge by Maximiliano Santa Cruz, where it was noted that "A2K now has a strong influence in intergovernmental processes at WIPO, the WTO and the WHO."

7.16 Access to Knowledge Treaty (A2K)

This is a treaty that seeks to enable access to knowledge. The treaty is still in its draft form and underscores the importance of knowledge as an essential tool in the daily activities of all global citizens. It recognises the role of the law in knowledge transactions and seeks to bridge the divide between the rich and the poor with regards to knowledge goods.¹¹⁷⁶ The Preamble to the draft treaty states that the treaty seeks to “enhance participation in cultural, civic and educational affairs, and sharing of the benefits of scientific advancement.”¹¹⁷⁷ The objective of the draft treaty is to protect and expand access to knowledge and to facilitate transfer of technology to developing countries.¹¹⁷⁸ Part 5 of the draft article focuses on expanding and enhancing the knowledge commons. It encapsulates a host of issues revolving around knowledge inclusive of distance education, government funded research, scholarly publications, public sector information, databases, open access journals, open access archives/repositories, open knowledge projects, public domain, access to archives of broadcasting works, interoperability and several other issues that would enable access to knowledge¹¹⁷⁹. The minds behind the draft were able to capture the multi-disciplinary perspective of access to knowledge.

7.16.1 Guidelines for adapting A2k

In an attempt to developing a national open access framework, the A2k draft framework route may be an option. The general factors discussed above will be relevant and have to a large extent been captured in the draft A2k treaty. As the draft is wide in scope, there is the need to

1. Delineate areas of interest and focus on what will best serve the national interest.
2. Set up public enlightenment groups to carry out public enlightenment campaigns about the meaning and importance of open access to knowledge.
3. Set up advocacy groups to lobby the Executive arm of government to present the bill and the legislative arm to speedily pass them. This is important considering the fact that Nigeria requires domestication of international treaties.

The challenge however is that reliance on such a treaty brings along the bureaucracies of International organisations and sovereign nations. Firstly, the document is still a draft and has not been passed as a treaty by any of the international bodies. It may require a number of diplomatic meetings and probably a conference to achieve this. Assuming the treaty has been adopted and is in force it may not be enforceable in Nigeria until it has been domesticated in line

¹¹⁷⁶ CPTech, *Access to Knowledge: Overview*, <http://www.cptech.org/a2k/>.

¹¹⁷⁷ Draft Treaty On Access To Knowledge A2k Treaty (9 May 2005). See the Preamble, P.3 at Part 1

¹¹⁷⁸ Ibid See Article 1-1- Objectives.

¹¹⁷⁹ Ibid See Articles 5-1 - 5-6.

with Section 12(1) of the constitution. The same may apply to other nations¹¹⁸⁰. The process of achieving this often takes time. It is therefore important to weigh the odds before deciding to build a framework around an international treaty. The advantage of using this framework is that it serves as qualitative and tested precedence having undergone rigorous reviews by international experts.

7.17 CONCLUSION

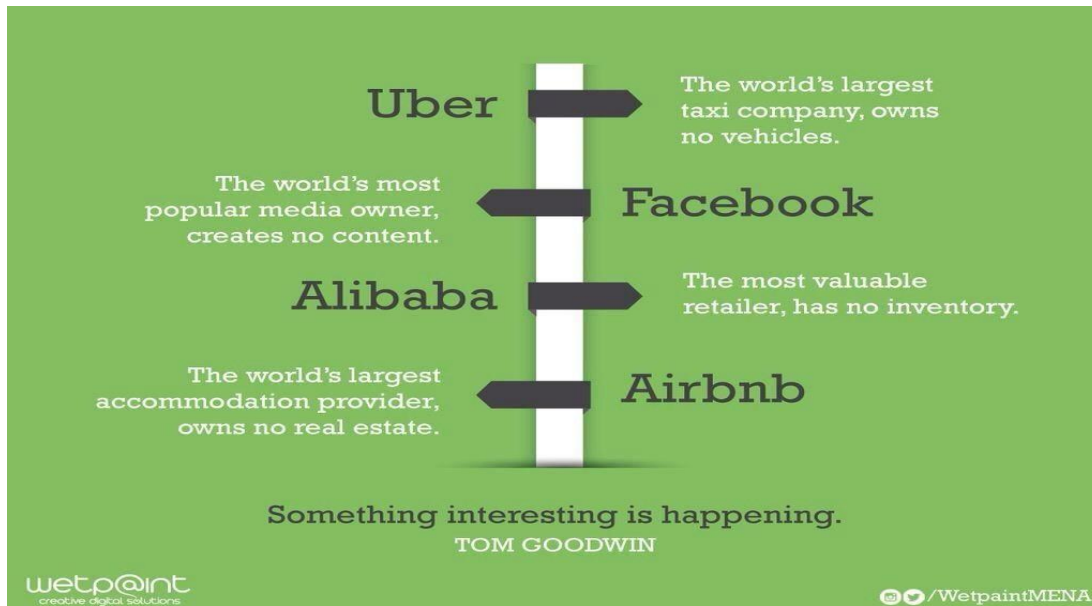
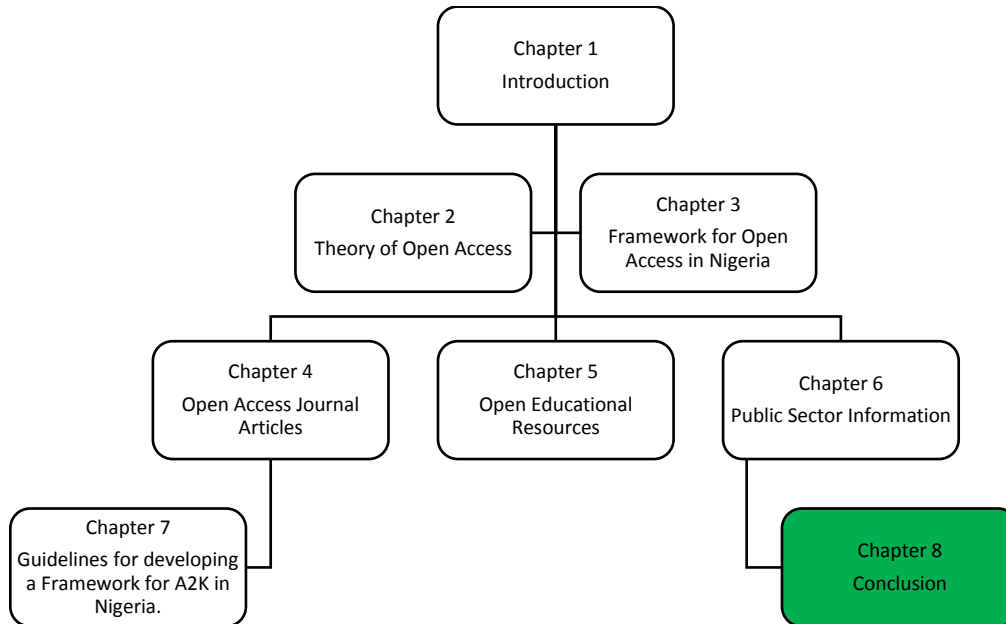
This chapter has explored general and special factors to consider and has provided draft guidelines to aid in developing an open access to knowledge framework. Whereas the general factors were considered from a broad perspective and apply to the three fields of the open access movement discussed in chapters 4, 5 and 6 of this thesis, the special factors laid emphasis on each of these fields. Lastly an international instrument/treaty pathway was considered using the “A2K draft treaty as the working tool.

¹¹⁸⁰ United Nations UN, *United Nations Treaty Collection: Glossary*, https://treaties.un.org/pages/Overview.aspx?path=overview/glossary/page1_en.xml#adoption.

CHAPTER 8: CONCLUSION: WEAVING THE THREADS TOGETHER

“Let us hear the conclusion of the whole matter...”¹¹⁸¹

Aim & Objective: This chapter brings together the essence of the entire work.



Source: Tom Goodwin, Wetpaint creative digital solutions.

¹¹⁸¹ Tyndale, *The Holy Bible : Authorized King James Version, containing the Old and New Testaments* (Tyndale House Publishers 1984) Ecclesiastes 12:13

8. WEAVING THE THREADS TOGETHER

This thesis examined three major areas within the open movement namely open access journal articles, open educational resources and public sector information. Three aims and objectives were set namely:

1. To demonstrate the potential benefits of the open access movement to Nigeria's national development.
2. To investigate, explain and propose a legal, regulatory and policy framework for Nigeria that would enable open access to the output of journal articles, open educational resources and public sector information.
3. To situate Nigeria within the current Open Access Movement by engaging in local pragmatic projects capable of advancing the development of Nigerians, other developing countries and the world at large. (For instance the establishment of institutional repositories in most Nigerian Tertiary Institutions.)

To actualise the above aims and objectives, three research questions were developed namely:

1. What role(s) can open access play in Nigeria's national development?
2. What are the possible challenges to the implementation of open access in Nigeria?
3. What legal, regulatory and policy frameworks are required or needed to be strengthened for the successful implementation of open access in Nigeria?

The summary of the outcome of this research in response to the above listed research questions are as follows:

- 1) Open access can play a developmental role in Nigeria's national development as seen in Chapters 4, 5 and 6.
- 2) The major challenges to the implementation of open access in Nigeria are knowledge gap, digital divide, fear of culture erosion and consumer partners.
- 3) As seen in Chapter 3, the current framework in Nigeria lacks appreciation of the OA culture. It mostly has no open access focus. Some contain a form of use rights but no rights for reuse. It is therefore pertinent for the legal, regulatory and policy frameworks to be aligned and realigned to conform to the guidelines provided in Ch.7.

8.1 COLLABORATION IS THE KEY

Throughout this thesis the value and importance of sharing has been explored. The picture above gives an indication that we live in an age where content is king and yet even superior to content is the power of sharing. Those who understand that sharing is the key to the next great economic, social and political development have already gone ahead and are already harvesting their fruits. It has been reported that Nigeria now uses 29% of Africa's Internet Access.¹¹⁸² Also reported is the fact that Apple buys Chinedu Echeruo's (a Nigerian) Hopstop.com for \$1Billion.¹¹⁸³ Creativity and Innovation are key tools for development and open repositories provide a platform for access to the output of creativity and innovation. Nigeria is a potential market but it can only attain her potentials through collaboration. Chapter 4 noted that Nigeria can contribute to global development through proper visibility of Nigerian works and that development can be quickened in Nigeria through enabling access to use and reuse of journal articles. The green and gold open access provide the platforms to make these happen. However, Nigeria must be an active participant and not a mere consumer.

8.2 THE FRUSTRATIONS ARE STILL THERE

In the course of this research, I received an email from a Nigerian who now lives and lectures in the United Kingdom. He had read one of my works that was freely available online and discovered it had many Nigerian decided cases. He had been trying to collate information on a particular area of Nigeria's case law but was unable to access any of those cases. He therefore sent me an email asking that I kindly assist him with the Nigerian cases I have. I have since pulled up the cases and sent them to him but this is not how it should be. The Nigerian judiciary is funded by tax payers' money and the records of the court are public documents that should be accessible to the public. Chapter 6 on Public Sector Information addressed the need for openness and transparency and explained how valued added services through access to use and reuse of government held information can foster development and good governance. The Nigerian judiciary and the other arms of government can bring about a better Nigeria if they adopt an open government policy. My

¹¹⁸² Dele Ogbodo, *Nigeria Now Uses 29% of Africa's Internet Access an Interview with Nigerian Minister of Communication Technology, Mrs. Omobola Johnson* (2015) Thisday <http://www.thisdaylive.com/articles/nigeria-now-uses-29-of-africa-s-internet-access/209661/>.

¹¹⁸³ Zacheaus Somorin, *Apple Buys Chinedu Echeruo's Hopstop.com for \$1 Billion* <http://www.thisdaylive.com/articles/apple-buys-chinedu-echeruo-s-hopstop-com-for-1-billion/209739/>.

colleague in the UK and several others will be able to access useful information and the utility and impact of such information will be maximized.



Source: A World at School: Global Youth Ambassadors

8.3 CHIBOK GIRLS STILL MISSING

The Chibok girls and many others in the terror torn region of Nigeria are amongst the 10.5 million Nigerians who will not go to school. Although agitations by Nigerians about the government's lackadaisical attitude towards the kidnapped Chibok girls brought about a change of government during the April 2015 Nigerian Presidential election, the girls are still missing and Boko Haram is still bombing different parts of Nigeria. People are afraid to go to school, people are not learning, education is lacking to a large number. Chapter 5 discussed open educational resources as an alternative route to the traditional route of acquiring education. OER cannot pretend to be a panacea to global education but it definitely provides tools to tackling challenges to accessing education. A high population of Nigerians in the areas where Boko Haram operates have mobile phones. These phones can receive open educational resources and can therefore serve as learning portal. Desperate situations require desperate measures.

8.4 RETROSPECT

Chapter one laid the background for the thesis explaining the origin and development of open access. It provided information on the fundamentals of open access and expatiated on the strategies to achieving open access.

Chapter two considered the theory of open access from a social, economic, legal and political perspective. It laid out the reasoning of certain scholars and philosophers towards

sharing of knowledge and argues that open access is a practical way of implementing the ideologies.

Chapter three examined specific Nigerian legal, regulatory and policy frameworks against the background of the open access movement in Nigeria to ascertain how these frameworks work in tandem or otherwise with the overarching objectives of open access.

Chapters 4-6 examined different aspects of knowledge management and how knowledge can be maximized from the perspective of open scholarly publishing, open educational resources and public sector information. It emphasized the need to conform to the rule of law and deploys open licensing to grant the requisite permissions. The duo strategy of self-archiving and open access publishing in the implementation of open access is investigated as well as the importance of providing use and reuse rights to publicly funded research and all government held information that do not fall within legally excluded materials. The impracticability to keep up with the high cost of educational materials and the need for a more globalized and integrated educational system was noted. Understanding and deploying open educational resources as strategic educational tools was explored as a pathway to alleviating the cost as well as providing the platform for the development and sharing of educational resources on a global scale.

The seventh chapter provides guidance and useful tools for developing open access frameworks be it that of an individual, a university, research institute, an agency of government, the private sector or even the public service. It provides links to a number of draft policy statements that could be helpful in developing a draft but draws attention to the need to customise and localise such draft policy statements.

The implementation of open access to knowledge in Nigeria can transform Nigeria if properly implemented. Below are some recommendations that would aid in maximizing open access to knowledge in Nigeria.

8.5 RECOMMENDATIONS

1. Government to develop a national open access policy, open government initiatives and open educational resources policy. The objective is to develop a policy with national applicability. In implementing this recommendation, government may wish to empanel a committee made up of public servants, private sector and International experts to undertake surveys and research and adapt the guidelines provided in this thesis. For funding, the first preference would be that it be funded by government. The second option

would be local (Nigerian) private sector funding. The third option would be from international donor organisations and Non-governmental organisations.

2. Universities to adopt open access policies. The aim is to institutionalise open access in the Nigerian academic environment. In implementing this recommendation, the office of the Vice Chancellor (VC) or that of the Deputy Vice Chancellor (DVC) should direct the policy development and delegate implementation to the Dean of each faculty but the VC or DVC should take responsibility for supervising its implementation.

3. All Nigerian research agencies to adopt OA policies, to ensure that the output of Nigeria's publicly funded research is made freely available. The Head of the agency or an officer at management level should be saddled with the responsibility of organising the development and implementation of the policy.

4. All Higher Educational Institutions, Research institutes and government agencies to establish Institutional Repositories. For purposes of providing an online platform for free global visibility and accessibility of Nigerian works. In the development of the I.R, agencies should avail themselves of open source software platforms such as

- Dspace and Eprint for their repositories, (Green OA)
- Ubuntu for the operating system and
- Open Journal System as the publishing platform (Gold OA).

The Head of the agency or an officer at management level should be saddled with the responsibility of organising the development and implementation of the policy.

5. Embark on aggressive enlightenment to the Private sector in Nigeria on the benefits of adopting open cultures and to build business models using available open platforms such as open source licences, open educational resources etc.

6. Public Sector Information held by government agencies should be made available for use and reuse. To encourage citizenry participation, accountability, transparency and good governance by the provision for use and reuse of government held information. In the implementation of this recommendation, the Head of the agency or an officer at management level should be saddled with the responsibility of providing this information via the government's website.

7. Government to adopt a standard licencing regime for PSI preferably the Creative Commons licences. To simplify and standardize the mode of obtaining authorization for

use and reuse of works. Implementation will require understanding and adoption of suitable Creative Commons licences taking cognisance of the peculiarities of certain Ministries, Departments and Agencies of Government (MDA's).

8. All libraries and informatics centres in Nigeria to work towards digitizing all documents in their custody and should work towards going online.

9. All government agencies to be encouraged to begin to use Open Source Softwares.

10. Develop a national advocacy program on understanding open access.

11. Develop a national portal capable of harvesting content from all the university institutional repositories. This will provide a single platform where all data in IR's in Nigeria can be harvested and systematically accessed. In implementing this recommendation, the national portal could be jointly managed by government and the Nigerian private sector. (GLO, MTN, MainOne Cable, SubUrban). The RIAN in Ireland, OpenAIRE, DartEurope, Driver and Base in Europe as well as NORA in Norway are examples of national portals that may be adapted. In developing this national portal open source platforms should be used such as

- Dspace and Eprint for the portal,
- Ubuntu for the operating system and
- Open Journal System for the publishing platform.

12. Adoption of open policy by the Judiciary thereby making the cases available for free online.

13. Adoption of open policy by the legislature thereby making legislation, draft bills and other legislative materials freely available online. This will promote transparency, good governance and greater citizen participation.

14. Encourage individual authors to set up individual websites and upload their works.

15. Open Access Policies in the Universities to include a mandate on deposits of works.

15. Enlist the support of Nigerian Publishers to adopt open access publishing models.

16. That old and new thesis in Nigerian universities be made available in their respective institutional repositories.

17. Establish a monitoring mechanism to assess the level of open access compliance in Nigeria. See MTMT in Hungary as an example.

18. Encourage all Nigerian journal publishers to register with one of the global indexing outlets to enhance the global visibility of works published in Nigeria.
19. Government in collaboration with the private sector to provide proper infrastructure like power and better internet service.
20. Government to encourage publicly funded schools to use open educational resources

9. BIBLIOGRAPHY:

JOURNAL & ELECTRONIC ARTICLES.

1. Adenike Orenuga, *REVEALED: How Dr. Adadevoh saved Nigerian lives from Ebola*, Daily Post, 2014.
2. Ahmed Mohammed, *The Development of Academic Journals in Institutions of Higher Learning in Kano State, Nigeria* Library Philosophy and Practice (e-journal) at <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1215&context=libphilprac>.
3. Alek Kwi, *Open Lesson launched in Poland with 30 workshops* European Open Edu Policy Project at <http://oerpolicy.eu/open-lesson-do-it-yourself-workshop-materials-on-open-education/>.
4. Aljazeera, *Nigeria Police Crack Down On Fuel Protests* (Aljazeera 2012) <http://www.aljazeera.com/news/africa/2012/01/201214141913862546.html>.
5. Allegra Stratton, *David Cameron aims to make happiness the new GDP* theguardian at <http://www.theguardian.com/politics/2010/nov/14/david-cameron-wellbeing-inquiry>.
6. Alwed Ekka, *True Education Enlightens People* Power Education System at <https://alwedekka.wordpress.com/2010/10/24/true-education-enlightens-people/>.
7. Aminu Abubakar, *Factsheet: How Many Schoolgirls Did Boko Haram Abduct And How Many Are Still Missing?*, Africa Check (2014), <http://africacheck.org/factsheets/factsheet-how-many-schoolgirls-did-boko-haram-abduct-and-how-many-are-still-missing/>.
8. Aminu Yakubu & Clement A. Adebamowo, *Implementing National System of Health Research Ethics Regulations: The Nigerian Experience*, 1 BEOnline : journal of the West African bioethics training program (2012).
9. Ana Jesus Lopez Menendez & Rigoberto Perez Suarez, *Measuring Progress towards the Millennium Development Goals. A regional approach* at http://www.academia.edu/999515/Measuring_Progress_towards_the_Millennium_Development_Goals._A_Regional_Approach.
10. Ana Zoria, *Nigeria's Publishing Industry: Telling our own stories* at <http://www.pambazuka.net/en/category/books/93917>.
11. Andrew Plume & Daphne Van Weijen, 'Publish or Perish? The Rise of the Fractional Author', (2014) *Research Trend*.

12. Anks Michels, 'Innovations In Democratic Governance: How Does Citizen Participation Contribute To A Better Democracy'?, (2011) 77 *International Review of Administrative Sciences* 275.
13. Annie Malknecht, *What the Millennium Development Goals Have Accomplished* at <https://www.americanprogress.org/issues/security/news/2014/08/18/95805/what-the-millennium-development-goals-have-accomplished/>.
14. Anyaoku E.N & Anunobi C.V, 'Measuring HINARI use in Nigeria through a citation analysis of Nigerian Journal of Clinical Practice' (2014) 31 *Health Information and Libraries Journal*.
15. Arthur Sale, *Comparison of content policies for institutional repositories in Australia* 2006 at <http://firstmonday.org/ojs/index.php/fm/article/view/1324/1244>.
16. Article 19 & Media Rights Agenda, *Unshackling the Nigerian Media*, Article 19 & Media Rights Agenda (1997), <http://www.article19.org/data/files/pdfs/publications/nigeria-unshackling-the-media.pdf>.
17. Article19, *Memorandum on the Nigerian Freedom of Information Bill* (2000), <http://www.article19.org/data/files/pdfs/analysis/nigeria.foi.00.pdf>
18. Article19, *The Public's Right to Know Principles on Freedom of Information Legislation*(1999), <http://www.article19.org/data/files/pdfs/standards/righttoknow.pdf>.
19. Association of Research Libraries, *Copyright Timeline: A History of Copyright in the United States* at <http://www.arl.org/focus-areas/copyright-ip/2486-copyright-timeline#.VW-DxM-ggko>.
20. Aurelia J. Schultz, *Back to School: Open Educational Resources in Africa* at <http://creativecommons.org/weblog/entry/17273>.
21. Ayodejo Olukoju, 'The Crisis of Research and Academic Publishing In Nigerian Universities', (2004) *CiteSeer*.
22. Barbara Kirsop, et al., 'Access to Scientific Knowledge for Sustainable Development: Options for Developing Countries' *ARLADNE* at <http://www.ariadne.ac.uk/issue52/kirsop-et-al>.
23. Barbara Kirsop, et al., 'Towards Open and Equitable Access to Research and Knowledge for Development' *PLOS MED* 8(3) at <http://www.plosmedicine.org/article/fetchObject.action?uri=info%3Adoi%2F10.1371%2Fjournal.pmed.1001016&representation=PDF>.

24. Barbara Miller, *Fugitive Edward Snowden meets with human rights groups at Moscow airport*, ABC News (2013), <http://www.abc.net.au/news/2013-07-12/snowden-meets-with-human-rights-groups/4817674>.
25. Barbara Nussbaum, 'African Culture and Ubuntu: Reflections of a South African in America' (2003) 17 *World Business Academy, Perspectives* 1.
26. Barbara Nussbaum, Reflections of a South African on our Common Humanity,(2003) 4 *Reflections* 21.
27. Bart Ooghe & Dries Moreels, 'Analysing selection for Digitisation: Current Practices and Common Incentives', (2009) 15 *D-Lib Magazine*.
28. Bayo Oladeji, *The Importance of Freedom of Information Act*, <http://leadership.ng/blogposts/390236/importance-freedom-information-act>.
29. BBC News Business, *Richest 1% to won more than rest of the world, Oxfam says* (2015), <http://www.bbc.com/news/business-30875633>.
30. Ben Mudrak, *New Study Tracks Growth of Open Access Publishing*, Expert Edge (2012), <http://expertedge.aje.com/2012/11/10/new-study-tracks-growth-of-open-access-publishing/>.
31. Bharat Kumar, *1333 words essay on Man is a social animal* Preserve Articles at <http://www.preservearticles.com/201102184074/man-is-a-social-animal-essay.html>.
32. Bill cope & Mary Kalantzis, *Signs of epistemic disruption: Transformations in the knowledge system of the academic journal* at <http://www.firstmonday.dk/ojs/index.php/fm/article/view/2309/2163>.
33. Brian Lai & Clayto Thyne, 'The Effet of Civil War on Education', 1980-97, (2007) 44 *Journal of Peace Research*.
34. Busch Gary, *The Full Story of the Fuel Subsidy Crisis* at http://www.ocnus.net/artman2/publish/Editorial_10/The-Full-Story-of-the-Fuel-Subsidy-Crisis.shtml.
35. C.P Uzuegbu, 'Academic and Research Institutions Repository: a catalyst for access to development information in Africa', (2012) *IFLA*, <http://conference.ifla.org/past-wlic/2012/191-uzuegbu-en.pdf>.
36. Cable Green, *British Columbia Government Lends Support to Open Textbooks* at http://creativecommons.org/weblog/entry/34566?utm_campaign=newsletter_1210&utm_medium=blog&utm_source=newsletter.

37. Cable Green, *OER K-12 Bill Passes in U.S. Washington State* at <http://creativecommons.org/weblog/entry/31756>.
38. Cable Green, *The Impact of Open Textbooks at OpenStax College* at <http://creativecommons.org/tag/open-textbooks>.
39. Cable Green, *US Department of State Unveils Open Book Project* at <http://creativecommons.org/weblog/entry/36421>.
40. Caralee Adams, *Open Access in Latin America: Embraced as key to visibility of research*, (2013) SPARC, <http://www.sparc.arl.org/news/open-access-latin-america-embraced-key-visibility-research-outputs>.
41. Carmella B'Hahn, 'Be the Change You Wish to See: An Interview with Arun Gandhi', (2001) 10 *Reclaiming Children and Youth*.
42. Chimamanda Ngozi Adichie, *The danger of a single story* TEDGlobal at http://www.ted.com/talks/chimamanda_adichie_the_danger_of_a_single_story?language=en.
43. Chris Butler, *FC74: The invention of the printing press and its effects* at <http://www.flowofhistory.com/units/west/11/FC74>
44. Christian Renoux, *The Origin of the Peace Prayer of St Francis* by Dr. C. Renous, Associate Professor of the University of Orleans, France (2001), <http://www.franciscan-archive.org/franciscana/peace.html>.
45. Collins Nduka, *Army Lied Again! Rescued Girls Aren't Chibok Girls – and their Parents are Livid* - See more at: <http://www.xclusive.ie/army-lied-again-rescued-girls-arent-chibok-girls-and-their-parents-are-livid/#sthash.ORjSpkPY.dpuf> at <http://www.xclusive.ie/army-lied-again-rescued-girls-arent-chibok-girls-and-their-parents-are-livid/>.
46. Corydon Ireland, *Scholarly Access to all*, (15 July 2014) Harvard Gazette <http://news.harvard.edu/gazette/story/2014/07/scholarly-access-to-all/>.
47. Cutler Kim-Mia, *Elsevier's Research Takedown Notices Fan Out To Startups, Harvard, Individual Academics* (2013), <http://techcrunch.com/2013/12/19/elsevier/>.
48. Daisy Ouya, 'Open Access Survey of Africa-Published Journals', (2006) *INASP*.
49. Dan Ben-Amos, 'Toward a Definition of Folklore in Context', (1971) *The Journal of American Folklore*.

50. Dan Grubbs, *More than Fellowship: Understanding Koinonia*, SermonCentral (2004), <http://www.sermoncentral.com/sermons/more-than-fellowship-understanding-koinonia-dan-grubbs-sermon-on-discipleship-84103.asp>.
51. Daniel Cahoy, *Property Right V Public Access* at <http://news.smeal.psu.edu/news-release-archives/2009/june-2009/smeal-professor-awarded-fulbright-research-chair>.
52. Daniel E Atkins, et al., *A Review of the Open Educational Resources (OER) Movement: Achievements, Challenges, and New Opportunities* at <http://www.hewlett.org/uploads/files/ReviewoftheOERMovement.pdf>.
53. Daniel E Atkins, et al., *A Review of the Open Educational Resources (OER) Movement: Achievements, Challenges, and New Opportunities* at <http://www.hewlett.org/uploads/files/ReviewoftheOERMovement.pdf>.
54. Datonye Dennis Alasia, 'The Impact of the Open Access Movement on Medical Based Scholarly Publishing in Nigeria', (2007) 12 *First Monday*.
55. David Fewer, *The genie in the information bottle* (2005) Index On Censorship at <http://www.eurozine.com/articles/2005-10-24-fewer-en.html>.
56. David Grossman, *Massive Open Online Courses - Threat or Opportunity?* at <http://www.bbc.co.uk/news/education-23069542>.
57. David Pannell, *278-Global Wealth Inequality*(2012), <http://www.pannelldiscussions.net/2015/02/278-global-wealth-inequality/>.
58. David Solomon & Bo-Christer Bjork, 'A Study of Open Access Journals Using Article Processing Charges' (2012) 63 *The Journal of the American Society for Information Science and Technology* 1485.
59. David Solomon, 'The Role of Peer Review for Scholarly Journals in the Information Age' (2007) 10 *The Journal of Electronic Publishing (JEP)*.
60. David W Lewis, 'The Inevitability of Open Access', (2012) 73 *College & Research Libraries*.
61. David W. Barnes, 'Congestible Intellectual Property and Impure Public Goods', (2011) 9 *Northwestern Journal of Technology and Intellectual Property* 533.
62. Davidson Iriekpen, *Nigeria: In Conflicting Judgement, Court Says FOI Act Not Binding On States* AllAfrica at <http://allafrica.com/stories/201411030673.html>.
63. DDC Outsourcing Solutions, *5 reasons to digitise your documents*(2014), <http://www.ddcos.com/5-reasons-to-digitise-your-documents/>.
64. Deborah Yakubu Dangana, *Nigeria: How Western Culture Erodes Values Among Nigerian Youths* at <http://allafrica.com/stories/201408081141.html>.

65. Dele Ogbodo, *Nigeria Now Uses 29% of Africa's Internet Access an Interview with Nigerian Minister of Communication Technology, Mrs. Omobola Johnson*
http://www.thisdaylive.com/articles/nigeria-now-uses-29-of-africa-s-internet-access/209661/, THISDAY, 2015.
66. Dougald Hind, *What good is information?* at <http://aeon.co/magazine/living-together/the-problem-with-too-much-information/>.
67. Douglas S. Winnail, *How The Media Mold The World, Tomorrow's World* (2003),
<http://www.tomorrowworld.org/magazines/2003/january-february/how-the-media-mold-the-world>.
68. E.O George & J.E Oseni, 'The Relationship Between Electricity Power And Unemployment Rates In Nigeria' (2012) 2 *Australian Journal of Business and Management Research*.
69. Ed Felten, et al., 'Government Data and the Invisible Hand', (2009) 11 *Yale Journal of Law and Technology* 160.
70. Edward Shizha, 'Reclaiming Our Indigenous Voices: The Problem with Postcolonial Sub-Saharan African School Curriculum' (2013) 2 *Journal of Indigenous Social Development*.
71. EIFL, 'Strategic Approach to Open Access in Nigeria: International Workshop On Open Access Repositories: New Models For Scholarly Communication' 28th - 29th April, 2008, Ahmadu Bello University, Zaria, Nigeria (2008) *Electronic Information for Libraries (eIFL)*
72. Elliot Harmon, *U.S. News and World Report Examines the Growth of Open Education* (2013),
http://creativecommons.org/weblog/entry/36366?utm_campaign=newsletter_1301&utm_medium=blog&utm_source=newsletter.
73. Elliot Ross, *Nigeria's New FOIA: Reporters enjoy new freedoms in a long-repressive society* at
http://www.cjr.org/behind_the_news/nigerias_new_foia.php.
74. Emwanta M & Nwalo K.I, 'Influence Of Computer Literacy And Subject Background On Use Of Electronic Resources By Undergraduate Students In Universities In South-Western Nigeria' (2012) 5 *International Journal of Library and Information Science*.
75. Enete A.A & Amusa T.A, 'Challenges of Agricultural Adaptation to Climate Change in Nigeria: a Synthesis from the Literature' *The Journal of field actions: Field Actions Science Reports* [Online] at <http://factsreports.revues.org/678#quotation>.
76. Esther Hoorn & Maurits Graaf, 'Copyright Issues in Open Access Research Journals, The Authors' Perspective', (2006) 12 *D-Lib Magazine*.

77. Fadokun James Banji, *Open Education Resources and Teacher Professional Development in Nigeria: Prospects and Challenges, a paper delivered at the 7th Pan-Commonwealth Forum on Open Learning (PCF7) at*
<http://pcfpapers.colfinder.org/bitstream/handle/5678/125/Paper%20460%20%20%28Supplementary%20File%29.pdf?sequence=1>.
78. Faith Karimi & Vladimir Duthiers, *Nigerians demand government do more to bring home kidnapped girls*, CNN (2014), <http://edition.cnn.com/2014/05/01/world/africa/nigeria-abducted-girls/>.
79. Francis Crick & Christof Koch, 'A Framework for Consciousness' (2003) 6 *Nature Neuroscience*.
80. Frank Bannister & Regina Connolly, 'The Trouble with Transparency: A Critical Review of Openness in e-Government', (2011) 3 *Policy & Internet*.
81. G Agoramoorthy & M.J. Hsu, 'The Significance Of Cows In Indian Society Between Sacredness And Economy' (2012) 18 *Anthropological Notebooks*.
82. G. A. Maxwell, 'Checks And Balances: The Role Of Managers In Work–Life Balance Policies And Practices' (2005) 12 *Journal of Retailing and Consumer Services*
83. G. Catt, 'Man The Social Animal', (1962) 29 *The Western Socialist* 20.
84. Gary Martin, *The law is an ass*, <http://www.phrases.org.uk/meanings/the-law-is-an-ass.html>.
85. Goke Pelemo, *Growth of Internet Usage in Nigeria compared to Ghana, Kenya and South Africa* (2012), <http://www.nigeria360.com/growth-of-internet-usage-in-nigeria-compared-to-ghana-kenya-and-south-africa/>.
86. Gordon McIntyre, et al., 'Library as Scholarly Publishing Partner: Keys to Success' (2013) 2 *Journal of Librarianship and Scholarly Communication*.
87. Greg Edwards, *Fed: Student Loan Debt Surpasses Auto, Credit card debt*. St. Louis Business Journal at <http://www.bizjournals.com/stlouis/blog/2013/04/fed-student-loan-debt-surpasses-auto.html>.
88. Hans Botnen Eide, *Literacy rates are rising – but not fast enough*
<http://efareport.wordpress.com/2012/05/31/literacy-rates-are-rising-but-not-fast-enough/>.
89. Ige Akindele, 'Challenges Facing the Achievement of Education for All (EFA) and Education Related Millennium Development Goals (MDG) in Nigeria' (2014) 3 *Journal of Poverty, Investment and Development*.

90. Ilkka Tuomi, 'Open Educational Resources and the Transformation of Education', (2013) 48 *European Journal of Education*.
91. J. Litman, 'Revising Copyright Law for the Information Age', (1996) 75 *Oregon Law Review* 19.
92. J.I Ezema, 'Trends in Electronic Journal Publishing in Africa: An Analysis of African Journal Online (AJOL)' *Webology* at <http://www.webology.org/2010/v7n1/a74.html>.
93. J.L Moore, et al., 'e-Learning, online learning, and distance learning environments: Are they the same?' (2011) 14 *Internet and Higher Education*.
94. J.Y Oricha & G.A Olarinoye, 'Analysis of Interrelated Factors Affecting Efficiency and Stability of Power Supply in Nigeria', (2012) 2 *International Journal of Energy Engineering*.
95. Jeremy Malcolm and Danny O'Brien, *Human Rights Are Not Negotiable: Looking Back at Brazil's NETMundial*, (25 April 2014) Electronic Frontier Foundation <https://www.eff.org/deeplinks/2014/04/netmundial>.
96. Jeremy Malcolm, 'The Space Law Analogy to Internet Governance' (2007) 18 (3) *Journal of Law, Information and Science*.
97. Jeremy Malcolm, *UK Copyright Law: Back to the Future, or Stuck in the Past?* (12 June 2014) Electronic Frontier Foundation <https://www.eff.org/deeplinks/2014/06/uk-copyright-law-back-future-or-stuck-past>
98. Jerome H. Reichman & Ruth L. Okediji, 'When Copyright Law and Science Collide: Empowering Digitally Integrated Research Methods on a Global Scale', (2012) 96 *Minnesota Law Review*.
99. Jessica Litman, 'Copyright Non-compliance (Or Why We Cant "Just Say Yes" to Licensing' (1997) 29 N.Y.U. J. INT'L L. & POL.
100. Joel Waldfoegel, 'The Four P's Of Digital Distribution In The Internet Era: Piracy, Pricing, Pie-Splitting, And Pipe Control' (2010) 7 *Student's Guides to the U.S. Government Series* 3.
101. John Alechenu, *Nigeria, still in the throes of illiteracy* Punch <http://www.punchng.com/education/nigeria-still-in-the-throes-of-illiteracy/>.
102. John C.V. Pezzey and Michael A. Toman, *The Economics of Sustainability: A Review of Journal Articles* (January 2002) Resources for the Future <http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-DP-02-03.pdf>

103. John Daniel, et al., *eLearning and Free Open Source Software the Key to Global Mass Higher Education*, http://www.col.org/PublicationDocuments/pub_JDspeeches_Vol2_web.pdf, 2 COL (2006).
104. John K Setear, 'An Iterative Perspective On Treaties: A Synthesis Of International Relations Theory And International Law' (1996) 37 *Harv. Int'l. L. J.* 139.
105. John Willinsky, The Stratified Economics of Open Access, (2009) 39 *Economic Analysis & Policy* 53.
106. John. Moravec, *Infoxication 2.0*, Education Futures(2008), <http://www.educationfutures.com/2008/10/24/infocication-20/>.
107. Jonathan Cohn, *The Heroic, Tragic Story of the Doctor Who Saved Nigeria From Ebola at* <http://www.newrepublic.com/article/119956/doctor-stella-adadevoh-isolated-ebola-case-stopped-nigeria-outbreak>.
108. Joshua Reno, 'Your Trash is Someone's Treasure: The Politics of value at a Michiga Landfill' 14 *Journal of Material Culture* (2009).
109. Justin Norrie, *Harvard Decries The High Cost of Journal Subscription*, <http://theconversation.edu.au/harvard-journal-subscription-fees-are-prohibitive-6659>, The Conversation, 24 April 2012. 2012.
110. Katherine Harmon Courage, *How Did Nigeria Quash ITs Ebola Outbreak So Quickly?*(2014), <http://www.scientificamerican.com/article/how-did-nigeria-quash-its-ebola-outbreak-so-quickly/>.
111. Kevin Chaplin, *The Ubuntu Spirit in African Communities*, Amy Biehl Foundation, <http://www.coe.int/t/dg4/cultureheritage/culture/Cities/Publication/BookCoE20-Chaplin.pdf>.
112. Kevin Smith, *Are fair use and open access incompatible?*, Duke University (2014), <https://blogs.library.duke.edu/scholcomm/2014/09/25/fair-use-open-access-incompatible/>.
113. Kimmerle Heinz, 'Ubuntu and Communalism in African Philosophy and Art', *Rozenberg Quarterly Magazine*.
114. Kunle Ola, 'Evolution and Future Trends of Copyright In Nigeria', (2014) 2 *Journal of Open Access to Law* (JOAL) 1.
115. Kunle Ola, 'Fundamentals of Open Access', (2014) 36 *E.I.P.R* 112.
116. Kunle Ola, 'Scholarly Publication in Nigeria: Implications of Open Access' (2015) 6 (2)*The WIPO*

117. Kunle Ola, 'Understanding Open Access for Africa' SSRN 2476739 at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2476739
118. L.M Whicker & K.M Andrews, 'Human Resource Management in the Knowledge Economy: Realising the Potential' (2004) 42 *Aisa Pacific Journals of Human Resources* 156.
119. Lanre Idowu, Nigeria's new FOI law brings celebration, challenges (Committee to Protect Journalists 2011) <https://cpj.org/blog/2011/07/nigerias-new-foi-law-brings-celebration-challenges.php>.
120. Leavenworth Stuart, *Michelle Obama urges open internet access in China speech* at <http://www.smh.com.au/world/michelle-obama-urges-open-internet-access-in-china-speech-20140323-hvlyb.html>.
121. Leena Hoffman, *Nigeria elections: Voters did not forget the Chibok girls taken by Boko Haram* at <http://www.independent.co.uk/voices/nigeria-elections-voters-did-not-forget-the-chibok-girls-taken-by-boko-haram-10147559.html>.
122. Leni Wild, *Information Alone is Not Enough: It's All About Who Uses It, and Why*, World Bank (2014), <http://blogs.worldbank.org/publicsphere/information-alone-not-enough-it-s-all-about-who-uses-it-and-why>.
123. Livres Hebdo, *The Global Ranking of the Publishing Industry 2014*, Rüdiger Wischenbart Content and Consulting (2014), http://wischenbart.com/upload/Global-Ranking-of-the-Publishing-Industry_2014_Analysis.pdf.
124. Lou Frenzel, *Drowning in Information But Starved for Knowledge*, Electronic Design (2011), <http://electronicdesign.com/blog/drowning-in-information-starved-knowledge>.
125. Lyudmila Bujoreanu, et al., *Open Government Initiative in Edo State : Fostering an Ecosystem of Collaboration and Transparency* (2014), <https://openknowledge.worldbank.org/handle/10986/18713>.
126. M.O. Okoye & A.N. Ejikeme, 'Open Access, Institutional Repositories, and Scholarly Publishing: The Role of Librarians in South Eastern Nigeria' (2011) *Library Philosophy and Practice*.
127. Manuel Area & Teresa Pessoa, 'From the Solid to the Liquid: New Literacies for the Cultural Changes of Web 2.0' (2012) *Comunicar: Scientific Journal of Media Education* DOI: 10.3916/C38-2011-02-01 <http://www.revistacomunicar.com/pdf/preprint/38/En-01-PRE-12378.pdf>.
128. Marco Ricolfi et al, LAPSI Position Paper No3: 'The "Licensing" of Public Sector Information, LAPSI www.ec.europa.eu/newsroom/dae/document.cfm?doc_id=8344.

129. Marco Ricolfi, *LAPSI Conceptual Framework No.1 Charging Policy: A Conceptual Framework for EU Guidance to the Member States*, LAPSI (2012)
www.ec.europa.eu/newsroom/dae/document.cfm?doc_id=8345.
130. Margaret Crampton, *An African Vision for African Journals OnLine (AJOL) INASP Newsletter* at <http://r4d.dfid.gov.uk/PDF/Outputs/Peri/No-29-Newsletter.pdf>.
131. Mark Morgenstein, *Edward Snowden: World's most wanted man, says new book*, CNN (2014),
<http://edition.cnn.com/2014/02/02/world/europe/uk-snowden-book/>.
132. Mark Tran, *War denying millions of children an education* at
<http://www.theguardian.com/global-development/2013/jul/12/war-denying-children-education>.
133. Mark Weber, *Hollywood's Agenda, and the Power Behind it* at
http://www.ihr.org/hollywoodagenda_weber.html.
134. Matusiak K.K & T Johnston, Digitization for Preservation and Access: Restoring The Usefulness of the Nitrate Negative Collection at the American Geographical Society Library. , (2014) 77 *The American Archivist*.
135. Maureen Henninger, 'The Value and Challenges of Public Sector Information', (2013) 5 *Cosmopolitan Civil Societies Journal* 75.
136. Max Fisher, The Amazing, Surprising, Africa-driven Demographic Future of the Earth, in 9 Charts (2013) *The Washington Post*.
137. Michael Carrol, 'Complying with the NIH Public Access Policy - Copyright Considerations and Options' (2008) *SPARC Open Access Newsletter*.
138. Michael Carrol, *Creative Commons Licenses Opening Access to Education in Sub-Saharan Africa and India*, Creative Commons (2015), <http://us.creativecommons.org/archives/1062>.
139. Michael Carrol, *PIJIP's Marrakesh Treaty Event – Teaching Resource and Thanks* at
<http://infojustice.org/archives/30682>.
140. Michael Strangelove, 'The Internet as Catalyst For a Paradigm Shift', (1994) 1 *Computer-Mediated Communication Magazine*.
141. Mikael Laakso & Bo-Christer Bjork, *Anatomy Of Open Access Publishing: A Study Of Longitudinal Development And Internal Structure*, (2012) 10 *BMC Medicine*.
142. National Universities Commission NUC, 'FG turning Brain Drain to Brain Gain' (2014) 9 *NUC Bulletin*.

143. Ndujihe Clifford, *Fuel Subsidy Crisis: Labour Versus Govt; Who Blinks First?*, Vanguard, 2012
<http://www.vanguardngr.com/2012/01/fuel-subsidy-crisislabour-versus-govt-who-blinks-first/>.
144. Nicholas Kristof, *Bring Back Our Girls*, The New York Times(2014),
http://www.nytimes.com/2014/05/04/opinion/sunday/kristof-bring-back-our-girls.html?_r=0.
145. Nigerian Copyright Commission NCC, 'STRAP and CLAMP – Nigeria Copyright Commission in Action', (2008) September, *WIPO Magazine*.
146. Niyi Akinnaso, 'Still on ASUU vs Government' (2013) *PUNCH*.
147. Nkwede J.O, 'Approaches for Poverty Alleviation and Sustainable Development in Nigeria: A Study of Ebonyi State Community Based Poverty Reduction Agency (EB-CPRA)' (2013) 2 *International Journal of Social Science Studies*.
148. O. Ivwighrehweta & O.K. Onoriode, 'Open Access and Scholarly Publishing: Opportunities and Challenges to Nigerian Researchers' (2012) *CLIEJ*.
149. O.G Ajao & Ugwu B.T, 'Some Problems Facing Scientific Medical Publication in Nigeria' (2011) 1 *Journal of the West African College of Surgeons*.
150. Ogunsola L.A, et al., 'Information Literacy In Nigerian Higher Institutions – Any Role For Librarians?' (2011) 4 *Ozean Journal of Social Sciences*.
151. Olawale Adebambo, *Domesticating International Treaties*
<http://thenationonlineng.net/new/domesticating-international-treaties/>, The Nation, 2013.
152. Olivia A. Cole, *Hollywood and the Shaping of perception of Racism* (2013),
<https://oliviaacole.wordpress.com/2013/12/24/hollywood-and-the-shaping-of-perceptions-about-racism/>.
153. Oluwafemi Bankole, *Nigeria: How Information Conquered Ebola* (2014),
<http://techcabal.com/2014/10/20/nigeria-information-conquered-ebola/>.
154. Oluwafemi Bankole, *Nigeria: How Information Conquered Ebola*, Techcabal (2014),
<http://techcabal.com/2014/10/20/nigeria-information-conquered-ebola/>.
155. Opafunso Z.O, 'An Assessment of the Impact of Government Interventon Projects on Poverty Alleviation/Reduction in Ekiti State, Nigeria' (2014) 5 *Mediterranean Journal of Social Sciences*.

156. Patrick McGroarty, *Muhammadu Buhari Defeats Goodluck Jonathan in Nigeria Election* at <http://www.wsj.com/articles/officials-tally-remaining-votes-in-nigeria-presidential-election-1427796882>.
157. Paul Ian, *Were SOPA/PIPA Protests a Success? The Results Are In*, (2012) PC World http://www.pcworld.com/article/248401/were_sopa_pipa_protests_a_success_the_results_are_in.html.
158. Paul McGeough, *Aaron Swartz: a beautiful mind*, The Sydney Morning Herald (2014), <http://www.smh.com.au/technology/technology-news/aaron-swartz-a-beautiful-mind-20140127-31hjr.html>.
159. Peter K Yu, 'Intellectual Property Rulemaking in the Global Capitalist Economy' (2013) 82 *Ind. L.J.* 827.
160. Peter K Yu, 'The International Enclosure Movement' (2007) 82 *Indiana Law Journal* 827.
161. Peter Suber, *AHRC announces its OA policy*(2007), <http://legacy.earlham.edu/~peters/fos/2007/09/ahrc-announces-its-oa-policy.html>.
162. Peter Suber, *Gratis and libre open access*, <http://legacy.earlham.edu/~peters/fos/newsletter/08-02-08.htm#gratis-libre>.
163. Peter Suber, *Green/gold OA and gratis/libre OA*(2008), <http://legacy.earlham.edu/~peters/fos/2008/08/greengold-oa-and-gratislibre-oa.html>.
164. Peter Suber, *Guerilla OA*, Open Access News (2008), <http://legacy.earlham.edu/~peters/fos/2008/09/guerilla-oa.html>.
165. Peter Suber, *Knowledge as a Public Good*, SPARC (2009), <http://www.sparc.arl.org/resources/articles/knowledge#sthash.R1nBSlQF.dpuf>.
166. Peter Suber, Open Access Overview: Focusing on open access to peer-reviewed research articles and their preprints, <http://www.earlham.edu/~peters/fos/overview.htm> (Peter Suber ed.).
167. Peter Suber, *Open Access to Science and Scholarship*, <http://legacy.earlham.edu/~peters/writing/wsis.htm>.
168. Peter Suber, *Praising Progress, Preserving Precision* SPARC Open Access Newsletter at <http://www.earlham.edu/~peters/fos/newsletter/09-02-04.htm#progress>.
169. Peter Suber, *Timeline of the Open Access Movement*, <http://www.earlham.edu/~peters/fos/timeline.htm>.
170. Peter Suber, *United States doubles down on open access to federally-funded research* SPARC Open Access Newsletter at <http://legacy.earlham.edu/~peters/fos/newsletter/03-02-13.htm>.

171. Peterson Andrea, *How one publisher is stopping academics from sharing their research* (2013), <http://www.washingtonpost.com/blogs/the-switch/wp/2013/12/19/how-one-publisher-is-stopping-academics-from-sharing-their-research/>.
172. Phil Davis, *Publish-or-Perish Culture Promotes Scientific Narcissism*, The Scholarly Kitchen, <http://scholarlykitchen.sspnet.org/2012/05/07/publish-or-perish-culture-promotes-scientific-narcissism/>.
173. Ray Spier, 'The History of the Peer-Review Process' (2002) 20 *TRENDS in Biotechnology*.
174. Raymond Shih Ray Ku, et al., 'Does Copyright Law Promote Creativity? An Empirical Analysis of Copyright's Bounty', (2009) 62 *Vanderbilt Law Review* 1669.
175. Raymond Tatalovic, 'Presidents and Promises: From Campaign Pledge to Presidential Performance', (1986) 48 *The Journal of Politics* 189.
176. Relando Thompkins, *Ubuntu: A Humanitarian Philosophy*, <http://www.relandothompkins.com/philosophy/>.
177. Richard Smith, 'Peer-Review: A Flawed Process at the Heart of Science and Journals' 99 *J R Soc Med* (2006).
178. Richard Stallman, *The GNU Project* at <http://www.gnu.org/gnu/thegnuproject.html>
179. Right to Research Coalition, *Open Access Empowers 16-year-old Jack Andraka to Create Breakthrough Cancer Diagnostic* (11 June 2013) SPARC <http://www.righttoresearch.org/blog/open-access-empowers-16-year-old-to-create-breakth.shtml>.
180. Rita Matulionyte, 'Copyright on the Internet: Does a User Still Have any Rights at All?' (2005) 1 *Hanse Law Review*, (*HanseLR*) 177.
181. Rob Farrow, *National uptake of Siyavula textbooks in South Africa* (2014), <http://oermap.org/evidence/national-uptake-of-siyavula-textbooks-in-south-africa/>.
182. Robert Kunzig, *A World With 11 Billion People? New Population Projections Shatter Earlier Estimates: Dueling projections of population growth present different visions of the world's future.*, National Geographic (2014), <http://news.nationalgeographic.com/news/2014/09/140918-population-global-united-nations-2100-boom-africa/>.
183. Robert Mills, *Knowing Vs Understanding* (2012), <http://www.robertmills.me/knowning-vs-understanding-2/>.

184. Rogers. Paul, et al., *Infobesity: The Enemy Of Good Decisions* Insight at <http://www.bain.com/publications/articles/infobesity-the-enemy-of-good-decisions.aspx>.
185. Roy Jackson, 'Aristotle on What it Means To Be Happy', *Richmond Journal of Philosophy* (2007).
186. S.O Labo-Popoola, et al., 'Universal Basic Education in Nigeria: Challenges and Way Forward' (2009) 6 *Pakistan Journal of Social Sciences*.
187. Sally Johnstone, 'Open Educational Resources Serve the World' (2005) 3 *Educase Quarterly*.
188. Samuel Utulu & Omolara Bolarinwa, 'Open Access Initiatives: Adoption by Nigerian Academics' (2009) 58 *Emerald Law Review*.
189. Sha. Li Zhang, 'The Flavors of Open Access' (2007) 23 *OCLC Systems & Services* 229.
190. Sharif Read, *Maximizing the Value of Public Sector Information for Scientific and Socioeconomic Development in Africa* 2009 KMAfrica
<http://www.hsrc.ac.za/uploads/pageContent/320/09aug11Sharifpaper.pdf>.
191. Sherwyn P. Morreale, et al., Why Communication is Important: A Rationale for the Centrality of the Study of Communication (2000) 29 *Journal of the Association for Communication Administration*.
192. Simon Owens, 'The Growing Adoption of Creative Commons Textbooks' (2013) *US News*.
193. Simon Rogers, *Government data: Full Text of David Cameron's Letter Pledging to Open Up The Datasets*(2010),
<http://www.theguardian.com/news/datablog/2010/jun/01/government-data-david-cameron-letter>.
194. Simona Vieru, 'Aristotle's Influence on the Natural Law Theory of St Thomas Aquinas' (2010) 1 *The Western Australian Jurist*.
195. Sioux Cumming, *African Journals Online* INASP Newsletter at <http://r4d.dfid.gov.uk/PDF/Outputs/Peri/No-29-Newsletter.pdf>.
196. Stephan Kinsella, 'Against Intellectual Property' (2001) 15 *Journal of Libertarian Studies*.
197. Stephen Downes, 'Learning Objects: Resources for Distance Education Worldwide' (2001) 2 *The International Review of Research in Open and Distributed Learning (IRRODL)*.
198. Stephen Downes, *Models for Sustainable Open Educational Resources* at <http://www.oecd.org/edu/cei/36781698.pdf>.

199. Stephen Graham, 'Bridging Urban Digital Divides? Urban Polarisation and Information and Communications Technologies (ICT's)' (2002) 39 *Urban Studies*.
200. Stevan Harnad & Nancy McGovern, 'Institutional Repository Success Is Dependent Upon Mandates', (2009) 36 *Bulletin of the American Society for Information Science and Technology* 27.
201. Stevan Harnad, 'Open Access – Stevan Harnad Im Interview', (2012) 65 *Mitteilungen der VÖB*.
202. Stevan Harnad, 'The Open Challenge: A Brief History' (2010) *Public Service Review: European Science & Technology*.
203. Stevan Harnad, et al., 'The Access/Impact Problem and the Green and Gold Roads to Open Access' (2004) 30 *Serial Review*.
204. Stevan Harnad, et al., *The Green and Gold Roads to Open Access* Nature Publishing Group at http://www.nature.com/nature/focus/accessdebate/21.html?pa_aid=3598aabf.
205. Stevan Harnad, *Gold Open Access Publishing Must Not Be Allowed to Retard the Progress of Green Open Access Self-Archiving* at <http://eprints.soton.ac.uk/271818/1/logospaper.pdf>.
206. Stevan Harnad, *The Green Road to Open Access: A Leveraged Transition* at <http://users.ecs.soton.ac.uk/harnad/Temp/greenroad.html>.
207. Stevan Harnad, What is Open Access, <http://www.eprints.org/openaccess/>.
208. Subbiah Arunachalam, *Information Poverty The Story: How the Internet is failing the developed world* at <http://www.abc.net.au/science/slab/infopoverty/story.htm>.
209. Susan D'Antoni, Open Educational Resources: The Way Forward, Deliberations of an International Community of Interest. (2008) <http://www.pontydysgu.org/wp-content/uploads/2008/03/oer-way-forward-final-version-for-printing.pdf>.
210. Tajudeen Sowole, 'U.S. Museum Splits Benin Royal House' (2013) *The Guardian*, 29 September 2013.
211. Thomas Carothers & Saskia Brechenmacher, *The Four Magic Words of Development*, World Bank (2014), <http://blogs.worldbank.org/publicsphere/four-magic-words-development-tom-carothers-and-saskia-brechenmacher>.
212. Tim Brody, et al., 'Incentivizing the Open Access Research Web. Publication-Archiving, Data Archiving and Scientometrics' (2007) 3 *CTWatch Quarterly* 42.
213. Timothy Vollmer, *California passes groundbreaking open textbook legislation* at <http://creativecommons.org/weblog/entry/34288>.

214. Timothy Vollmer, *FASTR introduced in U.S. Congress to drastically expand public access to federally funded research*(2013),
http://creativecommons.org/weblog/entry/36699?utm_campaign=newsletter_1302&utm_medium=blog&utm_source=newsletter.
215. Timothy Vollmer, *New federal education fund makes available \$2 billion to create OER resources in community colleges* at <http://creativecommons.org/weblog/entry/26100>.
216. Tom G Cochrane & Paula A Callan, 'Making a Difference: Implementing the eprints mandate at QUT International Digital Library Perspectives' (2007) 23 *International Digital Library Perspectives*.
217. Tony Okoroji, Nigeria is Not Ready For Creative Commons (June 23, 2015) Nigerian law Intellectual Property Watch <http://nlipw.com/nigeria-is-not-ready-for-creative-commons-tony-okoroji/>
218. Valerie Strauss, Nelson Mandela's Famous Quote On Education (2013) *The Washington Post*.
219. Wenhong Chen & Barry Wellman, 'The Global Digital Divide – Within and Between Countries', 1 *IT & Society* (2004).
220. Woods Alan, *The Ideas of Karl Marx*: International Marxist Tendency (IMT) at <http://www.marxist.com/karl-marx-130-years.htm>.
221. Ylann Schemm, *Leading the way with HINARI* at <http://exchanges.wiley.com/blog/2015/04/15/leading-the-way-with-hinari/>.
222. Zacheaus Somorin, *Apple Buys Chinedu Echeruo's Hopstop.com for \$1 Billion* <http://www.thisdaylive.com/articles/apple-buys-chinedu-echeruo-s-hopstop-com-for-1-billion/209739/>, THISDAY, 2015.

BOOKS & BOOK CHAPTERS

1. A. Smith, *Wealth of Nations* (Hayes Barton Press. 2001).
2. A. Toffler, *Future Shock* (Bantam Books. 1990).
3. A.C Pigou, *Socialism versus Capitalism* (Macmillan and Co. Limited. 1937).
4. Adebambo Adewopo, *Nigerian Copyright System: Principles and Perspectives* (Odade Publishers. 2012).
5. Albert Breton, et al., *The Economics of Transparency in Politics* (Albert Breton, et al. eds., Ashgate Press. 2007).

6. Alma Swan & Sheridan Brown, *Open Access Self-Archiving: An Author Study* (Key Perspective Limited. 2005).
7. Alma Swan, *Policy Guidelines for the Development and Promotion of Open Access* (UNESCO. 2012).
8. Anne Fitzgerald & Kylie Pappalardo, 'Open Standards in Government', in Brian Fitzgerald ed. *Access to Public Sector Information: Law, Technology & Policy* (Sydney University Press, 2010).
9. Anthony Austin, et al., *Academic Authorship, Publishing Agreements and Open Access: Survey Results* (Queensland University of Technology, 2008).
10. B.R. Scott, *Capitalism: Its Origins and Evolution as a System of Governance* (Springer, 2011).
11. B-C Bjork, et al., *Analysis of Economic Issues Related to Open Access to Scientific Publications* (Wydawnictwa ICM. 2014).
12. Brian Fitzgerald & Anne Fitzgerald, *Internet and E-Commerce Law, Business and Policy* (Thomson Reuters, 2011).
13. Brian Fitzgerald, 'A Short Overview of Creative Commons', in Brian Fitzgerald ed. *Open Content Licensing: Cultivating the Creative Commons* (Sydney University Press, 2007).
14. Brian Fitzgerald, et al., *Oak Law Project No.1: Creating a Legal Framework For Copyright Management Of Open Access Within the Australian Academic and Research Sector* (Report for the Department of Education and Science and Training (DEST), 2006).
15. Brian Fitzgerald, *Open Content Licensing (OCL) for Open Educational Resources: Commissioned by the OECD's Centre for Educational Research and Innovation (CERI) for the project on Open Educational Resources,* (OECD, 2007).
16. Brian Gutterman, *Internet as a Catalyst For Change: Access, Development, Freedoms and Innovation* (Internet Governance Forum [IGF], 2011)
17. C. Armstrong, *Access to Knowledge in Africa: The Role of Copyright* (UCT Press. 2010).
18. C. Dickens, *Oliver Twist* (Richard Bentley. 1839).
19. Carol Tullo, 'Charting Success And Navigating The Challenges In The PSI World', in Brian Fitzgerald ed, *Access to Public Sector Information: Law, Technology & Policy* (Sydney University Press, 2010).
20. Carolyn Deere, *The TRIPS Agreement and the Global Politics of Intellectual Property Reform in Developing Countries* (Oxford University Press. 2009).
21. Catherine Soanes & Sara Hawker, *Compact Oxford English Dictionary* (Oxford University Press 2005).

22. Charles.W Bailey, 'What is Open Access', in N Jacobs ed. *Open Access: Key Strategic, Technical and Economic Aspects* (Chandos Publishing, 2006).
23. Corbin Chris, PSI Policy Principles: European Best Practice, in Brian Fitzgerald ed., *Access to Public Sector Information: Law, Technology & Policy* (Sydney Press University, 2010).
24. D.J. Gervais, *Collective Management of Copyright and Related Rights* (Kluwer Law International. 2010).
25. David Bollier, *Viral Spiral: How The Commoners Built A Digital Republic Of Their Own* (New Press. 2008).
26. Esther Hoorn, 'Contributing to Conversational Copyright: Creative Commons Licenses and Cultural Heritage Institutions', in Lucie Guilbault & Christina Angelopoulos eds., *Open Content Licensing From Theory to Practice* (Amsterdam University Press, 2011).
27. Fitzgerald Anne, 'Open Access and Public Sector Information: Policy Developments in, Australia and Key Jurisdictions, in Brian Fitzgerald, *Access to Public Sector Information: Law, Technology & Policy* (Sydney University Press, 2010).
28. Fitzgerald Brian, 'Copyright 2010: The need for better negotiability/usability principles', in Greg Hearn & David Rooney eds., *Knowledge Policy Challenges for the 21st Century* (Edward Elgar, 2008).
29. G. Orwell & M. Bradbury, *Animal Farm* (Penguin Books Limited. 2003).
30. G.E Christian, *Issues and Challenges to the Development of Open Access Institutional Repositories in Academic and Research Institutions in Nigeria* [https://hdl-handle.net/10625/36986/1/127792.pdf](https://hdl.handle.net/10625/36986/1/127792.pdf), (International Development Research Centre [IDRC], 2008).
31. H.L.A. Hart, *Law, Liberty, and Morality* (Stanford University Press. 1963).
32. H.L.A. Hart, *The Concept Of Law* (Clarendon Press. 1961).
33. Hugh Collins, *The Law Of Contract* (Butterworths. 1993).
34. Internet Industry Association (IIA), *Principles for a Digital Economy: A manifesto on internet policy and regulation with principles and recommendations to guide decision making*, (IIA, 2010)
35. Isaac Newton, *From a letter written by Isaac Newton to Robert Hooke, 5 Feb. 1676*, (1676).
36. J. DeBardeleben & J. Pammett, *Activating the Citizen: Dilemmas of Participation in Europe and Canada* (Palgrave Macmillan. 2009).
37. J. Henry, *Knowledge is Power: Francis Bacon and the Method of Science* (Icon. 2002).
38. J. Litman, *Digital Copyright: Protecting Intellectual Property on the Internet* (Prometheus Books. 2006).

39. J. Locke, *Two Treatises of Government* (C. and J. Rivington. 1824).
40. J.J. Rousseau & G.D.H. Cole, *The Social Contract* (Cosimo, Incorporated. 2008).
41. Jennifer Davis, *Intellectual Property Law* (Nicola Padfield ed., Oxford University Press Third ed. 2008).
42. Jeremy De Beer, et al, *Innovation & Intellectual Property Collaborative Dynamics in Africa* (UCT Press, 2014)
43. John Asein, *Nigerian Copyright Law and Practice* (Books and Gavel Limited 2nd ed. 2012).
44. John Willinsky, *The Access Principle: The Case for Open Access to Research and Scholarship* (The MIT Press. 2006).
45. Jon Sobrino, *Humanizing A Sick Civilization, In Evil Today And Struggles To Be Human* (R. Ammicht-Quinn ed. 2009).
46. Judge Elizabeth, *Enabling Access to Public Sector Information in Canada, in Michael Geist ed., From Radical Extremism to Balance Copyright: Canadian Copyright and the Digital Agenda.* (Irwin Law, 2010).
47. K. Marx, et al., *Das Kapital: A Critique of Political Economy* (Regnery Gateway. 1996).
48. K. Smith, *Free is Cheaper* (John Ball Press. 1988).
49. Keitha Booth, 'NZ Government Information Policy and Data Re-Use Project Background Paper', in Fitzgerald Brian ed., *Access to Public Sector Information: Law, Technology & Policy* (Sydney University Press, 2010).
50. Krikorian Gaëlle & Kapczynski Amy, *Access to Knowledge In The Age of Intellectual Property* (Zone Books. 2010).
51. Kunle Ola, 'Evolution and Future Trends of Copyright in Nigeria', in Brian Fitzgerald & John Gilchrist (eds), *Copyright Perspectives: Past, Present and Prospects.* (Springer International Publishing, 2015).
52. Kunle Ola, *Copyright Collective Administration in Nigeria Lessons for Africa* (Springer. 2013).
53. L. Lessig, *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity* (Penguin Press. 2004).
54. Lawrence Lessig, *REMIK: Making Art and Commerce Thrive in the Hybrid Economy* (Bloomsbury. 2008).
55. Lawrence Liang, *Guide to Open Content Licenses v1.2* (Piet Zwart Institute, Institute for postgraduate studies and research, Willem de Kooning Academy Hogeschool 2004).
56. Leslie Chan, et al., *Open Access and Development: Journals and Beyond* (Institute of Development Studies [IDS] 2012).

57. Lessig Lawrence, 'The Vision for the Creative Commons. What are We and Where are We Headed?' Free Culture, in Brian Fitzgerald ed., *Open Content Licensing: Cultivating the Creative Commons* (Sydney University Press, 2007).
58. Lucie Guilbault & Christina Angelopoulos, *Open Content Licensing From Theory to Practice* (Amsterdam University Press, 2011).
59. Lucie Guilbault, 'Owning the Right to Open Up Access to Scientific Publications', in Lucie Guilbault & Christina Angelopoulos eds., *Open Content Licensing From Theory to Practice* (Amsterdam University Press, 2011).
60. Luntley Michael, *The Meaning of Socialism* (Open Court. 1990).
61. M. Munroe, *Rediscovering the Kingdom: Ancient Hope for Our 21st Century World* (ReadHowYouWant.com, Limited. 2010).
62. M.J. Wheatley, *Finding Our Way: Leadership for an Uncertain Time* (Large Print 16pt) (ReadHowYouWant.com, Limited. 2010).
63. Michael Finger & Philip Schuler, *Poor People's Knowledge Promoting Intellectual Property in Developing Countries* (World Bank & Oxford University Press 2003).
64. Nelson Mandela, *The Autobiography of Nelson Mandela* (BackBay Books. 1995).
65. Nigerian Copyright Commission, *Survey of Copyright Piracy in Nigeria* (Management Review Limited, 2008).
66. OECD, *Giving Knowledge for Free The Emergence Of Open Educational Resources* (OECD Publishing. 2007).
67. P.B Hugenholtz & Ruth.L Okediji, *Conceiving an International Instrument on Limitations and Exceptions to Copyright* (Institute for Information Law & University of Minnesota, Law School, 2008).
68. Paul Uhlir, *Policy Guidelines for the Development and Promotion of Governmental Public Domain Information*, in Brian Fitzgerald ed., *Access to Public Sector Information: Law, Technology & Policy* (Sydney University Press, 2010).
69. Peter Suber, *Open Access* (MIT Press. 2012).
70. R. Burns & L. Brander, *Poems of Robert Burns* (Oxford University Press. 1950).
71. R. F. Ola, *Local administration in Nigeria* (Kegan Paul International. 1984).
72. R. Wacks, *Understanding Jurisprudence: An Introduction to Legal Theory* (OUP Oxford. 2012).
73. R.D. Christy & V.L. Bogan, *Financial Inclusion, Innovation, and Investments: Biotechnology and Capital Markets Working for the Poor* (World Scientific Publishing Company. 2011).
74. R.W.M. Dias, *Jurisprudence* (Butterworths. 1985).

75. Reserving Rights of Use in Works Submitted for Publication: Negotiating Publishing Agreements. A Project of the IUPUI Copyright Management Center. (2004).
76. Richard Stallman, *Free Software*, in Mark Perry & Brian Fitzgerald eds., *Knowledge Policy for the Twenty-First Century: A Legal Perspective* (Irwin law, 2011).
77. Sally Johnstone, *Open Educational Resources Conversation in Cyberspace*, (UNESCO Publishing, 2009).
78. T. Gorman, *The Complete Idiot's Guide to Economics* (Alpha, 2003).
79. T. Hobbes & R. Tuck, *Hobbes: Leviathan: Revised Student Edition* (Cambridge University Press. 1996).
80. T. Jefferson, et al., *The Writings of Thomas Jefferson* (Issued under the auspices of the Thomas Jefferson Memorial Association of the United States. 1904).
81. T. Massaro, *Living Justice: Catholic Social Teaching in Action* (Rowman & Littlefield Publishers. 2008).
82. The Holy Bible : *Authorized King James Version*, containing the Old and New Testaments (Holman Bible Publishers Read-to-me ed. 1984).
83. The Holy Bible : *King James version* (Hendrickson Bibles. 2011).
84. The Holy Bible: *New International Version (NIV)* (Tyndale House Publishers. 1978).
85. Thomas Massaro, *Living Justice: Catholic Social Teaching in Action* (Rowman & Littlefield. 2012).
86. Thomas Paine, *Common Sense* (Philadelphia: Printed. Norwich: Re-printed and sold by Judah P. Spooner, and by T. Green, in New-London. 1776).
87. Till Kreutzer, *User-Related Assets and Drawbacks of Open Content Licensing*, in Lucie Guilbault & Christina Angelopoulos eds., *Open Content Licensing From Theory to Practice* (Amsterdam University Press, 2011).
88. Tony Okoroji, *Copyright Neighbouring Rights & the New Millionaires (the twists and turns in Nigeria)* (Tops Limited. 2008).
89. UNESCO, *A Human Rights-Based Approach to Education For All: A framework for the realization of children's right to education and rights within education* (UNESCO. 2007).
90. UNESCO, *World Open Educational Resources* (OER Congress, 2012).
91. V.E. Frankl, *Man's Search for Meaning* (Beacon Press. 1992).
92. WIPO, *Understading Copyright and Related Rights* § 909 (E) (WIPO.).
93. Y. Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (Yale University Press. 2006).

CASES

1. Brownmark Films, LLC v. Comedy Partners, 800 F. Supp. 2d 991 (D. Wis. 2011).
2. CCH Canadian Ltd. v. Law Society of Upper Canada [2004] 1 S.C.R. 339.
3. Claude-Reyes et al. v. Chile, Inter-American Court of Human Rights (September 19, 2006).
4. Comrade Victor Ashaolu v. Prince Muyideen Alade Aromire and ors., Suit No.FHC/L/CS/949/97, (Federal High Court, Lagos).
5. India Garba V SA to Governor Benue State MHC/2565M/2012, Makurdi High Court, 9 October 2014).
6. Legal Defence and Assistance Project Limited/GTE V AG Lagos State & 5 Others, (Federal High Court of lagos).
7. Microsoft Corporation v Frankie Associates Ltd LPELR-8987 (CA), (Court of Appeal).
8. Nigerian Copyright Commission V Emordi Henry Chukwuma, FHC/ABJ/CR/90/2013, Federal High Court, Abuja, (19 June 2013).
9. Nigerian Copyright Commission V Godwin Kadiri, FHC/B/43C/2010, Federal High Court, Benin-City (17 December 2012).
10. Nigerian Copyright Commission V Michael Paul, FHC/LF/CR/2/2013, (Federal High Court, Lafia 3 October 2013).
11. Nigerian Copyright Commission V Nwoke Isreal, FHC/L/159C/2013, (Federal High Court, Lagos 6 May 2013).
12. Sybersound Records, Inc. v. UAV Corp., 517 F. 3d 1137 - Court of Appeals, 9th Circuit 2008.
13. The National Collegiate Athletic Association V Kansas Department of Revenue, 781 P.2d 726, 245 Kan. 553, (Supreme Court).
14. Yomi Ogunlola V Clerk of the Oyo State House of Assembly, (High Court Ibadan).

REPORTS

1. 1998 Annual Reports: Bill & Melinda Gates Foundation. (1998).
2. A Basic Guide to Open Educational Resources (OER), A Report Commissioned by the Commonwealth of Learning and the UNESCO, prepared by Neil Butcher and Edited by Asha Kanwar, (COL) and Stamenka Uvalic-Trumbic, (UNESCO). (2011).

3. Accessibility, Sustainability, Excellence: How to Expand Access to Research Publications: A Review of Progress in Implementing the Recommendations of the Finch Report. (2013).
4. Assessing the Participation of Domestic SMEs in the International Production Chain: The Case of Nu Metro in Nigeria. (2010).
5. BIS & David Willetts, *Letter to Dame Janet Finch on the Government Response to the Finch Group Report: "Accessibility, sustainability, excellence: how to expand access to research publications"* (2012), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32493/12-975-letter-government-response-to-finch-report-research-publications.pdf.
6. BIS, 'Progress Review: Implementing Finch Report Recommendations', London: BIS, (2014).
7. BIS, Open Access: Responses to the Committee's Fifth Report of Session 2013–14,, (2013).
8. Digital Strategy 2.0. (2008).
9. Education For All Global Monitoring Report 2012: Youth And Skills Putting Education to Work: An Independent publication commissioned by UNESCO. (2012).
10. EFA Global Monitoring Report 2015: Education for all 2000-2015: Achievements and Challenges. (2015).
11. Federal Communications Commission, *Federal Communications Commission's (FCC) Second report and Order (FCC 03-101, released on the 30th of April, 2003) 47 C.F.R. § 54.500(b)*. at http://www.sl.universalservice.org/reference/educational_purposes.asp.
12. Finch Report, Report of the Working Group on Expanding Access to Published Research Findings. (2012).
13. Forest Horton, Public Access to Government Information and Information Literacy Training as Basic Human Rights (2002).
14. Houghton J, et al., Economic Implications of alternative scholarly publishing models: Exploring the costs and benefits. A report to the Joint Information Systems Committee (JISC), (2009).
15. INASP, *INASP Annual Review (2012-13)*, http://www.inasp.info/uploads/filer_public/2013/10/24/2012-2013_annual_review.pdf.

16. International Publishers Association IPA, *Annual Report October 2013 | October 2014*(2014), <http://www.internationalpublishers.org/images/reports/2014/IPA-annual-report-2014.pdf>.
17. JISC, Report on the JISC Collections Workshop: ‘Open Access Fees and the Hybrid Journal’ (2011).
18. NCC 2012 Annual Report. (2012).
19. OECD, The Knowledge-Based Economy, a report by the Organisation of Economic Co-operation and Development (1996) OCDE/GD(96)102.
20. Office of the Australian Information Commission Australian Government, *Information Policy Report*, <http://www.oaic.gov.au/information-policy/information-policy-resources/information-policy-reports/>.
21. Open Access Strategies in the European Research Area: RTD-B6-PP-2011-2: Study to develop a set of indicators to measure open access. (2013).
22. Open Educational Resources: *Open Content for Higher Education*, Forum 1 Final Report of The Virtual University, Prepared by Paul Albright, Western Interstate Commission for Higher Education, Colorado, USA, February 2006, http://www.unesco.org/iiep/virtualuniversity/forumsfiche.php?queryforumspages_id=23.
23. Powering Ideas An Innovation Agenda for the 21st Century. (2009).
24. The Coercive Information-Gathering Powers Of Government Agencies: Report No: 48 of May 2008 Prepared by the Administrative Review Council. (2008).
25. The Power of Information: An Independent Review by Ed Mayo and Tom Steinberg. (2007).
26. The Sources of Innovation and Creativity: National Center on Education and the Economy (NCEE) Research Summary and Final Report <http://www.ncee.org/wp-content/uploads/2010/04/Sources-of-Innovation-Creativity.pdf>. (2005).
27. The STM Report, An overview of scientific and scholarly publishing. (2012).
28. Trend Report: Open Educational Resources 2013.
29. Venturous Australia Report: Building Strength in innovation. (2008).
30. Alliance For Affordable Internet (A4AI), *Alliance For Affordable Internet's 2014 Affordability Report* (2014), <http://a4ai.org/affordability-report/report/>.
31. Ilkka Tuomi, *Open Educational Resources: What they are and why do they matter. Report prepared for the OECD at*

http://www.meaningprocessing.com/personalPages/tuomi/articles/OpenEducationalResources_OECDreport.pdf.

LEGISLATION & OFFICIAL GOVERNMENT DOCUMENTS

1. (OMB), Circular No A-130, Revised, (Transmittal Memorandum No. 4) (November 28, 2000), Memorandum For Heads Of Executive Departments And Agencies (United States Office of Management and Budget ed., 2000).
2. (OMB), CIRCULAR NO. A-130, Revised, (Transmittal Memorandum No. 4) (November 28, 2000), Memorandum For Heads Of Executive Departments And Agencies (United States Office of Management and Budget ed., 2000).
3. (OMB), Memorandum on Transparency and Open Government, (United States Office of Management and Budget ed., 2009).
4. (OMB), Open Government (United States Office of Management and Budget ed., 2009).
5. (OMB), Open Government Directive (United States Office of Management and Budget ed., 2009).
6. ACT Australian Capital Territory Government, Open Data Policy: Draft Proactive Information Disclosure (Open Data) Policy <http://actgov.github.io/opendatapolicy/> (GitHub).
7. Agricultural Research Council Act, <http://placng.org/lawsfnigeria/node/17> Cap L5 (2004).
8. ARC, *ARC Open Access Policy*, http://www.arc.gov.au/applicants/open_access.htm.
9. ARC, *ARC Open Access Policy*, http://www.arc.gov.au/applicants/open_access.htm.
10. ARL, *FASTR Bill to Enhance Public Access to Research Introduced in US Congress*, <http://www.arl.org/news/community-updates/3554-fastr-bill-to-enhance-public-access-to-research-introduced-in-us-congress#.VXocOM-qqkp>.
11. AusGOAL, *Australian Governments Open Access and Licensing Framework*, <http://www.ausgoal.gov.au/overview>.
12. Australian Bureau of Statistics, *ABS Copyright*, (2010).
13. Australian Copyright Act 1968 Act No. 63 of 1968 as amended Act No 63 (1968).
14. Australian Information Commissioner Act 2010 Act No.52 of 2010 C2014C00382.

15. Cabinet Office, Information Matters, Speech by the Prime Minister, the Rt Hon. Gordon Brown MP at Liberty, University of Westminster, October 2007 (Cabinet Office ed., Cabinet Office 2007).
16. Canadian Copyright Act, C-42 (1985).
17. Coordination of Federal Information Policy available @ <http://www.archives.gov/about/laws/fed-information-policy.html> (2002).
18. Copyright, Designs and Patents Act C.48 (1988).
19. DATA.GOV.UK, *Opening up Government*, <http://data.gov.uk/>.
20. Department of Parliamentary Budget Office, *Portfolio Budget Statements 2012-13, Budget Related Paper No. 1.20d*, (2013).
21. Digital broadband content: public sector information and content. (2006).
22. Directive 2003/98/Ec Of The European Parliament And Of The Council On The Re-Use Of Public Sector Information, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:345:0090:0096:EN:PDF>
23. Directive 2013/37/EU of the European Parliament and of the Council of 26 June 2013 <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02003L0098-20130717&from=EN> (2013).
24. ERC, *Open Access Guidelines for Researchers Funded by the ERC* (2012), http://erc.europa.eu/sites/default/files/document/file/open_access_policy_researchers_funded_ERC.pdf.
25. EU European Union, Commission Notice: 'Guidelines on recommended standard licences, datasets and charging for the re-use of documents' <https://ec.europa.eu/digital-agenda/en/news/commission-notice-guidelines-recommended-standard-licences-datasets-and-charging-re-use> (Newsroom Editor ed., 2014).
26. European Union, Revision of the PSI Directive, <http://ec.europa.eu/digital-agenda/en/news/revision-psi-directive> (Newsroom Editor ed., 2012).
27. Federal Government Brazil, *Open Data*, <http://dados.gov.br/noticia/dados-abertos-permitem-que-cidadaos-conhecam-melhor-as-acoas-e-os-resultados-do-mj/>.
28. Federal Ministry of Health, *National Strategic Health Development Plan (NSHDP 2010-2015)*, <http://www.health.gov.ng/doc/NSHDP.pdf>.
29. Freedom of Information Act 1982 Act No.3 of 1982 (1982).
30. Freedom of Information Act, 2011 FOI Act, (2011).

31. GOV.UK, *10 Policies About Government Efficiency, Transparency And Accountability*
<https://www.gov.uk/government/policies?topics%5B%5D=government-efficiency-transparency-and-accountability>.
32. Government of Canada, *Minister Holder Announces New Open Access Policy for Research* (2015), <http://www.science.gc.ca/default.asp?lang=En&n=415B5097-1>.
33. National Information Technology Development Agency Act, 2007
<http://www.placng.org/lawsofnigeria/node/342> (2007).
34. National Institute of Health (NIH), *Policy on Enhancing Public Access to Archived Publications Resulting from NIH Funded Research* § NOT-OD-05-022 (Health and Human Services ed., 2005).
35. National Planning Commission, *Nigeria Vision 20:2020* (NPC ed., 2009).
36. National Science and Technology Development Agency Decree NSTDA (1977).
37. National Universities Commission Act, Cap N.81, Laws of the Federation of Nigeria (LFN) <http://www.placng.org/lawsofnigeria/node/507> Cap N.81 Laws of the Federation of Nigeria (LFN) (2004).
38. New South Wales Government, *NSW Government Open Data Policy* (2013),
<http://www.finance.nsw.gov.au/ict/sites/default/files/NSW%20Government%20Open%20Data%20Policy%201.0.pdf>.
39. New Zealand Cabinet, *Open Government*, CAB Min (11) 29/12 (Cabinet Office ed., 2011).
40. New Zealand Government, *New Zealand Data and Information Management Principles* (2011),
<https://ict.govt.nz/guidance-and-resources/open-government/new-zealand-data-and-information-management-principles/>.
41. New Zealand Government, *Policy framework for New Zealand Government-held information* (1997),
http://www.ssc.govt.nz/Documents/policy_framework_for_Government_.htm.
42. Nigeria Structural Adjustment Program: *Policies, Implementation and Impact*. No. 13053-UNI (1994).
43. Nigerian Copyright Act, Cap C28, Laws of the Federation of Nigeria, 2004 Cap C28 (2004).
44. Nigerian Copyright Commission NCC, *Copyright (Collective Management Organisation) Regulation 2007*(2007),
<http://www.copyright.gov.ng/images/downloads/CMO%20Regulation%202007.pdf>.

45. Nigerian Copyright Commission NCC, *Copyright (Levy on Materials) Order 2012*(2012),
<http://www.copyright.gov.ng/images/downloads/REVISED%20DRAFT%20LEVY%20ON%20COPYRIGHT%20MATERIALS%20ORDER.pdf>.
46. Nigerian Copyright Commission NCC, *Copyright (Optical Discs Plants) Regulation 2006*. B 697-711 (2006),
<http://www.copyright.gov.ng/images/downloads/Optical%20Disc%20Regulation.pdf>.
47. Nigerian Copyright Commission NCC, *Copyright (Reciprocal Extension) Regulation 1972*(1972),
<http://www.copyright.gov.ng/images/downloads/Copyright%20Reciprocal%20Extension%20Order%201972.pdf>.
48. Nigerian Copyright Commission NCC, *Copyright (Security Devices) Regulation 1999*(1999),
<http://www.copyright.gov.ng/images/downloads/Copyright%20Security%20devices%200regulation%201999.pdf>.
49. Nigerian Copyright Commission NCC, *Copyright (Video Rental) Regulation 1999*(1999),
<http://www.copyright.gov.ng/images/downloads/Copyright%20Video%20rental%20regulation%201999.pdf>.
50. Nigerian Copyright Commission NCC, *Copyright Notification Scheme*(2005),
<http://www.copyright.gov.ng/index.php/regulatory-schemes/copyright-notification>.
51. Nigerian Copyright Commission NCC, *Nigerian Copyright Institute*,
<http://www.copyright.gov.ng/index.php/2013-02-10-16-11-10/nigerain-copyright-institute-nci>.
52. NIH, *NIH Public Access Policy*, <http://publicaccess.nih.gov/>.
53. NZGOAL, *New Zealand Government Open Access and Licensing framework* (NZGOAL)(2010),
<https://ict.govt.nz/assets/Uploads/Documents/NZGOAL.pdf>.
54. OECD, *Recommendation of the Council for Enhanced Access and More Effective Use of Public Sector Information*. [C(2008) 36](2008), <http://www.oecd.org/internet/ieconomy/40826024.pdf>.
55. Office of the Australian Information Commissioner OAIC, *About us*,
<http://www.oaic.gov.au/home/about-us>.
56. Open Government Partnership, *Australia*,
<http://www.opengovpartnership.org/country/australia>.
57. Open Government Partnership, *Open Government Declaration*,
<http://www.opengovpartnership.org/about/open-government-declaration>.

58. Open Government Partnership, *United Kingdom*,
<http://www.opengovpartnership.org/country/united-kingdom>.
59. Open Government Partnership, *United States of America*,
<http://www.opengovpartnership.org/country/united-states>.
60. OPSI, *Office of Public Sector Information*, <http://www.opsi.gov.uk/psi/>.
61. Public Procurement Act 2007 Act No.14 (2007).
62. Public Sector Management Act 1994 A1994-37.
63. Queensland Government, *Information Management Policy Framework* (2009),
<http://www.qgcio.qld.gov.au/products/qgea-documents/548-information/2349-information-management-policy-framework>.
64. S.779 - Fair Access to Science and Technology Research Act of 2015
[https://www.congress.gov/bill/114th-congress/senate-bill/779?q={%22search%22%3A\[%22Fair+Access+to+Science+and+Technology+Research+Act%22\]}](https://www.congress.gov/bill/114th-congress/senate-bill/779?q={%22search%22%3A[%22Fair+Access+to+Science+and+Technology+Research+Act%22]}).
65. South African Copyright Act No.98 of 1978 (1978).
66. Statute of Anne, 8 Anne c. 19 (1710).
67. The Constitution of the Federal Republic of Nigeria (1999).
68. The National Archives, *Crown Copyright*,
<http://www.nationalarchives.gov.uk/information-management/re-using-public-sector-information/copyright/crown-copyright/>.
69. The National Archives, *legislation.gov.uk, About Us*,
<http://www.legislation.gov.uk/aboutus>.
70. The National Archives, *Open Government Licence for Public Sector Information*,
<http://www.nationalarchives.gov.uk/doc/open-government-licence/>.
71. The National Archives, *Open Government Licenses for Public Sector Information*,
<http://www.nationalarchives.gov.uk/doc/open-government-licence/version/2/>.
72. The National Archives, *UK Government Licensing Framework for Public Sector Information* (2013), <http://www.nationalarchives.gov.uk/documents/information-management/uk-government-licensing-framework.pdf>.
73. The National Archives, *Who we are*, <http://www.nationalarchives.gov.uk/about/who-we-are.htm>.
74. The United States of America, Copyright Act of 1976 Title 17 of United States Code (1976).

75. The White House, *Office of E-Government and Information Technology* (2002), <http://www.whitehouse.gov/omb/e-gov/>.
76. The White House, *Open Government Initiative*, <http://www.whitehouse.gov/open>.
77. U.S. Congress, *Declaration of Independence* (1776), http://www.archives.gov/exhibits/charters/declaration_transcript.html.
78. United Nations Department for Economic and Social Affairs, *Guidelines on Open Government Data for Citizen Engagement, ST/ESA/PAD/SER.E/177*, <http://workspace.unpan.org/sites/Internet/Documents/Guidelines%20on%20OGDCE%20May17%202013.pdf>

TREATIES

1. Berne Convention for the Protection of Literary and Artistic Works, September 9, 1886, amended last on September 28, 1979 (September 9, 1886).
2. Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities, http://oa.mpg.de/files/2010/04/berlin_declaration.pdf. (2003).
3. Bethesda Statement on Open Access Publishing, www.earlham.edu/~peters/fos/bethesda.htm. (2003).
4. Draft Treaty On Access To Knowledge A2k Treaty (9 May 2005).
5. ERC, *ERC Work Programme 2015 (European Commission C(2014)5008 of 22 July 2014)*, (2015).
6. Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled, adopted by the Diplomatic Conference to Conclude a Treaty to Facilitate Access to Published Works by Visually Impaired Persons and Persons with Print Disabilities on June 27, 2013 http://www.wipo.int/edocs/lexdocs/treaties/en/marrakesh/trt_marrakesh_001en.pdf (2013).
7. UN General Assembly, *International Covenant on Economic, Social and Cultural Rights*, 16 December 1966, United Nations, Treaty Series, vol. 993, p. 3, : <http://www.unhcr.org/refworld/docid/3ae6b36c0.html> United Nations, Treaty Series, Vol. 993 ICESCR (1966).
8. UN General Assembly, UDHR *Universal Declaration of Human Rights*, 10 December 1948, 217 A (III), : <http://www.unhcr.org/refworld/docid/3ae6b3712c.html> (1948).

9. UNESCO, Universal Copyright Convention, with Appendix Declaration relating to Article XVII and Resolution concerning Article XI. Geneva, 6 September 1952, <http://www.unesco.org/eri/la/convention.asp?KO=15381&language=E>.
10. United Nations UN, *Millennium Development Goals and Beyond 2015*, <http://www.un.org/millenniumgoals/>.
11. United Nations UN, *United Nations Treaty Collection: Glossary*, https://treaties.un.org/pages/Overview.aspx?path=overview/glossary/page1_en.xml#adoption.
12. United Nations, Vienna Convention on the Law of Treaties, 23 May 1969, United Nations, Treaty Series, vol. 1155, p. 331, (1969).
13. WIPO Copyright Treaty, adopted in Geneva on December 20, 1996, http://www.wipo.int/treaties/en/ip/wct/pdf/trtdocs_wo033.pdf WCT (1996).
14. WIPO Performances Phonograms Treaty, adopted in Geneva on December 20, 1996, http://www.wipo.int/treaties/en/ip/wppt/pdf/trtdocs_wo034.pdf WPPT (1996).
15. WIPO, *Summary of the Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled (MVT) (2013)*, (2013).
16. WIPO, *WIPO Internet Treaties*, http://www.wipo.int/copyright/en/activities/wct_wppt/wct_wppt.html.
17. World Trade Organization (WTO), Agreement on Trade-Related Aspects of Intellectual Property Rights (World Trade Organization (WTO) ed., 1994).

INTERNET

SOURCES

1. (CC) Creative Commons Australia, *The Australian Parliament goes CC – with v3.0*, <http://creativecommons.org.au/weblog/entry/301>.
2. (CC) Creative Commons, *About the Licenses*, <http://creativecommons.org/licenses/>.
3. (CC) Creative Commons, *Attribution-NoDerivs 3.0 Unported (CC BY-ND 3.0)*, <http://creativecommons.org/licenses/by-nd/3.0/>.
4. (CC) Creative Commons, *Wikipedia + CC BY SA = Free Culture Win*, <http://creativecommons.org/weblog/entry/15411>.
5. (MIT) Massachusetts Institute of Technology, *About OCW*, <http://ocw.mit.edu/about/>.
6. (MIT) Massachusetts Institute of Technology, *About the OpenCourseWare Consortium*, <http://ocw.mit.edu/about/ocw-consortium/>.

7. (MIT) Massachusetts Institute of Technology, *About the OpenCourseWare Consortium*, <http://ocw.mit.edu/about/ocw-consortium/>.
8. Aaron Swartz, *Guerilla Open Access Manifesto*, Internet Archive (2008), http://archive.org/stream/GuerillaOpenAccessManifesto/Goamjuly2008_djvu.txt.
9. Academia Publishing, *Academia Publishing*, <http://www.academiapublishing.org/>.
10. Academic Journals, *Academic Journals*, <http://www.academicjournals.org/>.
11. Access to Global Online Research In Agriculture, *About Agora* (2014), <http://www.aginternetwork.org/en/>.
12. ADS, *Archaeology Data Service*, <http://archaeologydataservice.ac.uk/>.
13. African Legal Information Institute (African LII), *African law* (2014), <http://www.africanlii.org/>.
14. African Virtual University, *About: Introduction*, <http://www.avu.org/About-AVU/introduction.html>.
15. African Virtual University, *The AVU OER Repository*, <http://www.avu.org/the-avu-oer-repository.html>.
16. AgriVIVO, *National Agricultural Science Library and Documentation Centre*, <http://www.agrivivo.net/organization/national-agricultural-library-and-documentation-centre>.
17. AJOL, *About AJOL: Why is AJOL needed?*, <http://www.ajol.info/index.php/ajol/pages/view/AboutAJOL>.
18. AJOL, *African Journals Online*, <http://www.ajol.info/>.
19. AJOL, *Nigeria*, <http://www.ajol.info/index.php/index/browse/country?countryId=156>.
20. Amy Biehl Foundation, *Amy's life and legacy*, <http://www.amybiehl.org/amy.php>.
21. Android, *The Android Source Code*, <https://source.android.com/source/index.html>.
22. Android, *Welcome to the Android Open Source Project*, <http://source.android.com/>.
23. Apache, *The Apache Software Foundation: Community-led development since 1999*, <http://www.apache.org/>.
24. ARC, *About ARC*, http://www.arc.gov.au/about_arc/default.htm.
25. ARC, *ARC Open Access Policy*, http://www.arc.gov.au/applicants/open_access.htm.
26. ARDI, *Access to Research for Development and Innovation*, <http://www.wipo.int/ardi/en/>.
27. Aristotle, ((384 BC - 322 BC)), <http://www.quotationspage.com/subjects/knowledge/>.
28. Australian National Research Services ANDS, *About Us*, <http://www.ands.org.au/about-ands.html>.

29. Author, *Fire in Soweto*, (Youtube)
<https://www.youtube.com/watch?v=inCMdSWYKOo>.
30. AUTHORAID, *Supporting Developing Country Research in Publishing Their Work: What is AuthorAID* <http://www.authoraid.info/en/about/>.
31. BBC Trending, *#BBCTrending: The creator of #BringBackOurGirls*(2014),
<http://www.bbc.com/news/blogs-trending-27315124>.
32. Ben Okri, *F@T BEN OKRI, 19 Jan 2015, 06:42*(2015), <http://first-thoughts.org/on/Ben+Okri/>.
33. Bharat Kumar, *1333 words essay on Man is a social animal* Preserve Articles at
<http://www.preservearticles.com/201102184074/man-is-a-social-animal-essay.html>.
34. Big Cabal Media, *Ebola Facts* (2014) at <http://www.ebolafacts.com/>
35. Bill & Melinda Gates Foundation, *Bill & Melinda Gates Foundation Open Access Policy*,
<http://www.gatesfoundation.org/how-we-work/general-information/open-access-policy>.
36. Bill and Melinda Gate, *2015 Gates Annual Letter: Our big Bet For the Future*(2015),
http://www.gatesnotes.com/2015-annual-letter?page=0&lang=en&WT.mc_id=01_21_2015_AL2015-GF_GFO_domain_Top_21.
37. Bill and Melinda Gate, *2015 Gates Annual Letter: Our big Bet For the Future*(2015),
http://www.gatesnotes.com/2015-annual-letter?page=0&lang=en&WT.mc_id=01_21_2015_AL2015-GF_GFO_domain_Top_21.
38. Bill and Melinda Gate, *Bill & Melinda Gates Foundation Open Access Policy*,
<http://www.gatesfoundation.org/How-We-Work/General-Information/Open-Access-Policy>.
39. Bill and Melinda Gate, *What We Do*, <http://www.gatesfoundation.org/what-we-do>.
40. Bill Hubbard, *Transcript of a conversation between Bill Hubbard and Steve Burbolt* at
https://radar.brookes.ac.uk/radar/file/77294217-6d7d-04a0-db9a-ef4dba94c6e3/1/RADAR_BillHubbard.pdf.
41. Bioline International, *Bioline International*, <http://www.bioline.org.br/journals>.
42. BioMed Central, *Article-Processing Charge*, BioMed Central,
<http://www.biomedcentral.com/authors/apc>.
43. BioMed Central, *BioMed Central The Open Access Publisher*, BioMed Central.
44. *Budapest Open Access Initiative* at www.opensocietyfoundations.org/openaccess/read

45. Budapest Open Access Initiative, *Ten years on from the Budapest Open Access Initiative: Setting the default to open*, <http://www.opensocietyfoundations.org/openaccess/boai-10-recommendations>.
46. Bureau of Meteorology, *Copyright Notice: Your Rights To Use Material On Bureau Websites.*, <http://www.bom.gov.au/other/copyright.shtml?ref=fr>.
47. Bureau of Public Procurement, *About BPP*, http://www.bpp.gov.ng/index.php?option=com_content&view=article&id=110&Itemid=740.
48. Canadian Institutes of Health Research, *Tri-Agency Open Access Policy on Publications* (2015), <http://www.cihr-irsc.gc.ca/e/32005.html>.
49. CC Australia, *Which Creative Commons licence is right for me? poster*, <http://creativecommons.org.au/learn/fact-sheets/licensing-flowchart/>.
50. CC, *State of the Commons*, <https://creativecommons.org/>.
51. Centers for Disease Control and Prevention, *Countries with Cases of Ebola* (2014), <http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/distribution-map.html#areas>.
52. CNN (2014), <http://edition.cnn.com/2014/02/02/world/europe/uk-snowden-book/>.
53. COL & UNESCO, *Guidelines for Open Educational Resources (OER) in High Education*(2011), http://www.col.org/PublicationDocuments/Guidelines_OER_HE.pdf.
54. COL, *Publications*, <http://www.col.org/resources/publications/Pages/default.aspx>.
55. Compulsory, Free Universal Basic Education Act <http://www.placng.org/lawsOfNigeria/node/121> UBE (2004).
56. *Connexions*, <http://cnx.org/>.
57. CopyrightX, <http://blogs.law.harvard.edu/copyrightx/>.
58. Cornell University Library, *arXiv.org*, <http://arxiv.org/>.
59. Covenant University, *Covenant University Repository*, <http://eprints.covenantuniversity.edu.ng/>.
60. CPJ, *10 Journalists Killed in Nigeria since 1992/Motive Confirmed*, Committee to Protect Journalists, <https://www.cpj.org/killed/africa/nigeria/>.
61. CPTech, *Access to Knowledge: Overview*, <http://www.cptech.org/a2k/>.
62. Craig Bailey, *Content is King by Bill Gates* at <http://www.craigbailey.net/content-is-king-by-bill-gates/>
63. Creative Commons, *Contact*, <http://creativecommons.org/contact#discuss>.

64. Creative Commons, *Examples of Creative Commons License Use*, <http://creativecommons.org/examples>.
65. Creative Commons, *Ford Foundation to require CC BY for all grant-funded projects* (2015), <https://creativecommons.org/weblog/entry/44865>.
66. Creative Commons, *Hewlett Foundation extends CC BY policy to all grantees* (2014), <http://creativecommons.org/tag/the-william-and-flora-hewlett-foundation>.
67. Creative Commons, *The Power of Open*, <http://thepowerofopen.org/>.
68. *Curriki*, <http://www.curriki.org/>.
69. Dan Agbese, *When The Sun Set In Nigeria: Dele Giwa's Awful Murder* (Committee to Protect Journalists, CPJ 2009) <https://cpj.org/blog/2009/10/nigerian-editor-dele-giwas-unsolved-murder.php>.
70. Directory of Open Access Journals (DOAJ), *Open Access Journal*, <http://www.doaj.org/doi?func=loadTemplate&template=faq&uiLanguage=en>.
71. DSpace, *DSPACE*, <http://www.dspace.org/>.
72. Duke Law, *Duke Law Scholarship Repositories*, <http://scholarship.law.duke.edu/>.
73. *Dying for Change Poor People's experience of health and ill-health, a joint underatking between WHO and World Bank* http://www.who.int/hdp/publications/dying_change.pdf.
74. E Research Archive eRA, *Queensland Department Of Agriculture, Fisheries And Forestry Archive Of Scientific And Research Publications*, <http://www2.dpi.qld.gov.au/extra/era/index.html>.
75. E.S Gbaje, *Open Access Journal Publishing in Ahmadu Bello University, Zaria, Nigeria* 76th IFLA: World Library and Information Congress at <http://conference.ifla.org/past-wlic/2010/138-gbaje-en.pdf>.
76. Edo State Open Data Portal, *Terms of Use*, <http://www.data.edostate.gov.ng/terms-of-use>.
77. *Education Policy Analysis Archive*, University of Arizona, <http://asu.academia.edu/EPAAAAPE>.
78. *Education, Research and Open Access in Norway* http://www.pasteur4oa.eu/sites/pasteur4oa/files/resource/Norway%20Case%20Study_0.pdf. (2014).
79. Edwin Rutsch, *Obama Speaks about Ubuntu & Empathy at Nelson Mandela Memo* 2013 <http://www.youtube.com/watch?v=jiebOGRPPxg>.

80. Ehis Okpamen, *Goodluck Jonathan Becomes Nigeria's First President To Be Voted Out Of Office* at <http://venturesafrica.com/goodluck-jonathan-becomes-nigerias-first-president-to-be-voted-out-of-office/>.
81. EIFL, *22 Open Access Policies Adopted in 2014*, eifl (2014), http://www.eifl.net/news/22-open-access-policies-adopted-2014?utm_source=EIFLall&utm_medium=email&utm_campaign=newsletter72.
82. Elsevier, *Copyright*, <http://www.elsevier.com/about/company-information/policies/copyright#openaccess>.
83. *Encyclopedia of Life*, <http://eol.org/>.
84. Eprint, *Eprint*, <http://www.eprints.org/software/>.
85. ERC, *About ERC*, <http://erc.europa.eu/about-erc>.
86. ERC, *Facts and Figures*, <http://erc.europa.eu/about-erc/facts-and-figures>.
87. ERC, *History*, <http://erc.europa.eu/about-erc/history>.
88. EU, *Communication From The Commission To The European Parliament, The Council, The European Economic And Social Committee And The Committee Of The Regions: Towards better access to scientific information: Boosting the benefits of public investments in research*(2012), http://ec.europa.eu/research/science-society/document_library/pdf_06/era-communication-towards-better-access-to-scientific-information_en.pdf.
89. EU, *FP7: Research and Innovation Funding 2014-2020*, http://ec.europa.eu/research/fp7/index_en.cfm.
90. EU, *Open Access to scientific information*, <http://ec.europa.eu/digital-agenda/en/open-access-scientific-information>.
91. EU, *The EU Framework Programme for Research and Innovation: Horizon 2020: Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020* (2012), http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf.
92. European Commission, *Open-Source Software: Licence Compatibility and Interoperability*, Joinup, <https://joinup.ec.europa.eu/software/page/licence-compatibility-and-interoperability%20>.
93. European Union, Commission welcomes Member States' endorsement of EU Open Data rules http://europa.eu/rapid/press-release_IP-13-316_en.htm (2013).
94. Facebook, Federal Ministry of Education, Federal Scholarship Board Nigeria, (2013) <https://www.facebook.com/FSBNigeria/posts/216251851847903>.

95. Federal Ministry of Agriculture and Rural Development, *About us*, <http://www.fmard.gov.ng/About-us-new>.
96. Federal Ministry of Health, *Agencies under FMOH*, <http://www.health.gov.ng/index.php/about-us>.
97. Federal Ministry of Health, *Home*, <http://www.health.gov.ng/?view=featured>.
98. Federal Ministry of Health, *Mission and Vision*, <http://www.health.gov.ng/index.php/about-us/mission-and-vision>.
99. Federal Ministry of Health, *National Strategic Health Development Plan (NSHDP 2010-2015)*, <http://www.health.gov.ng/doc/NSHDP.pdf>.
100. Federal Ministry of Health, *Parastatals*, <http://www.health.gov.ng/index.php/parastatals>.
101. Federal Ministry of Health, *Revised National Health Policy* (2004), <http://osgf.dammy.net/payload?id=19d51d38-c75f-4461-91ce-f6a6d2298b87>.
102. Federal Ministry of Information and Communication Technology MICT, *National ICT Policy*, [http://www.nitda.gov.ng/downloads/NEW ICT Policy.pdf](http://www.nitda.gov.ng/downloads/NEW_ICT_Policy.pdf) (2012).
103. Federal Ministry of Information, *About us*, <http://fmi.gov.ng/>.
104. Federal Ministry of Science and Technology (FMST), *Framework for the Nigerian National System of Innovation* <http://fmst.gov.ng/downloadable/NATIONAL%20SYSTEM%20OF%20INNOVATION%20-%20Draft.pdf>.
105. Federal Ministry of Science and Technology FMST, *Harnessing Technology for Nigeria's Social and Economic Development*, <http://fmst.gov.ng/>.
106. Federal Republic of Nigeria FMST, *Science, Technology and Innovation (STI) Policy*, <http://workspace.unpan.org/sites/internet/Documents/UNPAN048879.pdf> (Federal Ministry of Science and Technology ed., Federal Government of Nigeria 2011).
107. Federal Republic of Nigeria, *About Nigeria*, <http://www.nigeria.gov.ng/2012-10-29-11-05-46>
108. Federal Republic of Nigeria, *About Nigeria*, <http://www.nigeria.gov.ng/2012-10-29-11-05-46>.
109. Federal Republic of Nigeria, *Federal Ministry of Education*, <http://www.nigeria.gov.ng/2012-10-29-11-06-51/executive-branch/93-federal-ministry-of-education/116-federal-ministry-of-education>.

110. Federal Republic of Nigeria, *Federal Ministry of Education*,
<http://www.nigeria.gov.ng/2012-10-29-11-06-51/executive-branch/93-federal-ministry-of-education/116-federal-ministry-of-education>.
111. First Monday, *Peer-reviewed Journal on the Internet*, <http://firstmonday.org/index>.
112. FMARD, *Federal Ministry of Agriculture and Rural Development*,
<http://www.fmard.gov.ng/About-us-new>.
113. FMARD, *Parastatals*, <http://www.fmard.gov.ng/parastals.php?0=0&limit=6&pno=8>.
114. FMCT, *Nigeria improves in United Nations eGovernment Development Ranking* (2014),
<http://commtech.gov.ng/index.php/videos/news-event/176-nig-improves-un-egov-dev>.
115. FMCT, *Nigeria's Internet Ranks 2nd Among Emerging Economies* (2014),
<http://commtech.gov.ng/index.php/videos/daily-press-release/298-nig-internet-ranked-2nd>.
116. Ford Foundation, *Ford Foundation Expand Creative Commons Licensing for All Grant-Funded Projects* (2015), <http://www.fordfoundation.org/newsroom/news-from-ford/934>.
117. Ford Foundation, *Issues*, <http://www.fordfoundation.org/issues>.
118. Ford Foundation, *Mission*, <http://www.fordfoundation.org/about-us/mission>.
119. Fred Miller, *Political Naturalism* Stanford Encyclopedia of Philosophy at
<http://plato.stanford.edu/entries/aristotle-politics/supplement3.html>.
120. Free Software Foundation, *GNU Free Documentation License*,
<http://www.gnu.org/licenses/fdl.html>.
121. GenBank, *GenBank Overview*, <http://www.ncbi.nlm.nih.gov/genbank/>.
122. Glenn Greenwald, et al., *Edward Snowden: The whistleblower behind the NSA surveillance revelations*, The Guardian(2013),
<http://www.theguardian.com/world/2013/jun/09/edward-snowden-nsa-whistleblower-surveillance>.
123. Global Open Access Portal, *Brazil* <http://www.unesco.org/new/en/communication-and-information/portals-and-platforms/goap/access-by-region/latin-america-and-the-caribbean/brazil/>.
124. Google, *Public Data: Percentage of people using the Internet*,
http://www.google.com/publicdata/explore?ds=emi9ik86jcuic_&ctype=l&strail=false&bcs=d&nselm=h&met_y=i99H&scale_y=lin&ind_y=false&rdim=country&idim=countr

- [y:NG:ZA:GH:KE&ifdim=country&tstart=650782800000&tend=1313470800000&hl=en_US&dl=en_US&ind=false&icfg](http://www.who.int/countryfocus/healthcare/NG:ZA:GH:KE&ifdim=country&tstart=650782800000&tend=1313470800000&hl=en_US&dl=en_US&ind=false&icfg).
125. GOVLAB, *Open Data and the United Nations: Experts reflect on current Open Data challenges within the UN and outline a path forward*.(2014), <http://thegovlab.org/open-data-and-the-united-nations-experts-reflect-on-current-open-data-challenges-within-the-un-and-outline-a-path-forward/>.
 126. Hilary Clinton, *The Open Book Project*, U.S Department of State(2013), <http://www.state.gov/p/nea/openbook/>.
 127. HINARI, *HINARI Research in Health: Nigeria*, https://extranet.who.int/hinari/en/browse_institutions.php?cntry=81.
 128. House of Lords, *The Implementation of Open Access*, (2013), <http://www.publications.parliament.uk/pa/ld201213/ldselect/ldsctech/122/122.pdf>.
 129. *How Open Access Empowered a 16 Year Old Boy to make Canver Breakthrough* <http://www.youtube.com/watch?v=G55hlnSD1Ys>.
 130. Hungary Open Access Case Study, <http://www.pasteur4oa.eu/sites/pasteur4oa/files/resource/Hungary%20Case%20Study.pdf>. (2014).
 131. Ian Lienert, *Where Does the Public Sector End and the Private Sector Begin: An IMF Working Paper for the Fiscal Affairs Department*, WP/09/122, <http://www.imf.org/external/pubs/ft/wp/2009/wp09122.pdf>, International Monetary Fund (2009).
 132. IFLA, *IFLA/Brill Open Access Award 2015 goes to DOAB at* <http://www.ifla.org/node/9630>.
 133. INASP, *About*, <http://www.inasp.info/en/about/>.
 134. INASP, *Publishers*, <http://www.inasp.info/en/network/publishers/>.
 135. Infoplease, *Overview of Economics*, <http://www.infoplease.com/cig/economics/three-economists-their-theories.html>.
 136. Innovation and Skills Committee House of Commons Business, *Open Access* (2013), <http://www.publications.parliament.uk/pa/cm201314/cmselect/cmbis/99/9902.htm>.
 137. Institute for the Study of Knowledge Management in Education (ISKME), *Siyavula: Building Communities to Support Teacher Use Localization and Sharing of OER at* <http://www.iskme.org/our-work/siyavula-project-formative-and-summative-research-study>.

138. Internet Industry Association (IIA), *Principles for a Digital Economy: A manifesto on internet policy and regulation with principles and recommendations to guide decision making* at <http://iia.net.au/sites/default/files/manifesto-2010-6.pdf>.
139. IOPscience, *New Journal of Physics The open access journal for physics*, <http://iopscience.iop.org/1367-2630>.
140. Ireland: The Transition to Open Access, <http://www.pasteur4oa.eu/sites/pasteur4oa/files/resource/Ireland%20Case%20Study.pdf>. (2014).
141. IRIN, *NIGERIA: School attendance down after Boko Haram attacks* at <http://www.irinnews.org/report/95327/nigeria-school-attendance-down-after-boko-haram-attacks>.
142. Japhet Alakam, *60 Reasons I won't vote for Jonathan-Soyinka* at <http://www.vanguardngr.com/2015/02/60-reasons-wont-vote-jonathan-soyinka/>.
143. Jenny Booth, *Praise for doctor who 'saved Nigeria from ebola'* at <http://www.thetimes.co.uk/tto/news/world/africa/article4242172.ece>.
144. Jide Awe, *Software Nigeria-The Software Industry in Nigeria*, <http://www.jidaw.com/nigeria/nigeriasoftware.html>.
145. Jina Moore, *The Nigerian Government Has Lied About Finding The Kidnapped Girls Before* at <http://www.buzzfeed.com/jinamoore/12-things-the-nigerian-government-has-said-and-sometimes-had#.mmDYB2kqwm>.
146. JOAL, *Journal of Open Access to Law*, <https://ojs.law.cornell.edu/index.php/joal>.
147. *Jorum*, <http://www.jorum.ac.uk/>.
148. Joseph Emmanuel, *Ogun State Govt fined by Court Over Freedom of Information Act(2014)*, <http://www.thetrentonline.com/foi-ogun-state-govt-fined-court/>.
149. Jules Evans, *Aristotelians: What is Aristotle's Theory of Human Nature?*, <http://philosophyforlife.org/philosophies-for-life/aristotelians/>.
150. Khan Academy, *Our Mission*, <https://www.khanacademy.org/about>.
151. Knowledge Unlatched, *A new Model For Academic Publishing*, <http://www.knowledgeunlatched.org/>.
152. *LeMill*, <http://lemill.net/>.
153. *Le Journal des Sçavans* (1665), <http://gallica.bnf.fr/ark:/12148/bpt6k56523g>.
154. Linux, *Introduction to Linux, Free Software and Open Source*, <http://linux.org.au/introduction-linux-free-software-and-open-source>.

155. Mellisa Hagemann, *Ten Years on, Researchers Embrace Open Access*, <http://www.opensocietyfoundations.org/voices/ten-years-on-researchers-embrace-open-access>.
156. Metropolitan Museum of Arts, *Queen Mother Pendant Mask: Iyoba. On Display in Gallery 352.*, <http://www.metmuseum.org/collections/search-the-collections/318622>.
157. MFA, *Benin Kingdom Gallery Gallery 172*, Museum of Fine Arts Boston(2013), <http://www.mfa.org/collections/featured-galleries/benin-kingdom-gallery>.
158. MFA, Museum of Fine Arts, Boston, *Opens Benin Kingdom Gallery Showcasing Robert Owen Lehman Collection of Rare West African Art*(2013), http://www.mfa.org/news/benin_kingdom.
159. Miranda Neubauer, *#BringBackOurGirls: How a Hashtag Took Hold*, TECHPRESIDENT (2014), <http://techpresident.com/news/24996/bringbackourgirls-how-hashtag-took-hold>.
160. MIT, *Mitopencourseware*, <http://ocw.mit.edu/index.htm>.
161. MIT, *Site Statistics*, <http://ocw.mit.edu/about/site-statistics/>.
162. MIT, *Working with the MIT faculty Open Access Policy* <http://libraries.mit.edu/scholarly/mit-open-access/open-access-at-mit/mit-open-access-policy/working-with-the-mit-faculty-open-access-policy/>
163. MOAI Server, *MOAI, an Open Access Server Platform for Institutional Repositories*, <http://infrae.com/products/moai>.
164. Murdoch University, *Murdoch University Law Review*, <https://mdulr.murdoch.edu.au/index.php/mdulr>.
165. NACA, *HIV Prevalence Advert NACA Nigeria on vimeo* (2013), <http://vimeo.com/66643577>.
166. NACA, *National Agency for the Control of AIDS*, <http://www.naca.gov.ng/history-naca>.
167. NACA, *PMTCT Advert NACA Nigeria* (2013), <http://vimeo.com/66643571>.
168. Nairaland, *Where Is The Official Website To The Ministry Of Education? - Education - Nairaland*, (2013) <http://www.nairaland.com/1350161/gbagaun-where-official-website-ministry>.
169. National Institute for Medical Research, *History*, <http://www.nimr-ng.org/NIMR-history.htm>.
170. National Institute for Medical Research, *List of Publications*, <http://www.nimr-ng.org/NIMR-publications.htm>.

171. National Institute for Medical Research, *Research for National Health*, <http://www.nimr-ng.org/>
172. National Institute for Medical Research, *Research Priorities*, <http://www.nimr-ng.org/NIMR-research-priorities.htm>.
173. National Universities Commission NUC, *Department of Information and Communication Technology*, <http://www.nuc.edu.ng/pages/pages.asp?id=75>.
174. National Universities Commission NUC, *Department of Inspection and Monitoring*, <http://www.nuc.edu.ng/pages/pages.asp?id=51>.
175. National Universities Commission NUC, *Department of Open and Distance Education*, <http://www.nuc.edu.ng/pages/pages.asp?id=182>.
176. National Universities Commission NUC, *Department of Research and Innovation*, <http://www.nuc.edu.ng/pages/pages.asp?id=25>.
177. National Universities Commission NUC, *Department of Students' Support Services (D.S.S.S)*, <http://www.nuc.edu.ng/pages/pages.asp?id=08>.
178. National Universities Commission, *List of Approved Universities in Nigeria*, National Universities Commission. 7 (2014), <http://www.nuc.edu.ng/nucsite/File/Monday%20Bulletin/MB%202014/MONDAY%20Bulletin%2003-02-2014.pdf>.
179. National Universities Commission, *List Of Nigerian Universities And Years Founded*, http://www.nuc.edu.ng/pages/universities.asp?ty=1&order=inst_name.
180. NBS, *National Bureau of Statistics* (2015), <http://www.nigerianstat.gov.ng/>.
181. NBS, *Nigeria National Data Archive (NADA) Centre* (2015), <http://www.nigerianstat.gov.ng/nada/index.php/home>
182. NBS, *Nigeria Statistical Data Portal* (2015), <http://nigeria.prognoz.com/>.
183. NERDC, *Library and Informatics Centre*, <http://nerdc.ng/academic-centres/library-and-informatics-centre>.
184. NERDC, *Nigerian Educational Research And Development Council (NERDC)*, <http://nerdc.ng/about-nerdc>.
185. NERDC, *Resource*, <http://www.nerdc.gov.ng/i/contents/eresources.html>.
186. Nigerian Copyright Commission NCC, *About NCC Historical Background*, <http://www.copyright.gov.ng/index.php/about-us/ncc-historical-background>.
187. Nigerian Field Society, *The Nigerian Field Society*, <http://www.nigerianfield.org/>.
188. NIH, *About NIH*, <http://www.nih.gov/about/>.

189. NIH, *How Open Access Empowered a 16-Year-Old to Make Cancer Breakthrough*
<http://www.nih.gov/about/director/videogallery/06112013-cancer-breakthrough.htm>.
190. NIH, *NIH Data Sharing Policy* (2003),
http://grants.nih.gov/grants/policy/data_sharing/.
191. NIH, *NIH History*, <http://www.nih.gov/about/history.htm>.
192. NIH, *NIH Mission*, <http://www.nih.gov/about/mission.htm>.
193. NIH, *NIH Public Access Policy*, <http://publicaccess.nih.gov/>.
194. Nima Elbagir & Lillian Leposo, *CNN exclusive: Nigerian schoolgirl describes escape from Boko Haram at* <http://edition.cnn.com/2014/05/11/world/africa/nigeria-escaped-schoolgirl-speaks/>.
195. NRC-CISTI, *NRC Publications Archive Statement of Responsibilities*, http://cisti-icist.nrc-cnrc.gc.ca/obj/cisti-icist/doc/nparc/NPARC-Statement-of-Responsibilities_e.pdf.
196. NSW Department of Education and Communities, *Research Partnership*,
<http://www.dec.nsw.gov.au/about-us/plans-reports-and-statistics/research-partnerships>.
197. OARE, *Online Access to Research in the Environment*,
<http://www.unep.org/oare/AboutOARE/tabid/129711/language/en-US/Default.aspx>.
198. OAU, *Obafemi Awolowo University*, <http://www.oauife.edu.ng/>.
199. OECD Declaration Principles and Guidelines for Access to Research Data from Public Funding (2006) <http://www.oecd.org/sti/sci-tech/38500813.pdf>.
200. OECD, *About the OECD*, <http://www.oecd.org/about/>.
201. OECD, *Declaration on Access to Research Data from Public Funding* (2004),
<http://www.oecd.org/science/sci-tech/sciencetechnologyandinnovationforthe21stcenturymeetingoftheoecdcommitteeforscientificandtechnologicalpolicyatministeriallevel29-30january2004-finalcommunique.htm>.
also <http://www.oecd.org/science/scienceandtechnologypolicy/38500813.pdf>.
202. OECD, *Declaration on Access to Research Data from Public Funding: 30 March 2004*
[C(2004)31/REV1];(2004),
<http://acts.oecd.org/Instruments/ShowInstrumentView.aspx?InstrumentID=157>.
203. OECD, *Declaration on Access to Research Data from Public Funding: 30 March 2004*
[C(2004)31/REV1];(2004),
<http://acts.oecd.org/Instruments/ShowInstrumentView.aspx?InstrumentID=157>.

204. OECD, *OECD Principles and Guidelines on Access to Research Data from Public Funding*(2007), <http://www.oecd.org/science/sci-tech/38500813.pdf>.
205. OECD, *Recommendation of the Council concerning Access to Research Data from Public Funding: 14 December 2006 - C(2006)184* (2006), <http://webnet.oecd.org/OECDACTS/Instruments/ShowInstrumentView.aspx?InstrumentID=159&Lang=en&Book=False>.
206. OER Africa, *Building African Education Capacity through Openness*, <http://www.oerafrica.org/Home/tabid/36/Default.aspx>.
207. OER Commons, <http://www.oercommons.org/>.
208. Online Computer Library Centre (OCLC), *OAIster*(2015), <http://www.oclc.org/oaister.en.html?urlm=168646>.
209. Open Archives, *Open Archive Initiative*, <http://www.openarchives.org/>.
210. Open Archives, *Open Archive Initiative*, <http://www.openarchives.org/>.
211. Open Archives, *Open Archives Initiative Protocol for Metadata Harvesting*, <https://www.openarchives.org/pmh/tools/tools.php>.
212. *Open Courseware Consortium*, <http://www.ocwconsortium.org/>.
213. Open Data for Economic Growth <http://www.worldbank.org/content/dam/Worldbank/document/Open-Data-for-Economic-Growth.pdf>. (2014).
214. Open Government Initiative in Edo State: Fostering An Ecosystem of Collaboration and Transparency. (2014) <http://documents.worldbank.org/curated/en/2014/05/19694128/open-government-initiative-edo-state-fostering-ecosystem-collaboration-transparency>.
215. Open Government Working Group, *Eight Principles of Open Government Data* (2007), https://public.resource.org/8_principles.html.
216. *OpenCourseware Websites*, <http://www.ocwconsortium.org/courses/ocwsites>.
217. OpenDOAR, *Directory of Open Access Repositories*, <http://www.opendoar.org/countrylist.php>.
218. OpenupEd, *Our framework*, <http://www.openuped.eu/mooc-features>.
219. OSTP & Micheal Stebbins, *Expanding Public Access to the Results of Federally Funded Research*(2013), <https://www.whitehouse.gov/blog/2013/02/22/expanding-public-access-results-federally-funded-research>.

220. Peter Suber, *AHRC announces its OA policy*(2007),
<http://legacy.earlham.edu/~peters/fos/2007/09/ahrc-announces-its-oa-policy.html>.
221. P2PU, *School of Open*, <https://p2pu.org/en/schools/school-of-open/>.
222. PASTEUR4OA/Case Study: Potugal Open Access Policy Landscape
<http://www.pasteur4oa.eu/sites/pasteur4oa/files/resource/Portugal%20Case%20Study.pdf>. (2014).
223. Peter K Yu, *Peter Yu*, (2014) <http://www.peteryu.com/publications.htm>.
224. Philanthropy News Digest, *Ford Foundation Announces Open Licensing Policy for Grantees* (2015), <http://philanthropynewsdigest.org/news/ford-foundation-announces-open-licensing-policy-for-grantees>.
225. *Philosophical Transactions of the Royal Society of London (or Phil. Trans.)*(1665),
<http://gallica.bnf.fr/ark:/12148/bpt6k55806g>.
226. PLOS, Open Access, <http://www.plos.org/about/open-access/>.
227. PLoS, *PLOS ONE is a Peer-Reviewed, Open Access Journal*, PLOS ONE.
228. PubChem, *PubChem*, <http://pubchem.ncbi.nlm.nih.gov/>.
229. Public Knowledge Project, *Open Journal System*, <http://pkp.sfu.ca/ojs/>.
230. PubMed, *PubMed*, National Institutes of Health (NIH),
<http://www.ncbi.nlm.nih.gov/pubmed/>.
231. QS TOPUNIVERSITIES, *Top Universities in the World 2014/15*(2014),
<http://www.topuniversities.com/university-rankings-articles/world-university-rankings/top-universities-world-201415>.
232. Queensland University of Technology, *QUT ePrints*, <http://eprints.qut.edu.au/>.
233. Quin Sarah, *Open Access by IOP Publishing* (2013),
http://australe.upmc.fr/access/content/group/fcMED_infoScient/seminaire_2012/UPMC_IOP_2012_11_anglais.pdf.
234. RCUK, *2014 Independent Review of Implementation*,
<http://www.rcuk.ac.uk/research/openaccess/2014review/>.
235. RCUK, *Open Access*, <http://www.rcuk.ac.uk/research/openaccess/>.
236. RCUK, *RCUK Aims & Objectives*, <http://www.rcuk.ac.uk/about/aboutrcuk/aims/>.
237. RCUK, *RCUK Policy on Open Access and Supporting Guidance* (2013),
<http://webcache.googleusercontent.com/search?q=cache:9mcesRxkWHgJ:www.rcuk.ac.uk/RCUK->

- prod/assets/documents/documents/RCUKOpenAccessPolicy.pdf+&cd=1&hl=en&ct=clnk&gl=uk.
238. RCUK, *RCUK Policy on Open Access*,
<http://www.rcuk.ac.uk/research/Pages/outputs.aspx>.
239. RCUK, *RCUK Position Statement on Access to Research Outputs*,(2005),
<http://www.rcuk.ac.uk/RCUK-prod/assets/documents/documents/2005statement.pdf>.
240. Relando Thompkins, *Ubuntu: A Humanitarian Philosophy*,
<http://www.relandothompkins.com/philosophy/>.
241. Research Information Network & Stephane Goldstein, *Expanding access to published research findings* (2011), <http://www.rin.ac.uk/news/press/expanding-access-published-research-findings>.
242. ROAR, *Registry of Open Access Repositories*
http://roar.eprints.org/cgi/roar_search/advanced?location_country=&software=&type=institutional&order=-recordcount%2F-date.
243. ROARMAP, *Registry of Open Access Repositories Mandatory Archiving Policies*,
<http://roarmap.eprints.org/>.
244. ROMEO SHERPA, *Publisher copyright policies & self-archiving*,
<http://www.sherpa.ac.uk/romeo/PDFandIR.html>.
245. Sahara Reporters, *Freedom Of Information: APC Chieftain Drags Alison-Madueke To Court*, Sahara Reporters (2014), <http://saharareporters.com/2014/09/24/freedom-information-apc-chieftain-drags-alison-madueketo-court>.
246. SciELO, *Scientific Electronic Library Online*, <http://www.scielo.br/>.
247. Scientific Publications: Free for all? Tenth Report of Session 2003-04
<http://www.publications.parliament.uk/pa/cm200304/cmselect/cmsctech/399/399.pdf>
(2004).
248. SIYAVULA, *Who We are Our Story*, <http://siyavula.com/who-we-are/our-story/>.
249. SIYAVULA, *Who We are Our Story*, <http://siyavula.com/who-we-are/our-story/>.
250. Sotunde Oluwabusayo, *World Bank Approves \$150m Grant For Education In Africa at*
http://www.ventures-africa.com/2014/04/world-bank-grants-150m-for-stem-education-in-africa/?utm_source=Friday%2C+25th+April+2014&utm_campaign=PR%2C+Africa+Business%2C+Africa+Economy%2C+Africa+Entrepreneur%2C+Ventures+Africa&utm_medium=email.

251. Springer, *Interview with Derk Haank on Open Access*,
<http://www.springer.com/societies+%26+publishing+partners/society+%26+partner+zone?SGWID=0-173202-12-489299-0>.
252. Springer, *Self-archiving policy*, <http://www.springer.com/gp/open-access/authors-rights/self-archiving-policy/2124>.
253. Springer, *Springer Acquires BioMed Central Group*,
<http://www.springer.com/authors/author+zone?SGWID=0-168002-12-563100-0>.
254. SSRN, *Announcing New LSN African Law*(2014),
<http://www.ssrn.com/update/lsn/lsnann/annA004.html>.
255. SSRN, *Social Science Research Network*.
256. SUSE, *About SUSE*, <https://www.suse.com/company/open-source/>.
257. Tate Williams, *Why Big Foundations Ganging up for Open Access is Important*, Inside Philanthropy(2015), <http://www.insidephilanthropy.com/home/2015/2/6/why-big-foundations-ganging-up-for-open-access-is-important.html>.
258. Tearfund, *Church Helps Nigeria Beat Ebola*(2014),
http://www.tearfund.org/en/latest/2014/11/church_helps_nigeria_beat_ebola/.
259. TESSA, *Primary Education Materials*, <http://www.tessafrica.net/>.
260. The Citizen, *Undermining Freedom of Information Act-Punch at*
<http://thecitizenng.com/public-affairs/undermining-freedom-of-information-act-punch/>.
261. The Economist, *Knowledge is Power: Do we need a new competition policy for the new economy?*
<http://www.economist.com/node/375597>.
262. *The History of Journal Publication*,
http://www.journal.au.edu/au techno/2008/jan08/journal113_editorial.pdf.
263. The InterAcademy Partnership IAP, *IAP Statement on Access to Scientific Information* (2003),
<http://www.interacademies.net/10878/13916.aspx>.
264. The Law Dictionary, *What is Framework*, <http://thelawdictionary.org/framework/>.
265. The Presidency, *Nigeria Extractive Industries Transparency Initiative (NEITI)*,
<http://neiti.org.ng/index.php?q=pages/about-neiti>.
266. The William and Flora Hewlett Foundation, *Open Educational Resources Initiative*(2005).
267. The William and Flora Hewlett Foundation, *Programs*,
<http://www.hewlett.org/programs>.

268. The World Bank, *Data & Statistics: Country Groups*,
<http://econ.worldbank.org/WBSITE/EXTERNAL/DATASTATISTICS/0,,contentMDK:20421402~menuPK:64133156~pagePK:64133150~piPK:64133175~theSitePK:239419,00.html>.
269. The World Bank, *Open Knowledge Repository*, <https://openknowledge.worldbank.org/>.
270. The World Bank, *World Bank Announces Open Access Policy for Research and Knowledge, Launches Open Knowledge Repository* (2012), <http://www.worldbank.org/en/news/press-release/2012/04/10/world-bank-announces-open-access-policy-for-research-and-knowledge-launches-open-knowledge-repository>.
271. Times Higher Education, *RCUK Open-Access Guidance Revised*(2013),
<http://www.timeshighereducation.co.uk/news/rcuk-open-access-guidance-revised/2002396.article>.
272. Treasury Board of Canada Secretariat Canada, *Information Management Policy*,
<http://www.tbs-sct.gc.ca/im-gi/imp-pgi/imp-pgi-eng.asp>.
273. U.S. Congress, *Declaration of Independence*(1776),
http://www.archives.gov/exhibits/charters/declaration_transcript.html.
274. U.S. Congress, *Fair Access to Science and Technology Research Act of 2013*, Congress.gov,
<https://www.congress.gov/bill/113th-congress/house-bill/708/text>.
275. UBEC, *Universal Basic Education Commission*, http://ubeconline.com/about_ubec.html.
276. Ubuntu, *The Ubuntu Story*, <http://www.ubuntu.com/about/about-ubuntu/>.
277. UK Open Access Case Study,
<http://www.pasteur4oa.eu/sites/pasteur4oa/files/resource/UK%20Case%20Study.pdf>.
 (2014).
278. UN News Centre, *Literacy vital for beating poverty and disease and reinforcing stability – UN*,
<http://www.un.org/apps/news/story.asp?NewsID=39485&Cr=literacy&Cr1#.USQBh1BP-Y>.
279. UNCTAD, Ministerial Round Table on "Science, Technology and Innovation for the Post-2015 Development Agenda" E/2014/31-E/CN.16/2014/4, UNCTAD(2014),
http://unctad.org/meetings/en/Presentation/CSTD_2014_STMT_Nigeria_Minister.pdf.
280. UNdata, *Nigeria*, <https://data.un.org/CountryProfile.aspx?crName=NIGERIA>.
281. UNESCO Institute for Statistics, *International Literacy Data*, UNESCO (2013),
<http://www.uis.unesco.org/literacy/Pages/data-release-map-2013.aspx>.

282. UNESCO, *Global Open Access Portal*, <http://www.unesco.org/new/en/communication-and-information/portals-and-platforms/goap/>.
283. UNESCO, *High Level Workshop on OpenupEd OER and MOOCs for the National Open University of Nigeria* (2014), <http://en.unesco.org/events/high-level-workshop-openup-ed-oer-and-moocs-national-open-university-nigeria>.
284. UNESCO, *Major push for adult and youth literacy in Nigeria*, UNESCO(2012), http://www.unesco.org/new/en/dakar/about-this-office/single-view/news/major_push_for_adult_and_youth_literacy_in_nigeria/.
285. UNESCO, *Massive Open Education Opportunities at the National Open University of Nigeria*(2014), http://www.unesco.org/new/en/communication-and-information/resources/news-and-in-focus-articles/all-news/news/massive_open_education_opportunities_at_the_national_open_university_of_nigeria/#.VVBqdvmqgko.
286. UNESCO, *Nigerian President pledges US\$5 billion towards National Science Foundation*, <http://www.unesco.org/new/en/natural-sciences/science-technology/sti-policy/country-studies/nigeria/nigerian-president-pledges-us5-billion-towards-national-science-foundation/>.
287. UNESCO, *Open Educational Resources at* <http://www.unesco.org/new/en/communication-and-information/access-to-knowledge/open-educational-resources/>.
288. UNESCO, *Open Educational Resources*, <http://www.unesco.org/new/en/communication-and-information/access-to-knowledge/open-educational-resources/>.
289. UNESCO, *Overview of OA in Nigeria* (2013), <http://www.unesco.org/new/en/communication-and-information/portals-and-platforms/goap/access-by-region/africa/nigeria/>.
290. UNESCO, *Overview of OA in Nigeria*. <http://www.unesco.org/new/en/communication-and-information/portals-and-platforms/goap/access-by-region/africa/nigeria/>
291. UNESCO, *The UNESCO Recommendation on Promotion and Use of Multilingualism and Universal Access to Cyberspace*, UNESCO (2004), http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/official_documents/Eng%20-%20Recommendation%20concerning%20the%20Promotion%20and%20Use%20of%20Multilingualism%20and%20Universal%20Access%20to%20Cyberspace.pdf.

292. UNESCO, *The University of Nairobi enhances education for all with Open Educational Resources* (2015) Media Services http://www.unesco.org/new/en/media-services/single-view/news/oerisation_at_university_of_nairobi_kenya/#.VdKbi_mqkko.
293. UNESCO, *UNESCO Adopts Open Access Policy* (2013), <http://openscience.com/unesco-adopts-open-access-policy/>.
294. UNIBEN, *University of Benin*, <http://www.uniben.edu/>.
295. UNISA, *Unisa Institutional Repository*, <http://uir.unisa.ac.za/>.
296. United Nations Department for Economic and Social Affairs, *Guidelines on Open Government Data for Citizen Engagement*, ST/ESA/PAD/SER.E/177, <http://workspace.unpan.org/sites/Internet/Documents/Guidelines%20on%20OGDCE%20May17%202013.pdf>.
297. United Nations UN, *Nigeria Makes Mild Stride in eGovernment Development Rnking*(2014), <http://www.unpan.org/PublicAdministrationNews/tabid/651/mctl/ArticleView/ModuleID/1555/articleId/42587/Default.aspx>.
298. United Nations UN, *Structure and Organisation*, <http://www.un.org/en/aboutun/structure/index.shtml>.
299. United Nations UN, *The Millennium Development Goals Report 2014* <http://www.un.org/millenniumgoals/2014%20MDG%20report/MDG%202014%20English%20web.pdf>.
300. United Nations, *The United Nations Committee of Experts on Public Administration (CEPA)*, <http://www.unpan.org/cepa.asp>.
301. United Nations, *UN at a Glance*, <http://www.un.org/en/aboutun/index.shtml>.
302. United Nations, *UN Public Administration Programme: Open Government Data and Services*, <http://www.unpan.org/DPADM/Themes/OpenGovernmentDataandServices/tabid/1536/language/en-US/Default.aspx>.
303. United Nations, *United Nations E-Government Survey 2014: E-Government For The Future We Want*, (2014), http://unpan3.un.org/egovkb/Portals/egovkb/Documents/un/2014-Survey/E-Gov_Complete_Survey-2014.pdf.
304. University of Illinois at Urbana-Champaign University Library, *The Cost of Journals*, <http://www.library.illinois.edu/scholcomm/journalcosts.html>.
305. University of Otago, *Institutional Research Repository Policy*, <http://www.otago.ac.nz/administration/policies/otago014455.html>.

306. Wellcome Trust Strategic Plan 2010-2020
http://www.wellcome.ac.uk/stellent/groups/corporatesite/@policy_communications/documents/web_document/WTDV027438.pdf. (2010).
307. Wellcome Trust, *Funding*, <http://www.wellcome.ac.uk/Funding/index.htm>.
308. Wellcome Trust, *History*, <http://www.wellcome.ac.uk/About-us/History/index.htm>.
309. Wellcome Trust, *Open access at the Wellcome Trust*, <http://www.wellcome.ac.uk/about-us/policy/spotlight-issues/Open-access/index.htm>.
310. Wellcome Trust, *Open Access Policy: Position statement in support of open and unrestricted access to published research*, <http://www.wellcome.ac.uk/About-us/Policy/Policy-and-position-statements/WTD002766.htm>.
311. Wellcome Trust, *Our vision*, <http://www.wellcome.ac.uk/Our-vision/index.htm>.
312. WHO, *About HINARI* (2014), <http://www.who.int/hinari/about/en/>.
313. WHO, *Publishers' Statement of Intent* (2014),
<http://www.who.int/hinari/statementofintent/en/>.
314. Wikipedia, *Delayed Open Access*, http://en.wikipedia.org/wiki/Delayed_open-access_journal.
315. Wikipedia, *Demographics of Nigeria*,
<http://en.wikipedia.org/wiki/Nigeria#Demographics>.
316. Wikipedia, *Edward Snowden*, http://en.wikipedia.org/wiki/Edward_Snowden.
317. Wikipedia, *Hybrid Open Access*, http://en.wikipedia.org/wiki/Hybrid_open-access_journal.
318. Wikipedia, *List of countries by literacy rate*,
http://en.wikipedia.org/wiki/List_of_countries_by_literacy_rate.
319. Wikipedia, *Music of Nigeria*,
http://en.wikipedia.org/wiki/Music_of_Nigeria#The_1950s.2C_.2760s_and_.2770s.
320. Wikipedia, *Nigerian Federal Ministry of Education*,
http://en.wikipedia.org/wiki/Nigerian_Federal_Ministry_of_Education.
321. Wikipedia, *Occupy Nigeria* (Wikipedia 2012),
https://en.wikipedia.org/wiki/Occupy_Nigeria.
322. Wikiversity, http://en.wikiversity.org/wiki/Wikiversity:Main_Page.
323. William & Flora Hewlett Foundation, *Commitment to Open Licensing*,
<http://www.hewlett.org/about-us/values-policies/commitment-open-licensing>.

324. WIPO, Historic Treaty Adopted, Boosts Access to Books for Visually Impaired Persons Worldwide, Marrakesh/Geneva, June 27, 2013, PR/2013/741
http://www.wipo.int/pressroom/en/articles/2013/article_0017.html (WIPO ed., 2013).
325. WIPO, Member States Adopt a Development Agenda for WIPO, Geneva, October 1, 2007, PR/2007/521
http://www.wipo.int/pressroom/en/articles/2007/article_0071.html (2007).
326. WIPO, *The 45 Adopted Recommendations under the WIPO Development Agenda*,
<http://www.wipo.int/ip-development/en/agenda/recommendations.html>.
327. WIPO, *The Third Access to Knowledge (A2K3) Conference*
http://www.wipo.int/wipo_magazine/en/2008/06/article_0007.html,
 WIPOMAGAZINE 2008.
328. WIPO, *What is Intellectual Property*, <http://www.wipo.int/about-ip/en/>.
329. WIPO, *WIPO Administered Treaties*, <http://www.wipo.int/treaties/en/>.
330. World Bank, *Poverty & Equity Data* (2015),
<http://povertydata.worldbank.org/poverty/home/>.
331. World Bank, *Poverty Overview* (2015),
<http://www.worldbank.org/en/topic/poverty/overview>.
332. World Bank, World Bank Announces Open Access Policy for Research and Knowledge, Launches Open Knowledge Repository, Press Release No:2012/379/EXTOP (2012).
333. World Health Organization, *WHO declares end of Ebola outbreak in Nigeria*(2014),
<http://www.who.int/mediacentre/news/statements/2014/nigeria-ends-ebola/en/>.
334. World History, *History of Nigeria*,
<http://www.historyworld.net/wrldhis/plaintexthistories.asp?historyid=ad41>.
335. Writing Commons, *About*, <http://writingcommons.org/about>.