

Explaining the relations between culture, structure
and agency in lecturers' contribution and non-
contribution to Open Educational Resources in a
Higher Education Institution

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Abstract

Despite the existence of many successful initiatives to promote the sharing and use of Open Educational Resources (OER), sharing and use of OER is not a widely accepted practice in higher education. The reasons for lecturers' choices on whether or not to contribute OER are poorly understood. This thesis develops a theoretically-based explanation of both why lecturers contribute and why they do not. The thesis addresses the question: How do the relations between culture, structure and agency influence lecturers' contribution and non-contribution of OER in a higher education institution? A mixed methods approach was used to gather quantitative (questionnaires) and qualitative (interviews) data. Fourteen lecturers from the University of Cape Town (UCT) were interviewed (two from each of its seven faculties), seven who had contributed OER and seven who had not. The analysis adopted an Activity Theory framework to highlight the enablers and barriers to contribution present in the institutional system. The Social Realism of Margaret Archer (1995, 2003, 2007a, 2012) was used to explore the power of academics' agency and their internal conversations arising from their personal concerns in deciding on their courses of action.

This study illustrates how capturing lecturers' internal conversations and analysing how they think about their social contexts is valuable not only in the context of OER but also as a way of understanding their role as social actors more generally.

Analysing the relations between culture, structure and agency in institutions explains why some institutions are slow to change and/or prefer to maintain current practices. At UCT, where institutional culture allows academic freedom of choice and structure supports that choice, it is the academic agents themselves who hold the power of action to contribute or not to contribute OER. Academics have the power to change their practice if it makes sense in terms of their projects, the activities that they are involved in and their concerns. Thus in this context, the long term sustainability of the OER movement rests firmly on the willingness of individual lecturers to share and use OER. By understanding the institutional context in which the individual is placed, OER can be encouraged appropriately.

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Table of Contents

Abstract.....	ii
Acknowledgements.....	iii
List of Figures.....	ix
List of Tables.....	xi
List of Abbreviations and Acronyms.....	xii
1 Chapter 1: Introduction.....	1
1.1 Introduction.....	1
1.2 Background.....	1
1.3 Key debates.....	2
1.4 Rationale: Theoretical gap.....	3
1.5 Case study: OER at the University of Cape Town (UCT).....	5
1.6 Research objectives.....	6
1.7 Research questions.....	7
1.8 Brief overview of methodology.....	8
1.9 Selection of participants and artefacts.....	9
1.10 Data analysis.....	10
1.11 Significance of this study.....	10
1.12 Organisation of this thesis.....	11
2 Chapter 2: Literature Review.....	13
2.1 Introduction.....	13
2.2 Open movement.....	14
2.3 Open development.....	15
2.3.1 Open Source Software (OSS).....	15
2.4 Open infrastructure.....	16
2.4.1 Open licensing.....	16
2.4.2 Open repositories.....	16
2.5 Open Content.....	17
2.5.1 Learning Objects.....	17
2.5.2 Open Access (OA).....	18
2.5.3 Open Educational Resources (OER).....	19

2.5.4	MOOCS	20
2.6	Participation	22
2.7	Contribution	22
2.8	Open scholarship.....	22
2.9	Emergence of OER	23
2.9.1	History of OER	23
2.9.2	Types of OER	23
2.9.3	Purpose of OER	25
2.10	Issues impacting on OER contribution	26
2.11	Culture of Open.....	26
2.11.1	Global culture of Open.....	26
2.11.2	The potential of OER	27
2.11.3	Global enablers of OER.....	27
2.11.4	Awareness	28
2.11.5	Sustainability.....	28
2.12	Critiques of OER.....	30
2.13	Institutional culture of Open	31
2.13.1	Institutional culture	31
2.13.2	Social context.....	33
2.14	Structure of Open.....	34
2.14.1	Global structures of Open	34
2.14.2	Institutional structural factors	36
2.15	Other significant contextual and structural factors	41
2.15.1	Pedagogy and OER	42
2.15.2	Quality of OER	45
2.16	Agency and Open.....	48
2.16.1	Motivation.....	48
2.16.2	Time and effort.....	50
2.16.3	Redundancy.....	50
2.16.4	Teacher attributes.....	50
2.17	Empirical studies in the Global South.....	51

2.17.1	African OER projects and research.....	51
2.17.2	South African OER projects	54
2.18	The context for this study.....	54
2.18.1	OER research in South Africa.....	56
2.19	Types of OER studies	57
2.20	Theoretical approaches adopted in prior OER studies	58
2.21	Pilot study	60
2.22	Summary of Chapter 2	62
3	Chapter 3: Theoretical framework	66
3.1	Introduction.....	66
3.2	Activity Theory.....	66
3.2.1	Contradictions	69
3.2.2	Agency in AT.....	71
3.3	Challenges of AT	72
3.4	Critical Realism	74
3.5	Social Realism	74
3.5.1	Structure and Agency.....	77
3.5.2	Mediation process	78
3.5.3	Life Courses	81
3.5.4	Internal conversations	83
3.5.5	Reflexivity compared.....	90
3.5.6	Internal conversations and Morphogenesis/Morphostasis	92
3.6	Challenges of SR.....	92
3.7	Conceptual framework of the study	93
4	Chapter 4: Research Design.....	96
4.1	Introduction.....	96
4.2	The nature of inquiry: Critical realist approach	96
4.3	Mixed methods approach.....	98
4.4	Methods of data collection/generation	99
4.4.1	Questionnaires.....	99
4.4.2	Interviews.....	100

4.5	Supplementary Documents	101
4.6	Selection of participants and artefacts.....	103
4.7	Data analysis	104
4.7.1	Questionnaires.....	104
4.7.2	Interviews.....	105
4.7.3	Analytical codes.....	106
4.8	Validity	107
4.9	Ethics.....	108
5	Chapter 5: Findings.....	110
5.1	Introduction.....	110
5.2	Part 1: Does global and/or institutional culture influence lecturers' contribution of OER, and if so, how?	111
5.2.1	Awareness	111
5.2.2	Institutional culture	114
5.2.3	Influence of the social context on OER contribution.....	118
5.2.4	Hindrances to contributing across the institution.....	120
5.3	Part 2: Do global and institutional structures influence lecturers' OER contribution and non-contribution, and if so, how?.....	121
5.3.1	Legal and copyright issues.....	122
5.3.2	Institutional Policy	128
5.3.3	Institutional recognition or reward for the contribution of OER	130
5.3.4	Technical support and use.....	134
5.3.5	Pedagogical issues.....	137
5.3.6	Lecturers' roles in the institution	142
5.3.7	Time and effort.....	144
5.3.8	Quality of OER issues.....	145
5.3.9	Summary of the influence of global and institutional structures and OER contribution ..	158
5.4	Part 3: What agency do lecturers display in relation to OER contribution and non-contribution?	158
5.4.1	Introduction.....	158
5.4.2	Internal conversations	158
5.4.3	Interviews.....	160

5.4.4	Lecturers relation to constraints and enablements in their backgrounds/life stories.....	170
5.4.5	Lecturers and dovetailing/ <i>modus vivendi</i> (practices).....	177
5.4.6	Does contribution of OER fit into your concerns?.....	181
5.4.7	Rating of findings.....	183
5.4.8	Summary of agency of lecturers	188
6	Chapter 6: Discussion	189
6.1	Introduction.....	189
6.2	The role of policy in a collegial, research intensive institution	190
6.3	Traditional inwardly focused vs outwardly focused Open pedagogy.....	192
6.4	Constraints of time.....	196
6.5	Legal issues: ‘all a little in the dark...’.....	197
6.6	The Quality of OER.....	199
6.7	Open scholarship: technology fluency and social media	203
6.8	The role of culture: global and institutional (departmental and collegial).....	205
6.9	Technical infrastructure and support.....	208
6.10	Extrinsic motivation: Recognition and reward for OER contribution	208
6.11	Agency in contribution and non-contribution.....	210
6.12	Summary of Discussion	211
6.13	Theoretical observations in contrast to Archer	213
6.14	Summary.....	214
7	Chapter 7: Conclusion and recommendations.....	215
7.1	Global and/or institutional culture influences upon lecturers’ contribution of OER	216
7.1.1	Global culture.....	216
7.1.2	Institutional culture	216
7.2	Global and/or institutional structures that influence lecturers contribution or non-contribution	217
7.2.1	Campus-based classroom structures	217
7.2.2	Influence of quality of OER concerns on contribution and non-contribution.....	218
7.2.3	Unexpected findings	219
7.2.4	Understanding of copyright legislation and the awareness of Creative Commons influence upon contribution.....	219
7.2.5	Enablements and constraints of institutional policy on OER contribution	220

7.2.6	The role of institutional recognition and reward mechanisms in contribution.....	221
7.3	Lecturers' agency in relation to contribution.....	221
7.4	Theoretical tools for examining the interrelationships between culture, structure and agency in lecturers' contribution.....	223
7.5	Relations between global and institutional culture, global and institutional structures and individual agency and their influence on contribution.....	223
7.6	Implications of the research.....	226
7.7	Recommendations.....	228
7.7.1	University management/administration.....	228
7.7.2	Academic developers.....	229
7.7.3	Librarians.....	229
7.7.4	OER Practitioners.....	230
7.7.5	Contributors of OER.....	230
7.8	Future Research.....	230
8	References.....	232
9	Appendix.....	248
	Appendix A: Questionnaire 1.....	248
	Appendix B: Questionnaire 2 (including ICONI).....	252
	Appendix C: Pilot Interview questions.....	259
	Appendix D: Interview questions.....	261
	Appendix F: Open Access Policy Open Access Policy as adopted by Council, March 2014.....	268
	Appendix G: Letter of appointment.....	269
	Appendix H: Performance appraisal.....	270
	Appendix I: UCT Teaching and Learning strategy.....	271
	Appendix J: Example of coding in Excel (Legal theme).....	272
	Appendix K: Example of manual coding (Quality theme).....	273
	Appendix L: Consent form.....	275

List of Figures

Figure 2-1: Organisational culture types (McNay 1995).....	32
Figure 2-2: Summary of concepts in Chapter 2.....	63
Figure 3-1: The Activity system adapted from Engeström (1987:87).....	67
Figure 3-2: Morphogenetic sequence (Archer 2012:52).....	75

Figure 3-3: Ultimate concerns of agents (Archer 2007a)	79
Figure 3-4: How the subject views itself as social object (Archer 2003:124)	81
Figure 3-5 : Diagram of the use of AT and Social Realism.....	94
Figure 5-1: Lecturers concerns about infringing copyright.....	123
Figure 5-2: Contradictions around copyright law	125
Figure 5-3: Lecturers views on loss of IP	126
Figure 5-4: Lecturers' views on whether policy would enable OER contribution	129
Figure 5-5: Contradictions around policy at UCT	130
Figure 5-6: Results on social media use by participants	136
Figure 5-7: Contradictions observed from the pedagogy or OER	142
Figure 5-8: Plane illustrating overlap between roles and lack of pedagogy.....	143
Figure 5-9: Contradictions regarding teaching roles and time	144
Figure 5-10: Lecturers views on Quality of OER.....	146
Figure 5-11: Readiness of teaching materials for contribution as OER.....	151
Figure 5-12: Primary, secondary and Tertiary contradictions about the quality of OER.....	156
Figure 5-13: Quaternary contradiction that occur with the introduction of a Quality check.....	157
Figure 5-14: AT systems and top concerns	186
Figure 5-15: Top concerns of contributors.....	187
Figure 5-16: Top concerns of non-contributors of OER.....	188
Figure 6-1 : Interplay of key factors for all participants	189
Figure 6-2: Readiness of teaching materials and lack of associated pedagogy	195
Figure 6-3: Concerns about quality and pedagogy cluster with no social media use.....	205
Figure 7-1: Relations between culture, structure and agency influencing OER contribution.....	225
Figure 7-2: Relations between culture, structure and agency (non-contribution).....	226

List of Tables

Table 2-1: OER initiatives adapted from Mawoyo and Butcher (2012).....	38
Table 3-1: Engeströms' 4 levels of contradictions:.....	70
Table 3-2: Modes of reflexivity in relation to cultural, structural and agential factors.....	91
Table 4-1: Matrix of concepts, research, data generation methods and supplementary documents	102
Table 4-2: Engeström's four levels of contradictions in activity systems	106
Table 5-1: Contributors of OER.....	110
Table 5-2: Non-contributors of OER	111
Table 5-3: Lecturers understanding of Open education.....	112
Table 5-4: Lecturers understanding of OER.....	113
Table 5-5: Lecturers' views on if UCT's institutional culture supports or is at odds with OER contribution.....	115
Table 5-6: All lecturers' technical fluency	134
Table 5-7: Lecturers view on the pedagogy of OER.....	138
Table 5-8: Results* of ICONI questionnaire.....	159
Table 5-9 : Ways in which modes of reflexivity relate to agential factors (adapted from Archer 2003,2007).....	165
Table 5-10: Modes of reflexivity and stances towards constraints and enablements	171
Table 5-11: Modes of reflexivity and approval.....	174
Table 5-12: Dovetailing interests: ways in which modes of reflexivity mediate structural and cultural factors	178
Table 5-13: Comparisons of concerns from findings (smaller numbers = higher rating)	185
Table 6-1: Ways in which the dominant two modes of reflexivity represented in this study mediate structural, cultural and agential factors in relation to key themes.....	212

List of Abbreviations and Acronyms

AR	Autonomous Reflexive
AT	Activity Theory
AVU	African Virtual University
BY NC	Attribution Non-commercial
CC	Creative Commons
CEPs	Cultural Emergent Properties
CILT	Centre for Innovation in Learning and Teaching
COL	Commonwealth of Learning
CR	Communicative Reflexive
DVC	Deputy Vice Chancellor
FR	Fractured Reflexive
HE	Higher Education
HEI	Higher Education Institution
IP	Intellectual Property
MR	Meta-Reflexive
MOOC	Massive Open Online Course
MIT OCW	Massachusetts Institute of Technology OpenCourseWare
OA	Open Access
OEC	Open Education Consortium
OER	Open Educational Resources
OSS	Open Source Software
ROER ₄ D	Research into Open Educational Resources for Development in Post-secondary Education in the Global South
SEPs	Structural Emergent Properties
SR	Social Realism
UCT	University of Cape Town
UNESCO	United Nations Educational, Scientific and Cultural Organisation
VC	Vice Chancellor
SAIDE	South African Institution for Distance Education

Chapter 1: Introduction

1.1 Introduction

This study investigates lecturer practices in response to the introduction of an Open Educational Resources (OER) platform at the University of Cape Town (UCT). This thesis is most concerned with uncovering the causal mechanisms that may explain the actions of lecturers in relation to whether or not they choose to contribute a selection of their teaching materials as OER to the platform.

1.2 Background

The challenges facing Higher Education (HE) globally are: increasing demand for education, insufficient higher education institutions (HEIs), increasing cost of HE and textbooks as well as increasing competition for the best students and lecturers. Daniel, Kanwar & Uvalic-Trumbic (2009) describe these issues as the “iron triangle” of access, cost and quality (in terms of fulfilling the mission of universities). They suggest that the elements are interlinked. For example, if cost increases, quality may increase, but access will decrease to HE. There is variable quality in HE especially in countries in the Global South where there is a tension between increasing access while maintaining quality (Daniel et al., 2009). The United Nations Educational Scientific and Cultural Organisation (UNESCO) estimated that in 2025, over 98 million students will graduate from school and require a tertiary education. According to some estimates, four large campuses (to accommodate 30 000 students each) will need to be built every week for the next 15 years (Matkin, 2012) if the need for tertiary education is to be met.

The use of OER is considered as one of the ways of responding to some of these challenges. The term ‘Open Educational Resources’ was coined by UNESCO in 2002 (UNESCO, 2002). In the 2012 Paris OER declaration, OER are defined 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. Open licensing is built within the existing framework of intellectual property rights as

defined by relevant international conventions and respects the authorship of the work”
(*Paris OER Declaration, 2012*).

The materials in this definition could include a range of teaching materials from entire courses to an image or infographic, and Open licensing would most typically be Creative Commons (CC), but could also include a GNU General Public Licence or similar licence.

Internationally there is an increase in the number of HEIs sharing a selection of their teaching materials as OER (Allen & Seaman, 2012). OER can be used by other lecturers, self-learners, students, teachers, governments and civil society free of an access charge. The potential benefits of OER are advocated across many countries and institutions throughout the world (West & Victor, 2011).

The OER movement is situated in a broader Open culture built upon a growing “culture of contribution” within institutions and is no longer a “nascent movement” (Atkins, Brown & Hammond, 2007). It is now said to have reached an “inflection point”, where the broader changes in education together with OER have the potential to change the way education can now be delivered (Matkin, 2012).

1.3 Key debates

Despite OER being available for more than 10 years, there does not appear to be a noticeable impact on HE (Kortemeyer, 2013). The promised benefits of OER have not been realised for the vast majority of HEIs. Although thousands of free resources now exist, lecturers are not taking up this opportunity to use them in their teaching and instead continue to use expensive textbooks and copyrighted publications (Hattaka, 2009). Lecturers store their teaching materials in password restricted course management systems and do not share these materials with their peers or other students outside of their classrooms. An understanding of this lack of participation and adoption is key to the success or failure of OER. For OER to deliver on their promise they are “dependent on critical mass and large-scale participation” from lecturers, students and other learners (Reed, 2012).

As with any movement that requires a change in practice within an organisation, the OER movement faces many challenges. There are several key debates around sustainability (Hodgkinson-Williams & Donnelly, 2010; Kanwar, Kodhandaraman & Umar, 2010). Initiating and sustaining a successful OER project requires funding and a vision as to why the institution should make its materials freely available (Hodgkinson-Williams et al., 2013). The introduction of OER often necessitates a reconsideration of systemic organisational issues (Clements & Pawlowski, 2012; Bossu & Tynan, 2011). Bossu and Tynan (2011) suggest that without support in the form of policy and resources from the institution, “the movement may indeed be a passing trend” (2011:4). Producing OER will most likely increase the workload of already overworked lecturers, and the result may be “few or no opportunities to venture into the OER movement” (Bossu & Tynan, 2011:3).

The quality of OER has been mentioned by lecturers as a barrier to contribution and use (Pegler, 2012; Hatakka, 2009; Stacey, 2007). The OER quality debate has two sides. There is a perception that because OER are free they may be of poorer quality, and therefore, there is a need for quality assurance of OER. Alternatively, there is an assumption that OER are of good quality because the resources themselves are exposed to “diversified expertise and perspectives” (Stacey, 2007:11).

The lack of associated pedagogy (Sclater, 2010a; Davis et al., 2010) of OER is seen as a potential downfall. There is a concern that OER are often stand-alone content without facilitator or peer support and are therefore limited in their use. These challenges may or may not influence lecturers’ decisions to contribute or not to contribute, and this is the core area of research in this thesis.

1.4 Rationale: Theoretical gap

Much of the literature on OER is advocacy-based and adopts an intuitive approach with little theoretical rigour (Rolfe, 2012; Reed, 2012). This lack of theoretical engagement has been highlighted as a gap where further work needs to be done (Masterman & Chan, 2015). Overall, the literature has focused on establishing lists of barriers and enablers with little indication of which factors are more important or how they relate to each other (Beggan, 2010). A theoretical approach is needed to explain the relationship between factors in institutions. The gap pertains

to not fully understanding the relationship between cultural norms, institutional structures and lecturers' individual actions.

It is not clear what motivates lecturers to contribute a collection of their teaching materials as OER; it could be an awareness of a global Open culture and the benefits of sharing, an institutional climate, a personal decision or a combination of these factors. Likewise, it is also not clear why lecturers opt out of contributing OER and whether their reasons are related to a culture that does not advocate Openness, an institution that does not support sharing, a personal choice or an amalgamation of these factors.

Activity Theory (AT) has been used in prior studies to explain some of the choices lecturers make about OER use and/or contribution (McAndrew, 2006). AT will be used in this study to highlight specific barriers and concerns and locate these within the institutional system. For this study, AT was selected as a useful framework and was tested in a small pilot study where six lecturers were interviewed on their contribution to OER. The pilot study showed that AT is a strong analytical tool as it provides a systematic approach to analysing empirical data. In particular, it is a useful means to highlight emerging contradictions in the system and to describe aspects of global Open culture, institutional culture and/or structure that may or may not influence lecturers' practices. However, there are concerns that AT does not adequately explain the actions or agency of the individual within the prevailing culture and established structures (Wheeahan, 2007).

Wheeahan (2007:5,13) provides a useful critique of AT and suggests that it "over-socialises the individual" and it does not have a "robust theory of the individual". It does seem that Engeström is working towards a more rigorous examination of agency, which is promised to surface over the next few years (Engeström, 2011; Engeström, 2009). Wheeahan's (2007) critique highlights some of the shortcomings of AT and suggests that a theory that helps explain social transformation could productively be applied alongside AT. Archer's (1995) morphogenetic realist social theory can be used with AT to address some of these shortcomings. Wheeahan (2007) argues that Archer's theory underpinned by the philosophy of critical realism can complement AT in order to take into account individual agency alongside culture and structure.

A theory that enables an explanation of the cultural context, the structural context, the individual and the relations or interplay among them is a requirement of this study. Archer has theorised the relationship between structure, culture and agency and provides tools for researchers to analyse the actions of agents through their internal conversations. Archer's (2003) well-established morphogenetic cycle is used here to explain transformation (or lack of transformation) in society. Social realism (SR) is used to enhance aspects of AT, to use Archer's own term, to 'under labour' AT, specifically the role of the Subject (in this case the lecturers) as agents. These theories form the basis of a dialectical approach that can be used to explore connections between all elements of a system as well as exploring the 'inner conversations' of the agents in the system.

1.5 Case study: OER at the University of Cape Town (UCT)

The University of Cape Town (UCT) provides a unique location in which to investigate the introduction of OER. Although UCT is located in South Africa, a developing country, it has aspirations of being a world-class, research-intensive institution. It is rated 141st in the world and 1st in Africa (Geldenhuys, 2014). It is the quality of research and academic excellence that has enabled the institution to score so highly on these international rankings.

UCT launched its OER directory, UCT OpenContent (UCT OC), on 12 February 2010. In July 2014, an institutional repository (OpenUCT) replaced the directory, and it includes OER from UCT OC, Open access publications, theses and dissertations. As of July 2015, OpenUCT included over 300 OER which consist of over 1000 downloadable items. To date, approximately 300 staff members (this number includes all collaborations where multiple authors appear on resources) have added teaching materials as OER. UCT has around 5000 staff members of whom about 44% are academics.

The impetus for the study arose from my day-to-day work experience in the Centre for Innovation in Learning and Teaching (CILT) as the manager of UCT OC and a range of institutional grants to support the development of OER. In my Open education advocacy and awareness work, I have noted that many lecturers are reluctant to share teaching materials beyond their classrooms. Voluntarily adding teaching materials to OpenUCT might involve a change of practice for lecturers, especially for those who are not in the mode of sharing their materials with others. It is

not clear whether or not OpenUCT will continue to grow and become a part of everyday academic practice.

UCT recently approved an Open Access policy (August 2014) that encourages lecturers to add their Open Access journal articles and other scholarly materials (which includes OER) to the OpenUCT repository. There is some support from members of the senior leadership group for OpenUCT, and re-allocation of the management of OpenUCT from CILT to the UCT library has assisted with the institutionalisation of OER. Although there is a growing awareness of Open access among UCT librarians, it is not yet clear whether the OER side of the repository can be sustained. During an “Open education week” (a week dedicated to open education awareness) welcome speech on the 6 March 2012, UCT’s Vice Chancellor (VC) Dr Max Price declared his support for all the Open initiatives at UCT. He astutely noted that staff attitude and willingness to change is a key challenge and that it was important for those who support OER to show “that it works and is valued” (Price, 2012). He added that it will be important in the future to think of ways of “creating incentives for lecturers to be involved” and to find tools “akin to a citation system to reflect who is using an OER” and link these citations to promotion and other forms of award (Price, 2012).

Despite the VC’s recognition of the importance of OER, the majority of lecturers at UCT do not contribute their teaching materials. The basic proposition in this thesis is that if lecturers do not contribute (and continue contributing) resources as part of their academic practice, all OER at UCT may falter; “without academic buy-in OER has no future” (Browne et al., 2010). Rolfe concludes that “central to sustainability is the community and growth of a critical mass of interested individuals” (2012:7).

1.6 Research objectives

The research objectives are twofold: to contribute to the existing empirical work on OER, specifically on OER practices in the Global South, and to explore possible explanations for lecturers’ choices to contribute OER to a public platform or not. Drawing on empirical data collected from 14 individuals, this thesis attempts to develop a rich and deep explanation of the practices of lecturers and also the wider social and cultural institutional contexts in which they work. This explanation will be on a case-by-case basis, and the intention is not to generalise

across all contexts at the university, as each department or faculty is likely to have different factors of influence. This study examines individual motivation and agency and the structures that may or may not influence these individuals. In order to provide this explanation, the interplay between the prevailing culture both within and beyond the institution that may encourage or inhibit OER contribution, the supporting or inhibiting structures of the institution and academic contribution and non-contribution of OER needs to be understood. Empirical evidence will be drawn upon in order to explain the role of culture, structure and agency in lecturers' contribution or non-contribution of OER in an institutional repository. This work also illustrates the contribution of AT and SR to identify and explains the causal mechanisms underlying lecturers' choices in a particular cultural and structural context.

This research aims to contribute findings that can inform faculty and/or managers in HEIs across the globe who are planning to establish or are evaluating the uptake of OER repositories. It seeks to identify the key factors involved in OER contribution and non-contribution. This research seeks to be useful in various contexts, especially in other institutions with a similar research-intensive culture to that of UCT. The research may also be useful for other institutions in Africa and the Global South that have similar resource constraints, community needs and pressing issues around OER.

The aim of this study is not to suggest that contributing OER is a prerequisite for all lecturers and is suited to all teaching materials and domains. This study does not aim to compare educational or intellectual practices but rather to understand the influence or lack of influence the cultural and structural contexts have on lecturers' choices to contribute OER or not.

1.7 Research questions

The overarching question that guides this study is: How do the relations between culture, structure and agency influence lecturers' contribution and non-contribution of OER in a HEI?

Sub questions:

1. Does global and institutional culture influence lecturers' contribution or non-contribution to OER, and if so, how?
 - 1.1 In what ways does global culture influence OER contribution?
 - 1.2 In what ways does institutional culture influence OER contribution?

2. Do global and institutional structures influence lecturers' OER contribution and non-contribution, and if so, how?

2.1 Does the campus based structure of classroom teaching influence lecturers contribution or non-contribution of OER?

2.2 Do concerns about the quality of OER influence lecturers' contribution and non-contribution of OER?

2.3 Does the understanding of copyright legislation and the awareness of CC influence contribution of OER, and if so, how?

2.4 Does institutional policy enable or constrain OER contribution, and if so, how?

2.5 Do institutional recognition and reward mechanisms enable or constrain OER contribution, and if so, how?

3. What agency do lecturers display in relation to OER contribution or non-contribution?

4. What theoretical tools can assist in examining the interrelationships between culture, structure and agency in lecturers' contribution or non-contribution of OER?

1.8 Brief overview of methodology

This study adopts a critical realist approach to an institutional case study. Realists argue for a stratified basis for social reality in the form of culture, structure and agency. Therefore in this study, the institutional culture will be examined separately from the institutional structures and lecturers' agency. This methodological approach is known as analytical dualism and is suggested as a way of guarding against conflating structure and agency (Bhaskar, 1986). The purpose of this study is to research agency and the structure and culture that surround the individual social actor. Therefore the realist approach allows for this analytical separation between agency and structure/culture. It is only once they have been separated that the researcher can then explain the relations between them and these relations will be explained in Chapter 6. This analytical dualism is supported by Archer et al.: "explanation must attend to both structure and agency, and any explanation which attends to either exclusively is probably going to be inadequate" (Archer et al., 1999:12). Archer (2007b) uses critical realism to 'under labour' her morphogenetic theory which she calls SR. She differentiates herself from critical realists by saying her theory is more applicable to social contexts, and importantly for this study, her theory has more to say about the agent as a person and why they might make the decisions they do.

This study rests on a critical realist ontology that recognises an independent reality. In other words: “there is a world existing independently of our knowledge of it” (Sayer, 2000:2).

Participants in this study deliberate reflexively on their social context. These reflections can be subjective, revisable or uncertain; this is what critical realists refer to as fallible (Bhaskar, 1975). In addition, the realist notion of causality is fundamental to this study as it recognises that causal powers may or may not be triggered in any given circumstance.

A mixed methods approach was used that included quantitative and qualitative data. Most of the data came from interview transcriptions and were qualitative in nature. The study used an interactive design where collection and analysis of data informed further steps. This process included two rounds of data collection over a period of two years. A questionnaire and in-depth semi-structured interviews were undertaken, and the analysis was used in the development of subsequent questionnaires one year later. University strategy documents, policy documents and academic performance guidelines were also described in order to contextualise findings under relevant themes.

I adopt a case study approach. The aim of these cases is: “to catch the complexity of (each) single case” (Stake, 1995). The study does not attempt to claim findings generalisable across all HEIs, but it has the ambition to reveal the cultural, social and agential influences on OER contribution and non-contribution that have previously been unexplored.

1.9 Selection of participants and artefacts

The focus of this study is to understand the contexts and explain the motivations of a group of 14 lecturers from UCT. UCT has seven faculties, and two lecturers were interviewed from each faculty. The sample included seven individuals who had contributed OER and seven who had not.

Purposive sampling (a non-representative subset of some larger population; Cohen, Manion & Morrison, 2007) was used to identify these 14 individuals. Purposive sampling allows the researcher to “handpick the cases on the basis of their (researcher's) judgement of their typicality or possession of the particular characteristics being sought” (Cohen, Manion & Morrison, 2007:115). Maxwell (2008) lists uses of purposive sampling that are relevant to the choice of this

sampling strategy in this research which include capturing a range of variation or heterogeneity in the population and that the sample can be selected to allow for the examination of cases that are critical for the theories used in the study.

1.10 Data analysis

The first set of interviews was analysed as soon as they were transcribed. Maxwell (2008) highlights that a key principle of qualitative research is that analysis and data collection should be simultaneous so that the researcher can focus future interviews and data collection in order to decide how to test emerging conclusions. The second point of data collection included two questionnaires which included new questions in order to monitor any changes that may have occurred over time.

Policy documents and other sources of information about Open culture and the broader context have been described and relevant pieces extracted from them in order to triangulate data to reduce the risk that the conclusions “reflect only the systematic biases or limitations of a specific method” (Maxwell, 2008).

Microsoft Excel was used to store, organise, manage and reconfigure the data for analysis and reflection. Data was coded into organisational categories according to pre-determined themes that emerged in the literature and that emerged from the themes in the data. It was also sorted into theoretical codes: AT nodes according to Engeström's framework (Engeström & Sannino, 2010; Engeström, 1987) and modes of reflexivity according to Archer (2003, 2007a, 2012).

1.11 Significance of this study

This study contributes to the existing body of knowledge in four key ways. It illustrates how AT can be used to describe the elements of institutions and the contradictions that emerge when a new tool (in this case an OER repository) is introduced. Identifying contradictions can lead to supportive environments where innovation and collaboration are encouraged. It is not always obvious why there is resistance in HEI's to take on a new technology (or a new tool or affordance such as OER) or a new style of teaching. Pinpointing the areas where contradictions emerge can result in the necessary adjustments to move the change forward.

The study demonstrates how establishing lecturers' internal conversations and analysing how they think about their social contexts is valuable not only in the context of OER but also as a way of trying to understand why lecturers do what they do. Archer's (2003, 2007a, 2012) (SR) explains lecturers' choices in this study and foregrounds their agency. Agency is sometimes overshadowed by socio-cultural factors, and it has, until now, been somewhat neglected in earlier studies. Archer's framework enables a deeper understanding of why lecturers make particular choices as they follow their concerns.

The framework highlights that understanding the relations between culture, structure and agency in institutions explains why some institutions are slow to change and/or prefer to maintain current practices. A particular institutional culture will influence its governance and the day-to-day work of lecturers. If a culture allows lecturers freedom to choose what they would like to invest in, change may be incremental. The balance of power in a research intensive institution, such as UCT, dictates the path of transformation. At UCT, structures are in place to enable the institution, but in this case culture lags behind, slowing the pace of change.

The framework recognises that diversity is real and should not be ignored. It recognises that each lecturer's story has unique features. Nevertheless, knowing why lecturers choose to contribute can potentially help university management, OER researchers and practitioners to support and enable the lecturers. Understanding why others do not contribute provides an explanation of why the OER movement has not been fully embraced across HE.

The argument raised in this study is that when culture allows academic freedom of choice and a structure is in place that can support academic choices, then it is the agents themselves that hold the power of action. The agents have the power to change their practice if it makes sense in terms of their concerns and their projects or activities that they are involved in.

1.12 Organisation of this thesis

Chapter 2 discusses the literature on Open Education broadly and then focusses more specifically on OER. The results of a pilot study where AT was tested as a possible theoretical tool are outlined.

Chapter 3 introduces the relevant theoretical approaches used are introduced. The strengths and weaknesses of AT and SR are examined. Chapter 3 includes a justification for the choice of these particular theories and how they can add to the understanding of OER contribution and non-contribution.

Chapter 4 includes the approach to the research design, the research methods, data collection and methods of analysis. It also outlines the ethical approach, the arguments for the validity of this study and the integrity of the findings.

Chapter 5 presents the empirical research findings of this study are presented. This chapter is divided into three sections based on the research questions. The first section addresses the possible influence of global and institutional culture on lecturers. The second section examines various global and institutional structural enablers and barriers using AT to frame contradictions that have emerged through the introduction of an Open repository. In the third section the lecturers' modes of inner conversations are identified using Archer's SR.

Chapter 6 discusses the relationship between culture, structure and agency related to each theme and uses SR to explain how lecturers at UCT exercise their agency in relation to these barriers and enablers of OER. Although structures are in place that enable and/ or constrain contribution of OER, the culture of the institution and the agency of lecturers both play a role in understanding OER contribution. A *laissez faire* culture, like UCTs, allows for academic freedom, giving the academic the power to choose the course of their actions related to their personal concerns.

Chapter 7 includes a response to the research questions. There are also a set of recommendations for various stakeholders in HE.

Chapter 2: Literature Review

2.1 Introduction

In the last decade, an ‘Open culture’ (Corrall & Pinfield, 2014) or ‘Openness culture’ (Peters, Ondercin & Liu, 2011) has emerged where some educators globally are working openly and collaboratively by contributing their knowledge in various forms to publicly accessible platforms. This contribution or formal sharing has been enabled by the growth of worldwide connectivity and by flexible intellectual property (IP) management solutions. Lecturers have been informally sharing for many years, but now they can formally share teaching and learning materials on a scale not possible before in the history of education.

Although some lecturers are taking up this opportunity to contribute materials openly and publicly, many are withholding their materials (Van Acker et al., 2013) as OER has “hardly registered with the average ‘coalface’ academic in Higher Education” (Davis et al., 2010). Some empirical research has been conducted to understand the enablers and barriers to contribution in order to suggest possible explanations for educators’ choices to contribute or not to contribute their materials (Rolfé, 2012). While some theoretical explanations have been suggested (Harley, 2011), there is still a gap in explaining exactly how and why lecturers make choices about contribution of OER and in explaining the interplay between those choices and the context of the institution as well as broader socio-economic and policy factors.

This chapter includes an introduction to the philosophy of Open culture in order to contextualise the emergence of OER. It provides an overview of the ‘Open’ movement which includes various forms of ‘Open’, including learning objects that preceded OER, Open Source Software (OSS), Open Access (OA), and Open Educational Resources (OER). The key components that have enabled these Open initiatives, such as technical and legal enablers, are also explained. Even though this study focuses specifically on OER, the other Open domains need to be understood as there are links and overlaps between them, and there are recent arguments for “convergence and coherence of open initiatives” (Corrall & Pinfield 2014).

Attempts have been made by authors to categorise different types of OER that can be positioned inside or outside institutions, with or without formal credit (Tuomi, 2013; Weller, 2010). A number of concepts, such as participation, contribution and Open scholarship, are introduced and explained with regard to educators' participation or nonparticipation in the OER movement.

The review of the literature focuses on factors impacting the OER movement. These factors have been grouped under three broad headings: cultural, structural and agential. These headings are informed by Social Realist theoretical framework that is used to guide this study. The review will highlight the key empirical findings and highlight the theoretical explanations proposed by researchers of why lecturers participate or do not participate in the movement. Although some attempts at theorising exist, there is still a need for a theoretically compelling explanation of lecturers' choices vis-a-vis OER in the global literature, but especially in the Global South and the African context (the site of this study). The gap lies in the lack of an explanation of the causal relations between the enablers and constraints in the social context (culture and structure) and the individual academic actions.

A pilot study undertaken at the commencement of this study (Cox, 2012) is summarised below as it suggests that AT is a useful framework to position the complex factors in HEIs that may impact on individual choices in relation to OER contribution. As this thesis is interested in explaining why lecturers make choices, the work of Archer (1995, 2003, 2007a, 2012) is used as an additional theoretical lens to highlight the importance of the actions of lecturers as they make their way through the world.

2.2 Open movement

The Open initiatives explained below impact upon the core business of HEIs, of teaching and of research and therefore impact both the individuals in the institutions and the institutions' systems. "Openness is a trend both in terms of the production and sharing of educational materials, as well as making research publications (and even research data) freely available" (Conole & Alevizou, 2010:42). Although there are a number of Open initiatives that are at different stages of evolution and maturity, these initiatives have been supported by separate communities with little collaboration so far (Corrall & Pinfield, 2014). These Open initiatives can be broadly grouped in three key areas: Open development, Open infrastructure and Open

Content (Corrall & Pinfield, 2014:298). These three categories will be used to frame the discussion below.

There are a wide range of definitions of ‘Open’ and it has been suggested by some authors that these definitions are not well theorised (Knox, 2013; Peter & Deimann, 2013). Debates about Openness occur in media narratives that discuss current issues, and as a result, media definitions of Openness have emerged faster than definitions from the academic community (Peter & Deimann, 2013).

In order to bring together the various types of open, a more overarching definition was developed by CETIS (the former JISC funded Centre for Educational Technology and Interoperability Standards):

“Open means ensuring that there is little or no barrier to access for anyone who can, or wants to contribute to a particular development or use its output” (CETIS, 2016).

Peter and Deimann (2013) provide a historical account of Openness over several centuries, going back to the late middle ages in order to reconstruct the origins of Openness in education. They plot shifts from periods of Openness to periods of more control, suggesting that we may be entering a tightening up or a more formal, structured period. This more formal period can be explained by the emergence of MOOCs as a way of bringing OER’s into a more structured setting.

2.3 Open development

Open development refers to aspects of Open that include actual processes through which primary materials are shared. For Open development to succeed, we need Open communities who have an interest in the domain, and therefore, I would like to add Open communities to this type.

2.3.1 Open Source Software (OSS)

The OSS movement led the way in showcasing the value of Openness and the ‘architecture of participation’, which allows for a free market of ideas which may or may not be adopted depending on the strength of the proposed idea (O Reilly Media, 2014). The OSS movement introduced the first ever Open licence for educational materials: the Publication Licence (West &

Victor, 2011:44) in 1999. Weber states: “The essence of open source is not software. It is the process by which software is created. Think of the software itself as an artefact of the production process. And artefacts are often not the appropriate focus of a broader explanation” (2004:56).

2.4 Open infrastructure

Open Infrastructure includes the ‘interoperable technical environment’ (Corrall & Pinfield, 2014: 299). The declining costs of information and communications technology and the growth of the internet have facilitated the expansion of OER (Tuomi, 2013).

2.4.1 Open licensing

Open licensing has been included as an addition to Corrall and Pinfield’s typology (2014) even though it is not a technology but is instead a legal framework that is key to the underlying, enabling structures of Open publication. While the OSS movement saw the introduction of the first forms of Open licenses, these licenses were suited to software but not to educational materials. In 2001, Larry Lessig released a set of licences known as CC. CC has played a crucial role in the development of the Open movement. It is a copyright management solution that allows the author to easily license his or her materials so that anyone can use the materials according to the permissions granted. CC has six different license options from. Its most open form is attribution only (BY). Other options stipulate that the materials may not be altered, “No derivatives (ND)”, or used for profit, “Non Commercial (NC)”. The ND and NC options can be combined to form the most restrictive licence close to full copyright although the materials can still be used or copied. Websites such as Wikipedia, Flickr, Vimeo and YouTube also use CC licences, and by 2015 there were over 1 billion of these licences being used globally (Creative Commons, 2015).

2.4.2 Open repositories

Open initiatives have been enabled by the fact that they are available online and that these materials can be stored in online repositories. A digital repository can be defined broadly as a place “where digital content and assets are stored and can be searched and retrieved for later use” (Hayes, 2005). This definition does not necessarily include access to the public. Many repositories are closed and require members from institutions or communities to register and login to access the materials. By contrast, an Open digital repository includes materials that have been openly licensed to enable some form of sharing.

Traditionally, repositories have been devoted to research (Gadd, Loddington & Oppenheim, 2007). In 2007, Gadd et al. surveyed British HEIs and found few institutional teaching repositories. More recently institutional teaching repositories are appearing, and this can be witnessed in the Open Education Consortium (OEC) which has a membership of over 300 institutions. The OEC portal allows the user to search for materials across all the member institutions. There are other global platforms like OEC, such as MERLOT and CONNEXIONS as well as national repositories like JORUM (JISC'S online repository for Learning and Teaching materials which is being retired ("Jisc to retire Jorum...", 2015), China Open Resources for Education (CORE) and the Irish Open repository (Dundon, Diggins & Exton, 2012). There are also numerous other community based repositories which have both closed and open access.

A key aspect to OER impact is its discoverability. Most digital libraries and repositories maintain their own cataloguing data called metadata. Although materials can be discovered through modern search engines, specific knowledge about the context of educational materials can make the task of finding the most useful materials quite tricky. Metadata standards (e.g. Dublin Core) are included by the author of the materials or by librarians or other support staff. One of the suggested enablers of OER use is metadata about the resource. When OER are added to repositories, the author adds metadata describing the educational content. There has been some effort to standardise metadata through, for example, widespread use of Dublin Core (Kortemeyer, 2013). However, Kortemeyer (2013) argues that sometimes the metadata are incomplete or absent. Importantly, there is no sequencing data ("which resources build on which resources") which makes it difficult for educators to find the resources they need (Kortemeyer, 2013:2)

2.5 Open Content

The Open Content domain is where content of various sorts is made freely accessible and available for reuse (Corrall & Pinfield, 2014). This content could include learning objects, publications, theses, data sets and metadata.

2.5.1 Learning Objects

The term 'learning object' has also been around for 10 years or more (Friesen, 2009). There are a growing number of OER repositories in addition to many learning object repositories. Friesen (2009) suggests there are some key differences between OER repositories and learning object

repositories: technology, design and the absence of an ‘Open’ reference related to learning objects. Definitions of learning objects stress modularity, self-containment, building blocks and objects. The learning object community places a huge emphasis on standards and design.

2.5.2 Open Access (OA)

The World Wide Web introduced in 1990 has facilitated a huge growth in OA to scholarly publications. By the end of the 1990s, there were over 500 OA journals, and by December 2015, 11 000 journals had been added to the Directory of OA Journals.¹ The Budapest Open Access Initiative defines OA as:

“Free availability on the public internet, permitting any users to read, download, copy, distribute, print, search or link to full text of these articles....or use them for any other lawful purposes, without financial, legal or technical barriers other than those inseparable from gaining access to the internet itself...” (*Budapest Open Access Initiative, 2002*).

This definition includes both the ability to view and the ability to read articles. Suber (2012) has separated out the two kinds of Open access into:

“Gratis OA is free of charge...users must seek permission to exceed fair use. Gratis removes price barriers but not permission barriers”

“Libre OA is free of charge and also free of some copyright and licensing restrictions. Libre OA removes price barriers and at least some permission barriers” (2012: 65 & 66).

In Open Access debates, the latter definition has caused some controversy as many journals allow viewing but not reuse (Corrall & Pinfield, 2014). Open Access came about through the lead of the free software community who used alternatives to copyright to enable access and reuse (Tuomi, 2013).

¹ Available: www.doaj.org [2016, January 2].

2.5.3 Open Educational Resources (OER)

Friesen (2009) identifies OER initiatives as having the same kinds of concerns as many learning object repositories have, for instance a lack of operational funding support and also issues of how to promote awareness and change practices and cultures.

In 1998, David Wiley coined the term 'Open content' to refer to educational materials traditionally accepted as learning objects that were being shared (Wiley, 2014). The term OER was developed to clarify concepts that were already in use by proponents of the Open movement (UNESCO, 2002a). OER can include entire courses but some OER directories allow lecturers to post individual items as well as entire course materials (e.g. lecture slides, podcasts, course outline or reading lists). OER do not have to be online, they could be on a CD, flash drive or in print form.

The 'Open' in OER can be defined in terms of licensing, where a resource is freely available on the internet or in print form and includes a copyright license that allows the use of the resource. Open includes "the removal of barriers (technical, price and legal)" (Reed, 2012:2). OER supporters suggest that one of its benefits will be to give access to "those learners who lack the means or access to follow traditional learning paths" (Macintosh, McGreal & Taylor, 2011:1).

The 2002 UNESCO definition includes key aspects of how these OER are enabled by technology. They are educational, they can be used and adapted and they are free of charge. Another definition is as follows:

"...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" (UNESCO, 2012).

This definition recognises the fact that many research materials such as books and articles are used in the teaching and learning process and often cannot be neatly separated into either research or teaching. It also recognises that in developing economies, OER can also be printed posters, documents or books that give access to those who do not have access to the internet.

Some definitions by key stakeholders provide more detail about the types of educational materials included as OER. For example, the Open Education Consortium (OEC, 2015) states that Open Courseware refers specifically to “materials that are organised as courses and often include course planning materials and evaluation tools as well as thematic content” . OER can include a broader range of materials: “Examples of OER include full courses, course modules, syllabi, lectures, homework assignments, quizzes, lab and classroom activities, pedagogical materials, games, simulations and many more resources contained in digital media collections from around the world ” (OER Commons, 2011).

West and Victor (2011) have proposed a definition that they suggest encompasses the detail involved in understanding OER, and it is included here because it is comprehensive and will be used for my research:

“Open Educational Resources (OER) are digitised educational resources that are freely available for use by educators and learners, without an accompanying need to pay royalties or licence fees. The digitised resources may be shared via the Internet or using media or disk-drives. OER are usually but not exclusively licensed using CC licenses. Both the original owners of the material and the subsequent users need to clearly understand the terms of these contracts to appreciate the ways in which materials may be remixed and shared” (West & Victor, 2011: 48).

This definition is chosen over the other definitions because of how it considers the ‘owners’ and the ‘users’ of OER. Other definitions do not make this distinction as clearly.

2.5.4 MOOCS

Another phenomenon that is based on this Open culture is the emergence of “massive open online courses” (MOOCs). MOOCs are a way of developing the relationship between content and process. Early MOOCs (2008) combined Open content with the processes of learning interaction (Littlejohn, 2013). The first MOOCs were called cMOOCs (Downes, 2008; Siemens, 2014). The so-called cMOOCs used OSS and were based on Connectivist principles where social learning and networking were a key aspect of the participants learning (Siemens, 2014).

A new generation of MOOCs has recently emerged called the xMOOCs. xMOOCs are offered by organisations such as Coursera, MITx and Udacity with course materials from institutions such as Stanford, California University of Technology and Princeton. In 2011, 167 000 students signed up for an artificial intelligence course led by Sebastian Thrun and Peter Novig. This was the highest recorded number for an online course. Although xMOOCs are open for anyone in the world to sign up and join the course, most of their content is not openly licensed as OER. Tuomi (2013:62) notes that “Coursera and edX, move with one foot solidly on each side of the fence, providing Open access to learning with restricted, though perhaps low cost, access to the benefits of education”. Peter and Deimann (2013:12) warn that “the development of free but not entirely Open courses needs to be examined more closely”. xMOOCs are a shift away from the humanistic ideals to a more “efficient” model of Openness that could “undermine the significance of openness” (Peter & Deimann, 2013:12).

There are many other MOOC providers around the world besides these very popular US based examples. In the UK, the Open University supported FutureLearn has introduced social interaction as its central and unique feature.² The European Commission funded ‘OpenupEd’ tailors each MOOC according to the institution’s learning platform and language (Mulder & Jansen, 2015).

In the context of this research, UCT has created three xMOOCs, and the model used so far has been that all teaching materials used should be created and shared as OER. The MOOC team (based in CILT) received financial backing from the VC and DVCs. This team have carefully designed and produced top quality materials in collaboration with the lecturers involved. Initial project proposals for new MOOCs require that lecturers are willing to share most, if not all, of the teaching materials. This is not always the case in MOOCs, and many MOOCs include fully copyrighted materials and complex terms of use (Wiley, 2015).

It is not clear whether xMOOCs will be sustained. However, they could potentially be a home for OER (Kortemeyer, 2013), a home with some associated pedagogy which may allay the concerns of

² Available: <https://about.futurelearn.com/press-releases/futurelearn-to-launch-unique-social-online-learning-experience-delivering-free-university-courses-to-learners-around-the-world/> [2016, January 20].

some lecturers who are reluctant to share their teaching materials outside of the classroom as content only in the form of OER.

2.6 Participation

Participation in OER can include sharing links to OER with another academic; it could include advocacy work on the benefits of OER or attending seminars and events but not actually contributing or using OER. Reed (2012:1) explores aspects of awareness and participation of teaching staff in a university setting and asks “what constitutes participation in the Open content movement?” Reed (2012:9) observed considerable informal sharing among colleagues but very little formal sharing of openly licensed teaching materials in a repository.

2.7 Contribution

In this study, contribution is synonymous with formal sharing. Contribution is when an academic submits some materials for publication with an Open license. The resource may already exist or, in other cases, the resource is specifically created for publishing openly. The contribution of OER may be undertaken by a lecturer alone or in collaboration with colleagues and/or students. The contribution of OER by lecturers is the focus of this study. It is an explanation of contribution and non-contribution rather than the use of OER and related Open educational practices (Conole, 2011).

2.8 Open scholarship

Various digital technologies are impacting upon the ‘work life of lecturers’ by facilitating and adapting existing teaching and research practices in a changed academic landscape (Scanlon, 2013). Scanlon defines Open scholarship as “a commitment to create knowledge and share it as widely as possible for the benefit of all” (2013:3). The term digital scholarship is different to Open scholarship in that digital applies to the ways in which technology may impact on academic practice whereas Open scholarship is a “particular view of contemporary scholarly behaviour” (Scanlon, 2013:5). Open scholarship is a set of emerging practices that include: publishing in Open access journals; submitting data to institutional or national repositories; having a digital presence through blogs, microblogs, websites and other social media; contributing teaching materials as OER; and even having Open courses like MOOCs (Veletsianos & Kimmons, 2012).

Lecturers may not engage in these activities, and Veletsianos and Kimmons (2012) suggest that a lack of social media and digital skills as well as a lack of time to invest in participating in Open scholarship might explain these practices. Veletsianos and Kimmons (2012) note that although Openness is rooted in democratisation of knowledge, participation is not equal and that currently the pockets of Open scholarship that exist do not necessarily benefit all humanity. This critique is valuable as there is no natural progression for lecturers to proceed to Open scholarship and it seems from the work of these authors and others (Weller, 2013) that future research should examine the challenges of engaging with Open scholarship. It is not the focus of this research to determine whether the scholars in this case study are Open scholars. However, some of the aspects will be revealed as part of the exploration of the practices of the lecturers in this study.

2.9 Emergence of OER

2.9.1 History of OER

OER have evolved over the last 15 years, and they are offered in various forms which will be discussed below. These different forms or types were developed to enhance the usability of OER across different contexts and needs.

Kanwar et al. (2010) describe three generations of OER. The first was initiated by MIT OpenCourseware who supported their lecturers to put their lecture notes online for public use. The second generation began when the Open University shared self-instructional materials online so that learning could be shared. It is important to keep in mind that MIT and the Open University are used as examples here and that other institutions were also doing this work. Kanwar et al. (2010) suggest a third generation where courses are developed collaboratively using an authoring tool such as WikiEducator. They conclude that the role of OER is shifting from primarily a teaching resource to a learning resource which reflects a broader change in education from teacher-centred to learner-centred. For example, MIT OpenCourseware has 9% academic users, 42% registered students and 43% self-learners.

2.9.2 Types of OER

OER exist in a number of different forms: 'Big', 'Middle' and 'Little' (Weller, 2010). They can also be formal and non-formal OER (Olcott, 2012). Weller (2010) appears to have focused on the intent and affordance of the resource as well as its context and granularity of the OER. Weller

(2010) refers to Big and Little OER which are not entirely comparable to entire course OER and granular OER. Big OER are created within an institution (e.g. OpenLearn) and are usually of high quality with a specific teaching context. They reside within an institution's repository. Little OER are created by individuals at low cost and shared through a range of third party sites, e.g. SlideShare. Non-profit organisations have also made a significant impact on the drive to provide free education worldwide, an example of which is the Khan Academy. The Khan Academy includes 3400 videos on various topics including maths, physics, finance and history, and it now has 3.5 million students (Tuomi, 2013). The granular resources submitted into institutional or more formal community repositories could make a “Middle” OER group as they do not fit into Big OER or Little OER. Institutions or projects have used the concept of granularity (Davis et al., 2010:98) to “convince teachers that what we were asking them to share was not some perfectly completed learning object but rather the artefacts that make up everyday teaching.”

Olcott (2012) distinguishes between formal and non-formal OER with the first including some recognition or credit. Several models are emerging to validate and obtain credit for courses. Peer to Peer University (P2PU) uses badges to accredit students for participation, teamwork, writing skills and completions of tasks during its free online courses based on OER.³ In Europe, universities are collaborating to design a credit system recognised across institutions.⁴ In Brazil at Fundacao Getulio Vargas (FGV), students receive certificates of completion when they have worked their way through OER modules; to date, 1.2 million certificates have been downloaded. The Open Educational Resources University (OERu) has recently (2012) launched a pilot project involving institutions from countries including New Zealand, Canada and South Africa which will create and offer first and second year university courses with credits (Olcott, 2012).

Currently, these different types of OER are available for use depending on the needs of the students. It may be that this range of OER should continue and that there is a place for formal and non-formal OER. However, there are some authors (Olcott, 2012; Kanwar et al., 2010) who suggest that there is a need for “structure to expand Openness” and that a “key issue in OER is how to blend OER with institutional structures”, in other words to have OER as part of existing

³ Available: <https://www.p2pu.org/en/> [2016, January 25].

⁴ Available: <http://www.openeducationeuropa.eu/es/initiative> [2016, January 25].

teaching structures (Olcott, 2012:289). Weller (2010) supports this by arguing that context is key and that if a resource is located within the bounds of an institution it is more likely to be used.

2.9.3 Purpose of OER

The purpose of OER is a focus of discussion in many papers on OER, especially when enablers and barriers to reuse are being discussed. Some authors suggest the OER should be designed for specific audiences, using learning designs that are made explicit to the user of the resource (Dimitriadis, McAndrew, Conole & Makriyannis, 2009). Weller (2010) suggests that Little OER are more flexible, and they allow the user to aggregate various resources according to their own purpose and not necessarily the purpose of the creator. Many Big OER are created for a specific teaching purpose, and being of high quality, the user does not adapt them (Weller, 2010). Other Little OER and even Middle size OER are shared without explicit educational aims. For example, if an academic shares a model diagram and not the associated lecture notes, another academic or a student could use this model together with other materials or as they see fit.

Pegler (2012) refers to reuse activity which she defines as “sharing and use”. Pegler’s introduces the concept of motivation, which she adds “has been relatively unexplored area of reuse activity” (2012:3). Motivation is defined as “the factors which make the individual, group or organisation wish to engage with reuse”, and Pegler adds that these precise factors or reasons are not always visible (Pegler, 2012:5). She describes reuse as a cycle, “with use following on from supply to create a sustainable process” (Pegler, 2012:1). Pegler (2012) refers to sharing being the supply side of the cycle. This is an important point, and although the key questions of this thesis focus on the “supply” side, the supply side will dry up if the resource is not used.

Participation, contribution, use, reuse and engagement are all ways of describing how lecturers might be involved in the OER movement. However, individual perceptions may change over time (Venkatesh, Morris, Davis & Davis, 2003). These concepts are described above, but it is important to keep in mind that lecturers may become involved at different points and that as they gain experience, they may choose increased or decreased involvement.

2.10 Issues impacting on OER contribution

There is a growing body of interesting literature on issues impacting upon OER (Rolfe, 2012; Wiley, Green & Soares, 2012; Sclater, 2010b; Sclater, 2010a; McAndrew et al., 2009; Geser, 2007; Stacey, 2007; Johnstone, 2005). Of particular interest here is the literature that refers to the reasons why institutions and the lecturers within them make their content freely available and what factors enable or motivate lecturers to contribute their original work. A considerable amount has also been written about the major challenges and barriers in the OER movement (Browne et al., 2010; Sefton, 2010; Sclater, 2010a; Sclater, 2010b; Winn, 2010) and what issues its participants must face and overcome in order to contribute their teaching materials (Stacey, 2007). Many of these issues such as sustainability (Hodgkinson-Williams & Donnelly, 2010), systemic organisational issues (Bossu & Tynan, 2011), pedagogy (Sclater, 2010a) and quality control (Stacey, 2007) are unresolved, and it is hoped that the research presented here will contribute to an understanding of these complex issues. The issues will be looked at on three levels: cultural, structural and agential.

2.11 Culture of Open

2.11.1 Global culture of Open

OER culture is based on the philosophical view of “knowledge as a collective social product and the desirability of making it a social property” (Prasad & Ambedkar cited in Downes, 2007:1). OER are part of an emerging global ‘Open culture’ in HEIs, where the ‘Open scholarship of teaching’ could become part of day to day practice (Martins & Baptista Nunes, 2012). It is suggested that where ‘Open content’ is used and produced in ‘Open processes’ within an ‘Open infrastructural’ setting, a “culture of Openness gradually emerges” (Van der Vaart, 2013: 130). Corral and Pinfield elaborate that their typology of OER they have developed rests upon an Open culture (2014). Open practices require cultural change but the practices themselves can also generate change (Corral & Pinfield, 2014).

2.11.1.1 *Global Open declarations*

The international commitment to OER is evidenced by the development and signing of the Cape Town Open Education Declaration. The Cape Town Open Education Declaration (2008) refers to the potential of OER to: “nourish the kind of participatory culture of learning, creating, sharing and cooperation that rapidly changing knowledge societies need” (*Cape Town Open Education*

Declaration, 2008). The recent Paris OER declaration was adopted at the 2012 World OER Congress held at the UNESCO headquarters in Paris (*Paris OER declaration*, 2012). The declaration calls on governments worldwide to make openly licensed, publicly funded educational materials available for public use. These documents are aimed at facilitating a cultural change. This cultural change can be equated with a global Open culture and philosophical view that sharing should become part of day to day practice (Martins & Baptista Nunes, 2012).

2.11.2 The potential of OER

Claims about the potential benefits of OER are advocated across many countries and institutions across the world (West & Victor, 2011). These benefits include increasing access to HE, decreasing costs of HE and the improved quality materials that result from collaboration and peer scrutiny (Daniel et al., 2009). OER supporters suggest that one of its benefits will be to give access to “those learners who lack the means or access to follow traditional learning paths” (Macintosh et al. 2011:1). Wiley et al. (2012:4) are strong advocates of the OER movement, and in an article on how OER can dramatically cut the cost of education, they argue that “OER gives us the previously unimaginable opportunity to use technology to maintain the quality of instructional materials while significantly cutting educational costs”. The OER movement, built upon a growing culture of contribution, is no longer a ‘nascent’ movement (Atkins, Brown & Hammond, 2007). It is said to have reached an ‘inflection point’, where the broader changes in education together with OER have changed the way education can be delivered (Matkin, 2012).

2.11.3 Global enablers of OER

A number of factors have enabled these global OER initiatives. Many of the top 50 HEIs have directories or repositories to enable the sharing their teaching and learning materials. Universities in Britain, Europe and the USA have established OER repositories that have been in place for some years (Schaffert, 2010). Mostly, these initiatives have been sponsored by private philanthropic foundations (Atkins et al., 2007). In some cases, these initiatives have been supported by governments that have policies advocating the creation of and use of OER (Uvalic-Trumbić & Daniel, 2012; Hoosen, 2012). Other institutions have established OER repositories more recently, with funding from the Hewlett Foundation and the Joint Information Steering Committee (JISC) in the United Kingdom. The movement has had some support from

international institutions such as UNESCO, Organisation for Economic Co-operation and Development (OECD) and the Commonwealth of Learning (COL).

2.11.4 Awareness

For OER to be sustained globally as a movement, work will be required to scale up awareness and participation. Reed (2012) investigated the awareness and attitudes of staff at one institution in the UK and compared his results to Rolfe (2012:8) who conducted a similar study also in the UK. In both studies, about 30% of participants were aware of the Open movement. Many staff were prepared to share or were doing so informally but few were actually sharing teaching materials “to any formal large-scale degree”. Davis et al. have researched the uptake of learning objects and OER in the UK and they conclude that “the concept of reusable learning objects has hardly registered with the average ‘chalkface’ academic in Higher Education” (2010:96).

The OER movement appears to be gaining momentum in the Global North. Yet educators in the US, for example, indicated they were only somewhat aware of OER (Allen & Seaman, 2012:12), and no study of leaders, educators or students has been completed in the Global South (Hodgkinson-Williams, 2013). Dichev & Dicheva surveyed computer science teachers from the US, Europe, Africa and South America and found that “there was a low level of awareness about existing OER” (2012:624).

Awareness of OER in this study includes an understanding that OER are teaching and learning resources and that they can be shared, reused, and released under an Open license such as CC. There is much confusion around various Open terms, and “there are continuing debates and disputes around what Openness means in particular domains irrespective of their age and development” (Corrall & Pinfield, 2014:294).

2.11.5 Sustainability

One of the biggest challenges to the OER movement is how to ensure that projects and initiatives are sustained. There is considerable debate in the literature about the costs of sustaining OER initiatives. Smith & Casserly (2006) refer to the costs and the question “who pays” for sustaining and updating OER in institutional repositories. Sustainability is not only about financing but also a combination of different aspects which Downes lists as “interrelated factors, including funding,

technical considerations, and content models and even staffing” (2007:40). The JISC (2014) definition of sustainability describes the structures that need to be in place as follows: “Sustainability in relation to OERs is closely linked to the business model or approach that an individual group or institution adopts to release, manage and support OER. It is not just about sustaining existing OERs but about embedding processes and transforming practices to support ongoing OER production and release (JISC, 2014). Hodgkinson-Williams and Donnelly (2010) argue that the sustainability of OER projects at universities needs to be aligned with the institutional perspective where the institution places value on the project and includes it as part of an institutional mission. Certainly a holistic approach needs to be taken where OER are part of the processes and practices of lecturers.

Wiley (2007) refers to sustainability as being located in two different areas: firstly, in the sustained development and sharing of OER and secondly, in the continued use by target groups. The first step for any institution or community is to have a repository so that staff members can add their materials. One measure of success is to have a range of quality materials in the repository but the second measure, which is key for sustainability, is the use and reuse of the materials by potential users (Wiley, 2007; Kanwar et al., 2010).

Iiyoshi and Kumar suggest that the real test of sustainability will be “a culture of openness across boundaries and borders” (2008:4). Kanwar et al. (2010) suggest the importance of various role players who may be able to impact on the sustainability of OER in the Global South. These role players are international organisations, like COL, UNESCO and UNICEF, and national governments who can develop policy and educational institutions. Kanwar et al. (2010:78) argue that there are three T’s necessary for the development of OER: “teachers, technology and time”.

An alternative approach to examining sustainability is one used by Stacey (2010) where he examines two theoretical approaches to sustainability. Stacey (2010) suggests that OER are now moving from the innovation phase of Rogers’ depiction (1995) of the early stages of technology innovation into the early majority phase. In addition, Stacey (2010) refers to Moore’s portrayal (1991) of how there is a chasm between these two phases and how many disruptive technologies (OER is considered disruptive) do not cross the chasm and disappear. He examines various financial models that could ensure the sustainability of OER.

2.12 Critiques of OER

Despite the potential benefits for education broadly, for institutions and individual teachers and learners, “the promise of OER has often not translated into concrete and tangible results” (Kanwar et al., 2010:68). Kanwar et al. (2010) list three possible reasons for this. Firstly, there is a lack of evidence, and secondly, the knowledge flow is in one direction only, from North to South.

However, she does note some initiatives in the south that are emerging (China Open Resources for Education, OER UCT and the Vietnam OpenCourseware initiative). Thirdly, Kanwar et al. (2010) cite the example of Utah State University’s OpenCourseware Movement being discontinued because the initial donor support was withdrawn. According to Kanwar et al. (2010) the problem with many OER initiatives is that sustainability is often only dealt with at the end of a project as an afterthought.

In a critique of the OER movement Knox (2013) argues that the concept of Openness has not been well theorised. Knox (2013) considers Berlin’s philosophy of positive and negative liberty. Positive liberty is about the practice of freedom where individuals are rational and make choices to decide on the “form and quality” of their freedom (Berlin 1969, in Knox, 2013:824). Negative liberty is seen as the freedom from barriers. “Negative liberty concerns itself entirely with the removal of obstructions to personal liberty” (Knox, 2013:4). Knox equates traditional universities with positive liberty, a centralised rational place that controls access to knowledge and delivery of learning. Open education on the other hand has the qualities of negative liberty where there is an emphasis on freedom from controls and systems that control knowledge. OER are said to be free from organisations and controls as “individuals are free to learn from OER” (Macintosh et al., 2011:4). Knox has other critiques of the OER movement and highlights contradictions that will be addressed in the relevant sections below, such a lack of sufficient thought given to the pedagogy of OER, assumptions about learners who may use OER and how OER give universities a competitive advantage (2013). Knox posits that for these reasons OER are aligned with capitalist needs and are not empowering learners to be free from the limits of their situations (2013). OER potentially only benefit those who have internet access perpetuating the ‘digital divide’ between those people with effective access to digital and information technology and those who do not have access to it (Castells, 2011).

2.13 Institutional culture of Open

Lecturers may be aware of the emerging global Open culture and this may influence their contribution of OER. Closer to home, the culture of Open at one's institutions may also enable or constrain the contribution of OER.

2.13.1 Institutional culture

Institutions have different cultural types (McNay, 1995, Bergquist & Pawlak, 2008), and these types need to be considered when a particular strategy is chosen for the implementation of OER. Some understanding of the culture of an institution aids the researcher in identifying why OER initiatives may have been implemented in a particular way.

McNay's taxonomy provides four organisational cultural types - collegium, bureaucracy, corporation and enterprise (1995) - according to the continuums of institutional policy definition and control of implementation (Figure 2-1). The collegium type is characterised by loose policy definition and innovation that occurs more on an individual level through informal networks. The bureaucratic type is characterised by loose policy but strong regulation. These institutions include many meetings and committees, and it takes a long time to implement any kind of change. The corporate type is characterised by tight policy definition, tight regulation and strong top down management.

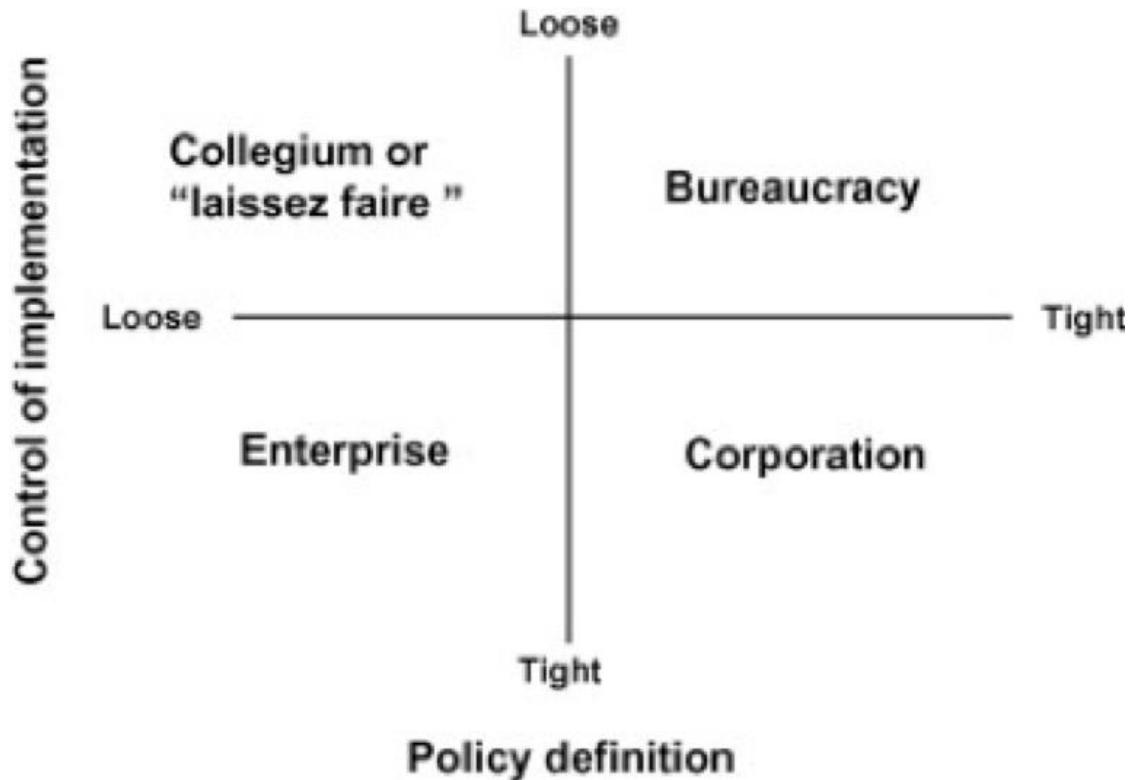


Figure 2-1: Organisational culture types (McNay, 1995)

The enterprise type has well defined policy which is directed at the student as client. In this type, the market leads policy and management are dictated by it. McNay notes that these types can change over time and certainly there may be aspects that overlap. McNay focused solely on institutional policy activities. Bergquist and Pawlak (2008) use multiple variables including governance style, levels of personal autonomy and location of members. They present 6 types of academic institutional cultures and elaborate on the collegial type, introducing additional features such as decentralised governance, academic freedom and faculty contributions. There is much debate concerning the definition of academic freedom, but in this study and in the context of UCT the definition is as follows: “the four essential freedoms of a university—to determine for itself on academic grounds who may teach, what may be taught, how it shall be taught, and who may be admitted to study” (Altbach, 2015:3). Altbach adds that academic freedom also protects ‘professorial freedom of teaching, research, and expression—and nothing else’ (2015:3). Czerniewicz et al. (2015) found that the UCT fitted into the ‘collegium type’, and any new initiative or change at the institution often involved middle management initiatives, negotiation and gradual ‘buy in’ of academic staff.

Many universities around the globe are 'research intensive' and academic autonomy is one of three key features. This principal of academic autonomy gives the academic the right to exercise their academic freedom (Chirikov, 2013). At the University of Oxford, a research intensive institution, the principle of 'subsidiarity' is in place where "decisions taken should be taken at the lowest level appropriate for the matter at hand" (Masterman & Chan, 2015). This freedom and power is important to lecturers at Oxford, however, it was noted that it resulted in resistance to initiatives from higher levels at the institution.

2.13.2 Social context

OER initiatives can be influenced by institutional culture. For example, a university department (social context) may be sharing teaching materials openly because the institution places value on OER, or alternatively, the department may ignore the values of the institution in pursuit of their own agenda, which may not include sharing teaching materials with other institutions.

Windle et al. (2010) shared their experiences of sharing and reuse of reusable learning objects in health education. The success of this project (at one institution) was the sense of community involvement as well as producing valuable materials which have been evaluated and have real world learning applications. Windle et al. (2010:11) argue that "institutions will need to drive and support a move towards a more widespread culture of transparency and sharing". Peers in a discipline as well as colleagues could form part of a community. Windle et al. (2010:7) refer to the work of Wenger, McDermott & Synder (2002) for their definition of community which includes a sense of belonging, shared purpose, empowerment and activity. Windle et al. (2010:7) suggest that creating a community is the only way to get lecturers to share and use OER.

Sharing of knowledge in communities of practice was in place long before these more formalised Open initiatives (Dundon et al., 2012). The success of communities of practice is based on its members sharing their knowledge among other factors such as domain, community and practice (Wenger, 2000). Communities also thrive if there is a sense of problem solving and purpose (Wenger, 2000). Dundon et al. (2012) report on a study in Ireland of an academic community of practice who have access to a National Digital Learning Resource service. They discuss the reasons why people share knowledge in a community of practice namely: social (community spirit), cultural (organisation where there is recognition and support for knowledge exchange)

and technical considerations. McLure Wasko and Faraj (2000) observed that people in the community that had a sense of community spirit and belief in the community are motivated to share.

However, creating a community is no guarantee to sharing. Communities (discipline areas, interest groups or departments) may support internal sharing but be opposed to sharing more broadly. Davis et al. (2010) found that a community using school materials (Edshare) had mixed attitudes to sharing. In fact they found “this reluctance was even deeper than anticipated” (Davis et al., 2010:105). For some community members, sharing publicly was a strong deterrent, and these members were worried about having their profiles up in a public.

Thus, lecturers may or may not be influenced by 1) peers in their discipline and/or 2) colleagues in their departments and/or 3) members of the OER support unit at the institution (in UCT’s case: CILT). Davis et al. (2010:107) argue that more than a plan (or structure) is needed: “there must be a change in culture, and that this change requires alignment of technical, community and institutional factors”. What is needed is a combination of easy to use technology and a belief in the value of sharing, suggest Davis et al. (2010). Wiley et al. argue for the key role of educators who must openly license and share their materials and be willing to use others’ OER and conclude “the academic culture from elementary to higher education needs to change from ‘not invented here’ to ‘proudly borrowed there’” (2012:5).

2.14 Structure of Open

2.14.1 Global structures of Open

2.14.1.1 *Legal issues*

Although CC has enabled the sharing of OER, many lecturers are not aware of it or do not understand how to use it. This has been a challenge to participation in the movement (Hysten, 2006; Lane, 2009; Reed, 2012). There are two main legal concerns when existing teaching materials are being prepared for sharing: copyright and licensing. Many authors have written about lecturers’ confusion about copyright and licensing (Davis et al., 2010; Martins & Baptista

Nunes, 2012; Reed, 2012). Lecturers are not always aware of who owns the copyright of their own material, and they are unaware of the application of CC licenses (Reed, 2012).

The copyright clearance process can be dealt with in various ways. If a support team is not in place, the author needs to check their own materials and a final copyright check is completed when the resource is added to the repository or directory. This approach is time consuming for the author and this is where small grants or student help might enable the process of copyright clearance. Mawoyo and Butcher (2012) have observed two other approaches, namely a dedicated approach and a conservative approach. A dedicated approach is often when there is major funder or institutional support and an entire team can help the author to prepare materials for sharing. A guide is developed to help lecturers to find Open materials that they can use in their materials. In some case, lecturers and members of the OER initiative will identify copyright materials, and there will be some institutional support about asking for copyright from third party authors. A more conservative approach (used at Nottingham and Leicester universities) includes removing images if there is any doubt about their authorship and its associated permissions. If there are images that have copyright protection, the images are taken out and new images are drawn by an in-house or employed graphic artist who is willing to openly license the materials. Key areas that are problematic include the fact that it takes time to trace content that has not been properly attributed as the materials have been used in closed classrooms. Also, even if an academic uses existing OER, care has to be taken about the terms of that license and whether they are compatible with use and reuse.

Legal constraints therefore include both clarifying copyright and ownership rules in HE institutions (Martins & Baptista Nunes, 2012). Beggan (2010) from the University of Nottingham and Lee et al. (2008) from Tufts University also found that copyright infringement was a concern. Davis et al. explain this typical concern: “[teachers are concerned with] possible copyright claims against embedded content that they downloaded and reused in their resources without the specific permission of the owner or publisher” (2010:97).

In addition to the above concerns, lecturers have also expressed concerns about loss of IP (Hysten, 2006; Ngimwa & Wilson, 2012). Teachers were concerned about losing control over their materials, thereby forfeiting any potential financial gain from selling the materials (Davis et al.,

2010). Lecturers in Portuguese HE voiced concern over misappropriation and plagiarism (Martins & Baptista Nunes, 2012). In a blog post, a lecturer at the University of Michigan describes how a set of his materials had been misappropriated and were used to make money. He had always used the most liberal CC licence but after this experience had moved to a more conservative approach with either all rights reserved or a CC BY NC license (Severance, 2013).

2.14.2 Institutional structural factors

Institutions can potentially derive several benefits if they invest in OER initiatives. Institutions may join the movement to keep up with the changing world of HE. This type of motivation has been labelled a ‘transformational’ motivation by Sclater (2010a) and describes a fundamental change in the way education at institutions has functioned. The OER movement is said to have “generated its own momentum” and many institutions are joining this movement to be part of a “feel-good factor” (McAndrew, 2006:1). The benefits include teaching materials that are of higher quality and that may include collaborative opportunities that would not have existed previously when lecturers worked in isolation. Examples of this transformational motivation are seen at MIT OCW (Smith & Casserly, 2006). Sharing OER at an institution may help lecturers to see some overlaps and opportunities to work together (Johnstone, 2005).

There are other benefits to sharing teaching resources across a university. These include enabling lecturers to view the teaching materials of others, using the metrics of citations of these materials could as evidence for acknowledgment of teaching excellence and sharing of materials where there are curriculum overlaps to avoid duplication of materials (Davis et al., 2010).

Reputational or commercial motivation is driven by raising the visibility of the institution thereby enhancing its branding (Johnstone, 2005). The availability of Open content may also enhance the reputation of HEI’s and, in doing so, increase the level of trust that the public may have in them (Corrall & Pinfield, 2014). This factor can be linked to evidence from MIT where access to OpenCourseware had an impact on students deciding to choose MIT over other institutions (d’Oliviera & Lerman, 2009). There is a strong marketing incentive to OER. The Open University’s OpenLearn site brought 4400 students into the university as of April 2008 (Gourley & Lane, 2009). The other commercial argument for OER is that sharing university resources is a better use of tax payers’ money (Geser, 2007). Public HEIs are taxpayer-funded and knowledge created

should be open to everyone. Lecturers should not make any attempt to profit from educational materials (Martins & Baptista Nunes, 2012).

The next section will discuss a number of features of the institution that could potentially enable contribution of teaching materials as OER. An institution may have an overall strategy to support OER which may include a support unit, a repository and a technical support team. This strategy may include a policy setting out guidelines for contribution. A strategy may also include a reward system for lecturers who share in the institution's repository. A policy is defined as a definite course of action, whereas a strategy is an approach to how a vision could be realised or a series of manoeuvres dedicated to a specific result (Du Toit, 2013). Policies tend to be a requirement dictated by institutional management, while strategies may be used in an attempt to follow a policy. While institutional strategies to support OER are regarded as important, these need to be backed up by a commitment from senior management (Wild, 2012).

Olcott (2012:289) suggests a possible solution to the lack of impact of OER and calls for "structure to expand openness". Olcott (2012:285) argues that a "key issue is how to blend OER with institutional management structures" in order to sustain OER initiatives. This call for structure not only supports the lecturers who create the OER but also supports the users who are more likely to have confidence and trust in the quality of OER associated with well-known institutions.

Various strategies have been adopted by OER-contributing HEIs ranging from offering only a sample of best practice examples of teaching (e.g. Harvard University), to having almost all courses available (e.g. MIT) for use by the general public. Projects to create OER repositories range in scale from a few individuals with limited funding (Hodgkinson-Williams & Donnelly 2010) to massive institutional projects with huge teams and several years of financial support (Carson, 2009; Abelson, 2007). Leading US universities such as MIT have been at the forefront of this growing Open culture since launching their Open Courseware (OCW) initiative in 2002.

Mawoyo and Butcher (2012) have introduced different 'models' of OER initiatives (Table 2-1). These various models have been described by Mawoyo and Butcher (2012) in their study of initiatives in Africa, the UK and the USA.

Table 2-1: OER initiatives adapted from Mawoyo and Butcher (2012)

Model	Initiatives	Defining features
Institutional: institution wide	Open Michigan University of Nottingham	Financial backing of institution possibly with other funding Scale of publications achieved Dedicated units to support
Institutional: discrete	UCT Faculty of Health Science OER University of Ghana Centre for Health Science OER UCT Centre for Higher Education Development (Student guide)	Specialised content is achieved Limited scale and output Often donor funded
Institutional: membership	OSTRICH (OER sustainability through Teaching and Research innovation: cascading across HEIs)	Replication of initiatives are various institutions Output high Initial mentoring and then over to institution
Network repository	MedEdPrtal	Scale is large Specialised subject focus
Conversion of commercially published work	Saide Teacher Education Series	Authoring institution retains copyright

Reed (2012:10) suggests an institutional policy and strategy should include a central repository where lecturers can share easily. In addition, he refers to a 'joined-up' approach where contributing OER is rewarded and there is clarification on ownership of content and activities around CC licenses. Reed (2012) suggests a range of staff development activities around OER, including embedding OER in postgraduate teaching certificates.

Despite efforts by some institutions to introduce OER strategies, many OER initiatives appear to be a bottom up phenomenon, with the management of institutions not aware of the sharing (Reed, 2012; Hylén, 2006). This lack of institutional strategy, support and reward is seen as an inhibitor to participation (Reed, 2012; Friesen, 2009).

2.14.2.1 Institutional policy

In the literature, there are several authors who strongly suggest that institutional policy is a key enabler to contributing teaching materials as OER within and beyond an institution (Browne et al., 2010; Lee et al., 2008; Carson, 2009; Reed, 2012; Lesko, 2013; Corral & Pinfield, 2014). Bliss

(2014) argues for policy at a Global level (e.g. 2012 Paris OER Declaration), at a National level (governmental) and at an institutional level. UNESCO has put considerable support behind country wide policy initiatives and the Hewlett Foundation has funded projects designed to draft and advocate policy.⁵

Besides resources to support lecturers, some institutions have policies that encourage lecturers to contribute material (Browne et al., 2010). Through these enabling policies and top down support, the institution places value on OER (Lee et al., 2008). Examples of successful Open endeavours can be found at MIT (Carson, 2009), the University of California Irvine (Matkin, 2012), Tufts (Lee et al., 2008) and the Open University in the UK (McAndrew et al., 2009).

Traditionally, institutional policy has concentrated on refereed published papers in high impact journals. OER advocates suggest policy should also include guidance for how teaching and sharing teaching can be assessed (Corrall & Pinfield, 2014). The e-IntraNet report argues for “a broader set of criteria that focus on the contribution to the advancement of knowledge” (Van der Vaart, 2013:31). Reed (2012) recommends an institutional policy where contributing OER is rewarded and which provides clarification on ownership of content.

In contrast Hodgkinson-Williams & Gray (2008) highlighted the importance of the agency of these lecturers in response to policy. The authors concluded that even though national and institutional policy may be in place some lecturers are still not interested in sharing their resources.

2.14.2.2 Institutional incentives: Recognition and reward

Many authors argue for the importance of having an institutional strategy on OER with built-in incentive systems as a key motivator for lecturers to share and use OER (Davis et al., 2010; Martins & Baptista Nunes, 2012; Wild, 2011; Ngimwa & Wilson, 2012). Corrall and Pinfield argue that although policymakers cannot themselves affect cultural change, they can “incentivise behaviour likely to encourage change in academic practices and culture, albeit gradually” (2014:300). Recognition for OER contribution can come as an informal acknowledgement of OER contributions (i.e. mentions in university communications, non-financial awards), or as part of

⁵ Available: <http://www.poerup.info/> [2016, January 19].

the formal performance appraisal process. A reward such as a small grant could also form part of a strategy (e.g. OER grants).

Davis et al. (2010) suggest that institutions build in acknowledgment for OER contribution into personal development processes. Recognition of published, high-quality, online resources both in the institutional learning management system LMS and as an Open resource can be an indicator of teaching excellence (Martins & Baptista Nunes, 2012). Lecturers at the University of Nottingham were concerned about the lack of acknowledgment or promotion for contributing high quality teaching materials (Beggan, 2010). Likewise, reward and recognition were major concerns, and lecturers at the University of Exeter felt that they needed “tangible evidence of examples of career rewards from teaching that mirror those traditionally limited to a more narrow view of research excellence” (Browne et al., 2010:6). Olcott suggests that “if faculty career advancement, whether in the university or public school, does not include incentives for using and counting this activity towards career advancement, it will be difficult to argue the case for OER” (2012:289). Andersen also suggests that policy could be a driver of sharing if “participation in digital activities, should count toward tenure and promotion” (2010:43).

All universities and colleges in British Columbia, Canada have access to a fund provided by BCcampus where reviewers of open textbooks are paid \$250 (BCcampus, 2016). There may be other universities who are giving small monetary rewards, but these are not reported on in the literature. At UCT, lecturers have been able to apply for small grants as a form of reward to adapt or create materials to share on the UCT OC directory. The money for these grants came from the OpenUCT Mellon Foundation funded project over a period of three years from 2011-2014. In the same way, the VC’s strategic fund has paid for more recent rounds in order to continue this initiative until the end of 2015.

One way of enabling lecturers to participate and contribute OER is to employ students to adapt existing teaching materials into OER, thus saving lecturers’ time. Open Michigan introduced the dScribe process in which students take the role of copyright clearance and source alternative third-party materials, rework existing teaching materials and release, with permission from the lecturers, the new object as an OER. Very little research has been conducted on the potential use

of students, with the exception of Hodgkinson-Williams and Paskevicius (2012) who undertook a study on adaptation work performed by Master's students in the Department of Physics at UCT.

2.14.2.3 Technical support/infrastructure and ability

Technical support and infrastructure form part of some institutional strategies to support OER contribution. Repositories are set up and lecturers have a support team to help them with the technical considerations of sharing materials. Mawoyo and Butcher (2012:205) have identified four technical issues when materials are being prepared for sharing: “initial authoring, HTML authoring, presentation and packaging, and hosting of resources”. Research has shown that lecturers need help with these processes and that they are not necessarily familiar with the online tools for creating and adapting their teaching materials (Highton, 2012). A lack of technical support has been identified as a barrier to the contribution of teaching materials (Rolfe, 2012).

Dichev and Dicheva (2012) surveyed 315 computer science teachers from around the globe to find enablers and barriers to the use of computer science Open materials. They found low use and investigated further by trying to collect evidence on the coverage of computer science topics by OER sites and analysing the content of 21 sites that provided OER on this topic. Of the 21 sites only, MIT had a range of resource types. A key outcome was that educators struggle to find relevant resources and they want help with the process. Dichev and Dicheva concluded that “current OER repositories are falling short of meeting users expectations in terms of adequate support for finding needed content” (2012:624). Technical ability or lack of ability could therefore be an enabler or barrier to contribution of OER. Confidence with technology tools could make contribution easier.

Open scholarship includes Open publishing of research and teaching and also the use of social media for networking and building reputation (Scanlon, 2013). Scanlon therefore suggests that there is a relationship between sharing information on social media and willingness to contribute OER. Although this is not a focus of this study this aspect will be explored.

2.15 Other significant contextual and structural factors

OER initiatives can be enabled and constrained through the strategies mentioned above. There are other structural issues that are present in all HEIs, such as the relationship between pedagogy and OER and debates surrounding the quality of teaching materials contributed as OER. It is

important to keep in mind that guidelines may be set out on how to teach or create learning materials and what quality checks should occur. Nevertheless, individual lecturers may choose to follow their own ideas of how to teach and/or create teaching materials.

2.15.1 Pedagogy and OER

Advocates suggest a number of potential pedagogical benefits of OER as content that can be included in teaching or in addition to teaching materials. The Open scholarship of teaching includes “the promise of transforming pedagogical practices and academic knowledge into commonly available and shareable resources” (Martins & Baptista Nunes, 2012:211). One of the benefits of Open learning systems is creative thinking (Peters et al., 2011). Creative thinking is the result of “individuals sharing ideas and knowledge freely in order to achieve the best possible results” (Peters et al., 2011:17). Knowledge that is shared will grow and change because of the combined efforts of its contributors (Nelson, Christopher & Mims, 2009; Peters et al., 2011). Stacey (2007) states that another benefit of OER is that learners who have access to a larger range of resources may be encouraged to further explore their fields in an autonomous and self-reliant way.

OER are usually focused on learners who are participating outside of an institution, i.e. a learner-centred model where the direct role of the teacher is removed. Knox (2013) argues that while the OER movement presumes that individuals are self-directed and autonomous, it has barely considered the capabilities of these learners in a theorised way. Some authors refer to ‘Open pedagogy’ (Hegarty, 2015) and Macintosh et al. (2011:14) refer to a “pedagogy of discovery”. The emphasis in OER literature has been focused on dissemination and not learning (Knox, 2013). However, recent research is trying to understand the learning aspect of OER (Tuomi, 2013; McAndrew, 2010).

OER are mostly standalone course materials without any teacher-student interaction. In a study of Canadian distance education students, researchers sought to discover the importance of student-content, student-student and student-teacher interactions for learning (Moore, 1989). Their results indicated that increased student-content interaction improved results more significantly than increasing the other two types of interaction. This evidence supports the idea

that OER could make a difference in education. However, other research and critique reported on below argue there is no evidence of this impact (Sclater, 2010a; Knox, 2013).

Another potential benefit of OER is the granular nature of many OER. Sapire and Reed (2011) report on a case study of mathematics educators in South Africa where OER were developed collaboratively at nine tertiary institutions and then used in mathematics educators' courses and other contexts. The OER created were granular in format, i.e. they were designed to be broken into smaller chunks of information (Sapire & Reed, 2011). Sapire and Reed (2011) suggest that it was because of this granularity that many of the OER were integrated into classroom activities.

Current research suggests that if materials are not developed with an audience in mind they may well not be used. Windle et al. note that HEI repositories are being filled up and ask "is this good enough, is this sufficient to fulfil their public good?" (2010:5). Teaching materials in the project reported on by Windle and colleagues were small and consistent and could be used in a number of teaching methods (2010:5). They argue that if institutions "get use right and sharing will follow" (Windle et al., 2010:5).

A number of strategies can be used to enhance the usability of OER. Mawoyo and Butcher (2012) discuss the pedagogical implications that are part of the process of sharing existing teaching materials as OER and focus on how "learner engagement enhances the quality of the materials" (Mawoyo & Butcher, 2012:212). Mawoyo and Butcher (2012) refer to examples of resources that have video clips and images and suggest that these ensure that students can understand the materials without the mediation of a teacher. However, they do note that even though media rich materials may enhance student or user experience, "it will be useful for some time to share even simple text-based materials" (Mawoyo & Butcher, 2012:212). They include three possible strategies to enhance learner engagement, strategies which can also be seen as a measure of the quality of the materials. Firstly, a resource should be versatile which will make the resource "dynamic". The author should consider the potential context of use and look at a wide range of usage, for example a resource could be translated into different languages. Secondly, resources can be more useful if they explain learning pathways including a date and level of study. Thirdly, material should be made in editable formats with appropriate licensing to enable adaptation.

In reviewing the experiences at MIT and OpenLearn, Sclater (2010b) found that lecturers were concerned that materials cannot be delivered without tutorials and other forms of interaction. Knox (2012) identifies this lack of pedagogy as a potential downfall of the OER movement, and Sclater emphasises that content without other aspects of formal learning can be “less engaging and effective” (2010a:295).

One response to this has been MIT’s initiative to:

“share not just the content that MIT uses in teaching ... but also explicit information on how we teach at MIT... [which include] pedagogical statements from and interviews with participating faculty, links to exemplary teaching practices, showcases of educational innovations, and other framing information that places content shared in context of our teaching philosophies” (Abelson, Miyagawa & Yue, 2012: 9).

This recognises that some pedagogical clues could be helpful to students and also reassure lecturers who are worried that there is no pedagogy associated with OER.

There are concerns that some disciplines need to be taught in certain ways and that OER are not ideally suited to these disciplines or types of engagement. Lee et al. (2008) from Tufts commenting on Health Science teaching and learning materials noted that disciplines which emphasized practical skills, were less suited to OER.

Lecturers are not only concerned about the lack of pedagogy, they are also concerned about a lack of feedback from the users of their OER. Beggan (2010) at Nottingham University found that lecturers were concerned that they would be sharing materials and not receiving any feedback from users of the materials. Kortemeyer (2013) suggests that faculty are anxious about the lack of impact figures of OER as opposed to journal articles or textbooks and how at annual evaluation time they cannot report back on what they have achieved.

Lecturers have certain beliefs and attitudes about pedagogy and these can play an important role when lecturers contemplate contributing, using and reusing OER. Users of OER can change materials to meet their needs however this requires “a radical change from conventional pedagogical beliefs and ‘closed’ practices of resources used by educators” (Karunanayaka 2013:3).

Davis et al. in a study in the UK about the uptake of OER suggest that “barriers to further progress are human rather than technical, the culture and practise of preparing teaching materials needs to change” (2010:101). Although there is a suggestion that pedagogy needs a radical change and lecturers must change their beliefs, research undertaken recently at Oxford suggests that in a research-intensive institution, OER can be added to existing practices and don’t need new pedagogies (Masterman, 2015).

2.15.2 Quality of OER

OER initiatives currently use different processes to assure the quality of the resources that are shared. There are three widely adopted ways to demonstrate the quality of the resources: author’s responsibility, formal peer review and informal peer review (Mawoyo & Butcher, 2012). In the first process, the author shares a resource that is currently in use and has made sure that it is of a good enough quality to share. This is also called the ‘pride of authorship’ model, and it is used by a number of institutions, e.g. Nottingham, MIT and UCT (Beggan, 2010; Hodgkinson-Williams et al., 2013). The second process is used at Open Michigan where the author, education specialists and publications managers are responsible for quality assurance (Open Michigan, 2011). A pool of reviewers is available to review the resource before it is published. This process is also used for materials on OER Africa (Mawoyo & Butcher, 2012). The third process is informal peer review where there is a pool of lecturers available to volunteer to check content, e.g. University of Ghana (Mawoyo & Butcher, 2012). OER initiatives choose one of the processes for quality assurance. However because there is no standard mechanism, there is considerable debate about which method to choose.

Several empirical studies reveal 1) acknowledgment that there may be an impact on the quality of resources due to peer scrutiny, 2) concerns about poor quality materials reflecting badly on the institution, 3) views on whether materials shared in Open directories should have a quality check before they are shared and 4) concerns about the readiness of their materials.

The question of quality is a key challenge in the OER movement, specifically the “extent to which quality control should be applied to materials that are being released for sharing” (Windle et al., 2010: 9). One side of the quality control debate holds that quality control goes against the ethos of the Open movement and would place restrictions and control over materials that are being

shared. The argument is that quality control is not necessary since materials that will be reused will be the ones of quality. In other words, quality will be controlled by the person selecting to use certain materials. Lecturers at the University of South Queensland were concerned that poor quality materials would damage the institution's reputation (Sefton, 2010). However, at MIT OCW a third of faculty who were interviewed felt that the quality of their teaching materials had improved (d'Oliviera & Lerman, 2009). Materials are now visible and invite input, and advocates of Open initiatives argue that this availability causes a cycle of improvement of learning and research (van der Vaart, 2013).

The examples cited here are situated in institutions. However, many OER are not associated with an institution. Knox (2013) identifies a paradox in OER where the OER discourse suggests that OER are available outside of universities and yet university credentials give OER a quality assurance that makes them useful. OER are endorsed by established universities, however protagonists claim liberation from them. While this thesis is focused on institutions and quality assurance, this paradox nevertheless highlights some of the origins of the quality debate across all OER.

The other side of the 'quality assurance of OER' debate sees authors arguing for quality assurance and why it is important. Windle et al. (2010) argue that robust quality control is essential for sharing and use, and this argument is based on their experience of health educators at one institution where quality may be more important, as misinformation could result in injury or worse. Windle et al. (2010) have three reasons for suggesting quality control. Firstly, they feel that quality control helps the person who is willing to share, who may be reluctant and uncertain about the quality of their resource, to have the confidence to share. Here, they specifically mention a quality control process that includes a check on any IP infringement (e.g. a moderator's queue). Secondly, they argue that quality control should be at the point of creation rather than at reuse. They raise concerns that many self-learners are not able to judge quality and/or that teachers have to select materials that are not necessarily in their main area of expertise. They provide the example of peer review of research articles as being a gold standard and feel that their resources were so widely used because of the quality assurance. Lastly, they are not sure that lecturers will put forward their best quality materials without the peer review process.

A number of quality approaches are emerging in the literature and institutions, and lecturers have a range of options that they can consider (Atenas, Havemann & Priego, 2014; Camilleri, Ehlers & Pawlowski, 2014; Clements et al., 2015). Clements et al. (2015) recommend that developers of repositories build a number of options for community engagement such as recommender tools, commenting, favourites and social media tagging. However, they caution that many repositories do not have a strong community, and it will take time for a community to develop. The TIPS framework has also been designed as a possible solution where teachers as creators could work through a checklist before publishing their teaching materials as OER (Kawachi, 2014). Atenas & Havemann (2013) have analysed the quality of 80 repositories and recommend 10 indicators to assess quality, acknowledging that quality measures should be suitable for the context and resources available.

The nature and definition of the quality of teaching materials contributed as OER also varies. It may depend on the context and the individual lecturers' interpretation of quality. At the University of Oxford, lecturers who completed interviews on OER use and contribution noted that quality could be on two different levels: pedagogic and production level (Masterman & Chan, 2015). These Oxford lecturers felt some kind of quality mechanism should be in place to protect their university's reputation but that it should not be too restrictive and impinge on the laissez-fair institutional culture. Masterman and Chan (2015:39) suggest a two tier approach where the institutional repository clearly indicates which OER are "flagship" resources that have been through pedagogic and production quality assurance and others that are good enough to share but are not of outstanding quality.

In the case of the author responsibility process, there is some concern that the lecturers sharing the materials are not necessarily the best judges of the quality of their own materials, and/or they may be overly concerned about the readiness of materials. Winn (2010) interviewed MIT OCW director Cecelia d'Oliviera who noted that a great concern at MIT was that lecturers felt that their materials were not good enough to be shared as OER. According to Davis et al. many lecturers do not make their materials open beyond a smaller community because they feel a "lack of confidence in the applicability of the resource" (2010:103). A participant in the study commented "I have some materials that are nearly ready, they need some more work, then I'll put them in" (Davis et al., 2010:105). Kursun, Cagiltay and Can (2014: 25) also noted that amongst Turkish

lecturers one of the main reasons for not contributing OER was “a lack of self-confidence about the quality of their course materials”. Van Acker et al. (2013:188) found that lecturers who contributed believed that their materials had value and they call this attribute “knowledge self-efficacy”. This idea of knowledge self-efficacy suggests a certain level of confidence by the academic, and Beetham et al. (2012:12) refer to this as “pedagogic confidence”.

The future direction of the quality debate remains uncertain. For many institutions planning repositories or evaluating existing repositories and for lecturers considering contributing, more research is needed to guide present and future practice.

2.16 Agency and Open

There are few studies in the literature that focus on personal factors that may constrain or enable the contribution of OER. While the institutional culture and structure may support contribution, there are also personal factors that will inevitably influence lecturers’ decisions to contribute or not. Measuring and trying to understand the exact reasons “why someone should choose to share or use resources across different contexts are not visible or obvious” (Pegler, 2012:6). This section will include issues such as motivation to contribute OER, lecturers’ concerns about the time and effort it takes to contribute OER and anxieties around redundancy. It will also introduce some work by Groom (2013) around recognising particular academic attributes that may make an academic more likely to adopt OER.

2.16.1 Motivation

Pegler (2012) refers to Herzberg’s (1968) two-factor theory of motivation which includes intrinsic motivation, for example achievement and recognition, and extrinsic motivation, which could include policy, conditions, salary and security. Pegler (2012) notes that it is not enough to have extrinsic inducements and that there needs to be intrinsic impetus for motivation to be sustained. In another study lecturers mentioned a feeling of personal satisfaction from sharing (intrinsic), including “enhanced esteem, recognition and increased visibility” (Martins & Baptista Nunes, 2012:211). Pegler (2012) suggests ‘a three-factor reuse theory’ which includes technical (mostly concerns about metadata and license choice), quality (of the resource and/or a repository) and motivation (purpose and conditions). Aspects of Pegler’s (2012) theory are useful, especially her introduction of motivation and how she has used this in the context of OER use and contribution.

However, there are aspects missing from her three-factor theory, such as culture and pedagogical issues.

Altruistic motivation is inspired by the premise that everyone has a right to education and, therefore, learning should be available to all (Sclater, 2010a). A 'belief in Open education' was found to be a fundamental motivation to share at De Montfort University in Leicester (Rolfe, 2012). Along the same line, Davis et al. (2010:97) refer to 'public spirited' lecturers who make their teaching materials openly available. These motivations are linked to the concept of 'open culture' (Brown & Adler, 2008). It should also be noted that some lecturers acknowledged that it is a good thing to share, but they don't (OECD, 2007). Therefore, it is important not to take a belief in Open sharing at face value as lecturers may pay lip service to the idea but actually their concerns lie elsewhere.

Andersen (2010), in an article on Open Faculty, argues that a "nature" influence is the individual's innate inclination to share. She categorises two ends of the scale. At one end of the scale, there are "the keepers", faculty who ask themselves: "why would anyone outside my course want to know what I think?" At the other end of the scale, there are "the sharers", faculty "who believe their contribution to the conversation, content and/or community is invaluable" (Andersen, 2010:45). The "nurture" influence is "how strongly the person feels a moral responsibility to share freely with his or her community" (Andersen, 2010:45). She adds that "the natural inclination to sharing cannot easily be altered, [but] the moral responsibility to share can be influenced by surrounding culture" (Andersen, 2010:46). Changing a person's natural inclination, she suggests, can be done if an institution places value on Openness. This suggests that it is merely the external motivation that is important for OER contribution.

Rolfe (2012) provides a different view in her analysis of data from interviews with six lecturers at De Montfort University in the UK that revealed "personal feelings and attitudes" towards OER. Rolfe does argue that we need to build on an existing "culture of borrowing and sharing" in order to achieve a "critical mass of interested individuals" (2012:7). She talks about lecturers who share as having a "strong belief in Open education" (Rolfe, 2012:1). These lecturers are exercising their individual agency.

On a more profound level, resistance to using OER can also be related to status and identity (Weller, 2010). Lecturers see themselves as experts in a field and perhaps using someone else's materials can be seen "a sign of weakness" (Weller, 2010:3). Lecturers in elite universities believe that expert resources are "created here so we'll use our own", and therefore a reason for faculty resistance is "my content is king in my kingdom" (Olcott, 2012:285).

2.16.2 Time and effort

Another factor highlighted as a barrier to OER contribution and use is the effort required to achieve Openness. Sharing materials often requires extra effort over and above traditional or existing practices (Corrall & Pinfield, 2014). Lecturers at Tufts University in the United States referred to concerns about the time it takes to prepare materials for sharing publicly (Lee et al., 2008). Lecturers who are already under pressure (from their teaching and research commitments) may not see the value in committing time to converting their materials into OER (Camilleri & Ehlers, 2011). Time is mentioned as a concern in terms of development of material and IPs clearance (Beggan, 2010). This overwhelming concern is recognised as a "proxy for other inhibiting factors"; however, lecturers felt they were struggling to get on top of current workloads, and preparing materials for OER would add to their existing obligations (Browne et al., 2010: 10). By contrast, West and Victor (2011) argue that using OER may also save time, especially when materials are being created from scratch and existing materials can be used.

2.16.3 Redundancy

Another more personal concern of lecturers or teachers is that traditional classroom teaching may be under threat. Sefton (2010) noted that lecturers at the University of South Queensland, Australia, were concerned that students would not attend lectures. Lecturers at the University of Nottingham voiced concerns that students would no longer come to lectures if teaching materials were available as OER (Beggan, 2010).

2.16.4 Teacher attributes

Research in the UK suggests that there may be a 'kind of teacher' who is likely to create OER (Groom, 2013). This kind of teacher:

- sees teaching as (among other things) helping students to become active, independent learners

- has a collaborative outlook
- sees value in combining their own teaching materials with relevant materials from other sources
- is confident in their teaching skills and their command of subject matter
- has a readiness to develop their professional practice both from engaging with other people's resources and obtaining feedback on the resources they have shared with others (Groom, 2013).

These attributes were recognised in a review of the OER work of JISC over many years. These attributes are not based on any theoretical approach but are the result of analyses on many empirical studies.

2.17 Empirical studies in the Global South

Most of the research already discussed in this chapter emanates from the Global North. Less empirical research has originated from the Global South, although some OER initiatives and empirical research has started to emerge. The current IDRC-funded "Researching OER for Development in the Global South" (ROER4D) seeks to build an empirical knowledge base from across South America, Africa and South and Southeast Asia (Hodgkinson-Williams, 2013).

2.17.1 African OER projects and research

Although OER contribution and non-contribution have been researched internationally, there are few studies from Africa or South Africa that specifically address why lecturers share or refuse to share materials and/or use or do not use OER (Cox, 2012). Research indicates that there are some institutions on the African continent with OER repositories: the University of Ghana, Kwame Nkrumah University of Science and Technology (KNUST)⁶, University of the Western Cape (UWC), the University of Cape Town (UCT)⁷, the University of South Africa (UNISA), Stellenbosch University⁸ and the University of Pretoria⁹. However, a web search, conducted in January 2016 indicates that in the case of the University of Ghana, KNUST and UWC the sites do not appear to be functioning. The African Virtual University (AVU) includes materials from 11

⁶ The websites of these two institutions were not functioning [2016, January 26]. For more information on these initiatives go to Adanu et al., 2010.

⁷ Available: <http://open.uct.ac.za/> [2016, January 26].

⁸ Available: <http://scholar.sun.ac.za/> [2016, January 26].

⁹ Available: <http://www.afrivip.org/> [2016, January 26].

African institutions.¹⁰ In addition, a non-governmental organisation, OER Africa, creates OER for specific projects across Africa.

The AVU has OER@AVU which has been in place since the end of 2010 and had over 900 000 views by 2012 (Diallo, 2012). The AVU is a collaborative venture and the OER partners include: Amoud University, Somalia; East Africa University, Somalia; Jimma University, Ethiopia; Université Cheikh Anta Diop, Senegal; University of Hargeisa, Somalia; University of Nairobi, Kenya; Universidade Pedagógica, Mozambique; Université Antananarivo, Madagascar; Yambogo University, Uganda; Open University of Tanzania; University of Zambia; and University of Zimbabwe. There are some informative presentations on OER@AVU (Diallo, 2012).

The OER Health Initiative (a collaboration of University of Ghana, KNUST, UWC, UCT, University of Michigan) and OER Africa (an initiative of SAIDE) has provided some insights on the sustainability of Health OER initiatives in South Africa and Ghana (Harley, 2011). Tagoe et al. (2010:1) from the University of Ghana, KNUST and the University of Michigan, reflect on their experiences of the OER Health Initiative and highlight the challenges of sustaining this initiative in a “low-resource” setting.

Ngimwa (2010) has written a report on OER readiness in Africa which assessed both technical (infrastructure) and human factors (skills, perceptions and attitudes). Ngimwa concludes that if technology infrastructure is a benchmark, there are pockets of readiness, mostly in South Africa, but that –“the question of human factors affecting this adoption still remains a big issue” (2010:41). She has noted a lack of awareness and a need to change attitudes in relation to OER adoption. She calls for research around ‘effective strategies’ as many of the issues are attitudinal and cultural and therefore unique to context. Various socio-cultural and economic issues appear to be preventing OER adoption in Africa. This investigation took place within the Teacher Education in Sub-Saharan Africa (TESSA) project (Ngimwa & Wilson, 2012). The issues include: 1) a lack of awareness of OER even when some participants were creating OER or were part of Open Access initiatives; 2) a fear of national and international critique due to teaching materials that may be out of date internationally but locally they were still relevant; 3) a feeling that they may still be

¹⁰ Available: <http://oer.avu.org/> [2016, January 26].

able to make money from their materials: 4) a shyness to share on the internet in spite of a pervasive culture of sharing on an oral level; 5) an unwillingness to spend the time 'adapting and using'; 6) a feeling that OER are foreign and not invented in Africa and 7) a lack of capacity especially in the area of computer literacy. All of these issues act as barriers to the adoption of OER in Africa.

In response to these socio-cultural and economic issues, Ngimwa and Wilson (2012) suggest that to adopt and sustain OER there must be national and institutional buy-in, where policy is implemented on both levels. They add that national and institutional policy should also clarify IP rights. Ngimwa and Wilson (2012) argue that universities across the world reward lecturers for publications in accredited journals, and in order to enable contribution and use of OER, there also needs to be reward for OER production and use (Ngimwa & Wilson, 2012).

An Honours in Information Systems thesis reported on a small sample exploring the barriers and enablers to the use of OER by lecturers in HEIs in Africa. This thesis focused on use of OER and the key barrier noted from the survey was a technological one which included lack of access to computers, the internet and sufficient bandwidth. This thesis by Percy (2011) includes the use of a modified version of the unified theory of acceptance and use of technology (UTAUT). Percy (2011) conducted a survey across HEIs in East, West and Southern Africa. The survey was in two sections: the first section was completed by 75 respondents and the second section by 68 respondents. Three interviews, from the second section of responses, were conducted in order to have some qualitative data. Percy (2011) also noted a difference in perceived barriers between those who use OER and those who do not use OER. Those who use OER struggled to discover and identify OER that were relevant to their contexts while those who did not use OER felt that they did not have the skills to use it (Percy, 2011). Percy (2011) concludes that a survey or questionnaire is not sufficient in attempting to understand the underlying intrinsic motivators to OER use. She suggests a qualitative study where lecturers are asked to discuss their underlying feelings and attitudes towards OER and how these attitudes are affected by culture and politics. This thesis responds in part to this suggestion of a qualitative approach.

2.17.2 South African OER projects

In May, 2012, the South African Department of Higher Education and Training included a section on the value of OER in their Draft Policy Framework for the Provision of Distance Education in South African Universities (Department of Higher Education and Training, 2014). The framework supports UNESCO's work on promoting OER as part of a "growing international movement" (Department of Higher Education and Training, 2014:59). In line with this position, the South African government co-hosted a UNESCO forum on OER policy in Africa at the end of February 2012 indicating their interest in and recognition of OER. However there is no South African national policy on OER as of yet.

UWC was the first South African university to create an OER directory. Although the initiative was strongly supported by university policy, the path to sustainability has been a slow one with only a few lecturers participating. "Getting actual buy-in from participants" was acknowledged as important for the future of the UWC involvement in OER (Keats, 2009:54).

There is a growing interest in OER at South African universities. UNISA launched an OER initiative in 2012. There is some recent interest from the Stellenbosch University, although their focus is still on Open Access (Van Der Merwe, pers. comm.). Additionally, the University of Pretoria, Faculty of Veterinary Science launched AfriVip in 2014.¹¹ The national landscape of Openness over the past 4 years is slowly shifting, with government and other institutions also promoting OER which may increase awareness and contributions from lecturers.

2.18 The context for this study

The Centre for Innovation in Learning and Teaching (CILT) at UCT developed UCT's first version of the UCT OC directory. The OER shared in that initial directory form part of the OpenUCT repository now managed by the UCT Library. CILT shares responsibility together with library staff for curating and growing the OER contribution (teaching and learning materials) of this repository which also includes Open Access materials (research). The development of the UCT OC was funded by the Shuttleworth Foundation, and OpenUCT (OC2) was funded by the Mellon Foundation (July 2011 - December 2014). UCT OC was sustained through its inclusion in the portfolio of the person responsible for the Curriculum Projects in CILT and by short-term,

¹¹ Available: <http://www.afrivip.org> [2016, January 19].

institutionally-funded projects such as the OER Adaptation Project (2013-2014), funded by UCT's VC's Fund.

OpenUCT is an institutional repository that: "...makes available and digitally preserves the scholarly outputs produced at UCT, including theses and dissertations, journal articles, book chapters, technical and research reports, and open educational resources" (OpenUCT, 2014). The Research Office at UCT, in collaboration with Information Communications Technology Services, created an "eResearch" portal. The portal is closed and requires a UCT login; however, the vision for the portal is that it will link to UCT OC so that Open Access articles can be shared. The 'Open' agenda at UCT is much broader than sharing teaching and learning materials as OER, but for the purposes of this thesis is on teaching and learning resources and not on sharing research.

Contribution to the UCT OC directory is voluntary. UCT has a Teaching and Learning strategy document which refers to OER and MOOCs:

"Recognising, rewarding and incentivizing the development of shareable teaching materials (for use as Open Educational Resources and/or in Massive Open Online Courses for example)."

UCT has a MOOC project (2015-2017) managed in CILT. Lecturers apply to create a MOOC and applications are considered by a committee. Guidelines for what is expected, how materials will be designed and how they will be openly licensed are set out on the CILT website.¹²

From May 2013-April 2014, the UCT OER team was allocated a small amount of money (R150 000) from the UCT VC's Strategic fund to employ students to assist lecturers with adapting existing teaching materials for contributing to UCT OC. The concept behind this proposal was that students are well positioned to approach their lecturers and offer their assistance. Students were trained in CC licensing and strategies to deal with 3rd party copyright in materials. At the end of the project, this group of five students were firm advocates of contribution. It was hoped that this small group could be called on as trained experts in this area if lecturers were looking for student help. A second grant was awarded to assist UCT librarians in their new role of curators of OER in OpenUCT.

¹² Available: <http://www.cilt.uct.ac.za/cilt/moocs-project-uct> [2016, January 26].

In 2014, an OA policy was introduced that encourages the sharing of teaching materials. However, there is no specific mandate. There is no financial or status reward or recognition in annual performance reviews for contributing teaching materials to OpenUCT or any other Open platform. The only incentives available were fairly modest OpenUCT OER grants (up to R10 000) that were used by lecturers to pay senior students, graphic designers, artists and software specialists to assist them with re-working or creating teaching and learning materials as OER. Seventy-six grants were allocated over five rounds from 2011 through 2015.

Before the OA policy came into being in 2014, 332 resources had been added to UCT OC on voluntary basis (some with the assistance of small grants). Over 200 lecturers, ranging from young lecturers to A-rated research professors across all faculties at the institution, contributed content to the directory (Cox, 2013). Nevertheless, those who added materials formed a small percentage of UCT staff (10% of approximately 2500 part time and full time academic staff).

The specific objective of UCT OC was to share teaching and learning materials with lecturers and students across UCT, the country, the African continent and the world. Lecturers at UCT were encouraged, on a voluntary basis, to share their teaching materials as OER on UCT OC. UCT adopted a pride-of-authorship model (King & Baraniuk, 2006:5) where the quality of the content and the resource is the responsibility of the author (Hodgkinson-Williams & Gray, 2009). The content created is developed from an African perspective and shared locally and internationally. Dulle & Minishi-Majanja (2009) note that Africa only generates 0,4% of global content which includes both teaching resources and research materials. Adding resources to UCT OC and OpenUCT is a way to redress this imbalance (Ngugi, 2011). As a South African and African institution, it is important that UCT produces and shares African content that can be used by African students, lecturers and globally in order to close the knowledge divide that exists between the so-called developed North and developing South. As West and Victor reflect: “the sharing of OER cannot be a one-way flow from industrial countries to the developing world. Both ‘worlds’ have knowledge to be shared with each other” (2011:49).

2.18.1 OER research in South Africa

Lecturers from 17 HEIs in South Africa were surveyed in order to explore the use and contribution of OER (Lesko, 2013). Of the 48 participants, 46% used OER in their teaching materials and 33%

had contributed OER to a repository. The respondents mentioned three main areas of concern: lack of knowledge about the ownership of materials, lack of awareness of copyright within the institution and a lack of ability to find resources. Lesko (2013) recommended more advocacy work around the value of OER, training around copyright and CC as well as more research into academic perceptions of quality in order to develop indicators to guide lecturers.

There has been some recent research into various aspects of OER at UCT. A Master's student explored student perceptions of the reuse of digital educational materials in a student outreach project (Paskevicius, 2011). Several papers and chapters have been published about the UCT experience of OER (Cox, 2012; Czerniewicz et al., 2015; Hodgkinson-Williams & Paskevicius, 2012; Hodgkinson-Williams et al., 2013; Hodgkinson-Williams & Gray, 2009; Hodgkinson-Williams & Gray, 2008). These articles cover aspects of developing the OER initiative at UCT, sustaining the initiative and working with post graduate students to assist lecturers in adapting teaching materials for OER.

This concludes the review of the literature that focuses on OER contribution and non-contribution both internationally and in Africa, especially South Africa. The next sections will look at the research methods and theoretical frames used by the authors that have been included in this research so far.

2.19 Types of OER studies

Several of the articles mentioned earlier are reviews of existing literature (Smith & Casserly, 2006; Andersen, 2010; Sclater, 2010a; Sclater, 2010b; West & Victor, 2012) and are not empirical studies. Two of the articles are blogs where lecturers have reflected on events relating to OER (Sefton, 2010; Winn, 2010). Browne et al. (2010) have used comments from lecturers they have worked with during the development of the OER initiative and refer to "informal and formal" engagement. However, they do not specify how many lecturers were used in the study or whether any formal interview or surveys took place. Beggan conducted a series of staff focus groups "to explore attitudes and any barriers preventing adoption" (2010:1).

Interviews are a popular way of collecting data for OER studies. Rolfe (2012) conducted a survey that was completed by 50 staff members and held interviews with six of those staff members. She suggests that interviews are a better method of collecting data than surveys because of the “richness of opinion”, and that interviews revealed barriers to sharing that were “deeper rooted and more personal” (Rolfe, 2012:8). She also suggests that interviewees should not be self-selected but that researchers should approach a randomised selection of participants in order to avoid “responses that may well be more positively biased” (Rolfe, 2012:8). In another study, Lee et al. (2008) conducted two sets of interviews, one set at the beginning of the intervention and one approximately six months into the intervention. In the African context, Ngimwa (2010) interviewed ten participants, three participants from Egerton University in Kenya, two participants from Makerere University in Uganda, one academic from the University of South Africa (UNISA) and an education specialist from the South Africa Institute for Distance Education (SAIDE).

Interviews are not the only way to effectively gather data. The OER Research Hub, a project at the Open University, UK, uses a mixed methods and open collaboration approach (Farrow et al, 2015). This research team is attempting to produce evidence of the impact of OER on Teaching and Learning. They have produced several papers on data gathered from across the world (surveys, interviews and focus groups) in order to better understand OER use by educators and formal and informal learners.

Various approaches to data collection have been used and these studies have produced useful research on OER. There is an empirical gap in the reviewed literature where few studies have used interviews with selected participants in order to delve deeply into their motivations and deterrents to OER contribution (the focus here). The methodological choices will be explained in more detail in Chapter 4.

2.20 Theoretical approaches adopted in prior OER studies

The majority of these papers referred to in this initial literature review make no claims to any explicit theoretical approach (Sclater, 2010a; Sclater, 2010b; Beggan, 2010). Some of the authors use the discourse of some theories, but not in an explanatory manner. So for example, Browne et al. (2010) refer to supply and demand in OER which suggests an economic strategy model.

Percy and Van Belle (2012) and Mtebe and Raisamo (2014) both use the unified theory of acceptance and use of technology (UTAUT), a primarily quantitative approach used in the field of information systems. This theory seemed to be useful in identifying barriers and enablers to contributing OER but did not assist the authors in explaining why lecturers chose to use/not use and contribute/not contribute OER.

Harley (2011) uses the work of Bourdieu (1986) and Rogers (1995) to explain some of the sustainability issues of an international collaboration of Health OER initiatives in South Africa and Ghana. As discussed earlier, Stacey (2010) also uses Rogers (1995) in an attempt to understand and propose sustainability models for OER. The innovation theory of Moore and Benbasat (1991), which is a development of Rogers (1995), was used in paper by Hodgkinson-Williams and Paskevicius (2011).

Pegler's paper (2012) uses Hertzberg's theory of motivation in an attempt to explain why lecturers create and use OER. Van Acker et al. (2013) use social exchange theory in an attempt to explain the sharing practices and choices of school teachers who contribute OER. Van Acker et al. (2013) investigated different forms of motivation that form part of social exchange theory and found that lecturers were sharing for altruistic reasons and not because of extrinsic factors such as reward and recognition.

Others have attempted to theorise different aspects of OER debates, e.g. McAndrew (2006) used AT as a lens to investigate how the various aspects in the adaptation of OER influence an entire system. Hodgkinson-Williams and Paskevicius (2012) also used AT in order to understand the role of postgraduate students in adapting lecturers' teaching materials as OER. Both McAndrew (2006) and Hodgkinson-Williams and Paskevicius (2012) have used AT to make causal arguments around the university system as well as to explain individual actions. Hodgkinson-Williams and Paskevicius (2012) used Engeström's three layers of causality in human action as part of their theoretical lens to explain the role of postgraduate students in co-authoring OER.

Hodgkinson-Williams & Gray (2008) used Archer's (1998,2003) SR framework in an endeavour to understand how the formal structures of policy at a national and institutional level enable or constrain the practices of individual or groups of lecturers.

This research built on the pioneering work of these authors and included the use of two theories AT and SR to explain the impact of OER. This research has filled this theoretical gap where, up to this point in time, only a few attempts have been made to move beyond describing the results of interviews and surveys to explaining why lecturers contribute OER or chose not to contribute OER.

2.21 Pilot study

A pilot study was carried out to assess the usefulness of AT in framing and describing the barriers and enablers across various contexts within UCT. The study was conducted in two phases. In phase 1, the concerns raised in the international literature were analysed using an AT framework together with the concerns raised by three lecturers who had not contributed to UCT OC (Cox, 2013). In phase 2, the AT framework was applied to the findings from interviews with three lecturers who had contributed and these were compared to the interviews with the three lecturers who had not contributed (Cox, 2012).

In Cox (2013), the concerns highlighted in the international literature were located on the nodes of an activity system triangle in order to locate the concerns within institutions. Cox (2013) analysed 30 concerns raised in the literature and determined that at least 50% of these related to “rules” embedded in university systems (both explicit or overtly stated and implicit or implied rules of academic institutions). The explicit rules are identifiable, e.g. in research institutions promotion is based on research and not on producing quality teaching materials (Beggan, 2010). The implicit rules are unwritten and therefore more difficult to address or change. These implicit rules relate to the quality of teaching materials and the social acceptance of OER issues, such as whether or not one lecturer should use another lecturer’s materials. Time, workload and cost were concerns related to the ‘Division of Labour’. The ‘Community’ represents not only colleagues and peers at the institution, but also the end users of the OER.

This coding of the enablers and barriers to OER contribution in the literature was verified through inter-rater reliability. I conducted a rating session where two colleagues coded the identified factors separately. This was followed by a discussion of the results in order to make sure the use of AT was accurate. This formed a preliminary inter-rated reliability exercise and it was

not necessary to repeat it in this research. Initial categories for interview questions were also verified by a colleague in the pilot study so that similar questions could be used in the thesis.

The in-depth interviews revealed different concerns or contradictions depending on the subjects' views and interests. The concerns of all three lecturers who had not contributed clustered around three key areas:

1. Pedagogical concerns around purpose and use of OER (Implicit Rules)
2. Quality assurance concerns about the quality of the teaching materials and their readiness to be released openly (Implicit Rules)
3. Collegial concerns about the influence of colleagues on the individual lecturers' inclination to contribute resources (Community)

There are some overlaps with concerns found at other institutions namely: 1) the time it takes to prepare OER; 2) the concern about copyright infringement; 3) the perception that some disciplines are not suited to OER; 4) the lack of promotion or recognition; 5) the concern that students will not attend lectures; 6) the quality of materials and 7) the perception that OER need to be interactive in order to be useful in the classroom. Institutional support and the opinions of lecturers about the value of OER were identified as being crucial to their contribution. The interviews revealed that the non-contributing lecturers did not place any value on adding OER. For these three individuals it seemed that not contributing was the result of a lack of motivation, and the three key concerns (pedagogical, quality and collegial) displayed in the contexts listed above stopped these lecturers from adding teaching materials.

Some interesting new concerns surfaced in the pilot study that were not encountered in the literature review. One academic felt that there would be a lack of freedom to teach spontaneously if all materials were open. There were also concerns around a lack of understanding of the purpose of OER from all three lecturers. Additionally, one academic felt that a personal invitation to contribute teaching resources from one of the members of CILT was needed before they would contribute teaching materials to UCT OC.

The enablers were identified by the individuals, who revealed their personal philosophy of Openness and other context specific factors such as stage in career, the content of the material

and technological ability. In this pilot study, it seemed that the altruistic belief that sharing has value (Sclater, 2010a) is combined with another enabler or motivation such as increased visibility.

This pilot study revealed the usefulness of the basic principles of AT in highlighting and understanding some of the enablers and barriers to OER creation within the UCT system. It was not clear from this initial pilot study how important the role of the individual academic is in exercising their free will. The three lecturers who were sharing were also faced with constraints that they managed to overcome because of their belief in sharing and the value they place on OER. Thus the pilot study revealed some of the shortcomings of AT, specifically that as a theory, it did not enable an explanation of more personal motivation and beliefs. The work of Hodgkinson-Williams and Gray (2008) introduced SR as a way to understand and frame the importance of the agency of lecturers and will be used in this thesis in the same way for this study.

2.22 Summary of Chapter 2

Analysis of the literature reveals the contribution and use of OER are enabled on a global level by technology, Open licences, donor funding and government policy. Institutionally, OER contribution is enabled by repositories, clear IP guidelines, donor funding resulting in support teams and services, and policy that gives lecturers time and recognition for their contributions (Figure 2-2). Previous studies suggest that the long term sustainability and global reach of the OER movement and other Open initiatives rests firmly on the willingness of individual lecturers to share and use OER. Prior research intimates that individual contributions and engagement with OER form the foundation of this movement and that this is built on the altruistic principle of sharing.

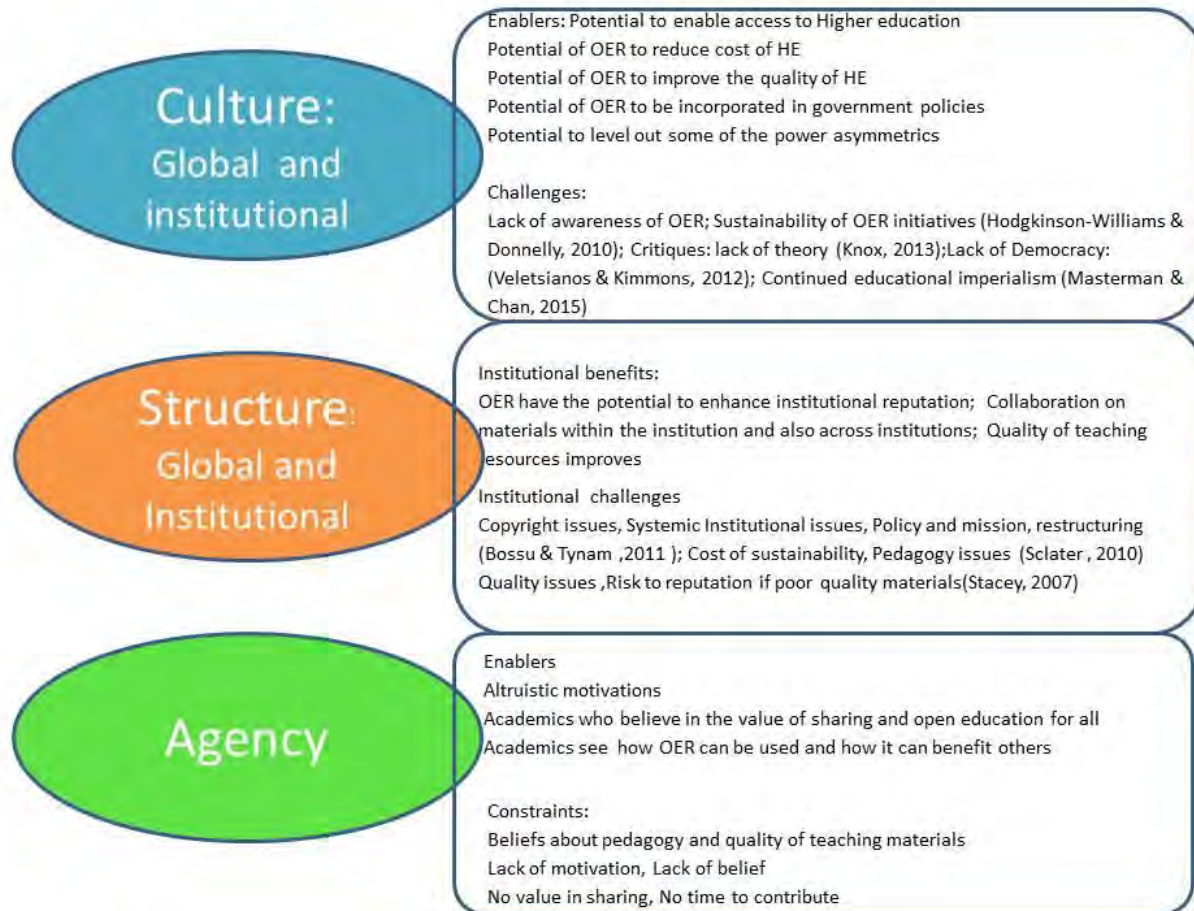


Figure 2-2: Local and global factors that affect OER in terms of culture, structure and agency

What is clear from the literature review is that the motivation to contribute OER is a complex issue. This review highlighted a number of permutations depending on the context (culture and structure) and the relationship between the context and individual choice. This relationship is not clearly articulated and anecdotal evidence was used to understand the relationship, if any, between the context and the individual.

The list of contextual constraints includes institutions that have few resources to support lecturers with OER creation, sharing and use. These institutions may not have received start-up funding for OER, or the start-up funding has ended and there is no capacity to assist lecturers through grants, student assistance or even staff development workshops. It would seem from prior studies that a lack of policy or support from senior management may result in the belief that the institution places little value on sharing OER. It appears that this lack of encouragement to share, or lack of a culture of sharing, may impact on individual lecturers' choices.

In the empirical studies reviewed, lecturers provide reasons why they have not contributed or used OER. However, it is important not to take these reasons at face value but to consider deeper underlying issues that need to be explored, for instance personal beliefs and values. Some authors have suggested that extrinsic motivators will shift lecturers' belief in OER. These authors believe that if an institution gives recognition, grant money and allocates time to OER creation and use, then the educators will add their teaching and learning materials. There are examples where educators have joined the OER movement with the push of these extrinsic motivators. It is not clear whether extrinsic motivators are sufficient for sustained OER contribution. For example, an educator may receive a small grant or some student help to develop or adapt materials, but this may result in once off contribution and not continued contribution.

In the literature review and the pilot study, individuals listed a lack of institutional support or support from peers, a lack of recognition for sharing and a lack of time as the key reasons why they did not contribute their teaching materials as OER. There is a lack of awareness of what OER are and how they can be used. There are misunderstandings around copyright and a fear of infringing on the copyright of others, and in addition, lecturers are not aware of CC licenses and what those licenses enable. In the pilot study, the individuals who shared their teaching and learning materials had similar constraints and yet they were contributing OER.

Two key issues have emerged from the literature review: the pedagogy of OER and the quality of OER. The pedagogy debate revolves around the purpose of OER and the changing pedagogical beliefs and practices. Quality debates in OER circles are emerging strongly as an area where there is a call for guidelines or a specific strategy on addressing the quality of OER. Some authors argue strongly that quality affects both contribution and use. In some contexts, there are structures in place, for example guidelines for the purpose, design and quality of OER. However more broadly, individuals and groups are free to decide how they would like to contribute and use OER.

This chapter has attempted to organise a substantial amount of research about OER into broad themes in order to make it more understandable to the reader and to myself. The proposal for this thesis was written in 2011, and at the time very little attempt had been made to theorise OER. In subsequent years, it has become clear that the OER movement needs explicit theorising. A number of authors have used AT, and there are some single attempts to use SR, motivational

theory and social exchange theory. The pilot study and the work by other authors indicates the usefulness of AT to frame the complex system of HE and the broader culture that impacts on that system.

The purpose of this study is to understand the actions of lecturers. The SR of Archer explores the power of the agent (academic in this case) to decide on their course of action related to their personal concerns. This research aims to understand lecturers' internal conversations in deciding: What should I do? Should I contribute my teaching and learning materials as OER?

Chapter 3: Theoretical framework

3.1 Introduction

This study aims to understand the reasons why lecturers choose to contribute or not to contribute their teaching and learning materials as OER and how these reasons might be shaped by culture, structure and agency. As lecturers find themselves situated within a particular set of cultural norms, these ideational aspects may or may not influence their decisions to contribute or not to contribute their teaching and learning materials. Likewise, these lecturers are located within global structures including IP regulations, repositories, meta-data standards and university structures which have their own policies, repositories, and quality assurance mechanisms. These structures may or may not impact directly on the choices lecturers make about sharing.

A theoretical framework is required which can provide descriptive and analytical tools to enable the precise description and the fine-grained analysis of the individual as well as the global and institutional structures and cultural systems within which lecturers are located. These structures and systems include the barriers and enablers which may impact upon teaching projects of the individual lecturers. To enable such description and analysis, a theoretical frame needs to be dialectical in its approach and able to move between the individual and the social setting. Finally, and critically, it needs to enable an explanation of change and transformation.

In this chapter, I make the argument for the use of two theories namely Activity Theory (AT) and Social Realism (SR) to assist with the descriptive, analytical and explanatory work. I explain how AT provides the descriptive and analytical framework necessary for a clear understanding of the structural and cultural context. I reveal how I use SR to underpin AT in order to explain the causal mechanisms impacting on the choices made by these lecturers in this study. SR is used to explain why lecturers act in different ways in the same structural and cultural context.

3.2 Activity Theory

In this research, I use what is referred to as Third Generation AT as proposed by Engeström in 2001. First generation AT based on the work of Vygotsky focuses on individual action, while second generation AT based on the work of Leont'ev explains the difference between individual action and collective activity (Feldman & Weiss, 2010). In third generation AT, Engeström (1987)

expands upon these previous forms and considers multiple activity systems in order to “understand dialogue, multiple perspectives and networkings of the individual activity systems” (Engeström, 2001:135).

AT provides the framework to investigate activity within a social setting. This social setting is also referred to as the activity system. The activity in the system at UCT is the preparation or creation of teaching materials to share as OER in the UCT institutional repository. Engeström (1987) formulated a model of the structure of a system which includes Subject, Object, Tools, Division of Labour, Community, Rules and Outcome. Using the labels for these nodes (elements) in the system developed by Engeström et al. (1991), case-specific descriptions can be added to the nodes in the activity system (Figure 3-1).

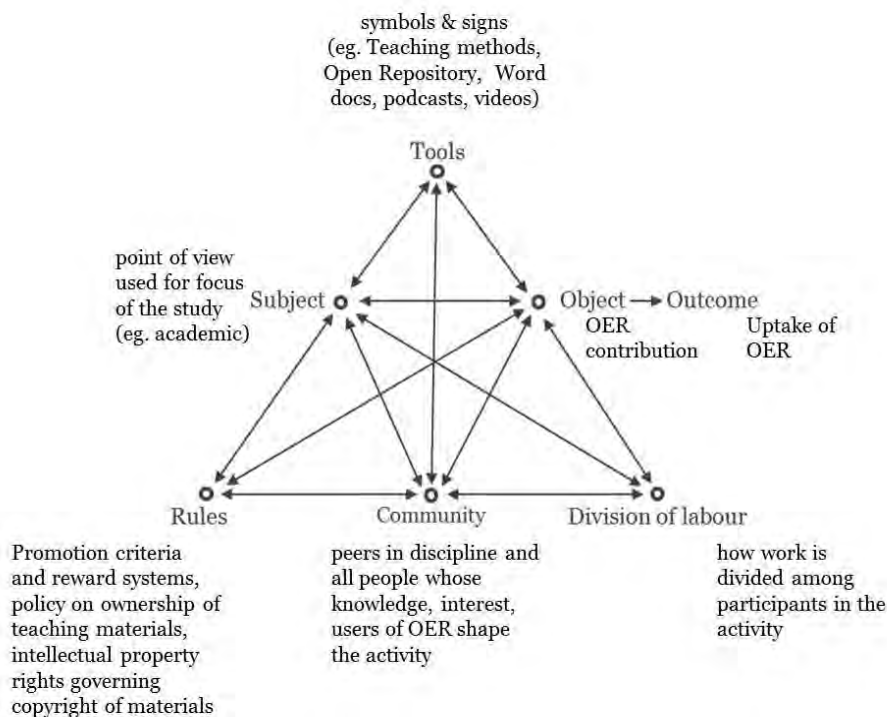


Figure 3-1: The Activity system adapted from Engeström (1987:87)

In this system, the Tools are the mediating artefacts through which the Object is transformed into the outcome (Figure 3-1). In this study, the Object is contribution of teaching materials as OER and the outcome is the access and use of materials for learning and teaching. These mediating artefacts influence how the Subject (in this case the academic) acts upon the Object in order to

arrive at the outcome. The Subject is also influenced by the Rules of the system, the Community and also the Division of Labour (Engeström, 1987).

The Tools in this system include not only the availability of the UCT repository where lecturers can contribute materials, but also the other technological Tools that can be used to create OER. Lecturers at UCT create teaching materials for their classrooms as part of their daily practice. However, even if they wanted to share, these materials are not necessarily suited to digital storage and being potentially shared with varied user groups from across the world (outcome). A change in pedagogical practice and beliefs may also be necessary to mediate the activity at the 'Tools' node. For many lecturers there is a gap in understanding how to design and disseminate resources for use by a broader online audience.

The Community consists of all the individuals or groups who have a stake in the Object of the activity system (Engeström, 2001). The Object therefore defines the Community and helps to distinguish the Community from other communities (Engeström, 2001). In this study, the Community includes the peers and colleagues of the lecturers and also the potential users of the contributed materials.

The Division of Labour represents the hierarchy in the system including the power relations at play (Engeström, 2001). In this study, the roles of the academic are important as they influence how lecturers might find the time to contribute OER and who else is involved in the OER production process. Third generation AT is particularly useful because of its emphasis on multiple systems, with each system representing a different stakeholder with different relationships to the Object (Engeström, 2009). Work has also been done on applying AT to different representations for different stakeholders of the same system rather than treating each version as different systems (McAndrew, Taylor & Clow, 2010).

Rules can be regulations, norms and conventions (Engeström, 2001). The Rules can be explicit and implicit, and they act as enablers or constraints within activity systems (Engeström, 2001). In this study, the explicit Rules include promotion criteria and reward systems, policy on ownership of teaching and assessment materials, and IP rights governing the copyright of materials. The

implicit Rules could include ideas about the quality assurance of materials and pedagogical practices.

Engeström explains the usefulness of Third Generation AT as being able to “expand the analysis both up and down, outward and inward” (2009:308). The “up and out” applies to multiple interconnected systems and their shared or fragmented objects while the “down and in” applies to “subjectivity, experiencing, personal sense, emotion, embodiment, identity and moral commitment” (Engeström, 2009:308). At this point in Engeström’s (2009) reflections, he notes a potential split in AT “into the study of activity systems, organisations and history, on the one hand, and subjects, actions and situations on the other” (Engeström, 2009:308). He closes his thought piece by saying that serious theoretical work is needed to prevent this split from happening. To address this tension, this uses AT for the ‘up and out’ and SR for the ‘down and in’. The ‘up and out’ will include the university systems, both old and new, and the contradictions that arise between the multiple systems that lecturers are part of as teachers, researchers and administrators. The exploration of the ‘down and in’ will include investigating the personal choices made by lecturers. Although Engeström talks about agency and this personal sense, he has not developed any theoretical tools in his expansive learning theory that can be used to explain individuals’ choices.

However, as AT provides a useful framework for the detailed description of complex activities and it is used to categorise and visually present the empirical findings in this research. AT offers the researcher a tool to identify which aspects of the system are impacted upon when a new initiative such as the Open initiative at UCT which included UCT OC.

3.2.1 Contradictions

Another useful aspect of AT is the concept of ‘contradiction’, which has been used extensively in educational technology research. Murphy and Rodriguez-Manzanares (2008) provide a thorough review of these studies, focusing on how these studies have used the principle of contradictions to describe and understand particular activity systems. These contradictions or tensions occur when there is a “misfit within elements, between elements, between different activities, or between different developmental phases of a single activity” (Kuutti, 1996:34). These contradictions can be visible or invisible, intentional or “unintentional disturbances” (Engeström, Brown, Christopher &

Gregory, 1991:91). Contradictions are historically present in activity systems. When a new activity is introduced into the system, internal ‘primary’ contradictions result in “aggravated secondary contradictions where some old element collides with a new one” (Engeström, 2001:137).

Engeström outlines tertiary contradictions, which occur when an old activity system clashes with a more advanced version of the activity system, and quaternary contradictions, which occur when the main activity system clashes with a neighbouring activity system. Contradictions are crucial driving forces of transformation (Engeström & Sannino, 2010) and articulating the location of these contradictions in the system and overcoming them can potentially transform the activity (Murphy & Rodriguez-Manzanares, 2008). These contradictions may also ‘disable’ transformation if they are not recognised and resolved (Nelson, 2002:34).

Table 3-1 includes definitions of Engeström’s four levels of contradiction are outlined. The first column is based on Engeström’s definitions that appear in Mukute and Lotz-Sisitka (2012). Mukute and Lotz-Sisitka (2012) have used this identification of levels of contradiction in their study of how farmers learn in a South African study. They investigated several case studies and were able to identify contradictions in each case. The second column also describes the contradictions, but uses more simplified language in order to make the understanding of these four levels of contradiction very clear. Their conceptualisation is compared to that of Yamagata-Lynch and Haudenschild (2009) who used these four levels to study teacher professional development activities. They compared the systems of the individual teachers with the institutional activities and included aspects of value and a participant perspective on contradictions. Both sets of definitions are useful for application in the current study.

Table 3-1: Engeströms’ 4 levels of contradictions:

Contradictions	Mukute & Lotz-Sisitka (2012:355)	Yamagata-Lynch & Haudenschild (2009:4)
Primary contradictions	appear within nodes such as Rules or Community	occur when participants encounter more than one value system within an activity
Secondary contradictions	which happen when there is a tension between one node and another in the activity system	occur when introduction of a new element into the system brings about conflict
Tertiary contradictions	which occur when an old activity system clashes with a more	occur when participants adopt what is believed to be a newly

	advanced version of the activity system	advanced method causing conflict
Quaternary contradictions	which happen when the main activity system clashes with a neighbouring activity system	occur when participants encounter changes to an activity that causes conflict with adjacent activities

Change is potentially driven by these contradictions. It is important to note that in this study, lecturers have to reconsider their current teaching practice, as they would have to create online materials and lecture notes in a format ready to be shared in an Open repository. Identifying contradictions as “disturbances and innovations” could help to identify areas where the barriers to taking part in this new activity are powerful and for many would constrain the activity (Madyarov & Taef, 2012: 81).

3.2.2 Agency in AT

In the more recent work of Engeström (2009, 2011) and Engeström and Sannino (2010:20), agency has been identified as “the most important outcome of expansive learning”. Expansive learning is essentially Engeström’s third generation AT embedded in a cycle of formative interventions. The formative intervention is Engeström’s change laboratory technique where participants and researchers move from action to activity. Engeström uses Midgley’s definition of intervention: “purposeful action by a human agent to create change” (Midgley, 2000:113 in Engeström & Sannino, 2010:15,20). Engeström and Sannino state that “a major challenge for the study of expansive learning is to conceptualise and characterise empirically the new forms of agency in expansive learning” (2010:20). Engeström (2011) introduces “agency as a crucial layer of causality” as part of a new “argumentative grammar” that can be used to understand formative interventions which form a crucial part of expansive learning.

It is important to keep in mind that the research in this thesis did not include any kind of formative intervention; however, it is seen as important here to show that expansive learning does conceptualise the importance of agency. Causality is explained as the observation of a chain of events and the relationships between them (Engeström, 2011). Engeström acknowledges that it is especially difficult to “observe and reconstruct chains of events among human beings” (2011: 610). Engeström bases his first interpretive layer on Eskola’s (1999) realistic paradigm that “focuses on

the fact that humans do not merely react as physical objects; they act based on their activities, interpretations and logics” (Engeström, 2011:610). The second contradictory layer acknowledges that humans can be unpredictable and irrational because they face contradictions “between multiple motives embedded in and engendered by their historically evolving communities and objects” (Engeström, 2011:610). The third layer is the agentic layer which is when individuals and/or collective agents take intentional transformative actions (Engeström, 2011).

Engeström criticises earlier design experiments saying that they “ignore resistance and agency of learners as a source of surprise and novelty” (2011:598). He then introduces agency as a layer of causality in order to open up “possibilities of theorising agency as something that can be purposefully cultivated” (Engeström & Sannino, 2010:20). Although this seems to suggest that agency may be explored further in AT, this has not been the case. Engeström and Sannino recently visited Cape Town (Cape Town, July 2015), and during a discussion, an audience member asked if Engeström could provide an explanation of agency. In response, he said that individual agency was not the focus of third generation AT and expansive learning.

3.3 Challenges of AT

Wheelehan (2007:5,13) provides a useful critique of AT and suggests that it “over-socialises the individual” and that it does not have a “robust theory of the individual”. It is important to keep in mind that this critique was written before Engeström’s recent foray into attempting to theorise agency (2011). However, Wheelehan’s (2007) critique is a useful for this thesis as it highlights some of the shortcomings of AT. Wheelehan (2007) suggests that Archer’s morphogenetic SR can be used alongside AT to address some of those shortcomings. Wheelehan (2007) also analyses the differences and similarities between the two theories and argues that Archer’s SR, underpinned by the philosophy of critical realism, can be combined with AT in order understand the relationship between the individual and society taking into account individual agency. According to Wheelehan the two theories overlap in some ways as they are both “materialist and realist, and [both] focus on tools and artefact-mediated human labour as the basis of social reproduction and change and as the basis for development of knowledge” (Wheelehan, 2007:5). Wheelehan maintains that “critical realism could potentially enrich aspects of activity theory” (2007:5), and to illustrate this, she draws on examples of the underpinning ontological and epistemological assumptions from critical realists such as Bhaskar (1975, 1998) and Sayer (2000).

Mukute and Lotz-Sisitka (2012) used both critical realism and AT in their research. They used critical realism to analyse the underlying causes of the contradictions that emerged through the use of AT in their study. They maintained that as an epistemological theory, AT was useful for gaining insights into their area of investigation, namely expanding farmer learning in Southern Africa. However, they suggest AT lacks ontological depth, and therefore critical realism “allows for in-depth explanatory critique beyond empirical experience to uncover the causal mechanisms that would otherwise be invisible” (Mukute & Lotz-Sisitka, 2012:345). Mukute and Lotz-Sisitka (2012) draw on the work of Bhaskar (1998) and Benton and Craib (2010), and they found that using both critical realism and AT allowed for an explanatory critique to understand the causal mechanisms underlying the contradictions that they identified in their case studies.

Unfortunately, these authors sometime conflate critical realism and SR which makes part of their study analytically muddled. They describe the reasons for choosing critical realism, but then later in the paper they introduce the work of Archer without acknowledging that she is in fact a social realist who draws upon Critical Realism to undergird her SR theory. Mukute and Lotz-Sisitka argue that “deeper understandings of the structure-agency change (Morphogenetic) process [which is Archer’s theorising] can only be realised when working with the theoretical tools afforded by a combined use of critical realism and AT (CHAT)” (2012:364).

The philosophy of critical realism underlabours Archer’s SR. The role of critical realism and its claims will first be outlined before delving more deeply into Archer’s morphogenetic SR.

3.4 Critical Realism

The research perspective adopted in this study is critical realist, and the ontological assumptions of this perspective will be elaborated upon in Chapter 4. Critical realism is adopted here because it is not restricted, such as positivist theories, to theorising our world according to what we see and experience but rather it seeks to identify the underlying causal mechanisms in order to analyse society. Realists identify three layers of reality; the empirical (experiences), the actual (events), and the real (the mechanisms that explain the actual and empirical). Realism is based on the assumption that “there is a world existing independently of our knowledge of it” (Sayer, 2000:2). There is a domain of events that exist without us knowing about them, but just because we do not actually observe these events, it does not mean that they do not exist. Critical realists caution against the epistemic fallacy where people believe that what they think is all that there is. Critical realists help with theorising agency as they position agents as having a central role in determining their own needs and aspirations (Bhaskar, 1986). In this study, I am interested in the underlying basis for the actual events that will be surfaced and organised through AT. The realist notion of causality explains why, in certain circumstances, causal powers may or may not be triggered (Sayer, 1992).

3.5 Social Realism

The key contribution of critical realists like Bhaskar (1986) is to acknowledge and theorise the causal mechanisms to explain society, and in SR Archer argues for the importance of agency as a causal mechanism. Archer introduced her morphogenetic social realist approach as a theoretical lens that is useful for understanding social change. Archer began publishing her work as early as the 1960's.¹³ Her work on morphogenesis was first published in the 1980's. There is only one other work that uses SR in OER research (Hodgkinson-Williams & Gray, 2008). However, various aspects of her theoretical framing have been used in cognate fields such as information systems and educational technology (Cox, 2010; Li, 2012; Dobson, 2012).

‘Morphogenesis’ means a change in form, and ‘morphostasis’ literally mean stability of form. As such, morphogenesis implies the alternative outcomes of social change and morphostasis of social reproduction. Archer took the terms over from social systems theory, which in turn had borrowed

¹³ For a list of Archer's publications go to the following website: <http://cdh.epfl.ch/page-55775-en.html> [2016, January 26].

them from biology (Porpora, 2013). Explained simply, morphogenesis can be observed as a sequence of social change or stasis. The start point of the sequence being analysed is a specifically identified time where certain conditions exist (e.g. the university before any mention of contribution of teaching materials as OER). Then the social interactions of agents who have particular intentions and concerns begin interacting. The outcomes of this interaction could be structural and cultural change (i.e. morphogenesis) or reproduction of the same conditions (i.e. morphostasis). In Figure 3-2 shows that morphogenesis “examines the sequence <structural/cultural conditioning, social interaction structural / cultural elaboration or stasis>” (Archer, 2012:52).

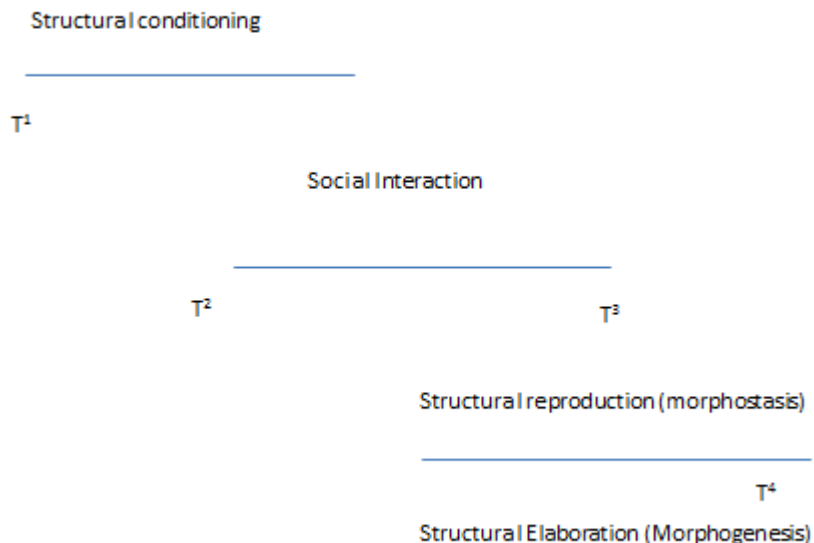


Figure 3-2: Morphogenetic sequence (Archer 2012:52)

In a recent summary of the morphogenetic approach, Porpora explains that it “signifies the understanding that people always act out of structural and cultural circumstances, which their very actions then proceed to modify or sustain” (2013:28). The element of time is symbolised by the T (Figure 3-2). T₁ is defined by Archer as being “a cut at some point in time and for some purpose at hand ... wherever that is situated historically” (2003:113). At this point the agent can be examined along with sources of motivation from the structures (social positions) and culture (“people’s value commitments and ultimate concerns”; Porpora, 2013:28). Then, from T₂ to T₃,

agents or people act within the socio-cultural environment over time and either maintain or change their structural circumstances. If agents maintain their circumstances, this is known as structural reproduction (morphostasis); if they change their circumstances, this is known as structural elaboration or morphogenesis (Archer, 2003:3). Porpora elaborates that “however much people act on their structured interests, for example, they will always do so in ways that are culturally informed” (2013:29). Porpora also notes that human agency is always creative and often defies circumstances and “even taking structure and culture fully into account, human behaviour can never be explained in terms of such laws” (2013:29).

Morphogenesis and morphostasis are associated with social movements or corporate agency where particular interest groups work together for change or maintenance of current conditions. Agents work in these groups with the intention of “defending or transforming the status quo” (Archer, 2003: 356), although the result is not always what one seeks. The external outcome of the exercise of personal powers is a societal effect. Archer (2003:356) distinguishes between two types of social relations: social integration (“the orderly or conflictual relations between members of society”) and system integration (“the orderly or conflictual relations between parts of society”).

Archer argues that existing social structures are a result of the past interactions between agents and that current agents’ responses to social structures shape the structure in which future agents will find themselves. She defines structure as “distributions, roles, organisations, or institutions” (2003:5). Cultural factors ultimately also emerge from people and include “propositions, theories or doctrines” (2003:5). Archer proposes the researcher should also separate the “cultural system integration (logical relations between ideas) and socio-cultural integration (the causal relations between people” (1985:333). She suggests that in distinguishing between logical and causal relations, the researcher will “gain an analytical grip on the cultural components and the socio-cultural dynamics” (Archer, 1985:337). Archer’s particular contribution is to put forward ‘reflexivity’ as the causal power through which social forms are mediated. She argues it is not that agents only promote their vested interests in society, but rather that they deliberate social situations that they confront (albeit fallibly) in order to decide on a course of action.

Archer’s morphogenetic SR makes an analytic distinction between agency and the structure and culture within which the individual exists. This structure can be understood as the context and

the cultural setting can be understood as a set of beliefs or ideas in which individuals find themselves. She notes that although each is ontologically different, they also cannot be understood separately. Archer uses the concept of analytical dualism to explore the interplay between them (Archer, 2003:71). Structure, culture and agency are interdependent; nevertheless, Archer argues it is possible to separate them analytically. Structural and/or cultural factors can be isolated (the context for actions of agents), and it becomes possible to investigate how those factors shape the interactions of agents and how those interactions in turn maintain or change the initial context.

This thesis sets out to understand the actions of individual lecturers. Some lecturers have chosen a path of change; they have chosen to contribute teaching materials that were previously only available to students in classrooms. Others have chosen not to change but rather to continue to do as they have always done. Archer (2003) offers a theoretical tool to understand this transformation or lack of transformation in her morphogenetic approach.

3.5.1 Structure and Agency

Archer (2003) is concerned with the persistent question: “How does structure influence agency?” Social theorists have tried to theorise the relationship between the two. Is there a process or causal mechanism that links the two? Archer (2003) argues that it is the properties and powers of agents that need to be considered within the cultural and social context in which they find themselves. Critical realists, such as Bhaskar, use the word ‘conditioning’ to describe the relations between structure and agency, and Archer argues that this is inadequate because the focus has been on “how structural and cultural powers impinge on agents” and not on the interplay which also includes “how agents use their personal powers to act ‘so’ rather than otherwise” (Archer, 2003:3). Structure impinges on agents to condition their actions through constraints and enablements that either impede or facilitate courses of action (Archer, 2003). It is “only because people envisage a course of action can one speak of constraint and enablement” (Archer, 2003:4). Put in another way, Archer notes that “constraints are confronted as situations that frustrate the achievement of desired outcomes” (2007b:215).

3.5.2 Mediation process

Archer (2003) establishes that it is the reflexive deliberations that are the mediatory process between structure and agency. These deliberations are the subjective part which is “always in interplay with the causal powers of objective social forms” (Archer, 2003:130). She stresses that we need to understand agential projects in relation to the social context. The agential project activates a constraint or enablement, and the outcome is unpredictable in terms of whether the influence will be “evaded, endorsed, repudiated or contravened” (Archer, 2003:132). Archer then conceptualises how the powers of structural and cultural emergent properties impinge on agents. It is not the agents themselves who interact directly with social powers but rather the projects formulated by the agents.

Archer (2003) suggests there are three stages in the mediation process between structure and agency. In the first stage, the agent is confronted with constraints and enablements that occur objectively as part of the structural and cultural environment. In the second stage, agents work reflectively and subjectively to monitor the three orders of reality in light of their concerns in their lives. Archer’s conception of the three orders of reality include: nature (physical well-being), practice (performative achievement necessary at work) and social (achievement of self-worth). In the third and final stage, agents elaborate a strategy or course of action towards “non-reflexive social powers” (Archer, 2003: 135). Therefore, Archer proposes that “agents will evaluate the same situations quite differently and their responses will vary accordingly” (Archer, 2003:139). The result of the evaluation could be ‘considered compliance’ with existing constraints or ‘intelligent co-operation’ with existing enablements depending on how agents reflect on the situation and how they go about achieving projects (2003:140). Archer (2006) argues that emotions are part of all three orders of reality, and our emotions are part of our reflexive response to the world. Because we invest emotionally in our projects and concerns, we are vulnerable when our performances in our roles are evaluated in society. Thus, lecturers who invest all their effort into classroom teaching may be afraid of exposing that teaching to a wider audience if they feel they are being evaluated.

As agents move through these three stages (Figure 3-3), they complete the process of formulating a course of action. Individuals are ‘active agents’ who follow a trajectory which starts with their ‘concerns’ - “those internal goods that they care most about” (Archer, 2007b:42). These concerns

result in elaborating a ‘project’ which, if it successfully addresses the concern, is “translated into a set of established practices” (Archer, 2007b:42). An individual’s sense of self comes from what really matters to them, what they choose to invest in. Individuals can exercise free will, but there are ‘degrees of freedom’ that are constrained by the social structure (Archer, 2010:234; Archer, 2003:6). Some choices will be selfless but many are at a cost, which could go against the pre-structured interests surrounding the individual. Archer accentuates that “there is a real price to be paid for the pursuit of projects that are antipathetic to vested interests” (Archer, 2003:136).

Ultimate concerns

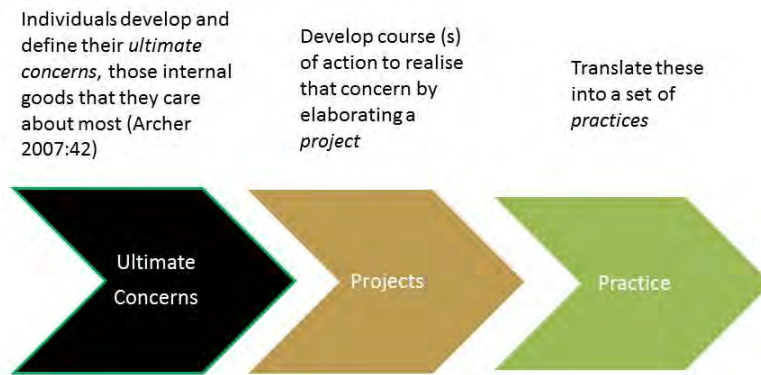


Figure 3-3: Ultimate concerns of agents (Archer 2007a)

The lecturers in my study can voluntarily choose to contribute or not contribute OER to an institutional repository and/or an international portal. The lecturers must therefore evaluate whether contribution of OER forms part of their ultimate concerns, i.e. the projects in which they choose to invest and the practices that buttress these projects. Contribution of OER may not necessarily lead to any direct benefits, and for some, they might choose not to contribute because contribution might be a move against the social structure and prevailing culture that surrounds the individual.

Archer (2003) notes that much empirical work only looks at the first two stages and ignores the roles of agential mediation. Archer adds that by not considering the reflexivity of reflexive agents, other empirical work that has tried to understand the effect of structure upon agency does not

recognise that personal identities are unique, that agents can subjectively modify their goals (which are not static) and that agents are active and not passive in that “we can adjust and adapt our projects to those practices that we consider have a better chance of realisation” (2003: 136). This is important for this study as agential mediation can potentially provide an explanation of why lecturers within the same cultural milieu and social structure make different choices.

In the mediation process put forward by Archer (2003), agents evaluate the opportunity costs associated with courses of action in Stage 3, and they make choices but are not compelled by social and cultural conditioning. Agents are fallible and can misjudge the costs and benefits and can also misjudge how to sustain a course of action (Archer, 2003:141). Archer suggests that there is a dialectic relation between “objectivity and subjectivity because circumstances can change (necessarily or contingently) and so can we (again necessarily, as we move through our life cycle, and contingently because we can re-assess our concerns)” (2003:141). Agents can make big shifts, which Archer calls ‘elastication’, and when there is only a slight change, Archer refers to this as ‘limited expansion’ (2003:147-148). The purpose of all these changes is to establish projects and practices where we have concerns; this is called a ‘*modus vivendi*’.

The next section will take a necessary step back in this explanation, and a description of agents’ life courses will be outlined in order to understand how individuals establish their agency in relation to their contexts (Figure 3-4).

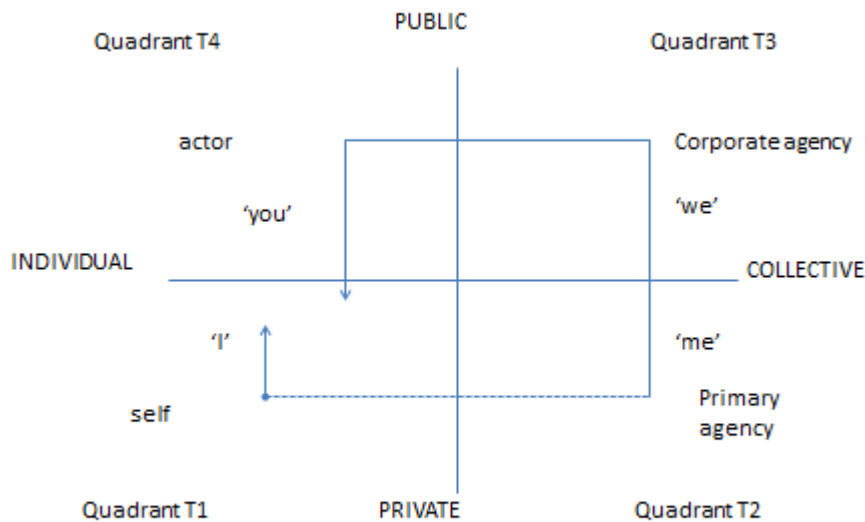


Figure 3-4: How the subject views itself as social object (Archer 2003:124)

3.5.3 Life Courses

In this research, I wish to identify the concerns of the lecturers who are participants in this study and establish how these impact upon the contribution and non-contribution of OER. In order to understand these concerns and how these concerns may have been formed during a person's life, it is important to understand how people choose their life courses.

In Figure 3-4 Archer (2003:124) illustrates the life course of a person starting from T₁ (the 'I') is a person growing up from growth to maturity. In T₂, this self "encourages and begins to learn about her involuntary social characteristics" and starts to distinguish herself as 'me' (Archer, 2003:124). These characteristics are acquired from family and the family's social background. Archer (2003) describes these as 'object' properties that are acquired involuntarily. T₃ is of a largely social nature and results from interpersonal relations, where the 'self' starts to identify with others and starts to distinguish herself as 'we' in certain circumstances. Archer (2003:124) adds that she does not include much on T₃ in her book "Culture and Agency: The internal conversation" and later reflects that this 'collective action' is the one part or 'missing link' in her discussion of the

interplay between structure and agency. T₄ is when the individual becomes an actor and takes on roles that relate to achieving ultimate concerns.

This journey from T₁ to T₄ is continually circulating the four quadrants as individuals continue through life in morphogenetic (change) or morphostatic (lack of change) cycles. This revisiting includes internal conversations about each quadrant as the mature person emerges. When a person revisits these quadrants in internal conversations, they will decide whether to keep things the same or change them. This is important for this study as the interviews capture a year in an individual's life and interviewing the same person in five years' time may give a different result.

In T₁, "the self consists of those things that have happened to it, together with those which it has made happen", and the self has objective properties in the form of commitments that can be carried through various cycles, for example being married or studying for a degree or choosing to be a vegetarian (Archer, 2003:125). These properties are relatively enduring; however, they can be discarded, some easier than others. These ongoing properties or characteristics are manifestations of our past ultimate concerns.

In the continuous cycle, when a person revisits the T₂ quadrant as a person who has a personal identity and as an actor, they can reflect on their social positioning and evaluate their location in society which may be in a fortunate or unfortunate position in relation to the distribution of resources. This quadrant is where an adult may decide to study again or change career in order to "narrow the gap between that which she has become and what which she would be" (Archer, 2003:125). In T₄, actors act out day-to-day life and can maintain their roles or can decide to be a different kind of 'you'. Actors may not relate to their current roles. A role may change, and this change could happen outside of the consent of the actor. Changing roles can be difficult and may require considerable effort even though staying in that role could cause unhappiness. A role can stay the same, but personal concerns may change, particularly as a result of social movement in T₃. If a person has a new personal concern, this may not be combined with an existing role, though some roles are more flexible than others. Archer (2003:128) concludes this discussion of self-transformation by noting that the 'I' can "only devise projects for the future because it possesses personal emergent properties (PEPs), which are self-consciousness, personal identity

and capacity for reflexive deliberations”. These reflexive deliberations in the form of internal conversations will be discussed in the next section.

3.5.4 Internal conversations

Agents have various ways of foreseeing or anticipating challenges and also of acting strategically to discover ways around constraints. Archer proposes that “agents have to diagnose their situations, they have to identify their own interests, and they must design projects they deem appropriate to attaining their ends” (2003:9). They do this via ‘the internal conversation’ which is how people talk to themselves and how we consider ourselves “in relation to social contexts and vice versa” (Archer, 2007b:4). She argues it is this reflexivity that is the most important of PEP (2003:9). Archer argues that “human reflexivity is central to the process of mediation” (2003:15) and identifies mediation as the influence of structure on agency and vice versa. Archer (2003:15) is also aware that the reflexive deliberations include epistemology, and therefore, one has to be aware of committing the ‘epistemic fallacy’ which can be defined as “wrongly substituting how agents take things for how they really are”.

The “long running” internal conversation is about our life projects (Archer, 2003:101). She presents this conversation in a dialogical schema using the three D’s: discernment, deliberation and dedication (Archer, 2003). Discernment is when an agent surveys the three orders of reality (the natural, practical and social) in order to find “enterprises ... to which it (the agent) feels drawn in terms of their worth and attractiveness” (Archer, 2003:102). Possible projects are reviewed in the form of ‘thought-experiments’ that are often best guesses about the possible futures that projects will take on. Choices are made around which ones an agent cares the most about and are therefore worth pursuing. Deliberation is understood as the positive and negative implications that are deliberated between the subject-self and the object-self. Projects are compared and analysed to determine if they can actually be achieved. In the dedication stage, the object-self “records a mental balance sheet of what is involved in adopting a particular ultimate concern in terms of what will have to be accommodated to it or subordinated because of it” (Archer, 2003:103). Archer sums up the three stages as “trying to prioritise our ultimate concerns and accommodate other necessary concerns in the form of a *modus vivendi* with which we think we can live” (2003:102).

It is by “monitoring and prioritising our concerns that we acquire our personal identities” (Archer, 2003: 41) and this process is embedded in the internal conversation and its three stages (discernment, deliberation and dedication). Individuals have a life-course or life span which is equated with a morphogenetic (change) process. Personal identity emerges from our involvement with the three orders of reality (nature, practice and society). These orders will be configured differently according to the person, with more emphasis being placed on one particular order. This configuration makes up our personal concerns.

The lecturers in this study all have a life story and have identified their ultimate concerns along the way. Contribution of OER may or may not be accommodated in their ultimate concerns. In the interviews, lecturers were asked about their concerns and projects and why they had chosen to contribute or not contribute OER. These responses formed part of their personal identities and varied as each academic had different levels of involvement with each order of reality.

Having identified the importance of life courses and ultimate concerns in relation to the three orders of reality, Archer then asks what part society plays in our internal conversations (2003: 116). Archer understands structure, culture and agency as analytically separable parts. She presents structures as having emergent properties (SEPs) and culture as having emergent properties (CEPs) as well. Archer explains that combinations of these properties form situational logics that present themselves in different situations. Some situational logics are ‘complementary’ (where systems are well-integrated) and some are ‘contradictory’ (where there is tension). The agent is present in these situational logics but is not necessarily taken over by the society’s logic. The agent has personal emergent properties (PEP) in the form of the internal conversation which “mediates the impact of the causal powers of society upon each one of us” (Archer, 2003:118). An important part of the internal conversation is an attempt to figure out where we stand in society; Archer calls this a “feasibility study” (2003: 123). Archer suggests that we talk *about* versus talk *to* society (2003:125).

Archer (2003) elaborates that there are different kinds of agency in society, namely primary agency, corporate agency and individual social actors. Primary agents start out at T₁ in the morphogenetic sequence; they share the same life chances and are shaped by SEPs and CEPs that they have inherited through their social contexts at birth. Corporate agents are organised interest

groups that undertake some kind of action to achieve a goal, for example the OER team at UCT (Archer, 1995:251). In T₂-T₃, there is social interaction between primary and corporate agents. At this point there are also individual social actors who take on certain roles that they invest in. Not everyone is a social actor, and some agents may not find a role which they feel they want to invest in. The lecturers in this research are potential actors as they debate where they stand in society, and it is through their roles and where they stand in society that they hold agency.

3.5.4.1 *Types of Internal Conversations*

In “Structure, Agency and the Internal Conversation”, Archer sets out to empirically prove her thesis that the Internal conversation is “the process through which agents respond to social forms” (Archer, 2003:16). Archer interviewed 20 subjects who were purposively selected. They were not intended to be representative but instead needed to be as diverse as possible with regard to class, age, gender and occupation. Eight were personal friends and acquaintances who she chose for convenience as she could follow up on questions after the interview if necessary. The interviews were in two parts. The first part was to ascertain the notion of the internal conversation and to explore a range of mental activities to discern any variation in the nature of internal conversations. The second part of the interview was about exploring the current concerns of the participants. Interestingly, all of the interviewees noted that they had internal conversations and many of them believed that all people had internal conversations in a similar way. Through her analysis, Archer distinguished that there are different types of internal conversations which she calls modes of reflexivity. The different modes were related to subjects’ life-projects, the nature of their ultimate concerns, the ease or difficulty that concerns dovetailed and the type of *modus vivendi*. Importantly these different modes represent “differentiated mechanisms mediating between structure and agency” (Archer, 2003:162).

Archer explains that reflexivity plays a potential role in shaping agential activity “towards ourselves or towards society” (2003:25), and it is this reflexivity that explains how structure is mediated by agency. Reflexivity is our internal conversations shared by all people. Archer argues that a good part of our internal dialogue or conversation involves primary reflexivity, where we ask ourselves a question about our circumstances. These questions can be trivial or profound. In her research, she identified four different modes of reflexivity: communicative, autonomous, meta-reflexives and fractured reflexives.

3.5.4.1.1 Communicative Reflexives

Communicative Reflexives (CRs) begin their internal conversation in their own minds but they complete these dialogues in what Archer refers to as “thought and talk” (2003:167) with others with whom they share their concerns. CRs are not sure that an internal conversation can be conducted successfully in an autonomous way and have a sense of self-mistrust. They surround themselves with people they can trust, usually close family and friends from whom they seek approval.

Family, friendships and work are their main concerns, with family and friendships being reversed depending on whether they have managed to achieve some ‘contextual continuity’. Contextual continuity is when agents maintain their situations that they found themselves in at birth. CRs are not concerned with politics or social injustice as they feel they have succeeded in forming a micro-life and no extrinsic factors could improve it.

Constraints and enablements are evaded in order to maintain their situations. They are active in that they strive to remain in a continuous and stable relationship with the structures that surround them. CRs tend to reproduce their social origins and do not opt for any kind of social mobility.

CRs are not ambitious people (2003:205). They are intent on social reproduction. However, Archer (2012) notes that this form of reflexivity is in decline as it is increasingly more difficult in modern society to maintain “contextual continuity”. CRs are increasingly forced to move away from their natal background and then seek friendships that can replace the close family ties that they desire. However, these relationships are more difficult to maintain as morphogenesis (change) occurs, and this leaves many CRs struggling to complete their internal conversations as they have lost the people that they trust.

3.5.4.1.2 Autonomous Reflexives

Archer (2003) describes Autonomous Reflexives (ARs) as people who sustain self-contained, internal conversations that lead directly to action. They do communicate with others but they do not need help to make decisions. According to Archer (2003), they accommodate others but investment in people is never their ultimate concern. ARs are characterised as being able to make

quick decisions, and their internal dialogues are about matching ‘options’ with ‘information’ (2007a:117).

ARs strive to do well at work, which Archer refers to as ‘getting on’ in their generic project (2007a:192). Their ultimate concerns are around work and employment, and they invest many extra hours in completing work. They are ‘selective, evaluative and elective’ about the world in which they find themselves (2007a:193).

Archer (2003) believes that ARs formulate clear projects, and in doing so, they activate constraints and enablements in order to achieve their projects. They are strategic and learn from their lessons. Archer refers to them as “agents for change” (2003:254). They “promote what they care about most and know what they want and also know a good deal about how to go about getting it” (Archer, 2003:252). They are able to delineate their desired work project, but they are also aware of social conditions likely to promote or hinder its achievement. Therefore, ARs often search for opportunities, but at the same time they are also try to anticipate obstacles. These obstacles are the structural constraints that we all face, and because of human fallibility, we will make mistakes.

Archer (2007a) observed that ARs are mostly individualist, self-disciplined and self-motivated. They do not seek approval from anyone else. When Archer’s participants were asked who they look to for approval, one response was: “My own, probably the most important thing is my own standards” (2007a:227).

They are not daydreamers and are “committed to reality” (Archer, 2007a:201). They are realistic because they are also practical people. ARs decide what they want to be, they achieve their goals and usually reach top positions in their chosen professions. Archer says that AR’s strive for three key aspects in their employment: “challenge, control and variety” (2007a:223). They seek a *modus vivendi* that is desirable and satisfying. Most of Archer’s interviewees had succeeded in dovetailing family and work usually by negotiation with their partners.

Inter-personal relationships are largely confined to partnerships and immediate family. According to Archer (2007a:227), strong autonomous people do not contribute to neighbourhood or

community work and are not typically religious people as they focus on immediate family and work.

3.5.4.1.3 Meta-reflexives

Meta-reflexivity is about “being reflexive about our own reflexivity” (Archer, 2003:255). Archer believes that MRs internal conversations are focused on the ‘self’ and not on external actions. They go out of their way to resist constraints and enablements and they spend much time reflecting on the consequences of their actions both positive and negative.

MRs are self-critical and do not look for approval elsewhere. However because of this criticality, they spend considerable time focusing on self-improvement. They are always concerned about acquiring more self-knowledge, which enables them to cope better in the contexts that they are critical of and to be more creative about dovetailing their concerns.

MRs are critical of their contexts and change their projects throughout their lives (Archer, 2003:287,2). MRs will undergo many changes in their jobs and positions if this is necessary to achieve their ultimate concerns. Archer (2003:295) refers to this as ‘elastication’. MRs will consider a job which results in downward mobility if it means achieving their ideals. According to Archer (2003), they are often never satisfied. Archer’s (2003) MRs acknowledged a sacrifice, often in monetary terms, in order to make the choice to follow their ultimate concerns. However, they continue to do so as the price is worth paying to follow their ideals.

Importantly for this study where I am trying to understand agents’ choices, MRs do not receive any guidance from the social structure. Social structure can place some conditions on their actions in the form of bonuses or penalties, but MRs often absorb the costs and ignore the incentives in order to pursue freedom of action. This pursuit of freedom and resistance is at a cost and is hard to maintain throughout their life courses.

MRs are not individualistic like ARs or communitarian like the CRs. They “need an environment that they see supporting them in working towards their ideals” (Archer, 2003: 287). Archer (2003) outlines three factors that meta-reflexives seek. The first factor that they seek is that the talents they are developing are not frustrated by “incongruent definitions of performative skills”. This

factor is difficult to find, and as a result, MRs are often critical of the institutions in which they find themselves. The second factor they seek is a group of colleagues who will support them to increase their self-worth. The third factor they seek is an environment that supports their physical and mental well-being.

Archer (2003) argues that MRs seek to align all three orders of reality, which is unlike the CRs and ARs who are prepared to let one aspect slip and will have one prime concern. However, according to Archer's research, sustaining all three orders is difficult, and therefore MRs have a lot of trouble dovetailing their concerns and finding a *modus vivendi* where they can realise their concerns.

3.5.4.1.4 Fractured Reflexives

The fourth form of reflexivity Archer proposes is the 'fractured reflexive' (FRs) group who, for various reasons, are currently unable to have an internal conversation. They cannot conduct purposeful internal conversations and take deliberate courses of action. These FRs are 'passive agents' and have lost the power to exert any action on their objective circumstances. In her study, Archer identified a number of reasons for this lack of purposeful action. Two of Archer's subjects suffered from anxiety and depression. They displayed uncertainty about their identities often as a result of constraining influences in their social environments such as losing a job, being discriminated against or being made homeless. They are called 'fractured' as fractures can heal and being fractured does not mean remaining so throughout a person's life.

FRs live in the moment and make decisions as they need to or when they have to. However, their approach does not have any kind of pattern and can be described as "stuff happens" (2012:279). Archer (2012:279) states that instead of making their way through life, they "ad hoc" their way through it.

Archer distinguishes between three categories of FRs; displaced, impeded and expressive. Some subjects had practiced a dominant mode of reflexivity until adverse circumstances had led to an inability to exercise their personal powers; they are known as 'displaced reflexives'. These reflexives can return to the dominant mode if the right amount of support is available in the form of relational conditions (Archer, 2012:252). The second form Archer calls 'impeded reflexives'; they have not developed a dominant mode sufficiently to be able to have an internal conversation.

The third form includes those who practice very little internal conversation at all; they are known as ‘expressive reflexives’.

3.5.5 Reflexivity compared

CRs identify their ultimate concerns as their inter-personal relations; they invest in people and flourish when surrounded by people like themselves. ARs’ concerns are centred on practical achievement. ARs are most invested in performative concerns. This performative concern sits in social contexts so the social is unavoidable but often ARs are loners. The MRs are even less inclined to link their contexts and their concerns. They have a cultural ideal that no structural context can approximate. MRs invest themselves in the transcendental order which means they have “a quest for truth or goodness, one that transcends the best that any social context ever represents” (2003:353). In summary, the practitioners of these three modes exercise their personal powers towards society in the following ways: CRs are ‘collectivistic’ towards the social (concerns and context are inseparable), ARs are ‘accommodative’ (context is a means towards realising a concern) and MRs are ‘transcendental’ (context is inadequate to concerns).

The three modes of reflexivity adopt different ‘stances’ towards society and its constraints and enablements: the evasive (CRs), the strategic (ARs) and subversive (MRs) (Archer, 2003:342) (Table 3-2). These stances represent what Archer calls the micro-macro link, in other words how subjects regulate relations between themselves and society. A stance produces an active agent where an agent uses their personal powers. In the case of the fractured reflexives, the agent is unable to take a stance. A stance is the combination of personal concerns and how different agents orient themselves in their encounters with constraints and enablements.

CRs take an evasive stance as they seek social reproduction. They will give up opportunities in order to stay where they are and not change their conditions. The evasive stance of the CRs sometimes involves some self-renunciation or self-sacrifice.

ARs are strategic in their stance and transform their own circumstances and adjust their projects in order to achieve their concerns. This enables this group to “identify a satisfying and sustainable *modus vivendi*” (2003:350). The ARs strategic stance requires self-discipline and self-restraint and they spend long extra hours at work acting as their own task masters.

MRs adopt a subversive approach to constraints and enablements, refusing enablements and resisting constraints. They systematically resist societies “sticks and carrots” in order to promote their values (2003:351). MRs are contextual critics who strive for self-transformation. Archer suggests that some MRs have ‘quality’ set out as their ultimate concern which results in a need for self-improvement. This striving towards being ‘better’ results in a consistent internal dialogue of personal interrogation to check how transformation is progressing.

Table 3-2: Modes of reflexivity in relation to cultural, structural and agential factors

Cultural, Structural and Agential factors	Communicative	Autonomous	Meta-reflexives	Fractured
Internal conversations	people orientated	task orientated	value orientated	none
Ultimate concerns	social order	practical order	self and social transcendence	unsure
Stances towards constraints and enablements	evasive	strategic	subversive	passive
Look for approval	others	Self	self -critical/always improving	no pattern
Action orientations	self-sacrifice	self-discipline	self-transcendence	uncertain
Consequences for patterns of mobility	social immobility	upwards mobility	lateral mobility (volatility)	none
Main institutional impact	family	market/work	third sector/other	none
Aggregate macroscopic consequences	social reproduction	social productivity	social reorientation	ad hoc

The current research takes the form of a case study and therefore it is challenging to extrapolate the behaviour of 14 people to greater society. The concern here is to explain the choices of individuals, however small. As Archer notes, it is the individual choices that can result in societal morphogenesis or morphostasis.

Archer argues that social morphogenesis and social morphostasis are the result of corporate agency for example, “social movements, organisations and articulate interest groups and pressure groups of all kinds” (2003:356). The actions of individual agents relate to their concerns and do

not necessarily aim at changing society. Yet even though the actions may be small they may have “cumulative significance” (Archer, 2003:356).

3.5.6 Internal conversations and Morphogenesis/Morphostasis

Returning to the macroscopic level, all of these modes of reflexivity form part of modern society. In this study, lecturers who may be CRs are likely to maintain the status quo as part of their focus on system maintenance. They may continue to use textbooks approved by experts and published in traditional forms. ARs fostering morphogenesis (based on task-performance) make strategic decisions to contribute their own teaching materials as OER in novel ways to raise their own profiles. ARs may be focused more on their own economic achievements rather than the community who could potentially benefit from OER contribution. MRs are most likely to contribute if we consider their commitment to forms of social justice. The findings from the interviews will reveal whether this is in fact the case.

3.6 Challenges of SR

Archer (2003, 2007a, 2012) provides an extensive framework for explaining the role of agency in society and the relations between culture, structure and agency. Luckett (2012) used SR to analyse an academic development programme. Two criticisms emerged from this study: 1) Archer’s morphogenetic cycle and typologies of situational logics are often so abstract that they are difficult to operationalise, and 2) as a methodology it was difficult to separate out the CEPs from the SEPs.

The morphogenetic approach has also been applied in the field of information systems (Horrocks, 2009). Overall, Horrocks (2009) found the approach useful in understanding organisational change. He was concerned that as the scope of the problem he was addressing increased (as is the nature of social complexity), it became difficult to explore and account clearly for agency, structure and culture (Horrocks, 2009). SR appears to be limited when multiple perspectives from different stakeholders are considered.

In this study, AT is needed to frame and highlight the contradictions within the UCT system and also in different systems guided by different stakeholders within the system. For example, the research production system has different stakeholders and contradictions to the teaching system. SR does not provide a framework for these multiple perspectives.

3.7 Conceptual framework of the study

In this thesis, Engeström's Third Generation AT is used to describe the contradictions that emerge in the university system that constrain or enable lecturers as they choose to contribute or not contribute OER. AT will be used to frame the broader workplace context and the situational logics in the socio-cultural context (Figure 3-5). AT has been used by other authors who have studied OER and its introduction, and this work provides useful comparative data. There are claims that AT can describe "the ways in which activities are informed by the specific setting and motives of people involved in them, as well as by the larger socio-historical and cultural networks of which they are a part" (Kain and Wardle, 2005). However, in this thesis this blurring of settings, motives and networks is viewed as conflatory and analytically impossible. Therefore, SR will be used to explain the causal mechanisms, especially those of individual agency. AT does not adequately explain the causal mechanisms that underlie the actions of the individual, thereby limiting the explanation of why certain courses of action have been chosen.

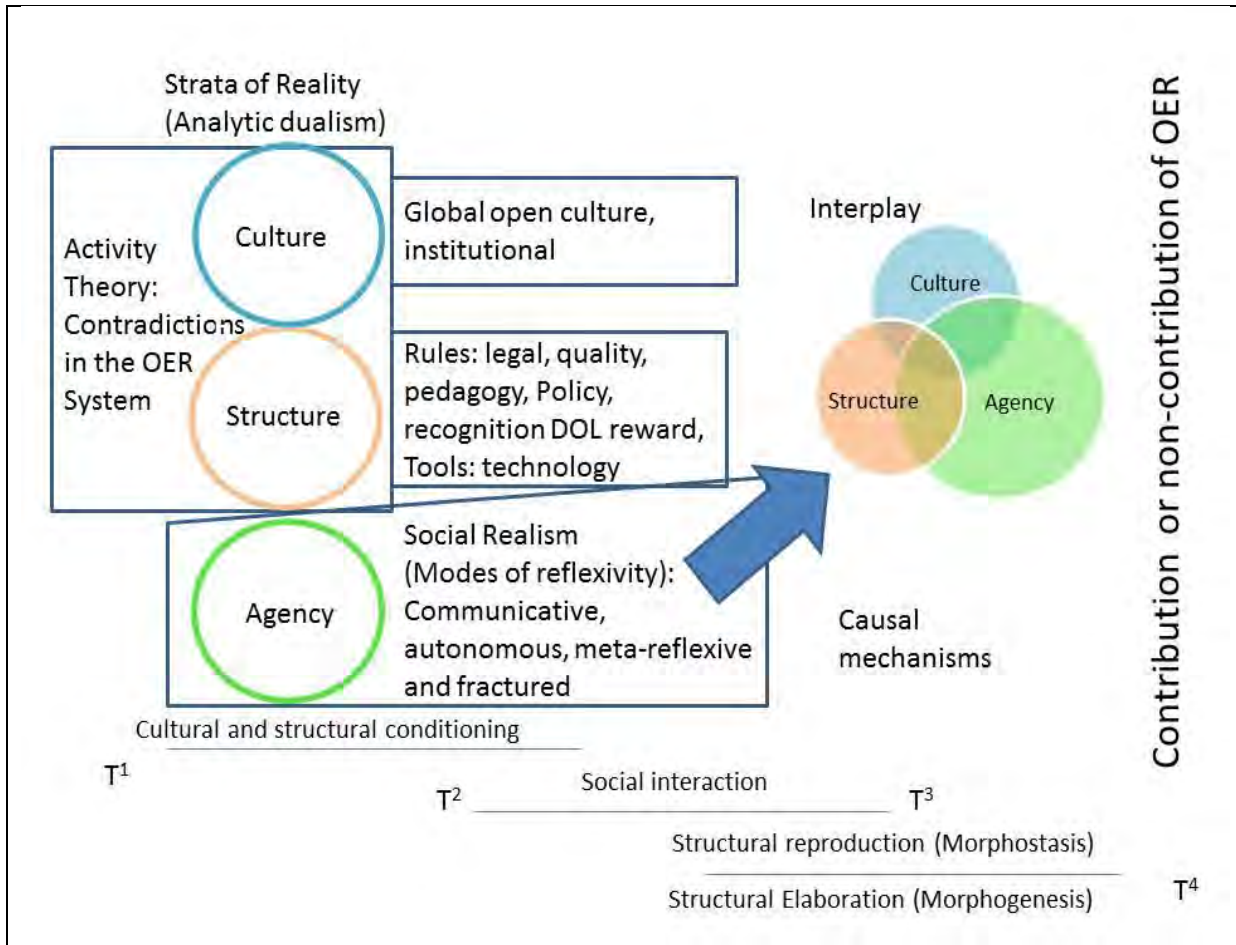


Figure 3-5 : Diagram of the use of AT and SR

Archer’s SR will be used to explore the agency of individual lecturers. The Archerian view that individuals have a life course that shapes the sense of self and that individuals make choices based on their life concerns is not made explicit in AT. SR (Archer, 2003, 2007a, 2012) will be used to explain why people mediate contradictions in particular ways. SR will be used in addition to AT, to use Archer’s own term, to ‘underlabour’ AT, specifically to explain the role of the subject as an agent.

These theories provide a dialectical approach that seeks to explore connections between all elements of a system as well as exploring the ‘inner conversations’ of the agents in the system. Three key components of SR will be used in this thesis. Firstly the analytic dualism of culture/structure and agency will be used to pull apart existing social structures in order to better understand the different parts. Secondly, Archer’s concept of ‘ultimate concern’ will be used to

understand the motivation of these lecturers. Thirdly, the modes of reflexivity will be applied to elucidate the interplay between agency, culture and structure.

Chapter 4: Research Design

4.1 Introduction

The focus of this study is to understand the contexts and explain the motivations of a group of 14 lecturers from UCT who have chosen to or refrained from contributing OER to a public repository. Activity theory (AT) is used to flesh out the cultural and structural levels of Social Realism (SR) at an empirical (or actual) level and unpack the situational logics that these lecturers face. SR is used to underpin AT, which is focused on epistemology, therefore allowing for a more in-depth, explanatory critique in order to discover the causal mechanisms underlying the empirical evidence.

This chapter includes a description of the ontological and epistemological assumptions that inform the research design of this thesis. The choice of certain methods is explained and justified. This chapter relates the research questions and key concepts to how data was collected in order to address these questions. The research design is described and includes the criteria for participant selection, a description of what was done, with whom, when and where, how much data was analysed, and how the data was analysed and synthesised. The chapter also includes the identification of areas that may have been omitted and areas where there were validity and/or ethical concerns.

4.2 The nature of inquiry: Critical realist approach

The purpose of this study is to research both the individual agency and the structure and culture that surround the individual in relation to the contribution and non-contribution of OER. The phenomenon of sharing, situated in an educational context, is a social concept. This study is not about the natural world and the world of science where scientific research uses ways of testing and quantifying knowledge in order to produce objective knowledge. The scientific method can be described as a positivist approach where variables are identified and patterns emerge that can be tested. This study includes some qualitative methods and attempts to understand the phenomenon through the views of the people or individuals involved. In addition, there needs to be an explanation of the social context and the circumstances (or conditions) in which individuals are transformed. Critical realism will be used to frame the analysis. Critical realism includes a

holistic approach where culture and the circumstances (or conditions) are analysed in order to understand how individual actions can be transformed.

Although the views of participants are important here, it is the underlying causal mechanisms that explain their actions in relation to their contexts that are being explained. Developing causal mechanisms is not a straightforward task, and it is a challenge to uncover the knowledge people have and what has caused their actions (Kahn, 2015; Maxwell, 2012b). This study rests on an ontology that recognises an independent reality, in other words 'there is a world existing independently of our knowledge of it' (Sayer, 2000:2). Critical realists acknowledge the fallibility of our knowledge of the world. In this research, using a critical realist approach, it is important to acknowledge the fallibility of the participants.

In the area of epistemology-considering approaches to how we come to know this world, realism, and more specifically the SR of Archer, provides a lens to examine both the individual and the context within which they exist. Archer (2007a) describes the particular role of SR (specifically the morphogenetic approach) as presenting a stratified social reality within the 'real layer' used by Bhaskar in the form of a framework that uses culture, structure and agency, which could tackle sociological problems. She emphasises the importance of not conflating culture, structure and agency. Archer et al., argue that: "explanation must attend to both structure and agency, and any explanation which attends to either exclusively is probably going to be inadequate" (1999:12). She also argues that realism 'had too little to say about persons' and who they are (Archer, 2007a:39).

A realist approach to qualitative research, informed by the work of Joseph Maxwell, is used in this thesis (2012a, 2012b). Maxwell (2012a) guides researchers through the process of qualitative research and its methods. He unpacks key concepts such as causation, culture and diversity using a realist approach. Causation, or the causal explanation for a specific outcome, has historically been placed in the realm of positivism and "quantitative methods that identify consistent associations between variables" (Maxwell, 2012b: 656). Maxwell (2012a, 2012b) argues that causation is part of our everyday lives and that causal explanation is "a matter of identifying the actual processes that result in a specific outcome in a particular context" (Sayer, 1992 in Maxwell, 2012a:656). Maxwell suggests that a realist approach enables qualitative researchers to make and support causal claims (2012b).

Maxwell sets out a philosophical argument that meaning and mental phenomena are real (2012a). Culture is real “but it is the property of groups rather than individuals” (2012a:2). Characteristics of individuals that indicate culture are socially distributed and not necessarily learned or socially transmitted.

Maxwell also acknowledges the importance of diversity, often discounted by quantitative researchers as ‘noise’ outside of ‘regularities and general patterns’ (2012a:2). Diversity is real and this philosophy challenges more traditional views of community being a place of social solidarity that discourages problematic, possibly destructive diversity. Maxwell (2012a) argues that diversity should be acknowledged and is inherent in communities.

4.3 Mixed methods approach

This research adopts a mixed methods approach, using both quantitative and qualitative methods. Data collection occurred in two main events with a one year interval, and the analysis of the first set of data informed the next collection activity. Jonassen and Roher-Murphy suggest that a research time frame “should be long enough to understand the objects of activity and changes in those objects over time” (1999:68). The data collection took place in two phases: 1) initial questionnaire and interviews (August-September 2013) and 2) follow up questionnaires (September 2014). The lecturers were asked to participate in two data collection interventions with a gap of approximately one year between interventions.

I used a case study approach. The aim of these cases is: “to catch the complexity of (each) single case” (Stake, 1995: xi). This study attempted to explain the contextual relationships in a specific institution “to provide an account of a particular instance, setting, person or event” (Maxwell, 2012a:114). A case study is useful for this in-depth exploration of an individual and the setting. Critics of case studies note how the findings of a case study cannot be generalised. To counter this critique, Wisker suggests that the context is clearly described and that “others can consider its usefulness in other contexts and examples” (2001:190-191). Flyvbjerg (2006) argues for the power of good case studies in order to produce exemplars as a base for comparative studies. He debunks various myths about case studies and argues that case studies allow researchers to make observations; if one observation does not fit in with a proposition, it falsifies the proposition, and that finding has general significance and stimulates further investigation. His analogy for this is

the claim that all swans are white. However, finding one black swan through an in depth case study approach falsifies that proposition.

Data has been collected in two main forms (Table 4-1), questionnaires and interviews. In addition, several policies and other documents and websites were scrutinised in order to validate the findings, facilitating the triangulation of data that “reduces the risk that ... conclusions will reflect only the systematic biases or limitations of a specific method” (Maxwell, 2008: 236). This data triangulation technique was used to explain human behaviour more fully in order to attempt to reveal its richness and complexity from more than one ‘standpoint’ (Cohen, Manion & Morrison, 2007). Jonassen and Roher-Murphy (1999) who use AT suggest that others using AT should use varied data collection methods such as interviews, historical and contextual materials.

4.4 Methods of data collection/generation

An interactive design was used where the analysis of one set of data informed the next collection activity.

4.4.1 Questionnaires

Questionnaires were used to collect numerical data in a structured way without the researcher being present. Results from questionnaires can be analysed quickly and easily in an objective way. Questionnaires included both closed and open ended questions. The open ended questions were used to verify and confirm comments made in the interviews.

A short background questionnaire (Appendix A) was developed as a pre-interview information-gathering strategy. Google Docs was used to generate an online form that included demographic and work experience questions as well as some questions about technology use in order to determine whether there was any relationship between familiarity with technology and OER contribution.

The second stage of data collection included a second questionnaire (Appendix B) designed to substantiate and clarify the findings from the first interview. This questionnaire included a number of Likert scales for a quantifiable compliment to the qualitative data. Mukute and Lotz-Sisitka designed a tool to ‘help with the identification of contradictions’ and also to rate the

importance of contradictions (2012:360). Initially, the tool used in this study was very similar to the one they developed. However in a pilot study where 2 participants were asked to try the questionnaire and give feedback, participants noted that the structure was confusing and difficult to answer. The tool was adapted for this project and is still useful for reflecting on contradictions that have emerged in the university system that relate to OER contribution and non-contribution. It helps to refine or test the scope of the contradictions identified in the system. Contradictions that emerged from the interviews were listed and participants were asked to order the contradictions in terms of importance. The second questionnaire also included three open ended questions about whether the participants felt any differently about contribution of OER than they had a year previously, during the first interview.

The second stage of collection included a tool developed by Archer (2007a), which she refined in 2008 (Appendix B). It is called the Internal Conversation Indicator (ICONI), and it was designed to identify a person's dominant mode of reflexivity. The ICONI was tested by Archer for reliability, and it was found that it "accounted for 46.8% of the variance on factor analysis, which compares respectably with directly comparable research instruments employed in social psychology" (Archer, 2008:4). In Archer's sample (2007a), there were only a few participants who scored low scores and some who could not be clearly identified as a specific mode. There were also some participants who had equal scores for two different modes. However, the ICONI scale did identify discrete modes for most participants, and this indicator has now been used by other researchers (Archer, 2008).

4.4.2 Interviews

Interviews "enable participants - be they interviewers or interviewees - to discuss their interpretations of the world in which they live, and to express how they regard situations from their own point of view" (Cohen, Manion & Morrison, 2007). The order of the interview is controlled by the interviewer, but it also allows space for spontaneity and for the interviewer to probe more deeply into complex issues.

Archer (2003) interviewed 20 people for her study. She acknowledged that this was a small-scale study and justified this by referring she to the work of Doug Porpora (2001) who also did a small study and says "the point of in depth interviews is not to establish the proportional

representativeness of views but to elicit an illustrative sample of the different ways differently situated people think about life's ultimate questions" (Porpora in Archer, 2003:159).

Some interview questions used in this thesis were developed during the pilot study (Cox, 2012; Cox, 2013) using AT nodes to analyse the international literature on contribution and non-contribution as a way of identifying potential barriers and enablers in the institution (Appendix C). This original set of questions in the pilot study, on which many of the questions in this research are based, went through a thorough inter-rater reliability exercise in order to check reliability (see Chapter 2 for a description of that process). The interview was in two parts (Appendix D). In the first part, lecturers were asked about their perceptions of OER and why they were contributing or not contributing OER. The format was semi-structured and did not deviate from the schedule, although some key questions were followed up with extra questions. This structure was important in order to assemble comparable findings across the group. However, the tone and structure changed considerably for the second part of the interview. This was essential as the second part of the interview included questions informed by Archer's (2003, 2007) work on agents and their internal conversations about their ultimate concerns, projects and practice. This line of questioning was very personal and even awkward for some participants as they had to talk about their personal aspirations. The 14 one-hour-long interviews resulted in 329 pages of transcript.

The terms 'sharing' and sometimes 'contribution' were used in interactions with lecturers. While terms such as 'adoption' or 'contribution' may be used more extensively in the literature, 'sharing' is less ambiguous and conforms more closely to common language usage.

4.5 Supplementary Documents

Documents, including policy and other institutional documents and websites, were used to provide evidence of the structures described in the analysis of the data collected. Various documents were read and relevant text was extracted for inclusion under certain themes in the findings. UCT IP policy (Appendix E) and new OA policy are described in the relevant section on policy and contribution (Appendix F). The letter of appointment for UCT staff (Extract in Appendix G) was also scrutinised as well as the performance appraisal criteria (extract in Appendix H).

In addition, the UCT Teaching and Learning strategy was used as evidence (Appendix I). The UCT OC site and its replacement OpenUCT were analysed over the period of research to monitor its growth or lack thereof and to make explicit the nature of its contents, identifying gaps in resource contribution.

Table 4-1: Matrix of concepts, research, data generation methods and supplementary documents

Concept	Research questions and sub-questions	Questionnaires	Interviews	Supplementary Documents
- Culture - Global and institutional awareness	1 In what ways does global culture influence lecturers' contribution or non-contribution to OER?		1 x 14 interviews with lecturers (August-September 2013)	Open UCT website (September 2013-December 2014)
	1.1 In what ways does institutional culture influence lecturers' contribution or non-contribution to OER?		1 x 14 interviews with lecturers (August-September 2013)	
- Global/institutional structure - AT Nodes: Rules, Community Division of Labour	2. How does global and/or institutional structure influence OER contribution and non-contribution?	2 x 14 Questionnaires (1-August 2013, 2-September 2014)	1 X 14 interviews with lecturers (August-September 2013)	UCT policy, OpenUCT site (July 2014)
	2.1 Does the campus-based structure of classroom teaching influence lecturers' contribution or non-contribution of OER?		1 x 14 interviews with lecturers (August-September 2013)	UCT Teaching and Learning Strategy
	2.2 Do concerns about the quality of OER influence lecturers' contribution and non-contribution of OER, and if so, how?		1 x 14 interviews with lecturers (August-September 2013)	

Concept	Research questions and sub-questions	Questionnaires	Interviews	Supplementary Documents
Global/ institutional structure - AT Nodes: Rules, Community Division of Labour	2.3 Does the understanding of Copyright Legislation and the awareness of Creative Commons influence contribution of OER, and if so, how?		1 x 14 interviews with lecturers (August-September 2013)	- IP Policy - OA Policy
	2.4 In what ways does institutional policy enable or constrain OER contribution?		1 x 14 interviews with lecturers (August-September 2013)	- IP Policy - OA Policy - Letter of appointment - Rate for Job criteria - Teaching and Learning strategy
	2.5 Do institutional recognition or reward systems enable or constrain OER contribution, and if so how?		1 x 14 interviews with lecturers (August-September 2013)	History of grants, Number in UCT OC
- Agency: AT-Subject plus SR to explain agency	3. What academic agency do lecturers display in relation to OER contribution?	Third questionnaire, ICONI tool (September 2014)	1 x 14 interviews with lecturers (August-September 2013)	Actual OER contributed

4.6 Selection of participants and artefacts

UCT has seven Faculties (Centre for Higher Education Development [CHED], Commerce, Engineering and the Built Environment [EBE], Humanities, Health Science, Law and Science). Two lecturers were interviewed from each faculty. The sample included seven lecturers who had contributed OER and seven who had not.

The sampling strategy involved choosing lecturers across all faculties, both male and female, from different age groups and with different academic rankings in order to sample the most diverse group of individuals possible. I have engaged with almost all of these lecturers because of my previous role in Staff Development, which resulted in extensive networks across the institution. Purposive sampling, a non-representative subset of some larger population (Cohen, Manion &

Morrison, 2007:114), was used as a technique to identify these 14 individuals. Besides the typicality mentioned already, purposive sampling can be used to capture a range of variation or heterogeneity in the population, and the sample can be selected to allow for the examination of cases that are critical to the theories used in the study.

There is a 50/50 gender split with seven males and seven females. The subjects range in age from early 30's to sixties, in both contributor and non-contributor groups. The sample included a Senior Lecturer employed on teaching only conditions, two Lecturers, four Senior Lecturers, three Associate Professors and three Professors. All faculties were represented, and the participants were from 14 different departments at the university. The sample included participants born in different geographical locations: South African (9), African (3) and European (2). In the contributor group, five out of seven have received support from the Centre for Innovation in Teaching and Learning (CILT). Two received Mellon Foundation funded Teaching with Technology grants in order to create innovative projects using technology in teaching and felt that they should share their materials beyond UCT in UCT OC. Two lecturers have received Mellon Foundation funded Open UCT OER grants to create and adapt their materials to be added to UCT OC. Two of the non- contributors received institutional Teaching with Technology grants. Three contributors had presented at annual UCT Teaching and Learning conferences and/or had attended and presented at CILT staff development seminars on their teaching with technology innovations.

4.7 Data analysis

4.7.1 Questionnaires

Google forms provides a summary of each question which is useful for numerical data. In the first and second questionnaires, answers were tallied and percentages were calculated. Various forms of Likert scales have been used and these have been summarised in tables in the relevant sections of the findings. Questionnaire 1 included closed questions and Likert scales (Appendix A).

Questionnaire 2 included both closed questions (mostly using scales) and four open ended questions (Appendix B) using the ICONI tool developed by Archer (2007a, 2008). A research report written by Archer was used to guide the analysis of the scores that needed to be calculated from the participants' selections. The questions were divided into the four categories related to the four modes of reflexivity (Appendix B).

4.7.2 Interviews

The interviews were analysed as they were transcribed (Included after Appendix for examination purposes). Maxwell (2008) highlights that a key principle of qualitative research is that analysis and data collection should be undertaken simultaneously. This enables the researcher to focus subsequent interviews and data collection in order to decide how to test emerging conclusions.

Excel was used as a tool for analysing the interview transcripts. The 329 pages of transcribed interview were formatted and uploaded to Excel. An entire response of a particular person was treated as a unit as opposed to each sentence being used as a separate unit. Some responses from interviews included a page or more of transcript and it was decided not to divide these into sentences in order to preserve the narrative of the person.

Coding is the main categorising mechanism in qualitative research. Coding gives the researcher a mechanism to “fracture” (Strauss, 1987:29) the data and rearrange it. I used a thematic approach. This included both pre-set and emergent codes. Maxwell (2012a:109) uses categorising and connecting strategies to describe this process of coding, which is followed by looking for relationships in the data. Maxwell (2012a) also refers to types of categories, including organisation, substantive and theoretical categories. In the initial coding of data, both organisational and theoretical categories were used. Substantive codes were used during the connecting stage of analysis.

Organisational categories included broad themes and issues, many of which were established prior to data collection and included policy, quality and pedagogy to name a few. These enabled the data to be sorted into topics which in some cases became section headings in Chapter 5. Theoretical categories included concepts and frameworks drawn from AT and SR.

Steps of data analysis:

1. Transcripts were read and coded in hard copy for initial pre-set codes, such as policy, quality and pedagogy, based on the concepts identified in the literature review and pilot study that informed the interview questions.
2. Each interview transcription was added to Excel, and theoretical codes as well as themes and emergent codes were added.

3. All lecturers were then given aliases and de-identified through careful checking of all personal information.
4. The ‘concatenate’ formula was used in order to indicate who the participant was, the pages and line numbers for every turn.
5. All responses for each theme were then collated into individual spreadsheets. An example of how part of the legal theme was coded is in Appendix J.
6. Some further manual coding and summarising was completed of high level major themes that emerged. Examples have been scanned and included in Appendix K.

Maxwell (2012a) and Saldana’s reference guide “The Coding Manual for Qualitative Researchers” (2009) was used to aid my understanding of the basics of coding.

4.7.3 Analytical codes

The first part of the interviews was coded according to the AT framework, and barriers and enablers were associated with nodes in the AT Diagram (Rules, Community, Division of Labour, Tools). The final step in the initial coding was to consider the contradictions that emerged. Contradictions were then analysed according to the four levels described in Table 4-2.

Table 4-2: Engeström’s four levels of contradictions in activity systems

Contradictions	Mukute & Lotz-Sisitka (2012:355)
Primary contradictions	appear within nodes such as Rules or Community
Secondary contradictions	happen when there is a tension between one node and another in the activity system
Tertiary contradictions	occur when an old activity system clashes with a more advanced version of the activity system
Quaternary contradictions	happen when the main activity system clashes with a neighbouring activity system

The organisation codes described were placed into the three strata of reality (culture, structure and agency) described by Archer (1998, 2003). Lecturers’ reflections on their life histories, the second part of the interviews, were coded according to the modes of reflexivity identified in the questionnaire. Within each mode, the stances of the lecturers in relation to their contexts were identified. This analysis of agency was guided by the interview questions from Archer (2003), and

then themes in each question were discussed together or in comparison. For example, when lecturers talked about their ultimate concerns, these were discussed and compared in a narrative style.

4.8 Validity

Qualitative research does not have the same built-in measures of control that quantitative studies have in their design (Maxwell, 2008). Issues of researcher bias and the effect the researcher has on the individuals being studied (known as ‘reactivity’) need to be recognised, and the researcher needs to develop ways to minimise the particular threat to validity. Maxwell (2008) suggests seven validity tests that qualitative researchers should apply to their research.

- 1) Intensive, long-term involvement is suggested rather than single interventions as this prevents premature theories and incorrect associations. In this study, lecturers were interviewed and then completed a second questionnaire a year later.
- 2) “Rich data should be collected through intensive interviews where every word is transcribed as opposed to some notes being taken during the interview” (Maxwell, 2008:244). In this study all interviews were transcribed.
- 3) Respondent validation should occur to check that transcribed interviews have been transcribed correctly. Some initial conclusions can be checked by the participants. Maxwell (2008) cautions that feedback on the interviews should still be regarded as evidence and not inherently valid. Besides the testing of the second questionnaire on two lecturers, there was no process of checking. Subjects were asked if they would like to check transcriptions; however, those I approached said that they were too busy and trusted my integrity. Having said this, there was still some judgement made by the researcher, and in some situations there is some conflict between trying to understand the phenomenon and ensuring that participants experienced no harm.
- 4) A key part of testing for validity is “searching for discrepant evidence and negative cases”, in case the evidence is sufficient to modify conclusions (Maxwell, 2008: 244). Some evidence was reported on that was not expected. These were not sufficient to change my theory; however, these cases may be useful for readers of this thesis to evaluate.
- 5) In this thesis, a triangulation of information was used in order to reduce the risk of “chance associations and of systematic biases due to a specific method” (Maxwell, 2008:245).

6) Quasi-statistics were used to assess the amount of data that had been collected (in the interviews and the artefact analysis) which was essential to making claims about a particular phenomenon being typical or rare.

7) Maxwell (2008) suggests that even if the research is taking place in a single site, such as this one, that there is room for constant comparison across individual data. The study was conducted at UCT but across all the faculties in order to compare individual data.

Archer (2003:154) cautions that her own research and any other investigator's research where one is trying to get interviewees to discuss their internal dialogue encounters problems of the 'double hermeneutic'. This is where the research itself "involves the interpretation of interpreting subjects" who give their responses during interviews. Internal conversations are theory-laden and based on the reflections of the participants. This study includes the interpretive understanding of interviews, and these interviews include "imperfectly successful communication" (Archer, 2003:155). This is the same problem for any interview or survey. It is very difficult to ask people to explain their internal conversations when they may in fact struggle to understand it themselves.

4.9 Ethics

Ethical clearance for this study was obtained from the Humanities Ethics Board. This process included detailing the nature of the topic and seeking approval of the format and content of consent forms that were signed by all participants (Appendix L).

Participants in this study are members of the UCT community and this poses several ethical complexities as I am also a UCT staff member. Williams (2009) outlines ethical 'aporia' that arise when researchers interview their own colleagues. Williams suggest five 'aporias', some of which are relevant here. The first likely 'aporia' is how to preserve the confidentiality of data and the identity of the subjects. Participants were respected at all times and were assigned pseudonyms to ensure confidentiality. Every attempt was made to protect the identity of the lecturers who were subjects of this study. It should be noted that if certain demographic data and location within a discipline as well as certain educational practices were identified, participants might be recognised by their colleagues. However in this study, specific demographic data was not necessary to the argument formed here and was therefore omitted.

The second 'aporia' is that of representation. Steps were taken to obtain informed consent from subjects, and they were informed of the nature of their involvement in recorded interviews. Signed consent (Appendix L) was obtained from research participants prior to interviews and permission was obtained to use the data when the study was being written up.

Some participants had met me and worked with me and therefore I had their trust. Collecting this data included some personal data. However, this was not a serious threat to validity, and care was taken to guard against the interview being a space for interviewees to complain about their colleagues and/or their institution.

I attempted to find a balance between my roles as staff developer, researcher and also grant giver of the Teaching with Technology grants. It is this latter role that may result in the biggest ethical dilemma, that of 'guilty knowledge' (Williams, 2009:211,214). 'Guilty knowledge' is knowledge about a person that may cause harm to that person. I have access to information about an individual or department through the research process that might prejudice my future dealings with them. I have attempted to guard against this kind of subjectivity both in the interview situation but also in my future work in the role of grant giver. At the same time, the participants might be aware that I allocate grants and might have chosen not to reveal certain information in case their chances of future grants was jeopardised.

Chapter 5: Findings

5.1 Introduction

This chapter examines all the data generated through the qualitative and quantitative tools outlined in the methodology described in Chapter 3. Analysis of the interview data was combined with the questionnaire data and artefact analysis to form a complete picture for each of the three subsidiary questions (SQs). This chapter is divided into three parts, and in each part, themes were identified from all the data. This approach helped me to build a reliable and rigorous interpretation of the data. Part 1 includes a response to SQ₁, which focuses on cultural influence using qualitative data from the interviews and the results of one question from Questionnaire 2. Part 2 focuses on possible structural influences and includes both qualitative analyses of the interviews as well as the results from the two questionnaires. In this section, AT was used to locate contradictions in the system in the key themes that are described in some detail. Part 3 includes both qualitative data from the interviews and quantitative data from a questionnaire (ICONI) and is essentially about lecturers' agency. In this section, SR was used to frame the data.

Fourteen participants (two from each of the seven faculties at UCT, one who was contributing and one who was not) were part of this longitudinal study (Table 5-1 and Table 5-2). In order to de-identify the participants of this study, their faculty association was removed.

Table 5-1: Contributors of OER

Alias	Gender	Rank
Natalie	F	Associate Professor
Frank	M	Professor
Kathy	F	Associate Professor
Simon	M	Senior Lecturer
Bronwyn	F	Senior Lecturer
Erica	F	Lecturer
Sam	M	Senior Lecturer

Table 5-2: Non-contributors of OER

Alias	Gender	Rank
Lance	M	Professor
Mandy	F	Associate Professor
Gary	M	Associate Professor
Mike	M	Lecturer
Gwen	F	Senior Lecturer
Larry	M	Senior Lecturer

5.2 Part 1: Does global and/or institutional culture influence lecturers' contribution of OER, and if so, how?

Part 1 of the findings chapter endeavours to establish if and in what ways lecturers' awareness of an emerging global 'culture of Openness' and/or the prevailing institutional culture influences their willingness to contribute some of their original educational materials as OER.

5.2.1 Awareness

In order to address this, it is important to establish how aware the participants in this study are about Open developments. Lecturers described what they knew about the term 'Open education' and then, more specifically, their understanding of OER.

I used 'magnitude codes' (Saldanha, 2013:75) to evaluate their understanding. A code of 1 meant there was very little awareness and no understanding of the term OER. A code of 2 was used for responses that mentioned two or three aspects of either Open education or OER; these aspects could include a reference to either an Open culture, OSS and/or OA, examples of overseas institutions that have OER repositories, MOOC platforms, awareness of alternative licensing and/or the mention of some of the structures that are in place at UCT. A code of 3 meant that the participant mentioned most of the above and could give a very clear and thorough explanation of Open education.

5.2.1.1 Open Education

Overall, two participants were coded 1 as they had very little, if any, idea of Open education. Ten participants mentioned two or three aspects about Open education and were coded as 2. Code 3 was given to 2 participants who could describe various aspects of Open education (Table 5-3).

There was some confusion and uncertainty about the concept of Open education. Even though seven participants contributed OER, only two displayed a high level of knowledge (Natalie and Frank). The other four had some knowledge (Code 2). Bronwyn, who was busy preparing resources to contribute at the time of the first interview, admitted to not knowing much.

Six of the non-contributors had some knowledge (Code 2) of Open education even though they were not actively involved; four had attended CILT seminars on the topic or had some dealings with CILT. Gwen had heard about Open education from the IP Unit in the Law Faculty.

Table 5-3: Lecturers understanding of Open education

Open Education	Contribution	Non-contribution	Example
Code 1: little knowledge (14,5%)	Bronwyn	Mandy	"I'm thinking of is the journals, the Open education journals." (Mandy 1,12-13)
Code 2: some knowledge (71%)	Sam, Erica, Kathy, Simon	Lance, Chloe, Mike, Gary, Larry, Gwen	"I know very little. (...) we could saved lots and lots of money if we weren't doing that, ... the whole sort of big push to get governments to use textbooks which are Open source and all this sort of stuff..." (Erica,1, 4-13).
Code 3: most knowledge (14,5%)	Natalie, Frank		I know about the Creative Commons, because of my websites and my textbooks... Open Access ...other universities making educational content available internationally for free. ... Then I also know about the Khan Academy, which is to me an interesting concept ...I also know about the Shuttleworth project ...(Frank,1,4-27)

Of the twelve participants who were coded 2 or 3, five mentioned Open access incorrectly by equating it with Open education; one used Open source as a way of describing contributing openly; two participants talked about MOOCs being Open education; one participant gave an

example of a MOOC platform-Coursera; two mentioned the Khan Academy; and one mentioned MIT.

5.2.1.2 OER

Natalie and Frank were the only two lecturers who could accurately describe OER (Table 5-4). Two lecturers referred to journal articles as being OER and two mentioned Open Access. Only two lecturers mentioned open licensing.

Table 5-4: Lecturers understanding of OER

OER	Contributor	Non-contributor	Example
Code 1: little knowledge(21,5%)	Sam	Mandy, Lance	Very little.(Mandy,1,14)
Code 2: some knowledge (64%)	Bronwyn, Erica, Kathy, Simon	Chloe, Mike, Gary, Larry, Gwen	I think of course notes, lectures, podcasts, videos... made freely available, mainly on ,and that's what I kind of think of people being able to download anything from a website... the fact that they're free. (Mike,1,19-26)
Code 3: most knowledge (14,5%)	Natalie, Frank		"Open Education Resources are educational resources or materials that you would use in an educational setting, be that school or university, but these are materials that are made available free of copyright restrictions, so I wouldn't need permission to copy it or to use it in other materials. It's just available to use." (Natalie,1,21-26)

Of all the lecturers, Lance expressed the most concern about his lack of awareness of OER. Lance had concerns about who would use his materials and why users would be motivated to use his teaching materials (Lance,25,990-993). Lance, however, also made two comments suggesting that he would like to contribute in future if he had more knowledge about OER:

"... if I had a clear idea in my head, which I do not at this point, who these people are who're going to access my stuff, ... what they were looking for and why I am doing this, then I would probably go ahead and do it happily. It wouldn't be for the tick on the ... in that box" (Lance,14,451-460).

At UCT, 12 of the 14 (86%) participants were aware of Open education and 11 (78%) were aware that OER were teaching materials. This is good indicator of some awareness, even though in many cases Open terms were used incorrectly. Six of the seven non-contributors had some awareness and yet this did not necessarily result in contribution, and therefore, knowledge of Open culture initiatives such as Open education and OER does not seem to directly influence the contribution of OER in this case.

5.2.2 Institutional culture

At UCT, the contribution of teaching materials as OER began as a middle management initiative typical of a collegial style institution, which is characterised by loose policy definition and innovation that occurs more on an individual level through informal networks (Czerniewicz & Brown, 2009; McNay, 1995). Because of this strategy, not all lecturers are aware of the UCT OER initiative or are aware that contribution is voluntary.

5.2.2.1 *Perceptions of the Institutional Culture with regards to Open Education*

Lecturers' views varied concerning whether UCT's institutional culture was supportive or at odds with more open contribution of teaching materials (Table 5-5). Overall, this view of inconsistency in institutional support was more of a concern for lecturers who were contributing, whereas for the non-contributors, this was not that much of a concern; the culture of the institution was not impacting on their decision to contribute.

Table 5-5: Lecturers' views on if UCT's institutional culture supports or is at odds with OER contribution

	Supportive	'Marginally supportive' of OER contribution	Not sure	At odds with OER contribution
LAW	1 Contributor		1 Non-contributor	
Health Science	1 Non-contributor			1 Contributor
Science				1 Contributor 1 Non-contributor
Commerce	1 Contributor			1 Non-contributor
Humanities	1 Contributor			1 Non-contributor
EBE	1 Contributor	1 Non-contributor		
CHED		1 Contributor		1 Non-contributor
	5 (36%)	2 (14%)	1 (7%)	6 (43%)

Only five (36%) lecturers felt that UCT's culture was supportive of contributing. Six (43%) felt that UCT's institutional culture was at odds with a culture of Open education and the rest were unsure (7%) or felt there was marginal support (14%). Lecturers within the same faculty had different views on institutional culture and its support for Open education, for example, Law and Health Science. It seems that departments within faculties have their own rules concerning teaching and sharing of teaching materials.

Four of the lecturers who had contributed teaching materials to OC felt that the institutional culture of UCT was supportive of Open education (Natalie, Simon, Erica and Sam). Natalie had met with peers at other universities, and she felt UCT was far more supportive of Open education. Simon said the presence of UCT OC and the OER grant system showed that the institution was supportive. Sam felt the university was supportive, yet individuals still had a choice. Bronwyn said that there was some visibility of Open projects through the UCT OC site. However, she felt that the practice of the institution had not changed, that UCT had a closed culture, that teaching was not transparent and that for these reasons, "lecturers don't think about contributing" (Bronwyn, 8,319-365). By contrast, Frank and Kathy said the university's culture was at odds with Open contributing. Frank said he thought there could be more support. He criticized the UCT OC

website as being badly indexed. Kathy felt that UCT was ‘luddite’ in its approach to innovation (including OER) and she found that it was “easier to get forgiveness than to ask permission” (Kathy,8,290-303).

Four non-contributors felt that the university was not supportive of Open initiatives. An academic from EBE thought the institution was marginally supportive, another was not sure and only one academic from Health Science thought the institution was supportive. Their reasons for saying this included, for example, that the institution appeared to be a focus on support for individual interests. Those individual interests were concentrated in the area of research, not teaching, and there was a lack of clarity about what contribution might mean to the institution. Mandy felt the institution was “completely at odds”. She said this because of her experience in her faculty, where in faculty meetings the emphasis was on the individual and not on contributing or collaboration (Mandy,10,360). In addition, Gary said that his sense was that “... people tend to pretty much stick to what they’re doing ...” (Gary,10,397-431). Gwen said UCT was focused on a peer review research system that was closed: “as a researcher ... the minute you talk about peer review and all those things, Openness is not part of that” (Gwen,5,203-205). Larry showed some dissatisfaction with UCT: “I don’t think the actual philosophy is to share, because that’s the individuals, and especially if you’re a teacher ... if you’re a teacher, your classroom is your space and we’re just only starting now to get people to come into each other’s classroom. Because teaching is not valued in that sense ...” (Larry,8,277-284). He went on to add: “they [the institution] like the idea of we can share and we can do all of this, but I do not think things are in place to actually do it in a safe environment.” (Larry,8,289-294). Lance felt that there was still a “lack of understanding” of Open education (Lance,10,356-357). Gwen said that in her faculty, contribution of teaching materials as OER or sharing informally was something that they did not talk about. Gary said that contribution of teaching materials as OER was not something that he felt the university had “actually engaged with” (Gary,10,399-431). Mike felt that although there was some support, contribution was “not really necessary, it was optional” (Mike,7,263-271). For Mike, UCT’s culture was “a culture of being overworked” (Mike,7,275-291). Chloe felt that UCT was marginally supportive, but she criticized the content in OC: “I am not sure that UCT’s best foot is being put forward”. She added that lecturers were contributing only to build their individual profiles (Chloe,10,437-440). She also felt that UCT was about individuals, and said UCT was “relatively anarchic, and it was built on a space for individuals to flourish and run with things,” and she felt

that UCT “would struggle to get an edict that everyone must now put this online. So that’s where its limitation will kick in” (Chloe,12,453-463). Chloe, through this remark, reinforced the tension that exists at UCT between individual freedom of choice and being told what to do.

In AT, ‘culture’ can be present in the Subject, Rules, Community, Division of Labour and Tools. Culture in the form of beliefs and ideas is often most apparent in the Rules node, where the beliefs held by the system reside. It is the Rules explicit and implicit, written or unwritten that guide activity in the system. It seems that there is no ubiquitous culture of Open at UCT and lecturers have different views about the culture of the institution. Those who are not contributing do not feel the institution is encouraging or supporting them to contribute OER.

AT highlights an interesting primary contradiction within the node on Rules; in this case, the Rules are not consistent. The implicit Rules about individual work being privileged over collaboration or sharing of teaching materials indicates the influence of the culture of the institution. There are also explicit Rules that peer reviewed research is recognised over teaching or producing teaching materials. In other words, the introduction of a tool for sharing in the form of UCT OC (initially) followed by the institutional repository has created a tension in the existing institutional system.

5.2.2.2 Departmental culture and contributing teaching materials

Many lecturers in this study felt that some departments would have to change their traditional way of doing things if contributing teaching materials was to become more widespread. Others were more flexible and inclined to contribute regardless of departmental culture. New concerns emerged about technical infrastructures and a lack of understanding about IP issues. Nine of the 14 participants said that their departments would need to change their practices. In certain cases, the change was not thought to be so big and that it depended on the kinds of courses (prestigious courses were mentioned as being more complicated). The discipline itself might also come with more of a collaborative sharing culture.

As a contributor, Simon felt that it would “depend on the discipline”, that there would be “mixed reactions” and that in his area, there was “a lack of computing capacity”. Because of this last aspect, he predicted that making this change would be met with resistance (Simon,9,307-319 and

10,330-335). Bronwyn said that “lecturers mind sets” would have to change and that most “teaching materials would need to be reconceptualised” (Bronwyn,10,404-478). Erica felt there would be resistance and reluctance to share, especially prestigious or capstone courses, and many may be concerned about losing their IP. Erica also felt there was a lack of clarity around the area of IP, and even though she had shared resources, she was still not clear about who owned the rights to her teaching materials (Erica,14,525-527).

In the non-contributor group, the idea of lecturers working alone reappeared as part of departmental culture. Gwen observed that all her colleagues were in “silos” and that they would have to change the way they practiced (Gwen,7,216-219). Chloe echoed Gwen’s comment on silos and said that “a person’s course is their fiefdom”, which will be difficult to change (Chloe,12,472-501). A new concern emerged in the form of a worry about the quality of materials. Mike felt that his department would have to “change its protocols and that potentially the quality of resources would diminish” (Mike,8,297-302). Gwen was also concerned about the quality of materials that would be shared.

5.2.3 Influence of the social context on OER contribution

These lecturers are situated in 14 departments across campus. What emerged from the interviews is that some departments have a particularly collaborative thrust around courses and curriculum design while others may be more individualistic with each academic pursuing their own research paths.

5.2.3.1 *Influence of peers in discipline and colleagues in departments*

There was some uncertainty about whether colleagues were aware of the UCT OC directory and responses from contributors ranged from: some (2), yes (3) and no (2). Only two lecturers felt that their colleagues’ valued adding teaching materials to the directory, and only two lecturers said their colleagues were aware that they had added materials to UCT OC.

Bronwyn was the only contributor who was positively influenced by her colleagues to share teaching materials as OER. The contributors worked alone on their OER without any support from peers or colleagues.

Five of the non-contributors have been influenced not to share by their colleagues despite the fact that most of the colleagues were not aware of UCT OC. Lance had noticed that there was a 'Yes and No' group and said he was siding with the 'No' group as he was uncertain about what was expected. The Open education advocate in his unit had asked him to share and on several occasions his response was

“... I just don't even answer. If other people say they're not going to do it, then I say ya, I'm not going to do it either” (Lance,9,316-335).

The teaching philosophy of Mike's unit was against sharing teaching materials with other institutions, because his department did not want to create a situation where other institutions were dependent on UCT. Both Mike and Gary were influenced by their colleagues but in different ways. Mike was concerned about the risks he would have to take to share often controversial teaching materials. He used examples of companies and other recognised industry bodies in his notes, often in a critical way.

Gary recounted an interesting story about when he first started at UCT. There was an article on the department's tea room notice board that described how lecturers should not share notes and that the mark of a great teacher is someone who develops their own materials. Although his reading this article occurred some 22 years earlier, the message had always 'stuck' with him. At the time, he lacked confidence and he admitted that now he felt much happier in the department

“... I essentially sort of grew up as a lecturer, thinking by damn, I've got to generate my own notes from scratch. I didn't even ask for notes from any of my colleagues” (Gary,13,164-183).

Gary concluded his interview saying he could see the value in Open contributing. “For goodness sake, if it's going to help all of us, let's do it. You know. And let's find ways ...” (Gary,28,1139-1152).

Particular disciplines may be less conducive to sharing, and this was expressed by Gwen who had not thought about her colleagues contributing because “...first of all there's confidential issues, and secondly you can make a lot more money by selling it ...” (Gwen,12,164-169).

5.2.4 Hindrances to contributing across the institution

Six of the 14 participants felt that UCT's culture was at odds with Open contributing and all participants felt there would need to be big changes in the way their departments worked in order to foster an Open culture.

The contributors concerns centred around issues of awareness, internet fatigue, the value of contribution and the lack of a technical support infrastructure. Natalie used this question to reflect on why people were not contributing more:

“People are unaware of the possibilities, unaware of the platform that were available. Perhaps even unaware of the benefits that would follow ... or it could be that people are constrained by other pressures or demands on their time and they just can't get around to it” (Natalie,7,257-263).

Frank was concerned that more contributing on an institution-wide scale would be difficult to promote as he had a sense that the university was suffering from what he termed “internet fatigue”(Frank,15,555-561).

Kathy felt that people would have fears around their teaching being devalued:

“I think the idea that contribution devalues the teaching materials is an old-fashioned way of looking at it ... from an economic point of view, that's not what [the institution] should be offering, this secret information that students have to register to get access to...”
(Kathy,10,374-383).

In addition, Erica talked about ‘dinosaurs’ that she knew who were even reluctant to have their lectures recorded and also mentioned that attitudes towards Openness could vary from department to department.

Simon and Erica were concerned by the lack of technical expertise and capacity. Simon added that he thought there would have to be a support unit for those who wanted to contribute as lecturers have such heavy workloads.

The lecturers who were not contributing on UCT OC expressed nervousness, fears and anxieties around institution-wide contributing. Mandy talked about the university's materials being 'exposed' and that could be a hindrance (like Mike). She added that many people would find this "scary" (Mandy,13,498-499). Gwen said that "UCT would be afraid of their teaching materials or their teaching staff being used by others" (Gwen,8,276-277).

Gary had three main areas of concern: 1) "anxieties around what the effect would be on student participation in classes"; 2) confusion about IP which would need explanation and clarification; and 3) that "someone might well argue why should I put hours and hours of my time and effort, only to see so and so walk off with it and maybe even take the credit for it... [he could] understand that that might need to be clarified" (Gary,14,559-590).

Mike talked about lecturers' nervousness about contributing:

"Transparency would maybe create a bit of nervousness amongst the lecturers ... when people want to shine the light on something, it could be people scurrying out of the way, so [he thought] that would be a big resistance to the change kind of aspect to it"
(Mike,9,332-351).

The views of lecturers concerning the institutions support or lack of support of Open culture are varied across faculties and across departments in the same faculty. It seems that Open culture and/or the culture of the institution could be an enabler, but for many lecturers who have their own motivation to contribute, it does not influence their decision.

5.3 Part 2: Do global and institutional structures influence lecturers' OER contribution and non-contribution, and if so, how?

There are a number of global and/or institutional structures that may influence contribution of OER. These structures can be in the form of policies, guidelines or frameworks and may include copyright legislation, IP legislation and global and institutional policy. Inside the institutional structures such as policy, contribution may or may not be influenced by recognition and reward processes, technical infrastructure, and support and use of OER. At an institutional level, the theme of 'pedagogy of OER' and the roles of lecturers emerged. The debate in the literature about the 'quality of OER' is explored further in this section.

Initial guidance from themes in the literature helped describe structural issues. These themes were used to focus the interview questions. From the analysis of the interviews and questionnaires, a number of key areas of importance were identified:

- legal and copyright issues
- institutional policy
- institutional recognition and reward
- technological support and use
- various aspects concerning the pedagogy of OER
- roles of lecturers, both inward and outward facing
- various aspects concerning the quality of OER, including quality assurance structures

5.3.1 Legal and copyright issues

A number of separate issues arose with regards to legal issues, and these issues are arranged in order of frequency of concern mentioned. These issues included concerns about third party copyright infringement and a lack of knowledge about copyright, lack of knowledge about CC and concerns or lack of concerns about loss of IP.

Third party copyright infringement and uncertainty about copyright

Infringing the copyright of others was the most important legal issue mentioned, with 10 lecturers expressing concerns about this (Figure 5-1). Contributors and non-contributors were concerned about infringing the copyright of others. All the lecturers who were concerned about copyright expressed some confusion and uncertainty about copyright. They described their knowledge of copyright in the following terms: 'hazy', 'never quite sure', 'grey area', 'in a quandary', 'a little bit in the dark', and 'very concerned'. They found understanding copyright a difficult area. Lecturers felt there was a 'fine line' and that you 'never quite know' when you are infringing copyright.

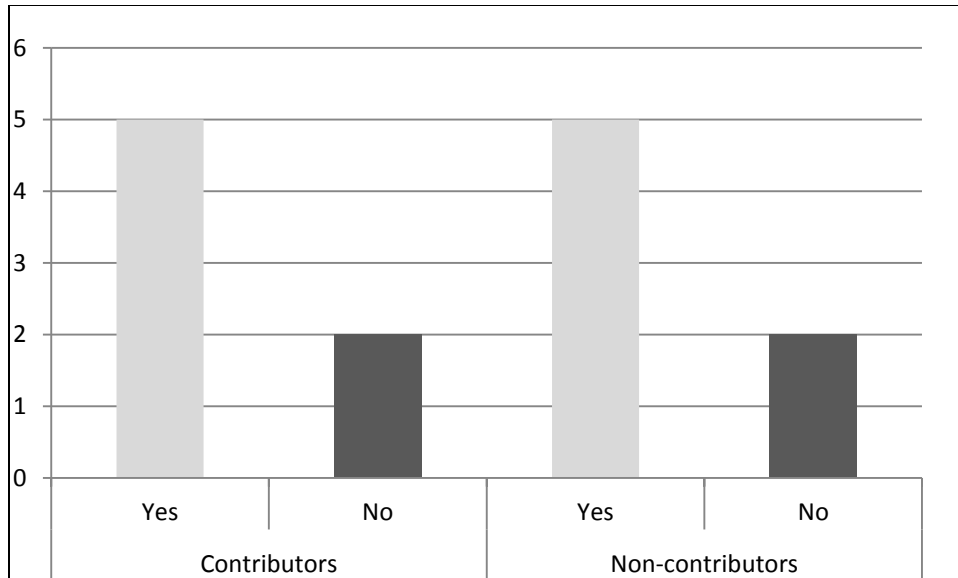


Figure 5-1: Lecturers concerns about infringing copyright

Five of the seven contributors were concerned that they had infringed the copyright of others. They mentioned how careful they had to be, because they were really quite unsure about how copyright worked. It was a hurdle for them, and understanding and attributing third party copyright when it came to images was particularly concerning.

Natalie understood copyright. However, it was still a concern for her:

“...because I do not want to put something out there and then someone turns around and says you’ve plagiarised their stuff or infringed their copyright” (Natalie,9,342-348).

Similarly, Frank had published a textbook as OER, and his concern was about the publishers saying he had infringed their copyright:

“...that’s a very difficult area, because if for instance, someone’s posted an Open Access article which has got some scans on the internet and you can access it ... then why can’t you just use that material in an Open Access site and reference it.... But it is untested waters” (Frank,18,655-666)

Kathy used a lot of images in her slides. She had tried to look for images that were openly licensed, but this process took too long so she started to draw her own images:

“It was the only real hurdle for me because I tend to use quite a lot of images and they’re sort of swiped from Google searches,... a slight but significant barrier to putting things up” (Kathy,15,524-531).

Simon had worked with the UCT OC team who had checked the copyright on his behalf, so he was not concerned about the materials that had been released. However, he added that copyright “held him back quite a lot”, and he would contribute more if he was not so concerned about it (Simon,16,551). Bronwyn said she was worried about infringing copyright. Even though Erica had shared on UCT OC, she was still very unsure about her rights and the rights of others. She asked: “That’s a very interesting question, like is my stuff mine? Or is it the university’s?” (Erica,18,678-679). Sam thought he had not infringed copyright to the best of his knowledge.

Non-contributors were concerned about infringing copyright and similar themes emerged around being uncertain of copyright rules, the use of images and the barrier copyright was to contribution. Lance described how he felt he was in a “quandary’ (Lance,15,555) because he had a lot of images that he had collected over the years, and he was unsure about the copyright on these images. Chloe had started taking photographs to use as images in her teaching materials in order to avoid the copyright infringement and added “... it’s a whole area where we’re all a little bit in the dark” (Chloe,18,719-726).

Mandy described the area of copyright infringement as being ‘tricky’ (Mandy,16,612). Gwen was unsure about whether she had infringed copyright and said if she knew she was going to share openly, then she would have to be more careful:

“You never quite know... if I use an example from a textbook... I have to make a concerted effort to remember to attribute it” (Gwen,9,317-326).

In the same way, Chloe expressed concerns about the violation of other people’s copyright, and she echoed Gwen’s concerns about her classroom practice and not having time to ask permission to use materials.

This uncertainty and concern around infringing copyright suggests a primary contradiction within the Rules node of the activity system concerning how lecturers use other people's IP (Figure 5-2). The current third party copyright guidelines allow lecturers to use materials in the classroom as part of the 'Fair Use' legal clause. The university also pays for the rights to access journals and textbooks otherwise under full copyright.

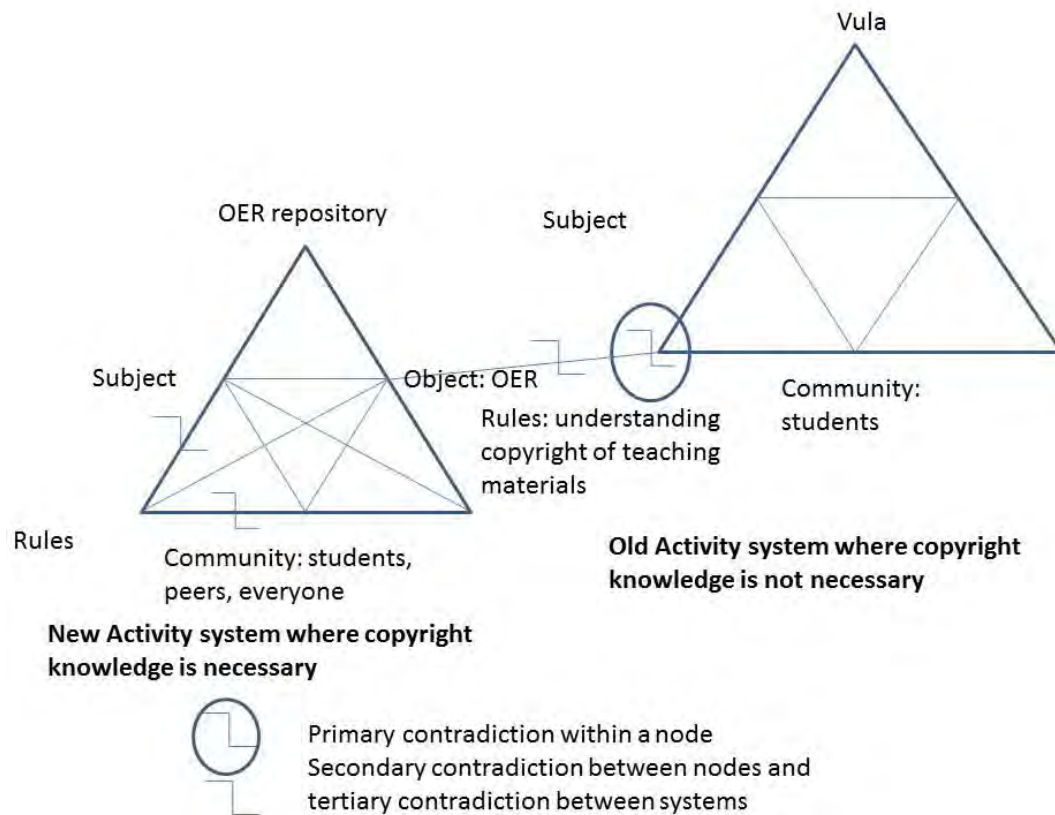


Figure 5-2: Contradictions around knowledge of copyright law

In summary, many lecturers are not rigorous in acknowledging sources and referencing correctly. Therefore, the thought of contributing those materials under an Open license with an audience beyond the institution is a concern. There is also a tertiary contradiction where the Rules for engaging with the Community are already not clear in the current system. However, in a new system that includes an Open repository, the Rules are inadequate. This is not an unexpected finding. The literature on OER suggests that the lack of clarity about copyright is a barrier.

Creative Commons (CC) licensing

All the lecturers who were contributing were asked to explain their knowledge of CC licensing, and only Natalie could describe clearly what it was. Even though these lecturers had put the license on their materials, they did not understand the copyright management solution. Bronwyn said: “...I am not even trying to understand the licensing thing... It’s too complicated” (Bronwyn,19,780-782). She added “... I will look at what most lecturers normally did... there must be a kind of a norm at UCT” (Bronwyn,19,777-779).

The non-contributors had almost no understanding. The findings highlight the casual copyright practice of lecturers in their day-to-day teaching and how these practices will need to change for teaching materials to be shared as OER.

Loss of intellectual property

Overall, only three of 14 lecturers were concerned about losing their IP. Participants were asked more specifically if they were concerned about lecturers or students ‘taking’ their work. The contributors were a little concerned (3) about lecturers taking their work and not attributing it (Figure 5-3).

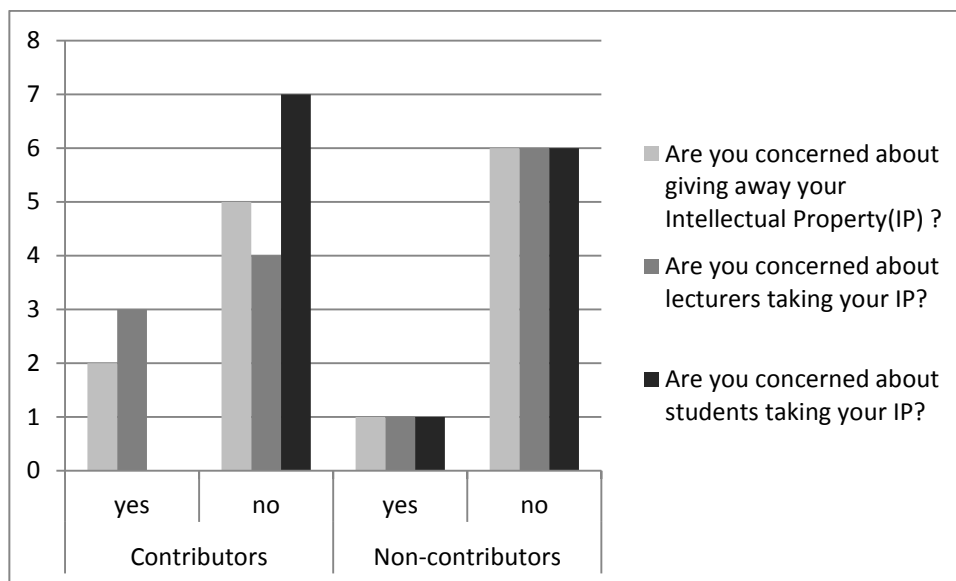


Figure 5-3: Lecturers views on loss of IP

Natalie and Sam, both contributors, were concerned that they would not be attributed for the work they had done. Natalie said: “the one thing I would insist on is on attribution, my greatest

fear then would be someone will take it and will not attribute” (Natalie,9,323-327). Similarly, Sam was concerned “to what extent this material will be given credit...” (Sam,12,450-459).

Bronwyn expressed an idea that did not appear in any of the literature reviewed (October 2013). She felt one’s IP was actually protected by contributing it as an OER:

“Because you have the documentation ... you have a place where you put it up with a date and a time. [You are] protected if you make something legitimately an OER and then somebody else uses it” (Bronwyn,18,731-750).

Seven of the contributors said that they were not concerned about losing their IP, which was a concern for contributors and non-contributors in the literature (Davis et al., 2010). Erica said it would be ‘irritating’ (Erica,19,695-702) but that this was not a concern for her: “it’s just a very small thing that people would use and wouldn’t attribute” (Erica,19,704-706). Some contributors said they were ‘happy’ even ‘delighted’ to contribute and have someone else use their work.

The non-contributors of OER were not concerned about losing their IP; this was not a reason for them not to contribute. Lance was the only person in the non-contributor group who was concerned about not getting attributed, but he was also worried that attribution meant users would check his materials and find copyright infringement:

“Who’s going to get hold of it, will they be crediting me and will they also discover that I had used an image of theirs... because I didn’t know 10 years ago that one was meant to be doing all of that...” (Lance,5,156-160).

Lance also gave an example of a colleague who had taken lecture notes from a colleague without crediting them which was upsetting. Mike was not concerned about his IP being taken and said: “I am happy to share IP, I can see the benefit of just making available, and networks get created off that, and you become a ... hopefully a voice of excellence” (Mike,10,395-496).

5.3.2 Institutional Policy

At the time of the first interviews (August-September 2013), there was no institutional policy concerning OER or any other Open initiative. There were, however, some clauses in UCT's IP guidelines that encouraged the use of CC. Then, in 2014, the UCT Council approved an OA policy (Appendix F). The UCT Library is the formal owner of this policy. The Library works closely with UCT's Research Office and CILT to implement the policy.

The policy foundation for an ongoing emphasis on OER is evident: "The widespread availability of open education resources, open content, open courses etc. from the global north is both an opportunity and a concern as there is an equally urgent need for local teaching and learning resources to be made freely available online." The policy states: "The University encourages Employees and Students to make all forms of works of scholarship available. This includes (but is not limited to) essays, books, conference papers, reports (where permitted by a funder of the research leading to the report), educational resources, presentations, scholarly multi-media material, audio-visual works and digital representations of pictorial and graphical materials." Similar to OA policies around the world, the policy requires UCT authors to deposit journal articles. It is this high profile inclusion of and support for OER that distinguishes the policy from that of other institutions and organizations.

In the literature, there are several authors who strongly suggest that institutional policy is a key enabler to contributing teaching materials as OER across an institution (Browne et al. 2010; Lee et al. 2008; Carson 2009; Reed 2012; Corral & Pinfield, 2014).

Although ten lecturers were aware of the new UCT OA policy, it emerged that they were most concerned that this policy would impinge on their academic freedom and have the unanticipated effect of discouraging OER contribution. Policy, it was suggested, could be coercive and even create a negative feeling. Lecturers made no mention of other 'policy', like structures such as the Cape Town Open Education Declaration or the Paris OER Declaration.

Four contributors felt that policy would not be an enabler (they would contribute regardless), two were unsure, and one felt policy might encourage lecturers at the institution to share (Figure 5-4).

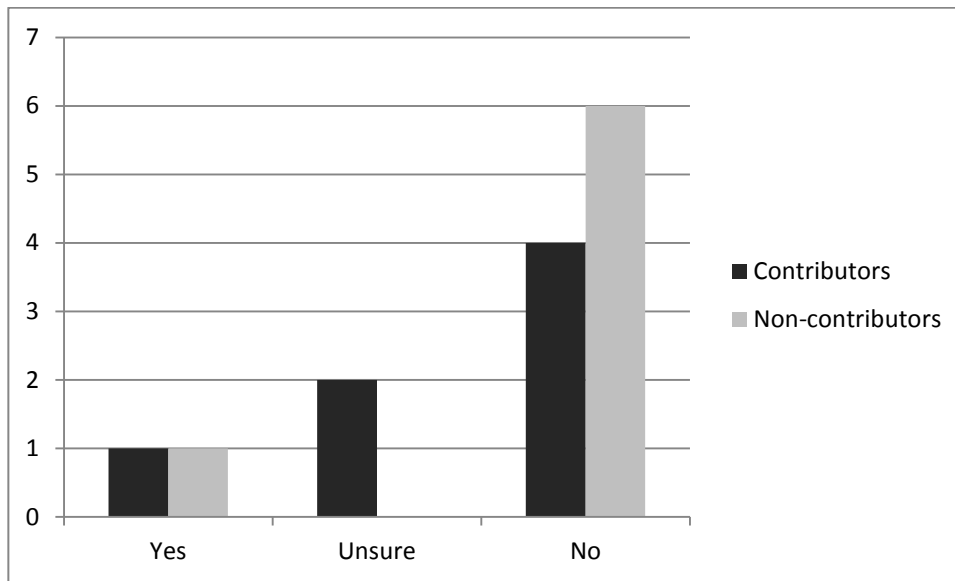


Figure 5-4: Lecturers' views on whether policy would enable OER contribution

Simon, a contributor, had quite a bit to say about the impact of policy: “I think it [a policy] could become coercive...I do not think I would be as willing to share if it was a policy sort of thing ...” (Simon,11,372-384). Natalie said: “I might share more, but I would share anyway” (Natalie,7,231-233). She had some reservations about the effect of policy on contribution:

“I am concerned that if it became a top down almost instruction ... one of those things that has to be done and so that might perhaps also generate some negativity around it” (Natalie,7,244-248).

In the non-contributor group, only one participant felt that policy would be an enabler because it would provide a structure: “Because it’s the only way one gets structure and you get the right way of doing things” (Lance,13,474-480). Gary responded that he was not governed by any policy but that he could also see how other lecturers ‘would feel more secure knowing that there is a very sort of strict set of things in place’ (Gary,14,549-555).

The views against policy were quite strongly voiced. Larry felt that “...policies actually constrict more than anything else and they start putting extra pressures on everyone” (Larry,10,340-341). Chloe voiced a similar sentiment and added “any mandatory anything was going to ever get through senate” and that this was “the weakness and the strength of UCT” (Chloe,14,557-565).

Policy forms part of the Rules node of the activity system. A policy is introduced in order to specify a set of rules regarding a particular activity. In this case, the policy requires lecturers to contribute their research articles into the UCT repository, but it only encourages the contributing of teaching and other scholarly materials. Contributors felt that policy would negatively impact on contribution and non-contributors felt that it would not make any difference to them. A contradiction emerged between the Rules (policy), the Subject and their views on policy (Figure 5-5).

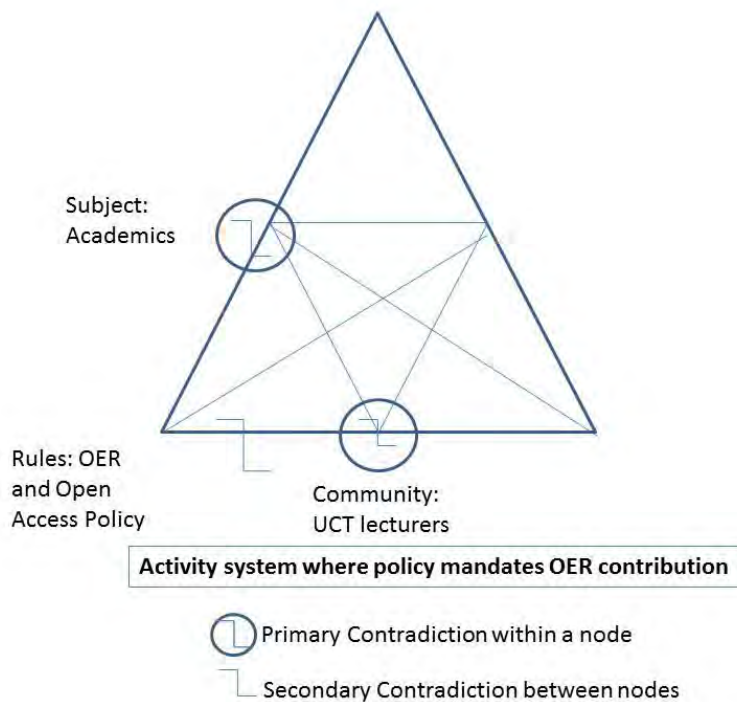


Figure 5-5: Contradictions around policy at UCT

There also appears to be a contradiction between the policy and the UCT Community, who may view policy as infringing on their academic freedom to make their own choices about contribution and non-contribution of OER.

5.3.3 Institutional recognition or reward for the contribution of OER

Research suggests that some kind of promotion or reward will enable lecturers to contribute (Davis et al., 2010; Martins & Baptista Nunes, 2012; Wild, 2012). At UCT, there is no formal recognition for contribution.

From the close scrutiny of several documents included in this study, it seems that at UCT there is no mention of, or requirement of, contribution of OER in the official letter of appointment. In addition, performance appraisal templates and Ad Hominem promotions criteria make no mention of OA or OER even in the area of social responsibility which seems the best category or role for contribution of OER (as the category where UCT lecturers are encouraged to share their expertise with the broader community).

UCT is a research intensive institution and it follows that perhaps research is more highly valued than teaching. Four (Bronwyn, Kathy, Mike and Chloe) of the 14 lecturers representing four different faculties felt that they had seen a shift recently when applying for promotion and that excellent teaching was also very important for promotion, not only research.

Overall, five of the 14 lecturers felt it would make no difference if they were to receive recognition or not and they would have shared anyway. Five of the seven who had added teaching materials to UCT OC felt a reward in the form of money to employ a researcher would enable them to share more (see Grants discussion later). Two lecturers were in the earlier stages of their academic careers and they felt recognition would be an incentive (Bronwyn and Erica).

Four of the lecturers who did not contribute OER felt that recognition might encourage them to share, but Mike and Gwen said that it would also require a huge change in their approach (in addition to promotion and reward). Only two non-contributors felt that a reward would enable them (Chloe and Mandy).

5.3.3.1 Grants for developing teaching materials

Based on the analysis of interview responses, institutional enablers such as grants and student support can potentially enable those who are willing to contribute their materials. These grants were an enabler of contribution of OER, and five contributors had received grants from CILT (four OER grants and two TWT grants). However, the relationship between grants and contribution was not straightforward.

Four of the contributors received OER grants and recognised that these grants enabled them to hire students to adapt and prepare their materials for contribution. Bronwyn talked about the amount of effort involved in using other people's OER in her materials: "it took much more vision than we realised... if you haven't referenced that picture you never find that picture again yourself, so you have to find a new one" (Bronwyn,24,1004-1008). Frank had not applied for a grant as he said he had not yet needed one, but he could see how it could be useful: "I would rather have other people use it that have more pressing needs..." He continued by adding "... this [writing his materials] is taking up probably on average about 3 hours of my day ... which is at night. And I could delegate some of that work ..." (Frank,16,585-589). Kathy contributed a set of lecture slides in 2010. In 2012, she applied for and received a TWT grant for a different project, so the grant did not enable her. Simon received a TWT grant and he decided to contribute the materials developed with the grant money. He subsequently received an OER grant and added more materials in addition to those that were grant-supported projects. Simon commented that the grants had enabled him to contribute. Erica shared her first resource because she received help from the OER team. Subsequently she applied for an OER grant, and at the time of the first interview, these materials had not been shared as the money had run out. Erica's student assistant was no longer available, and she had no time to prepare the materials for contributing. Erica said that the grant was an enabler: "I wouldn't have done it otherwise" (Erica,17,634).

In the group that had not contributed, Mandy was the only academic who was keen to apply for a grant, but she had no particular materials in mind. Lance was ambivalent and said help from a student might be a good idea. There was a sense that lecturers were already so busy that even a grant would not enable them. Gary would not consider applying for a grant: "I simply cannot do anything more. It's a very simple reason... it's not any judgment on the concept itself" (Gary,15,621-625). Similarly, Chloe said her answer was a 'maybe'. She felt R10 000 was not a lot of money for the effort required to apply and administer the grant. She added that she was just trying to survive, and she had "lots of things on the plate" (Chloe,16,634-637). Larry was not convinced about applying for any grants. He had received some money from another grant (not one offered by CILT) and had not found time to work on that project.

The other three non-contributors felt that a grant would not enable them. Mike said:

“That sounds like a fantastic idea.. ...but only once the bigger debate settled around educational philosophy then that would be an enabler, but it wouldn’t overcome those obstacles...” (Mike,9,362-369).

Gwen would not apply for a grant as it would not enable her to contribute. “No, it wouldn’t make a difference to me...” (Gwen,9,298).

5.3.3.2 *Student support in preparing teaching materials*

While lecturers were mostly positive, some were a little cautious about having students help them to prepare materials. Natalie, Simon and Sam all answered positively and said ‘definitely’. Frank thought he might need a student: “...or someone, but maybe I am a bit of a micromanager on this project itself, and I just want to make sure the quality is up to scratch...”(Frank,16,591-592). Kathy clarified her ‘yes’ by saying “if it was the right student” (Kathy,12,434). Similarly, Mike, a non-contributor, indicated a little reluctance:

“No, I don’t think I would be open to that... I tend to put a lot of effort in...[to creating his slides]... like one person’s good slide is like another person’s terrible one.” He continued by adding that perhaps he would be “open to another perspective” (Mike,10,383-386).

Gary indicated he also would not want student help because of a lack of time. Similarly, Larry also said he did not have the time to get a student to help him: ‘But again, it’s a time management thing...’ (Larry,12,413-415). Chloe might consider student help, but not yet. Gwen would not get student help; she was not going to contribute.

This description of the lecturers’ responses to questions about institutional structures (policy, recognition and reward (grants) and student help) included some perhaps unexpected results. The contributors would contribute resources, whether there was a policy or not, and on the whole they would prefer not to be told what to do. Similarly, non-contributors would not make the decision to contribute based on a policy. What was not surprising was the usefulness of grants to the contributors. It was interesting to see that non-contributors would not be enabled to contribute even with a grant or student help.

5.3.4 Technical support and use

5.3.4.1 *Technical fluency*

In order to assess the technological ability and the levels of use of the interviewees, a short questionnaire was sent to each person prior to the first interview in August/September 2013 (Appendix A).

Table 5-6: All lecturers' technical fluency

	Contributors	Non-contributors	All
Not fluent		1	1
Fluent	3	4	7
Highly fluent	4	2	6

The contributors were slightly more technologically fluent than the non-contributors (Table 5-6). Four contributing lecturers rated themselves as highly fluent and three considered themselves fluent. Two non-contributors said they were highly fluent and only one person (Gwen) indicated a lack of fluency.

All lecturers were asked how motivated they were to learn more about technology. One non-contributor (Gwen) was 'unexcited', three non-contributors and one contributor were 'eager' and the rest were 'very eager' to learn more about technology.

The lecturers were asked how they were currently sharing their teaching materials and their responses included: all information and communications technology platforms, Vula, chatting over coffee, using pdfs, .odp and .odt files, blogs, discussions, seminars, podcasts, the g drive (internal UCT drive) with colleagues, UCT OC and personal electronic communication. Five of the non-contributors were sharing materials in Vula, one was not sharing at all and another said they shared teaching ideas with colleagues while chatting in the tea room. The interviewees were asked about whether they found technology useful in their teaching and only two found it mildly useful (one contributor, one non-contributor), two found it useful (both non-contributors) and ten found it highly useful.

5.3.4.2 *Social media use*

Bronwyn and Larry suggested in their interviews that people who are contributing teaching materials may also use social media and share other aspects of their lives in blogs, Twitter or through Facebook:

“So I was just thinking, if you are a blogger and you are a Tweeter and you are a Facebooker and you don’t mind Facebook for your courses, then maybe OER doesn’t seem so... doesn’t seem like such a first time exposing of your teaching and learning practices, because you’ve kind of exposed bits of yourself along the way to another group”
(Bronwyn,26,1091)

Larry also commented that if “people are quite happy to tweet and do all those sort of things, that doesn’t particularly appeal to me... probably that’s all linked in with the fact that I don’t put things out...” (Larry,17,593-596).

Those who are contributing OER are the more confident users of social media. Although there are some forms of media that the contributors have not used at all, there are more cases of non-use in the non-contributor group. This finding supports the argument (suggested by Larry and Bronwyn) that perhaps lecturers who do not have strong digital identities do not share. This is reinforced by the high level of confidence in the use of social media expressed by contributors.

5.3.4.3 *Use of specific technology*

Lecturers were asked about some of the specific technologies they used such as blogging, microblogging, Facebook and other social media tools (Figure 5-5).

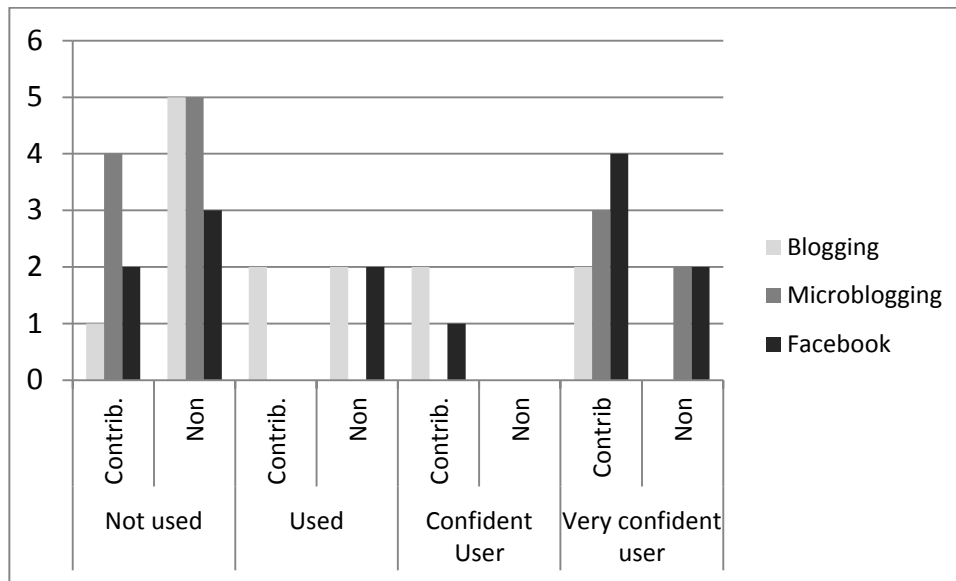


Figure 5-5: Results on social media use by participants

Most of the non-contributors ($n=5$) were not blogging. Microblogging (e.g. Twitter) had a closer split between the groups; three contributors and two non-contributors (Mike and Chloe) said they were very confident in using Twitter. Social networking (e.g. Facebook) had a range of participation with some using and some not using in both groups, although there were five contributors who were confident and very confident users.

5.3.4.4 Technological support and infrastructure

Erica, Sam, Simon and Natalie all had some support when it came to contributing to UCT OC 1.

“I think I had to perhaps e-mail once or twice for instructions on how do I actually do this. But that’s fairly easy enough, it’s just registering and logging in and putting your stuff on there. But I did get a lot of technical assistance from (a web designer) to do with the layout of the website and things.” (Natalie,8,305-309).

All the lecturers who had contributed OER said the repository was easy to use: “I think it’s easy. It’s like Vula” (Simon,13,455). Simon, Natalie and Frank used websites to share their materials instead of PowerPoint. Frank and Simon were able to do this themselves: “I wrote the original website myself anyway, it’s so easy to do nowadays.” (Frank,17,614).

The lack of technical support may be a barrier to contribution (Highton, 2012), and when lecturers were asked what may hinder the university from more sharing across the university, the lack of technical infrastructure was mentioned (Simon and Erica). However, the non-contributors did not feel that a lack of support was holding them back from contributing (they had other concerns).

5.3.5 Pedagogical issues

OER are often content only with no related pedagogy or interaction, and overall, the participants said the lack of pedagogy associated with many OER had a negative impact on ongoing contribution (three lecturers) and was a reason why many of these lecturers were not contributing (five lecturers). Consequently, those who had not contributed felt that it would be difficult for them to re-design materials to make them suitable for use in a context outside of the classroom, and this was a clear barrier to contribution.

5.3.5.1 *Lack of pedagogy associated with OER*

In total, eight lecturers were concerned about the lack of pedagogy associated with OER (Table 5-7: **Lecturers view on the pedagogy of OER**) three were contributors and five were non-contributors.

One contributor felt “worried about how isolated bits make sense”, and that she would “probably end up with something saying what it is and what it’s about and how it goes together” (Bronwyn, 20-21, 847-885).

Table 5-7: Lecturers view on the pedagogy of OER

	Contributors		NON-contributors		Combined	
	Yes	No	Yes	No	Yes	No
Are you concerned about the lack of pedagogy associated with OER?	3	4	5	2	8	6
How difficult or easy would it be to re-design your materials as OER?	1 difficult	6 easy	7 difficult	0 easy	8 difficult	6 easy
Do you have concerns about how the materials might be used?	0	7	1	6	1	13
Do you have concerns about a lack of feedback from users?	1	6	1	6	2	12

In the same way, Erica felt that if she was going to share more materials, they should be in the form of a whole course, and the most valuable item would be the course outline. Frank's textbook was very popular, but he was concerned about the lack of interaction. Natalie noted that if pedagogy were added, OER became an online course: "The best or optimal OER would be one that doesn't necessarily provide tutorial support, but provides opportunities for the student to self-evaluate. I suppose to provide some model answers... this thing wouldn't be an OER, this would now be an online course ... So that would be transforming the whole material.

(Natalie,13,485-491). By contrast, Simon was not worried about the lack of pedagogy associated with OER: "I understand that some people need pedagogy and all that. If Open content is not issuing a certificate at the end, for me it would be like going to the library, you pick a book... you read, not necessarily the whole book, you take out the section that you like, so it can be part of what is available" (Simon,19,656).

In the non-contributing group, this lack of pedagogy was an overriding concern with five of seven, suggesting this is a barrier to contributing. Gary could see a use for a textbook by itself, but he could see how a textbook could be used more if it included tutorials. Mandy said the materials needed to be part of something, and she wanted to include support for her students and she couldn't let her materials stand on their own. Larry was very concerned about this idea that UCT was moving some courses into online learning spaces (conflating online courses with OER):

“...it just seems to be we’re taking courses and just dumping them online ... and I fear we’re losing control” (Larry,16,570-584).

Chloe understood that OER with tuition would be more like a MOOC model and said: “I’m not a big MOOC person, so I think they’re resources, you can learn in so many ways, people can access things” (Chloe,21,832-840). Mike discussed that if he shared some of his PowerPoints it would be “almost like here’s for interest sake, but it’s not like you’re getting a full experience of what the course is like” (Mike,15,595-597).

5.3.5.2 *Teaching style*

Chloe and Mandy felt that because of their interactive teaching styles their materials were ‘not stand alone’ or ready to share online. Chloe said she did not produce notes. Mandy was cautious about contributing her materials as her teaching style was about process and the content was not so visible. Mandy was worried that others (who she did not know or trust) would ‘misunderstand’ her materials.

5.3.5.3 *Preparation of teaching materials for an online audience*

Bronwyn was preparing her materials for contributing at the time of the interview, and designing materials for online use was proving to be very difficult. She said she had to change her ‘mind set’ when approaching the materials, and said: “But it does take a whole change of ‘conceptualisation’ so it really takes a whole lot of rethinking ... it’s become a better course, because it’s forced us to make explicit things that were implicit” (Bronwyn,10,404-478). Sam felt that designing materials as OER was difficult but it was a ‘kind of ongoing learning experience” (Sam,16,617-621).

Erica held a contrasting view and felt that no re-design was necessary:

“Every year I make my slides more and more generic so that I can just slap on 2012, 2013... you know what I mean?” (Erica,24,888-891).

However, it has to be noted that Erica handed over her materials to a member of the UCT OC team who assembled these materials into a website, excluded some materials and checked for copyright.

The lecturers who were not contributing felt that designing their materials for online use would be a difficult exercise, and all viewed this as a constraint. For Lance, this was one of his biggest concerns as he felt he could not imagine who the audience would be: “Who’s going to get hold of it” (Lance,5,156-160). Similarly, Mandy referred to her flexible teaching approach: “I always think in terms of students ... well, whoever my audience is really. The size, the age, the experiences ... I actually find it really hard to design anything until I’ve seen their noses, you know, just walking in and then very often I just change and chop as I go along the course” (Mandy,20,769-792).

Chloe’s response suggested that some teaching styles or disciplines were simply not suited to contributing:

“I don’t make these big packs of notes. So I produce stuff that is generated in the lecture, or some is generated beforehand, but the sort of central part of my teaching is the stuff that comes out of the lecture engagement” (Chloe,21,823-828).

Gwen and Larry were also concerned about some disciplines not having appropriate materials for OER: “... because (my subject) is case-based, and it’s best taught in an interactive way. And I’d have to rethink how I do this in a way that still keeps it interactive” (Gwen,15,499-505). Larry had other concerns about his writing:

“Probably because I’m not a great writer. So I don’t generally ... I think about my lectures and I think about what I’m going to do, but I’m always conscious that somebody might say something else or whatever and therefore I don’t give it out freely” (Larry,3,80-90).

5.3.5.4 *Design for audience*

According to the contributors in this study, their OER were mostly designed for students as the primary audience. Frank’s textbooks were designed for students and surgeons in developing countries but could also be applicable to other audiences in, for example, the USA. Sam designed his materials for multiple audiences:

“Students, lecturers, professionals... So I try to do it in a language, as much as I can, that is in between academic language, but away from jargon language, and not too simplistic and so on. So it’s kind of challenging, but I think it’s worth it....” (Sam,16,598-613).

5.3.5.5 *Feedback on OER*

Overall, participants indicated a lack of concern about receiving feedback from users of OER. Five contributors’ immediate response to this question about whether they were concerned about a lack of feedback on OER said that they were not concerned. They clarified that it would be useful to track what was happening to the resource and also to see the number of clicks. Two contributors felt that they were not contributing for ‘profiling’ (Bronwyn) or to be in the limelight (Sam).

Lance and Larry, non-contributors, both felt feedback was very important for them, with Larry saying, “Otherwise, what is the point?” (Larry,17,589-591). This represented a range of motivations or potential motivations. In some cases, contributing would occur without wanting any kind of reciprocation while others would only share if they knew who was using their materials.

5.3.5.6 *Contradictions concerning the pedagogy of teaching materials*

The nature of the activity of teaching in the classroom and creating teaching materials requires a change if the teaching materials are to be shared as OER. The Object and Outcome has changed. For some lecturers, this requires a big change in practice as they are focused on interactive teaching and creating teaching materials for only students within the classroom and not materials ready for online delivery to a broader audience (Community). Primary contradictions lie within the elements of Object and Tools as lecturers require new ways of using tools which include teaching style (Figure 5-7).

There is a secondary contradiction between Tools and the Object and one between the Tools and Community; non-contributors felt it would be difficult to re-design their teaching materials for a

new Community of users outside of the university.

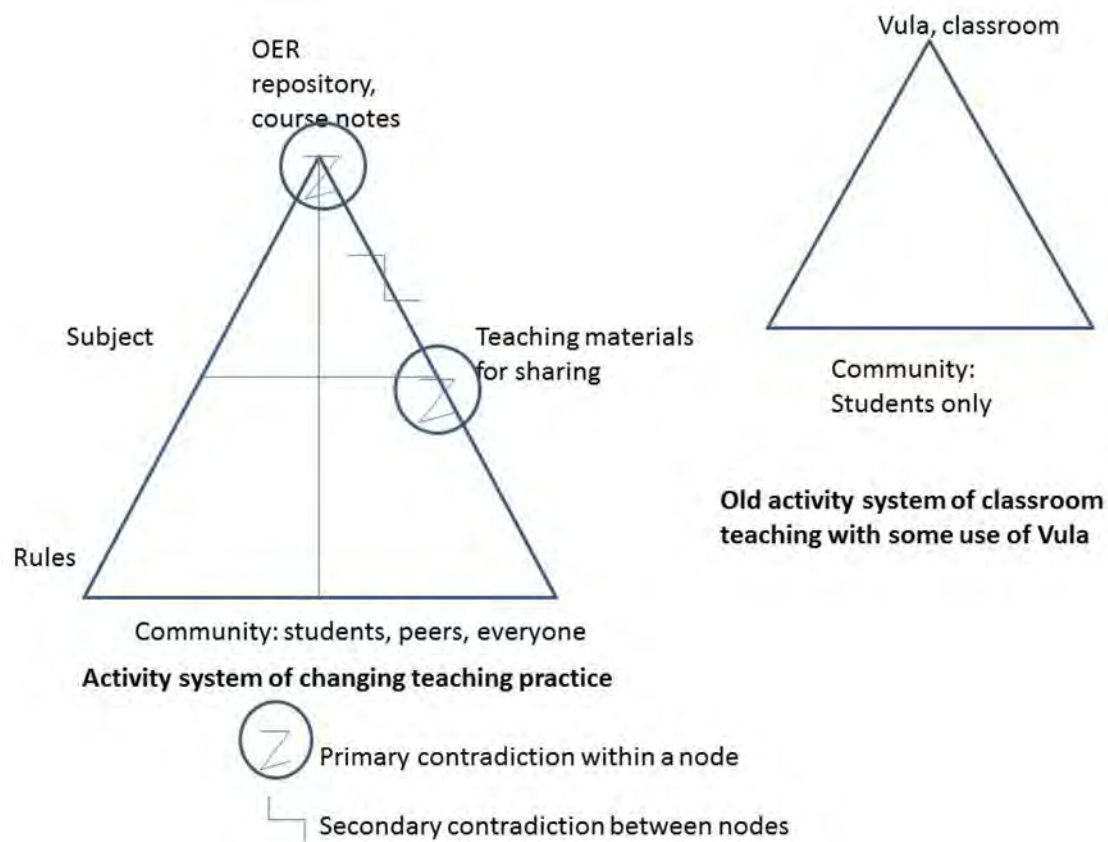


Figure 5-7: Contradictions observed regarding the pedagogy or OER

A tertiary contradiction is present between the 'old' system of only having materials available to students in the classroom to a potentially 'new' system of OER. The tool in the system may have changed but for lecturers with interactive classroom, teaching styles changing this style to fit the new system would involve a change in practice.

5.3.6 Lecturers' roles in the institution

Natalie, Frank, Simon and Sam, all contributors, felt that teaching, research, social responsibility and administration were all important roles. Natalie felt they were all important, however she did add that for her personally teaching was most important. Kathy also felt that teaching was most important and said she often felt that research was 'indulgent' (Kathy,6,229-238). Bronwyn felt that teaching and research were equally important to her. Erica said that teaching was most important, however she added that it was not rewarded in the university system. Three lecturers in this group felt that adding OER was an extra job. Kathy stressed that adding OER to the

institutional repository should be part of the ‘system’, like using the online learning environment or the lecture capture process.

Lecturers who had not contributed felt that their role as a teacher was most important and more important than sharing their teaching materials beyond the institution. The classroom space was very important for them and all of them mentioned their interactive teaching style. Five mentioned this as a primary reason not to contribute, as their materials were not suitable. Larry was employed in a teaching only post. Mike’s head of department had defined his role as being focused on teaching (Mike described his teaching as being his “A Game”). Lance explained that he had made choices in his career and that teaching was what he ‘loved’ most. Chloe felt that teaching undergraduates was “the most crucial role (she was performing) for society” (Chloe,8,332-337). Lance and Gary (the two most experienced teachers) were concerned that students would not come to lectures if they shared teaching materials openly.

A Cartesian plane is used to illustrate the interplay between views on the importance of teaching and views on associated pedagogy (Figure 5-8). Five non-contributors cluster in the bottom right hand corner.

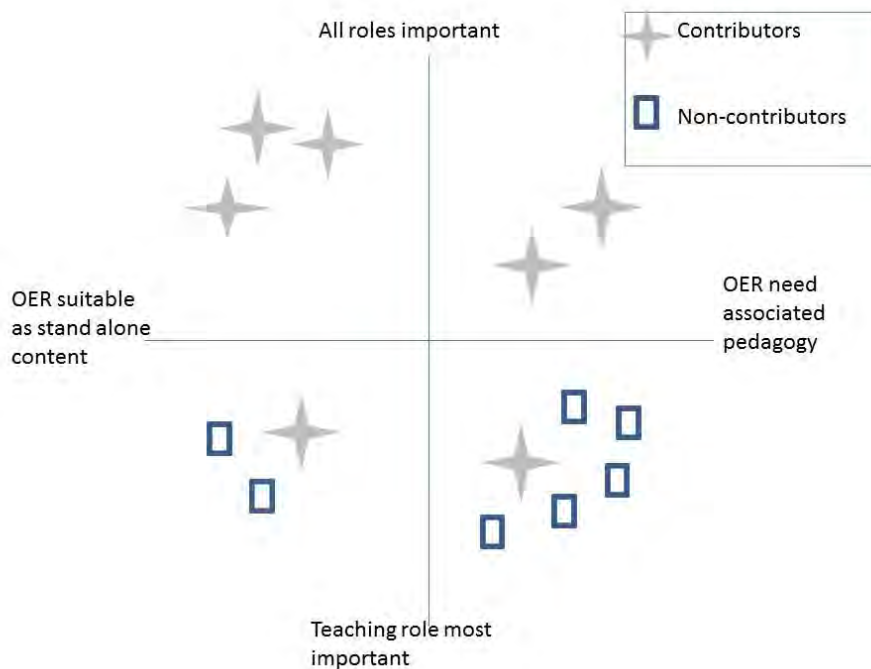


Figure 5-8: Plane illustrating overlap between roles and lack of pedagogy

The introduction of the UCT OC as a new tool in the AT framework has introduced a primary contradiction in the Division of Labour node, where especially non-contributors view teaching in the classroom as their most important role and any contribution of teaching materials to students outside of the classroom as being additional work (Figure 5-9). This also raises another contradiction in the Community; OER introduces a potential outside-of-the-classroom audience, and for the non-contributors this audience was not important to them. In fact, when evaluated, a classroom focus was given as the most important reason why these lecturers were not contributing.

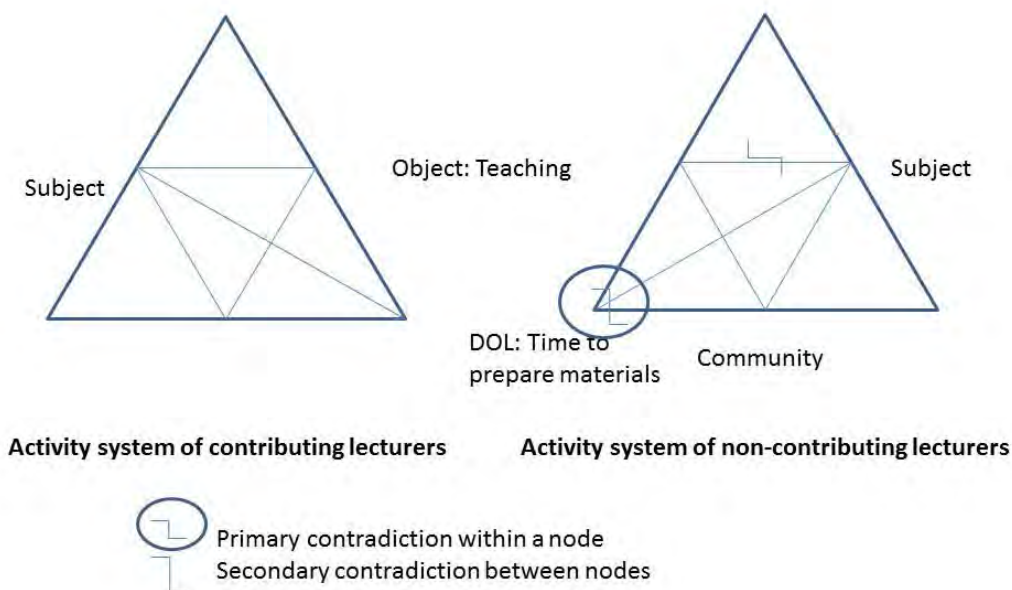


Figure 5-9: Contradictions regarding teaching roles and time

5.3.7 Time and effort

Time was recognised as a significant barrier, especially for the contributors who were aware of the time it took to prepare materials for contribution as OER. Erica declared that if the Open content team had not approached her, she would not have shared because of the time and effort involved. Frank and Sam felt that cost was not an issue, as they had both invested afterhours time in preparing their materials. Unlike the contributors, the non-contributors had mixed views about whether the time and effort it took to produce OER was a concern. Only two participants

recognised that there was a cost involved in producing OER. No participants were concerned about any commercial loss that might occur if they shared their materials.

A lack of time to work on teaching materials is clearly a barrier for some non-contributors. However, having said this, the contributors have a similar lack of time and yet they have made the effort, even working after hours, to contribute.

Time is also a Division of Labour issue; a contradiction emerges both within the Division of Labour node and also between multiple systems as the participants must find time to prepare teaching materials in OER. There is also a tension between the teaching system and the research production system where the lecturers must take up different roles (Figure 5-9).

5.3.8 Quality of OER issues

Key discourses emerged around lecturers' perceptions of the quality of OER, and these are examined here. Figure 5-10 illustrates the key issues and summarises the results that are described in detail below.

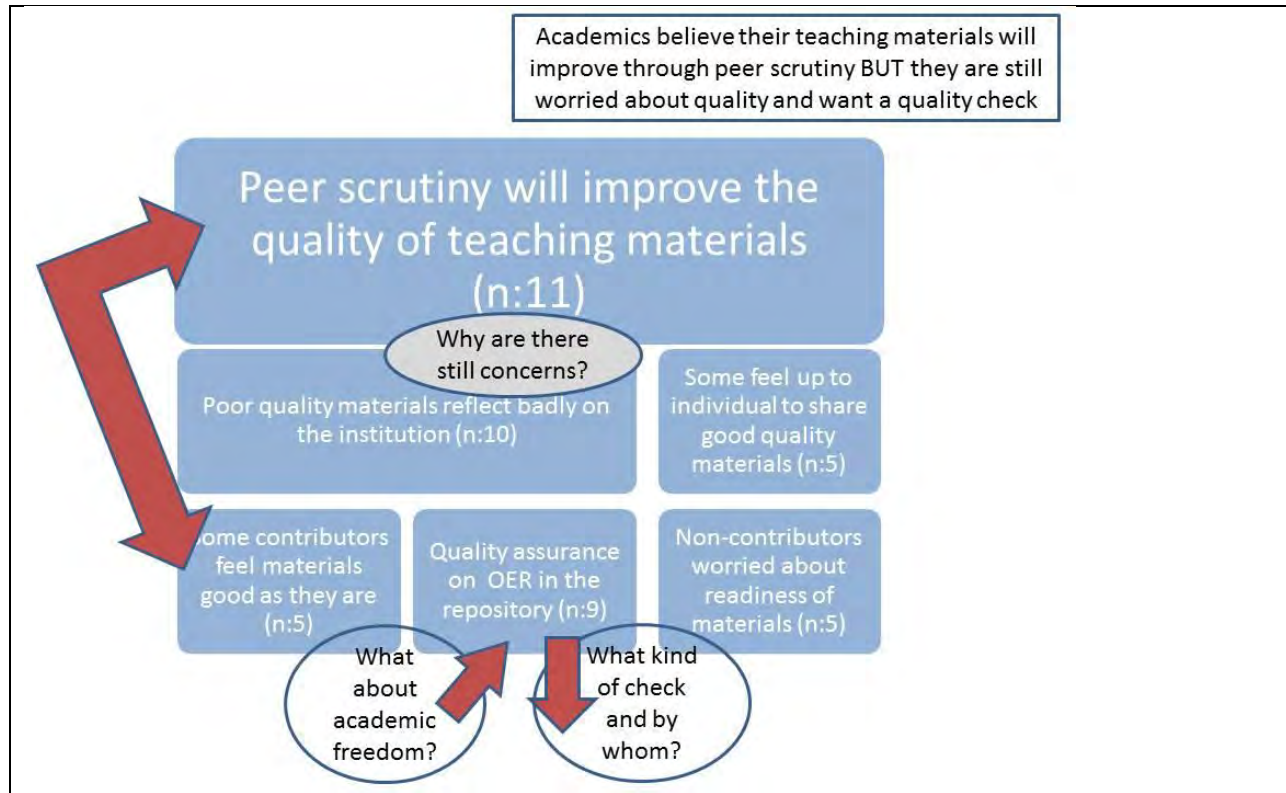


Figure 5-10: Lecturers views on Quality of OER

5.3.8.1 Peer scrutiny and the improvement of teaching materials

Contributors agreed that making materials available would improve quality (five out of seven). However, there were some reservations. Sam (contributor) was concerned that a lecturer-to-lecturer review could put more pressure on the person contributing:

“Practically, with sensitivities, with the tension, with the power relations ... maybe in some other cultures or other backgrounds ... it doesn’t work” (Sam,15,559-566).

Making materials available for peer scrutiny would make visible historic baggage, tensions and power relations.

Peer scrutiny would also depend on the group, the materials and the person who wrote the materials. Natalie said she was extra careful in preparing her resources for contribution. Frank was not sure that materials would improve. He said it depended on the “type of material” and he gave examples of the differences between peer scrutiny in the Fine Arts or Science. He added that it also depended on the “type of person” who was contributing (Frank,21,755-760).

Six of the seven non-contributors felt that the quality of materials would improve through peer scrutiny as a result of contribution. Gary felt that this peer scrutiny had been missing and was important: “There’s too little accountability actually for what we teach” (Gary,19,769-776).

Preparing materials for contribution with peers meant lecturers would be held accountable for the quality of their materials, and therefore they would be more careful. Larry felt that it depended on the openness of the peer group. Mike said even if the materials were not read by peers, the idea that they might read them would improve their quality: “... it will make everyone go over it [teaching materials] two or three times” (Mike,13,528).

5.3.8.2 *Poor quality materials reflect badly on the institution*

Contributors and non-contributors were concerned about the quality of teaching materials being made available through the institutional repository (ten out of 14).

In general, the participants had several different views about who should take responsibility for poor quality materials: the individual themselves, the user or reader of the materials and the institution. The lecturers who were contributing felt that it was primarily up to the individual to be responsible for the quality of their materials. One academic felt that this responsibility could come in the form of putting a permanent staff member’s name to the materials and materials produced by students. Two lecturers felt that worrying about the institutions reputation was not that important and said that it was up to the user or student to be discerning and select materials.

Three lecturers in the contributor group (Simon, Bronwyn and Sam) felt that poor quality materials would not reflect badly on the institution. Simon felt that it was up to the academic who was contributing to be discerning. Although Frank had some concerns about quality, He was not an advocate of quality control:

“... it’s more important just to encourage people to share than to police... UCT should just leave it alone.” (Frank, 21,778-780)

Kathy felt that any criticism would be justified and the author should be brought to task.

Erica said that poor quality materials might reflect badly on the institution but that it was up to the reader to select what they need:

“I write up lecture notes and there may be mistakes in them, who cares... now it’s kind of on the reader to establish that” (Erica,22,246-256) and later “But this is a selection thing. The sort of person who will share the materials, their materials will be good and there’s nothing in it for some nitwit first year teacher who prepares these really shoddy slides” (Erica,22,836-840).

The non-contributors were more worried about the reputation of the institution than the contributors. Six of the seven lecturers in the non-contribution group were concerned about poor quality materials reflecting badly on the institution. This concern about poor quality OER in the institutional repository was considered a reason not to contribute. Only Lance felt the author should be responsible for the quality of materials. The non-contributors shifted the language to one of quality control, observing the dangers to the institutions’ reputation if there was no ‘filter’, ‘gatekeeper’ or ‘check’.

Gary and Chloe both mentioned looking at some Open materials that were not of good quality “one gets the sense that this is not in any way checked” (Gary,19,746-754). Gary made an interesting and unexpected observation that “people were riding on a bandwagon... and contributing because they thought they were doing the right thing” (Gary,19,746-754). He continued and said that the people who were contributing were not paying enough attention to quality, and if this was not checked, then poor quality would impact on institutional reputation.

Chloe debated this issue of responsibility in her response to this question: “Who carries the responsibility? I guess a combination of both.” (Chloe,19,755-764). Chloe also expressed a novel idea that contribution teaching materials was a form of ‘media’; in other words, lecturers were putting themselves out there in a kind of promotional way and if there were errors, it would adversely affect their reputations and that of the institution.

5.3.8.3 *Quality check on materials going into the institutional repository*

Overall, nine lecturers felt that there should be some kind of quality check on materials before they were published. This is not surprising considering how concerned lecturers were that poor quality materials would reflect badly on the institution.

There were various suggestions about who should perform this check, which included: peers, departments, an editor and “UCT” (the moderator of OER). The process of checking could be done through formal peer review, an online rating system, a document guidance system or an internal department check by colleagues.

Frank, Natalie, Kathy, Erica and Sam (all in the contribution group) felt strongly that there should not be a formal check. Reasons included that it would hold up the process of opening up materials. Frank did not want a formal check but suggested a Wiki type format where users could comment.

One contributor felt that it would impact on academic freedom, and it would be an extra constraint to adding teaching materials. Kathy voiced her opinion on why there should not be a quality check:

“You will have a nightmare if you do that, because lecturers can get very upset... I think by doing that it starts, in some strange way, impacting on academic freedom” (Kathy,16,591-602).

Sam felt that a quality check would mean that:

“If they [OER] are peer reviewed, then they become not teaching tools ... it becomes more research-oriented” (Sam,15,579-583).

Those who felt a check was not necessary felt the responsibility was firmly on the individual academic.

Not all contributors had the same view, and Simon and Bronwyn said that there should be a quality check on all materials that are added to the UCT OC directory. Simon felt that a quality check in the form of some kind of peer review would make the UCT OC site a “more credible source of information” (Simon,18,601). Bronwyn was worried about quality and she felt that a check would enable her to share:

“But I would love to be able to give what I had to somebody and say does it... it’s sort of like is there cohesion, does it make sense” (Bronwyn,19,804-626).

By contrast, all non-contributors except for Lance felt that there should be some kind of quality check on materials. Lance felt that a check may be necessary for the more inexperienced lecturers, but that it was mostly up to the individual academic to make sure that what they added to UCT OC would be of a high standard. Gary felt that perhaps a check could be done through an informal rating system where comments could be made to the author, and in this way, quality would “regulate’ itself. Gary (like Frank) suggested a Wikipedia format.

Mike imagined that some lecturers were:

“... thinking they’ve got a great product and they don’t...and if there’s no filter, they could embarrass themselves and the institution... poor materials would get out if there was no gatekeeper’(Mike,12,494-506).

Larry and Mandy felt the check should be limited to spelling and grammar, and Mike felt there could be some kind of document guidance, that there should be a “double sign-off... ideally it would be someone a year higher [in the teaching progression]” (Mike,14,564-570). Chloe also felt, like Mike, that the department itself should check materials before they were added to UCT OC and that that would help with “coherence” of the materials (Chloe,20,801-812).

Mandy went on to explain that there might be some drawbacks to checking:

“One risks that people might think, is that your teaching capacity is going to be evaluated on the basis of what you put on that site [UCT OC]. But it is one thing to put something up there, it’s another how you teach it... No, I think there should be some kind of check I think... quality control” (Mandy,19,740-762).

Mandy’s comment revealed a concern that teaching materials would be evaluated making lecturers vulnerable to possibly unfounded criticism. Mandy was clear that poor quality teaching materials should not equate to poor quality classroom teaching.

Gwen felt that an editor would be useful to check materials. Although she noted that the preparation of notes for UCT OC would be different, she said lecturers would be more careful.

5.3.8.4 *Readiness of teaching materials for contribution as OER*

Overall, a quality check might diminish the fears of seven of the 14 lecturers who said their teaching materials were not ready for contribution. The lack of readiness of materials was a complex area, as lecturers' ideas of what readiness is were not that clear. Five out of seven contributors were not concerned about the readiness of their materials, whereas five out of seven non-contributors were concerned about it (Figure 5-11).

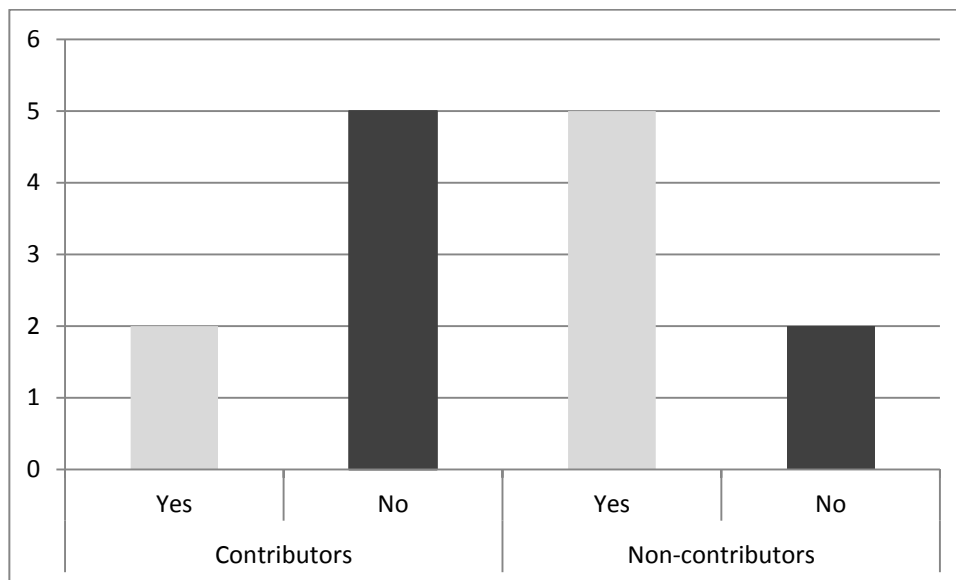


Figure 5-11: Readiness of teaching materials for contribution as OER

It is important to note that the readiness of teaching materials to contribute as OER is a concern for non-contributors, whereas contributors are less concerned.

At the time of the interview, contributor Bronwyn was preparing her materials for UCT OC, and she was delaying contributing because of her concerns about the readiness of her materials:

“So we’re hanging onto them because we want to put up something that’s good. And actually there’s a point at which you have to make a decision” (Bronwyn,14-15,618-624).

Natalie was also worried about the readiness and quality of her materials. She felt ‘exposed’ if she put her materials out in the open and ‘vulnerable’ as she was not sure of their quality:

“The materials that I use in my lectures and class, are not as they are ready to be shown to the outside world. And this is for various reasons. Sometimes they are prepared quickly, and they don’t look good enough to put out there...” (Natalie,20,381-393).

Frank’s concern was not about his own materials but rather other people’s materials, and he felt that there should be a peer review system. However when he was asked to answer a series of more specific questions around quality (see below), he said he retracted the earlier remark about peer review and said it was more important for lecturers to add than to worry about quality too much. This reveals a slight tension in his thinking about who is responsible for the readiness of OER.

In contrast, Frank felt that:

“Often I’m in a bit of a hurry. Once I do something I just want to get shot of it and then I often go back and I find some typing errors, etc. ... But the great thing about the electronic versions is that it’s a living document, so you can keep updating and changing. So it’s more important to just get it out there ... than to hold material back for another six months while you get the right illustrations, etc.” (Frank,20,715-725).

Kathy and Erica had the same response and said if the lecture materials were good enough or ready for their students, they were ready for UCT OC.

Readiness concerns for non-contributors seem to stem from several aspects: 1) a lack of confidence in their writing ability 2) a concern that they could be exposed as an impostor, 3) an interactive teaching style where lecturers do not produce a lot of notes and 4) the removal of copyright materials.

Gwen and Larry had personal concerns about the quality of their materials. Gwen said she had her own issues about the quality of her writing and had a fear of ‘exposure’. Larry felt that he was not a great writer. He was not contributing as a form of ‘protectionism’ as he did not feel confident about his materials. He said he did not use social media, such as Facebook or Twitter and had a

more ‘closed mentality’. Chloe admitted she was concerned that: “someone will find out that you’re actually an impostor” (Chloe,21,845).

Mandy and Gary did not voice this lack of confidence as the main concern but rather said their materials were not ‘standalone’: “my material wouldn’t be ready, because it would go on there and someone would say well why are there gaps here...” (Gary,18,722-726). Although lecturers have to be evaluated for teaching, Gary (non-contribution) observed that no one has ever looked at his ‘notes’.

Larry, Chloe, Mandy, Gary and Mike (all non-contributors) spoke about their interactive teaching style which meant any materials they produced were inadequate for contribution as OER without changes. For some lecturers, preparing teaching materials for the classroom was different to preparing materials for the outside world. In the classroom, lecture notes can be explained, but if they are shared online, the lecture notes are not ‘standalone’ and need to be readied to become OER. These comments about changing teaching style indicate the lack of pedagogy associated in the materials themselves. These two constraints, the lack of associated guiding pedagogy in many OER materials and lecturers concerns about the readiness of materials, have some overlap. Mandy and Chloe felt that because of their interactive teaching styles, their materials were ‘not stand alone’ or ready to share online. The quality of a resource can be equated with its ability to be pedagogically sound and effective. This is Chloe’s astute observation about exactly this blurring of lines that warrants further discussion in the next chapter: “What do you mean by quality? So I’m sure things will look nicer, we’ll have less errors in them. Will they facilitate learning better? I’m not sure of that...” (Chloe,20,778-786).

Lance and Mike felt that their materials were ready, except they would have to check for copyright. Mike felt that if he removed some of the examples he used in his lecture slides that were potentially controversial, he would end up with a resource that was “watered down and a kind of version of what it used to be” (Mike,21,869-878).

5.3.8.5 *Summary of key findings for quality issues*

In this study, lecturers felt that materials would improve if they were made available openly for peer scrutiny (11 out of 14; Figure 5-10). Lecturers were not too concerned about sharing with

peers, and only four said they did not want to share with peers. The majority (ten out of 14) were concerned about the possibility that poor quality materials could reflect badly on the institution. There was support for a quality check on materials published in an institutional repository (nine out of 14). The lecturers who were already contributing teaching materials mostly felt that there should not be a quality check on all materials (five out of seven). The lecturers who were not contributing felt there should be a quality check on the material. Fifty percent of all the lecturers were concerned about the readiness of their materials.

5.3.8.6 Contradictions concerning the quality of teaching materials

All four levels of contradictions (primary, secondary, tertiary and quaternary) were encountered within the OER activity system and between other activity systems at UCT in relation to the quality of teaching materials. The contribution of OER is potentially a change in lecturers existing practice with regards to how teaching materials have been traditionally created.

Primary contradictions lie within the elements of Community and Rules, as this new practice of OER contribution results in lecturers having to reflect on their own practice and the new expanded audience that could potentially use their materials. The Community or audience is no longer only students; it has been extended to peers and other users around the world. The lack of guidelines around teaching materials raises a contradiction in the Rules node.

There is a primary contradiction in the Division of labour node where the role of who is responsible for poor quality materials shifts from the academic to the reader and/or user. Peer scrutiny also introduces a tension into the Division of labour, where previously lecturers worked on their teaching materials and put in as much effort as thought was necessary for their students. The idea of peer scrutiny meant that lecturers would have to spend more time preparing their materials. In the current system, lecturers are in control of their own materials. However if some kind of quality check is introduced, the power and control would move away from the lecturer to colleagues or peers or even external reviewers.

Both contributors and non-contributors value the Outcome of teaching materials being subjected to peer scrutiny, yet only 50% have the objective of contributing their materials. In other words, valuing the same Outcome does not seem to be a discriminating factor on its own for why these lecturers would contribute or not. The overall perception of the value of peer scrutiny of teaching

materials indicates that the non-contributors are slightly more convinced about the value of peer review than the contributors.

Gwen, Chloe and Larry, as Subjects in the activity system, have personal reasons for their concerns about quality, indicating a secondary contradiction between the Subject and the Object. These personal concerns relate to their own beliefs and ideas about their teaching materials.

Secondary contradictions are present in the tensions between the Rules and the Community. New stakeholders are introduced into the activity in the form of users outside the university, and there are no rules that guide the quality of teaching materials that are shared outside the university (Figure 5-12).

There is a tension between the Rules and this new Object that will be prepared for contribution outside of the classroom. Thus, lecturers have a lack of confidence about the readiness of their materials for an outside audience.

On the tertiary level, contradictions occur when an old activity system clashes with a more advanced one. The Rules of the old activity system are concerned with peer review of research, and new Rules will need to be developed around the quality of teaching materials. A new Tool in the form of the institutional repository has been introduced, and the old system of keeping materials within the institution or classroom is being challenged by a possible new Open approach, enabled by the provision of the institutional repository. There is a tertiary contradiction between the traditional teaching activity system and a contribution teaching system, where the newer (possibly more advanced system) surfaces poor quality in the Object (the teaching materials) (Figure 5-12).

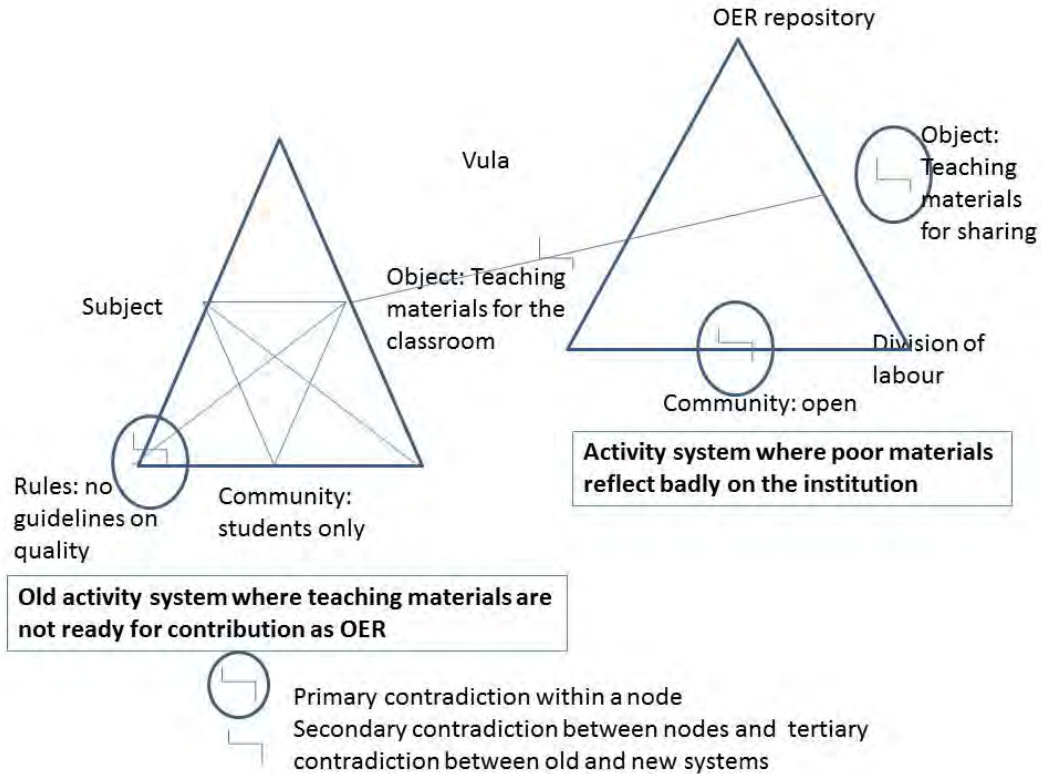


Figure 5-12: Primary, secondary and tertiary contradictions about the quality of OER

The finding that the majority of the lecturers (ten out of 14) were concerned about the possibility that poor quality materials could reflect badly on the institution, highlights a key contradiction within the Rules and between the Rules and the Object (Figure 5-12). Guidelines and structures for assessing the quality of teaching materials are not present at the university.

A quaternary contradiction exists in that time spent on the activity of preparing teaching materials that are considered of ‘quality’ would increase, and this could clash with the activity of doing research because lecturers may have less time for this activity (Figure 5-13).

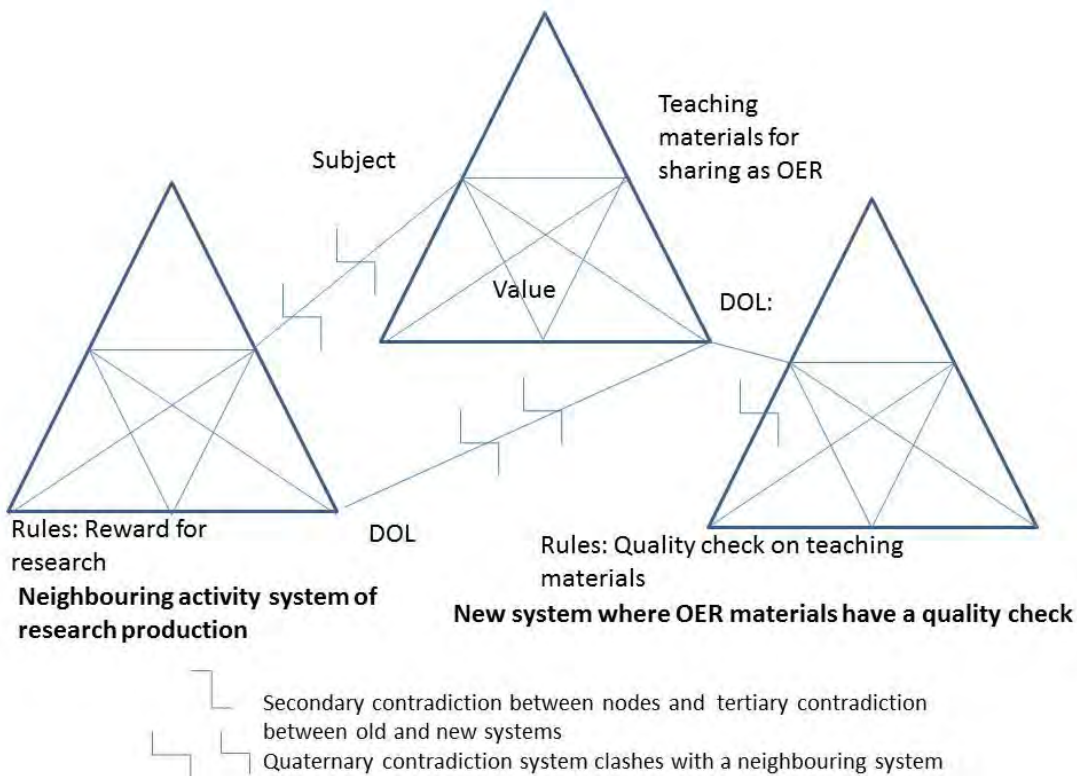


Figure 5-13: Quaternary contradictions that occur with the introduction of a quality check

This has implications for the individual academic who has to find a balance between his or her various roles. Five of the lecturers felt that their materials were not ready and were not willing to overcome this tension and transform their practice. For some this was because of time, but others had more personal reasons. Peer scrutiny also introduces a quaternary contradiction between the activity system of preparing teaching materials and the research activity system, in that contribution would put pressure on the time of the lecturers who were contributing.

To sum up, concerns around the quality of teaching materials are clearly important to these lecturers. For some, quality and pedagogy are closely aligned. For example, Bronwyn said: “It’s interesting, because when you said the word quality, I was thinking... I actually was thinking pedagogy” (Bronwyn, 20, 842-843).

The opinions of the lecturers are diverse (in the contribution and non-contribution group) and highlight the primary contradiction in the Rules of the institution. There are no Rules or

structures that govern the quality of materials in the institution, and this contradiction emerges when lecturers contemplate contribution outside of the institution.

5.3.9 Summary of the influence of global and institutional structures and OER contribution

Policy was not an enabler, contrary to the literature on OER. Lecturers were concerned about the time it takes to adapt materials. Lecturers who were not contributing concentrated their efforts in the classroom, and they did not see contributing OER as part of their roles. Both contributors and non-contributors were concerned about copyright infringement. Non-contributors were concerned about the readiness and quality of their materials. The non-contributors would not be enabled by policy, promotion, reward, grants or student help. Enabling institutional structures will not necessarily encourage non-contributors to contribute their teaching materials. The current lack of mandate through policy and recognition or reward was not key barriers to contribution.

5.4 Part 3: What agency do lecturers display in relation to OER contribution and non-contribution?

5.4.1 Introduction

Part 3 focuses on the agency of the lecturers in this study and includes a change in emphasis in the theoretical framework. The framework provided by Archer (2003, 2007a, 2008, 2012) includes personal questions about lecturers life concerns and life histories.

5.4.2 Internal conversations

The following section describes an analysis of interviews and the ICONI questionnaire (Archer 2008). Archer (2003) suggests that the different modes of internal conversations are likely to surface with respect to particular concerns and areas of influence. As explained in Chapter 3, Communicative Reflexives (CRs) are most concerned with family, Autonomous Reflexives (ARs) are most concerned with work or the market and Meta-reflexives (MRs) are most concerned with social issues and social change and mostly work in what Archer refers to as “the third sector”, e.g. NGOs and education (Archer, 2012:293). Fractured Reflexives (FR) are unable to make decisions and reflect, which could be because of some trauma or unhappiness in their lives.

It was expected that the lecturers in a HEI (the third sector) would be MRs. This is not the case with the participants in my study. In the sample of 14 participants, there were five ARs, five MRs, one FR, two “unclassifiables” and one “expressive” (Table 5-8). An “expressive” (E) is a person who scores a mid-way score of four. Archer (2012:327) refers to these participants as being “under-developed reflexives”. Two participants did not have a dominant mode of internal conversation and score equally on two modes; these have been coded as “unclassifiables” (Archer, 2012:324). In both cases, these participants scored equally for AR and MR. The highest score for any mode was a 7, Archer refers to these participants as extreme practitioners. For example, Natalie gained the top score of 7 for AR and MR.

Table 5-8: Results* of ICONI questionnaire

		CR	AR	MR	FR	Un	E
Contributors	Natalie	1	7	7	1	*	
	Frank	2	7	6.6	1.25		
	Kathy	2.3	6.3	5	1.75		
	Simon	1	6	4.3	1.25		
	Bronwyn	4	5.6	4	1.25		
	Erica	1.3	4	3	1		
	Sam	4	4.3	7	4		
	Non-contributors	Lance	2	6	7	3.25	
Mandy		2.6	6	7	2		
Gary		1.6	6	7	3.75		
Mike		1.3	6.3	6.6	2.25		
Gwen		3	4.6	6	2.5		
Chloe		2.3	5	5	1.5	*	
Larry		2	6	3.6	2.25		

*Green: unclassifiable, Orange: Autonomous Reflexive, Blue: Meta-Reflexive, Red: Fractured Reflexive, Yellow: Expressive

Besides these two unclassifiables (Natalie and Chloe), the ICONI registered 'high' scores of one cluster and 'lower' scores on other clusters. The participants were ordered according to these high scores in their dominant mode of reflexivity (Table 5-8). In the ARs, one person scored a 7 (Frank) and two scored a 6 (Kathy and Simon). ARs opposites of FRs are decisive and conclude deliberations alone. This can be seen in this study with four ARs having FR scores between 1 and 2 with one exception at 2.25 (Larry).

All the MRs scored high scores of 6 and above and indicated higher FR scores ranging between 2 and 3.75. Archer (2012) notes that a FR score of 4 'trumps' any other higher score; on this basis, Sam was classified as a FR. Sam scored 4 for FR, but also scored 7 for MR. This can be partially explained by a period of sickness before the questionnaire and will be discussed further below. There are no CRS in my sample, with only two participants having scores of 4 for this mode (Bronwyn and Sam).

5.4.3 Interviews

The interview questions began with a broad question that asked lecturers to outline their life concerns and life projects. Lecturers were encouraged to talk about their upbringing and their careers. Lecturers were asked about what helped and what hindered them in realising their projects and concerns. In order to realise these concerns, these lecturers recounted changes in discipline, as they underwent what Archer (2003) calls 'elastication' in order to achieve their concerns. The final two questions were about whether lecturers concerns dovetailed in order to find out more about whether they were content with their current *modus vivendi* and how contribution did or could fit into their current concerns.

5.4.3.1 Life concerns: Contributors

Lecturers who contributed OER said they contributed for altruistic reasons (5), self-interest (1), influence from colleagues (1) or as a response to a request (1). Their contribution revealed their personal choices, which were sometimes enabled by grants and/or support from the CILT OER team.

The contributors are discussed in the following order based on their ICONI scores: Natalie, the extreme practitioner who scored 7 for AR and MR, will be discussed first; Frank, Kathy, Simon and Bronwyn, who are all ARs, will be discussed second; Erica, on the edge of the AR group but

technically an 'expressive' or an impeded AR, will be discussed third; and Sam, a fractured MR, will be discussed last.

Natalie's concerns were about people in the Global South and personal ambitions, a combination of altruism and upwards mobility. Frank was focused on uplifting the community, which he considered to be part of his work. Kathy and Simon were concerned about their work (practical order). Bronwyn talked about trying to balance work and family (social and practical order). Erica was vague and did not really identify a clear concern. Sam, like Frank, was concerned about the community and also his own personal growth.

Natalie (unclassifiable, MR=7 and AR=7) showed no sign of hesitation in talking about her life concerns and said:

"... my life project in a sense would be to contribute to causes that matter to me, the economic wellbeing of people in the Global South generally. I would like to provide materials for use in other less and well-resourced universities. I would like to put ideas out there so that influential people, whoever they may be, read them and think about them and perhaps in due course implement them wherever they are. And of course... be the best academic that I can be" (Natalie,14,543-557).

Natalie emphasised social justice and altruism, part of her MR mode of reflexivity. Natalie was also self-directed and ambitious because she had a very specific goal to be a professor by the time she was 40. Natalie's response is a clear manifestation of both MR and AR; she is both concerned about the well-being of others (MR) and she is ambitious (AR).

Frank (AR=7 and MR=6.6), who is a professor, was slightly uncomfortable with this more personal line of questioning. However, he continued to explain quite clearly that:

"I come from a family background that has always had a strong emphasis on making a contribution to society... And it's far easier to make a contribution in the developing world than the first world...to make a bigger impact" (Frank,24,872-892).

Kathy (AR=6 and MR=5) seemed quite nervous about personal questions. She asked a few clarifying questions about exactly what I wanted to know and what I meant by the term 'life concerns'. Part of the way through this set of questions, when Kathy was explaining how she felt her work concerns fitted together, she said "...I am very uncomfortable talking about myself" (Kathy,22,807). However, she did continue to respond to interview questions.

Kathy's situated her life concerns and projects in the recent difficulties she had experienced moving from one academic department to another. She explained her discomfort in her new department and the challenges to her area of research:

"... I feel a bit acknowledged [*recently promoted to Associate Professor*], it feels strange in this department, because... no one really believed that I was doing research in their area and frankly I do not care at this point I am now doing what I want to do..." (Kathy,19,675-694).

Kathy's deliberations were inward looking with her concerns focused on her personal growth and not on any social concerns. She is also self-directed, and this emphasis on independence and personal choice is a characteristic of the AR mode of reflexivity.

Simon (AR=6 and MR=4.3), like Frank and Kathy, was reluctant to share personal information and was uncomfortable with these questions:

"I am quite happy as I am, without having to think about the ultimate... in my mind people should take responsibility for uplifting their own set of circumstances and we live in an age, the information age, which we have all this knowledge available and quite a lot of it freely. And I feel that I need to be part of a system where something gets initiated" (Simon,21,698-706).

This initial reluctance of the three lecturers to talk demonstrates that as ARs, they do not talk about personal information and would prefer to keep that to themselves. Simon's response, that one should take responsibility for oneself, is typical of an AR. Simon gave 'self-interest' as the

primary reason for contributing OER. He added that he had already developed the materials so there was “no investment once the materials are done” (Simon,4,96-101).

Simon continued to explain what his life concern or philosophy was, and although he felt his purpose was to supply students with information, he was not going to help them any further than that: “I want them to just actually challenge themselves... it [acquiring knowledge] should be self-driven.” He was self-directed and he expected others to be like him, but in the next comment he explained that he “was referring more to like poor people... not in university, but in communities...” (Simon,22,737-738).

Bronwyn (AR₅=6, CR=4 and MR=4) felt that this question about her life concerns was “actually quite a hard question” (Bronwyn,1,23-33). Bronwyn was focused on finding a balance in her life between her various concerns:

“... I love teaching and I love working in the university context. I think that a work/life balance is really important... I feel quite passionately about helping developing students, sort of academic capacities across Africa...” (Bronwyn,1,34-44).

Like Natalie and Frank, Bronwyn was concerned about students and people in the Global South or developing world. She constantly assessed what she was doing and how to achieve her concerns in relation to the three orders of reality (natural, practical and social). Bronwyn had the highest score for CR, and this explained her talkative style and also the strong concern for her family and family time.

Erica’s (Expressive: AR=4 and MR=3) response to this set of questions was one of enthusiasm, and she seemed to particularly enjoy answering the questions. This was Erica’s response to the question about her life concerns:

“My overarching philosophy is along the lines of do unto others as you would have done unto you... but it’s also kind of this happened in my life and that happened in my life and I have a goal of working towards my PhD... I have a goal to be the best mother, I have a

duty to be a really good teacher, as opposed to having a duty to be a really good researcher” (Erica,27,1019-1035).

Erica contributed OER because she was approached by the UCT OC team to share, and she took the opportunity. She added that it would be useful for people in Africa to look at her materials. She was happy for the UCT OC team to “just take everything” (Erica,7,237-244). Erica’s explanation that “things kind of happened” in her life showed a lack of agency and a willingness to drift along, which agrees with her low scores in all modes and mid-range AR score. It also helped to explain her motivation for contributing OER; she was happy to contribute if someone else prepared the teaching materials.

Later on Erica clarified her philosophy in a more cynical way and explained how she was endeavouring to make sense of her life:

“... everybody is a rational human being, calculating what’s best for them. I am calculating what’s best for me... but I have this idea that if I am a nice person, it [life?] will be rewarding for me in some way. So it’s not a 100% altruistic” (Erica, 29,1065-1086).

This explains her motivation to contribute as a result of circumstance and a partial desire to be altruistic.

Sam, whose score indicated a current mode of FR, (FR=4 and MR=7) talked about his teaching in the following way:

“It is a challenge to deal with different global audiences in a lecture... when I first came to South Africa [it was a challenge] to deal with the baggage reflected in the classroom...” (Sam,18,694-706).

Sam, like Bronwyn, scored a 4 for CR, and although his responses were not as detailed as hers, they included personal information about his experiences when he moved to Cape Town and some of the prejudice he had experienced. Sam shared his concerns about his own attempts at realising self-worth:

“I do not like to be a loser, so I always liked to improve and be better... [this process of self-improvement was] exhausting, but rewarding at the same time...” (Sam,19,708-737).

This was an interesting revelation and it could perhaps indicate his awareness of his vulnerability and current insecurity. He felt that he had to work hard to get ahead and that he lacked the confidence of other participants.

5.4.3.2 *How do these life concerns relate back to contribution of OER?*

Autonomous reflexives ultimate concerns are focused in the practical order and they are self-disciplined in their actions (Table 5-9). Their internal conversations are focused on the task at hand which is usually being productive at work.

Table 5-9 : Ways in which modes of reflexivity relate to agential factors (adapted from Archer 2003,2007a)

Agential factors	Communicative (CR)	Autonomous (AR)	Meta-reflexives (MR)
Ultimate concerns	social order (family)	practical order (work)	self and social transcendence
Action orientations	self-sacrifice	self-discipline (self-directed)	self-transcendence (personal development)
Internal conversations	people orientated	task orientated	value orientated

Five contributors of OER were ARs, even though some of their concerns and projects were based on self-interest rather than uplifting (social justice concerns). Natalie was very ambitious and confident. However, she felt that contribution was important, and it was one of her main concerns. Natalie and Frank were similar in their passion to share, and this was a life concern of theirs. Kathy was busy in her own internal battle to understand her concerns, and contribution seemed like the correct thing to do. Simon talked about how people should be responsible for their own uplifting and be self-driven. He was contributing because he hoped others were sufficiently self-driven to use his materials. Bronwyn was trying to find a balance in her life, and although her ultimate concern was to develop people, she admitted that she was influenced to contribute by her colleagues and was helped by a grant. Erica’s almost laissez-faire philosophy, ‘be nice to others and hopefully they will be nice back’, explained the fact that she contributed OER;

the opportunity arose for her to contribute with very little effort on her part (she was telephoned and asked). Sam had moved countries and experienced some discrimination on arrival. Sam's ultimate concern was around teaching for diversity.

Broadly Kathy, Simon, Bronwyn and Erica can be grouped together as lecturers with many projects mostly related to their own wellbeing and not necessarily related to high ideals. They are all on steady career paths. Frank and Natalie, a professor and associate professor, were further along their career paths, and for them, contributing OER was a life concern. Even though Sam had scores indicating he was a FR, he still declared he had an Open philosophy and was willing to contribute all his teaching and research.

5.4.3.3 *Life concerns: Non-contributors*

Those who are not contributing reflected on personal influences and choices that policy, promotion or grants would not change. Their concerns were deeper than the amount of time and effort it would take them to adapt their work. They were influenced by colleagues or aspects of their own personal histories that made them unlikely to contribute OER.

The non-contributors will be discussed in the following order based on their ICONI scores. Lance and Mandy scored extreme 7s for MR. They will be followed by Gary and Mike, whose scores indicate the MR mode of reflexivity based on a score of 6.6. Gwen will be discussed next; her highest score was a 6 for MR. Chloe is discussed last; she is unclassifiable with low 5s for both MR and AR. Larry will be discussed last and is the only AR in the group of non-contributors.

Lance (MR=7 and AR=6) was a full professor. Before starting the interview, I asked about another colleague of his whom I knew, and Lance commented that the colleague was away again on a research sabbatical, a luxury he could not afford himself as he was too busy teaching. Lance believed that education was key to the progress of South Africa:

“... I stand firm in my belief that if I can play a role in educating the undergrads and the postgrads at my faculty, at UCT as a whole, that is how we will sort this country out. ...and that's why I still want to be in the classroom” (Lance,21, 800-818).

Lance was concerned about educating young people, and in his response to the ‘life concerns’ question, his emphasis was on UCT and the classroom as a way to make a difference in uplifting people. This might help explain why he had not contributed, since he was entirely focused on the classroom.

Mandy (MR=7 and AR=6) felt that the school system was a problem. Her ultimate concern was to make a difference in this area. She responded:

“...social justice. The way kids are treated in schools ...The children are not being listened to and not heard, hit most of the time...my project is to change the world... perhaps I am a sort of an idealist and romantic and nothing will change anyway, so perhaps I just shouldn’t get out of bed...Anyway, I am committed to keep going for a while anyway” (Mandy,23,872-900).

Mandy was committed to social justice, and in a typical MR mode, she also recognised her idealism and was cynical about ever achieving it.

Similarly, Gary (MR=6.6 and AR=5, second highest FR score of 3.75) was passionate about his teaching, but he focused on a concern for people as individuals and did not mention broader ideals around making a difference on a national level:

“...I have an interest in and a concern for people, learning effectively ... I try to make a difference at the post graduate level as well. ... when they [the students] feel that you have been more than just a supervisor to them, but literally a parent, you know... some of them have been very explicit, they say you are like a father to me” (Gary,22,866-926).

Gary’s caring nature was apparent in this response. He was concerned about his teaching and also helping students outside of the classroom. His emphasis, like Lance’s, was on the classroom and helps to explain why they had not considered sharing teaching materials beyond the classroom. Mike (MR=6.6 and AR=6.3) is a dynamic teacher and he had been a recipient of the very prestigious ‘Distinguished Teacher award’. He still needed to do his PhD, and it seemed from the interview that he had focused his early career more on teaching than research.

Mike's concerns centred on his home life and his family, and he conflated his concerns with the projects he was busy with in his department:

“My wife and I have just bought a home, we are busy renovating and moving into that and starting a family... I have another big project here in the college and it's completely online” (Mike,16,630-651).

Later, Mike talked about teaching and knowledge transfer which seemed to be his ultimate concern, although these concerns were not voiced in the response to the initial question about life concerns:

“I was the beneficiary of meaningful moments with teachers at school and at university level, so in my kind of experience, it's quite tangible the difference you can make, because that's what I experienced...at the end of the day, there's been some kind of a knowledge transfer and the change has been made” (Mike,17,686-693).

His scores for MR and AR had a 0.3 difference between them, and in his responses, his passion for teaching as a way to making a difference in society (MR) and his work projects (AR) were clear.

Gwen (MR=6 and AR=4.6, third lowest) had recently completed her PhD, which she saw as a huge milestone, and she seemed quite content to continue her research and teaching. Gwen was also a little uncomfortable about more personal questions and responded: “Okay, I'll try my best” (Gwen,17,584). Gwen was happy in her current situation, and said in her own words:

“... I come from the Cape Flats [a low income area], for me coming to UCT was a huge thing... and now I've got the PhD, ... so, and I've got the family, I've got the kids. So in that sense I'm at a space where a lot of the stuff that I've wanted to achieve, I have. And I'm having to think about what's the next step, and I don't know yet.” (Gwen,17,585-603).

This comment related more to projects than life concerns. Although I attempted to probe deeper, she did not reveal any deeper concerns. Gwen said she did not have goals and responded: “But I

don't think of life in terms of projects ... I'm not ambitious in that sense. If I get there, good and well" (Gwen,18,606-618).

This last response suggests a lack of strategy and also what appears to be a lack of ambition. It is worth noting that Gwen's AR score were the lowest of all the non-contributors and the third lowest overall.

Chloe, who was unclassified (MR=5 and AR=5), had already achieved full professorship by age 45. She was, by all accounts, an accomplished academic who had also received a Distinguished Teacher award. Although her passion lay in teaching, she was strategic enough to complete sufficient research to achieve full professorship. She added later that she was "career obsessed" (Chloe,24,971-975). Her life concerns were idealistic. In her own words, Chloe said:

"My personal projects and my work projects would be two domains. And they both are very important to me and they do interface in some space. ... I'm very engaged with my career I suppose ... managing in those two projects is always ... is a juggle just in terms of time and focus as well. I really love what I do in the teaching, academic space. But I'm like gutted by how young people's lives are limited by their school experiences. And that we're not really shifting things there ... my life project is also intertwined into my conceptualisation of my role in the South African project as well" (Chloe,22,881-905).

Chloe's scores reflected both her concerns for people and her work related ambition. However, she came across as being a far more decisive person than her almost mid-range reflexivity scores indicated. This may be explained by the fact that she had achieved professorship and was a brilliant teacher as well as a mother. She was satisfied with current place in life.

Larry (AR=6 and MR=3.6) was the only AR in the group of non-contributors. Larry answered initially that his concern was to: "get a PhD" (Larry,17,610). He talked about a concern for students outside the classroom too and related how he was a warden at one of the student residences:

"And that whole pastoral care [like a pastor] I really enjoy. So it's sort of pastoral care in the lectures, but it's also pastoral care outside the lectures too" (Larry,17,797-799).

Larry's initial 'get a PhD' comment was a feature of his AR mode; he was concerned with his own growth. However, his emphasis on pastoral care, according to Archer (2012) was not necessarily a focus of ARs.

5.4.3.4 *How do these life concerns relate back to OER non-contributors*

Non-contributors of OER had personal concerns about education and believed in the importance of education, but their focus was on making a difference in their classrooms. For Lance, Mandy, Gary and Larry teaching was fundamentally important, more important than any other role. Gary viewed his role as being a 'father' figure to his students. All of these lecturers were happiest in their classrooms, and by all accounts, they were excellent teachers (three had received the Distinguished Teacher award). Gary was influenced by his colleagues very early on in his career. Mike was also influenced to some extent by his colleagues not to contribute. Gwen and Larry were not confident in their writing skills and would not contribute under any conditions. Chloe was ambitious and was a young Professor, however she was also striving for balance.

These life concerns contributed to explaining why some lecturers are contributing OER and some are not. The next questions were about the life journeys of these lecturers. Life journeys can reveal the social conditioning of these lecturers and help to explain why some lecturers were not contributing.

5.4.4 Lecturers relation to constraints and enablements in their backgrounds/life stories

Throughout the lives of agents, decisions must be made about courses of action and what projects to pursue. Table 5-10 illustrates the stances and actions adopted by different modes of reflexivity. CRs look for guidance from within their stable community using a 'thought and talk' mode of reflexivity where they share their concerns and projects within their carefully maintained and familiar contexts (Archer, 20013:299). ARs are strategic and interrogate their circumstances and come up with the best way of achieving their concerns individually. MRs judge different courses of action according to their ideals, and they evaluate what they consider to be the right actions in their circumstances, often subverting these constraints and enablements. These lecturers experienced recent or current hindrances or constraints in their contexts. While describing these constraints they revealed their stances related to their modes of reflexivity (Table 5-10).

Table 5-10: Modes of reflexivity and stances towards constraints and enablements

Structural and cultural factors	CR	AR	MR	FR
Stances towards constraints and enablements	evasive	strategic	subversive	passive
Action orientation	self-sacrifice	self-discipline(self-directed)	self-transcendence	uncertainty

Contributors

Five of the seven contributors were ARs, and their strategic approach to constraints and enablements was evident in their responses. Natalie, Frank, Kathy and Simon all had MR scores above 4 (although Simon was only 4.3), and all four of them described some form of subversion such as turning a challenging background into an advantage to pursuing concerns despite a lack of support from colleagues or the institution.

Natalie (AR/MR) was very ambitious and wanted to achieve full professorship by the time she was 40. She recognised that her ideas were not recognised at UCT: “I don’t think that the production of OERs is in UCT’s frame of mind what make a great academic, but you know, I’ll still do it anyway” (Natalie,14,543-557).

Natalie started out in industry but chose to move into academia. I asked many of the participants if they had always wanted to work in academia, and Natalie’s response demonstrated Archer’s idea of MRs making some sacrifices, sometimes in monetary terms, and searching for the structural situation that fits their concerns:

“For me, private practice was in a sense helping the rich get wealthy ... that’s not important. And so, even back then I always knew that whatever I did had to matter. It had to make a difference” (Natalie,16,597-605)

Natalie is not South African, and she believed that coming from a conflict ridden country that suffered a complete economic downturn could be seen as an obstruction to achieving her life concerns. She described how she superseded this constraint:

“But I think that growing up there and experiencing this very swift downhill turn of our country actually makes me who I am. Perhaps it makes me more aware of people’s problems and perhaps makes me want to contribute. So in a sense it’s bad, but it’s good.” (Natalie,17,656-668).

Frank (AR) felt his life has been “plain sailing” and did not describe any particular hindrances in his background to realising his concerns (Frank,2,937-943). He recounted a privileged background where his parents and family all helped less fortunate communities. He said how he was “happy to possibly punch above my weight initially, I do not respect people because of their position, but what they do or they achieve” (Frank,25,923-931). He also described how he had been outspoken in the past around training issues, and he was not prepared to step back. He recognised that there was a cost in the extra time that he took to write his text book, but this was outweighed by the international recognition he had received.

Frank outlined some constraints about training in South Africa that frustrated him and described how he had a strategic workaround. He said:

“...then I take my labour where it’s appreciated and makes a difference ... and that’s been the great thing about the internet; is you can transcend all these barriers ... all these borders. It just opens up the whole world for you, from your lounge you can ... you communicate with the whole world. So the frustrations in a sense ... I just focused elsewhere” (Frank,26,946-960).

Kathy (AR) spent some time recounting her concerns. She wanted to be more creative, and she had included graphic design in one of her courses - “whether everyone else approves [of this inclusion] is another thing” referring to her colleagues in her department (Kathy,19,703-733). She had been unhappy about a lot of things in her life, and she talked about her “life-long... Science/Arts pull” (Kathy,2,773-775). She recounted how she changed departments and felt really out of place. It had taken her a long time to figure out what she was doing and finally she felt she had a balance. She said: “So I feel I’ve had very little mentoring, if you want to get on grouches. I’ve had a lot of obstacles at UCT, practically no one actually really trying to help” (Kathy,26,756-

766). Kathy had recently received a promotion, and that had given her the confidence to ignore the opinions of her colleagues: “No one really believes that I’m doing research in their area, and frankly I don’t care at this point [laughing]” (Kathy,19,671-694). Kathy’s described how she was including her artistic side in her teaching as she had always suppressed this side of her personality which had made her unhappy.

Bronwyn (AR) also talked about how she had overcome constraints: “I had a manager whose agenda didn’t match my goals. I knew I needed a PhD in order to get to where I wanted to go and in fact I wanted to do it but it was hard given my work circumstances. Practically that hindered me but on the flip side it perhaps made me more determined” (Bronwyn email correspondence). Sam talked about pressure and the constraints in his job. However, he had overcome these by “trying to use time management. I am a very organised person, but still sometimes it can be very overwhelming, very stressful”; he added that he planned his time, and he had goals that he was working towards (Sam,22,838-841).

Erica (AR) revealed very little about her background, and she briefly summed up her philosophy pragmatically’ “one is a product of one’s experiences” (Erica,31,1159-1160). Simon was also elusive and did not reveal much personal detail about his background: “I think I’ve come to the conclusion that it doesn’t really, really matter where I am. I think what I need is my time to do my stuff” (Simon,23,773-782).

Most of the contributors of OER described some hindrances, but these often intellectual and emotional trials were subverted by a strong sense of agency. Being tested simply made these lecturers more determined, organised and focused, or using Archer’s terms, more strategic, self-disciplined and task orientated (Table 5-10). ARs did not seek approval from others. Natalie, Frank, Kathy and Simon pursued their concerns and did not seek approval from their colleagues (Table 5-11).

Table 5-11: Modes of reflexivity and approval

Agential factor	CR	AR	MR	FR
Look for approval	others	self	self -critical/always improving	ambivalence

Non-contributors

Five of the non-contributors were MRs. Chloe was unclassifiable with a 5 for MR and AR. MRs do not evade or circumvent constraints and enablements in their lives but instead show an ‘immunity’ towards them: “They will try to advance their projects in the face of constraints by resisting their powers, and will pursue them with indifference to whether or not enablements are on their side” (Archer, 2003:299). MRs will often subvert the causal powers of society but not without feeling the costs of their actions.

Lance recounted how he had to adapt during his teaching career: “A big learning curve for me was when the demographics of our student body began changing and continued changing. I had to adjust the way I taught” (Lance,25,889-927).

Mandy had been through major constraints on the way to reaching academia and described how she had been “angry all her life” mostly about the injustices towards children (Mandy,23,872-900). In her current job, she found her department to be unfriendly. After reflecting on her life and the anger she felt, she added: “But that doesn’t matter they are just hiccups, I’ll overcome them” (Mandy,24,947-948).

Mandy, Gary and Gwen (all MRs) had all overcome hindrances in their background that made their choice of careers in academia particularly challenging. Mandy had unsupportive parents, and she went into considerable detail about how she had to battle to do her degrees and to achieve what she had achieved with little recognition from her parents. Mandy personified the MRs who “try to advance their projects in the face of constraints by resisting their powers, and they will pursue them with indifference to whether or not enablements are on their side” (Archer, 2003: 289).

Gary struggled when he first started at UCT and noted “people can be incredibly cruel in this environment” (Gary,27,1096-1099). Gary also noted in true MR style:

“I suppose that’s what is important in life... actually for your head to engage with your heart ... which makes one think about the disadvantages that accrue to other people” (Gary,26,1034-1045).

Gary gained his greatest satisfaction and approval from his students. He reflected that:

“A student comes in and just kind of opens up and starts talking about all the difficulties they’re having and then it’s a real... is an extraordinary thing” (Gary,22,866-926).

MRs are willing to pay the price, as Gary had to when he chose to come to academia after teaching and travelling:

“I was quite a latecomer into the academic world, because of my wavering. And it cost me. ... because I chose to put my time in certain directions, my research has suffered, therefore I have not been promoted all the way through to professor” (Gary,25,985-993).

Gwen (MR) made a shift from a traditionally under resourced, lower-class area into academia. However, when asked about hindrances to achieving her project to come to UCT, she did not mention any challenges:

“For me, the big issues was around whether or not I can write. Whether or not I can speak in an articulate manner ... am I clever enough? Those are your personal issues. ... nothing sort of seriously kind of say somebody stopped me or there was a particular issue that couldn’t be dealt with, no” (Gwen,23,771-778).

Gwen was self-critical (Table 5-11) and felt that coming from a disadvantaged background was not such a disadvantage as it “enabled [her], to see things in a different way” (Gwen,22,756-760).

Mike (MR) started out in industry but when he did an internship at UCT, he realised this was where he should be. Mike did not talk about any hindrances in the past to achieving his current concerns, although he did mention that his department's budget had been cut. Even so, he was generally in a good position and was able to focus on his teaching: "I'm the lecture guy and that's where I spend my hours. Because that's where I can really bring my A game and where students can benefit" (Mike,18,733-750).

MRs are searching for structural situations where they can realise their cultural ideals, and they are aware of this search. Chloe said she was "very comfortable in an academic space" (Chloe,26,1025-1038). She was happy working at UCT and showed no sign of ever wanting to go anywhere else: "So I like massively value the diversity of UCT and all that ... I now can say I'm very comfortable in an academic space... UCT accords quite a lot with the things that the way I like working and what I like doing" (Chloe,26,1025-1038). She found some of the committees, the bureaucracy and long meetings "draining", and said she was retreating from these commitments so that she could work in her department.

Larry (the only AR in the non-contributors) was dyslexic and always struggled in school, yet he was clearly very intelligent and managed to graduate from a top UK institution. Larry was animated when he talked about students and said: "I have a good relationship with students and I think that really helps" (Larry,26,922-923). Later, he reflected that "students are a great validation of how you're doing. And [they] are very supportive" (Larry,27,947-952). Larry, like Gary, received recognition from his students and worked at improving his teaching in order to gain student approval, as he felt he would not be getting recognition from the university. Most of the participants recognised hindrances in their working environments, but none appeared to be deeply unhappy or wanted to move on except for Larry, who was the only participant who indicated that he wanted to leave UCT after he had completed a PhD.

Larry experienced many hindrances in his job. Teaching was not supported:

"In terms of a career at the university, you're wasting your time... he who shouts the loudest gets recognition (Larry,23,814-816) ... and if you're a teacher, you're not someone

who particularly shouts. You just get on with a thing and you do it because you're enjoying it" (Larry,23,818-823).

However, he still found reasons to be positive and said: "But I think in that sense it's also helped me a great deal because I do understand what it's like to trip over fences and hurdles and things continuously" (Larry,23,832-842).

The hindrances described by the non-contributors compared to the contributors seemed to be more constraining, and they had to overcome large barriers to make their way through life. Larry, Gwen, Gary and Mandy described major constraints. Their move into academia meant fighting various emotional battles and finding a way of realising their projects. This could explain their reluctance to share. The findings suggest that when you have to fight tough battles to get where you are, contributing teaching materials as OER is not a life concern. Instead, these lecturers may prefer to maintain their current roles as far as possible, and because of these challenging social conditions, they choose *homeostasis* instead of *homeogenesis*. Their difficult journeys might explain why they lacked confidence in their teaching materials and were easily influenced by their colleagues. Lance experienced fewer constraints and his response to them was to be more empathetic and sensitive. This more emotional response could explain his major concern about contribution: "Who is the audience?" His sensitivity may explain why he was influenced by his colleagues. Mike was a younger academic who moved from the workplace to academia. He was comfortable in his classroom and influenced by his colleagues. Chloe had few complaints about her current context. She moved from one discipline to another and also indicated a lack of confidence as she felt contributing OER could expose her work.

5.4.5 Lecturers and dovetailing/*modus vivendi* (practices)

Unlike Archer's original sample, many of these participants (whether they were MR or AR) felt that their concerns were dovetailing (Table 5-12). The two groups below were similar and there did not appear to be any clear relationship between contribution and the current dovetailing of interests of each person. This indicates that being satisfied in a current situation in a personal capacity did not encourage or discourage contribution or non-contribution.

Table 5-12: Dovetailing interests: ways in which modes of reflexivity mediate structural and cultural factors

Structural and cultural factors	AR (5 contributors)	MR(5 non-contributors)
Consequences for patterns of mobility	upwards mobility	lateral mobility (volatility)
Aggregate macroscopic consequences	social productivity	social reorientation
Main institutional impact	market/work	third sector/other

Contributors

Amongst the contributors of OER, those who felt that their concerns dovetailed mentioned being helped by their working environment and enjoying work (Table 5-12). Natalie, who was unclassified, mentioned both work and broader ideals. The ARs focus on work but also mention their agential role in making their concerns dovetail, so Kathy had ‘made’ her concerns fit and Bronwyn had her family who kept her ‘grounded’.

Natalie described how she had found people similar to her: “some like-minded souls at UCT... I think being at UCT actually helps me to achieve some of those, perhaps very personal, goals. So of course, UCT has taken a lot of the things that I care about on-board as well” (Natalie,16,620-629). Natalie was able to combine her ambition of making an impact in her field internationally with her more personal and work related goals (upwards mobility see Table 5-12).

Frank’s response was indicative of the hard-working, driven person that he was: “Well, hopefully these books will be done in the next year or so, and then it would just be a matter of finding a new project [laughing] and also just revising what we’ve got” (Frank,27,1011-1013). Frank was focused on work tasks and referred to his OER contribution as an important part of his life.

Kathy had made strategic decisions in order to make sure that she could include her multiple concerns into her life. “I finally feel they dovetail. I have made them fit” (Kathy,22,799-802). Simon was positive about his *modus vivendi* but was unhappy about his workload: “I just like work... I think UCT’s great. But the point here is we are over-burdened in terms of time...” (Simon,25,869-875).

Bronwyn was happy but needed her family, and this was illustrative of her CR score of 4. CRs' ultimate concerns and institutional impact involve the social order, usually family (Table 5-9): "My current work context matches my life goals and I am happy there. My family also keep me grounded" (Bronwyn, email correspondence).

Two contributors of OER felt that their concerns were not dovetailing. This dissatisfaction with their current *modus vivendi* can be explained by their modes of internal conversation: Erica was expressive and Sam, at the time when he completed the ICONI questionnaire, displayed a fractured mode of reflexivity (FR). Erica acknowledged tensions, and it seemed that she was struggling to dovetail her concerns: "There definitely are tensions... when you're a better teacher, you're a worse mother, when you're a this, you're a that" (Erica,30,1120-1123).

Sam's (FR) responses were a bit confusing and indicated his fractured state. He had been the victim of some discrimination on his arrival in South Africa (he is not South African), and it seemed there was some tension with colleagues. Initially he responded to the question about whether he felt his concerns were dovetailing by saying: "I like South Africa, that's why we're staying here" (Sam,24,915-925). However, he also added that he found time management difficult: "I'm a very organised person. So I try to do that, but still sometimes it can be very overwhelming, very stressful" (Sam,22,838-841).

The contributors of OER were mostly satisfied that their concerns dovetailed. In these ARs, an emphasis on work and the task focus of their internal conversations was apparent. The contributors of OER referred to work and projects that were the focus of their activity, and part of that activity was to contribute some of that work as OER.

Non-contributors

Amongst the non-contributors, there was also a general satisfaction with their *modi vivendi*. These individuals (mostly MRs) did not express an intention to move to another institution or to change their current jobs despite the constraints, which is in contrast to Archer (2003) where she suggests that MRs are seldom satisfied. Larry, an AR, was the only participant in this study who said that he might want to leave UCT. It is possible that others were unhappy and did not want to be open in front of a UCT colleague (the researcher). However since these interviews, all these

participants have remained at UCT. This satisfaction was expressed despite earlier criticisms of colleagues and the institution. Lance, Mandy and Gary, participants in their 50s, seemed content with their dovetailing concerns. Lance remarked: "... I've been very, very happy here for all these years and it's worked out well because it was the right thing to have happened" (Lance,23,849-852).

Despite her earlier comments about not trusting her colleagues, Mandy stated that, "... all these things... somehow are coming together really beautifully actually, almost as if there was this grand plan" (Mandy,24,930-935). Gary, who had said his colleagues were critical of him and even cruel when he arrived, said: "... my department has changed hugely in that sense, and we have a very nice department, I must say, and there's been a huge change actually in people's attitudes and willingness to work together generally" (Gary,28,1112-1137).

Gwen had concerns about the quality of her teaching practice and materials not being good enough in comparison with her colleagues. However despite that, she said: "I really enjoy being here, and I have no desire to go back to private practice. I think that makes me an academic, I actually enjoy the students. I get energised when I teach. I love being able to sit in my office and close my door and work. So those are the two things I think that enables me to be an academic" (Gwen,19,650-656).

Despite some criticism of the institutional system, Larry had been recognised for his teaching excellence, and so in conclusion, he conceded that "everything actually fits together" (Larry,23,807).

For Chloe, an unclassifiable (equal MR=5 and AR=5), her concerns were not dovetailing. She described her dilemma and said:

"It's [dovetailing concerns] hard, because I think society still expects a relatively traditional role from a woman and if anything I'm not that traditional, so I am quite sort of domestically focused, I do live in my own head a bit, you have to... you're an academic, so it's quite a juggle to give what kids, in middle class sort of schooling context need to

help them have all their ducks in a row and to have your ducks in a row...” (Chloe,23,941-969).

The MR non-contributors appeared content in their current positions and did not talk about any particular challenges with regard to work needs or family.

5.4.6 Does contribution of OER fit into your concerns?

Contributors affirmed that contribution fitted in with their life concerns. However, four out of seven said that they had not had time since their initial contribution to add more resources. Frank, Simon and Sam had contributed more resources since the first interview. Natalie wanted to contribute more but did not have the time to work on materials. Lack of time was the primary reason for Kathy not contributing again, and she mentioned that copyright was an issue. In Bronwyn’s case, contribution was not high on her list of priorities, and she kept “trying to make it [the teaching materials] too perfect” (Bronwyn, Questionnaire 2, Q6).

Bronwyn explained her response further. Bronwyn said: “I’m generally quite open about what I do... And I don’t even really think about things like attribution or anything like that. But this [OER contribution] I suppose gives one a way to share, but share in more systematic ways. So maybe it’s more beneficial personally. Because I think that the development of students across Africa, helping them” (Bronwyn,7,275-298). Sam felt other lecturers could be influenced to contribute, despite his earlier concerns that his colleagues were not contributing and would not because of historical tensions and baggage. He added: “I think we need to create a culture of awareness about contribution and the benefits of contributing” (Sam,24,919-926).

Most non-contributors of OER, except for Larry who felt contribution of OER was at odds with their life concerns, felt that contribution did fit, in principle, because of their social justice ideals. Nevertheless, they still had concerns, some of which may not be easy to overcome. These included concerns about who would use the materials, how lecturers needed to work together, how a personal desire to contribute could be overridden by conflicting concerns such as classroom teaching and how there is a lack of supporting structure and time.

Lance said: "... if I could be shown how to appropriately share my material with not a targeted audience... if I knew who the people... because I wouldn't know what I'm doing" (Lance,26,976-977). He added that he was "too busy delivering my own teaching materials to live bodies in the teaching venues" (Lance, Questionnaire 2, Q6).

Mandy felt that "it's [contribution of OER] completely in line, because I suppose what I've learned throughout my life is that if you want to change things, you've got to work together. It's always been my way, a bit too much actually" (Mandy,27,1042-1050). A year later, Mandy was still unsure about how and why she should contribute her teaching materials as OER (Mandy, Questionnaire 2, Q6).

Gary's response was perhaps the most astute. He realised that on the surface he was influenced by the article on the tea room wall, but the real reason for not contributing was his late entry to HE and how this made him feel less secure and confident. He contemplated the underlying reason for the way he had heeded the message on the tea room wall and said: "... I'm puzzled why that set so hard... when in fact, everything else that I've done has been much more open and contribution... I think, it might have to do with coming in, having a family... so maybe this is the answer to that actually" (Gary, 26 ,1046-1066). He added in the questionnaire that he had other priorities and that he did not see how OER would help him with his day-to-day challenges with students who were struggling academically.

Mike was influenced by the philosophy of his colleagues, and even though he saw how contribution could be useful, he did not see a way for him to share in the current setting. In addition, he felt his notes would not be that good when he removed sensitive case material and criticism from them. A year after the interview, he said "the incentive is to create materials for courses which generate revenue" was the reason he was still not contributing.

Gwen felt contribution would be a good thing, but if she shared it would be under certain conditions: "It probably fits in... provided that you have the right structures in place..." (Gwen,23,783-786). A year after the initial interview, Gwen was still not sure 'how' to share.

Chloe gave a complex answer that was ambiguous: “It’s all about contributing, I’m very into an open flow of education, of information put it that way ... and ... it’s very much part of all aspects of my life I think.” She mentioned some of her constraints about “time is always limited” (Chloe,27,1097-1115) and said: “I think some people have this feel of power... you like keep everything to yourself and that’s the power. I don’t think that at all. I like working collaboratively” (Chloe,28,1119-1129). Her response gave an indication that she might contribute in the future. A year later, she said that she was open to change but that she was focused on the core business of UCT which was its students.

By contrast, Larry felt that the idea of contribution was not bad, but it was at odds with his life concerns and he would not be able to do it: “... it’s at odds in the sense that I’m not great about contributing things, because I have been criticised about the way I’ve done things... So I’m not too sure if what I do is necessarily good enough to share...” (Larry,26,933-942).

These non-contributors were unlikely to change their current practice. Lance, Gary and Chloe mentioned directly that the classroom was where their concerns lay. Lance needed specific help to be shown what was expected. Mandy also seemed ambiguous and said she thought collaboration was good but did not trust her colleagues. Gary would possibly contribute in the future. Mike was too strongly influenced by his colleagues. Gwen suggested she may contribute if a structure like a quality assurance process was in place. Chloe seemed to be afraid of losing control and her response was very ambiguous. Larry would not share because it was at odds with his personal concerns.

5.4.7 Rating of findings

Based on the data from the interviews and questionnaire 1, a number of contradictions emerged. These contradictions extend across Part 1: Cultural influence on OER contribution and Part 2: Structural influence on OER contribution. These contradictions helped to identify certain key observations or factors as follows:

Culture:

- Lecturers have a superficial awareness of ‘Open education’ and OER
- There is inconsistent support from the institution with regards to Open education
- Lecturers work in different ways: some collaborate and others work alone

- Lecturers are sometimes influenced by colleagues

Structure:

- Lecturers are concerned about copyright of materials
- Institutional policy is in contradiction to academic freedom
- The university has no recognition systems in place
- OER contribution needs technical support
- Social media fluency may enable contribution (technology fluency)
- OER has no associated pedagogy (pedagogy)
- Interactive teaching prevents contribution (pedagogy)
- Lecturers must change their practice of last minute preparation (pedagogy)
- Inward facing, classroom-focused role most important (roles)
- Lack of time is a concern
- Poor quality OER are a bad reflection on the institution (quality issues)
- Lecturers are concerned about exposing teaching materials that are not ready (quality issues)
- OER need quality assurance (quality issues)

In Questionnaire 2 (Appendix B), participants were asked to rate the importance of each of these findings when they considered contributing OER. Contributors and non-contributors had different concerns with six overlaps on the top 9 concerns, such as: institutional policy is seen as infringing academic freedom, classroom focus, lack of time, copyright concerns, poor quality OER is a bad reflection on the institution and OER needs quality (Table 5-13). To form the table below, the ratings were added together and ordered from top rated being the smallest combined rating.

Table 5-13: Comparisons of concerns from findings (smaller numbers = higher rating)

Concerns	Contributors	Non-Contributors	Rating combined
Institutional policy vs lecturers freedom	1	6	7
Inward facing classroom focus	8	1	9
Lack of time	2	8	10
Copyright concerns	7	3	10
Poor quality OER is a bad reflection on the institution	5	5	10
OER needs quality assurance	3	9	12
Concerns about exposing materials that are not ready	12	2	14
OER has no associated pedagogy	11	4	15
Social media fluency is an important enabler	4	15	19
Inconsistent support from the institution	6	14	20
Interactive teaching prevents contribution	10	11	21
Change practice of night before preparation of slides	13	10	23
Awareness: How, what and who will benefit	16	7	23
Need for technical support	9	16	25
Collaboration versus working alone	14	12	26
Influence of colleagues	17	13	30
No reward or recognition	15	17	32

AT was useful for highlighting contradictions that were explored in some detail. However, AT has not been able to explain why these subjects are concerned by certain constraints and not others or why some subjects choose to contribute or not to contribute (Figure 5-14). The comparison of the two systems for contributors and non-contributors illustrates clusters of concerns, where the contributors are more concerned about the Rules around OER. The non-contributors cluster

around the top right-hand side of the triangle and are mostly concerned about the classroom focus, the lack of pedagogy associated with OER and the lack of readiness of their materials (Figure 5-14).

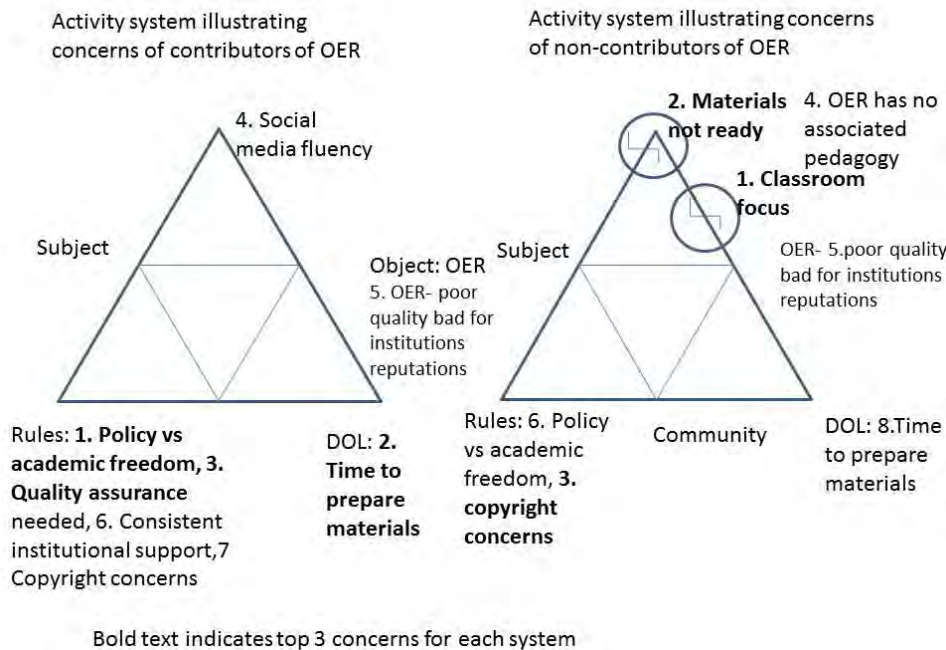


Figure 5-14: AT systems and top concerns

Contributors also felt that social media fluency was important for contribution. They were more concerned about the inconsistent support for Open education from the institution and the lack of technical support (Figure 5-15).

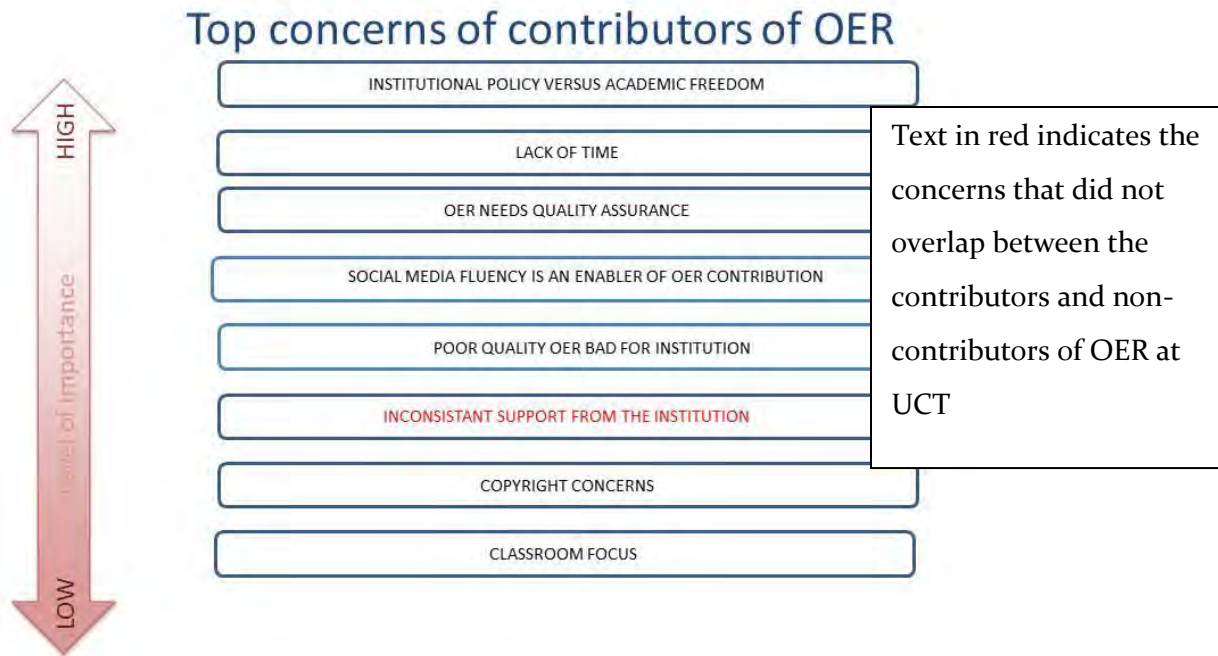


Figure 5-15: Top concerns of contributors

Non-contributors were concerned about exposing their materials, about OER having no associated pedagogy and about their lack of awareness of the benefits of contributing OER (Figure 5-16).

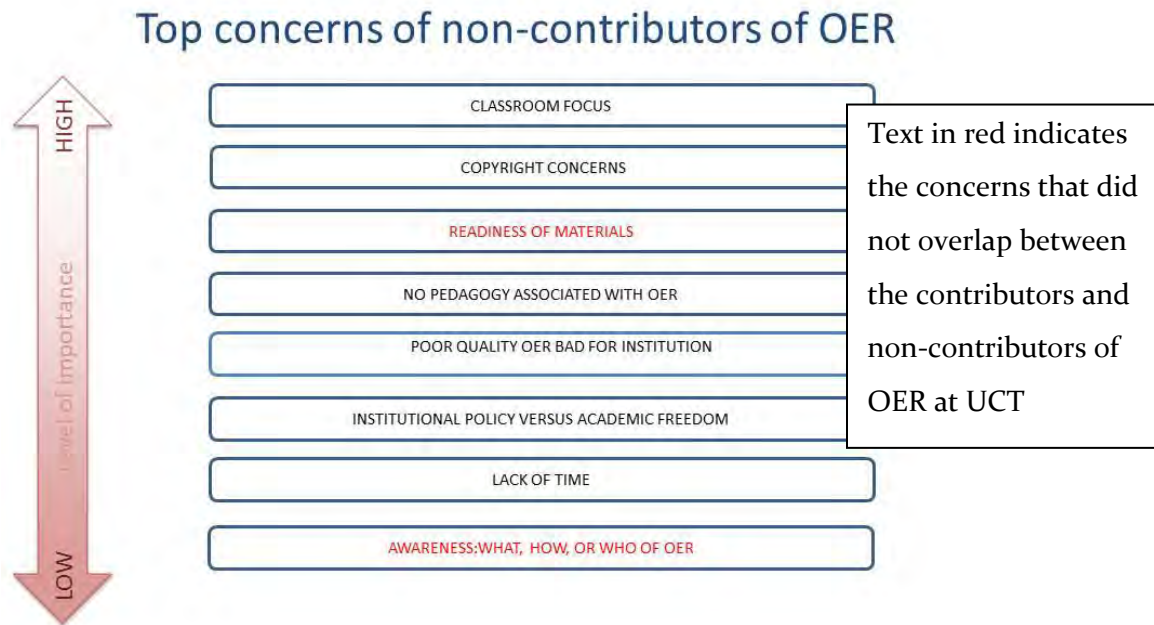


Figure 5-16: Top concerns of non-contributors of OER

5.4.8 Summary of agency of lecturers

This final part of Chapter 5 included insights into the lives of these participants as agents who reflected on their contexts and either contributed or did not contribute OER in relation to their ultimate concerns. Some agents have decided to contribute OER despite some structural constraints. Non-contributors have decided not to contribute due to various constraints and because their concerns lie elsewhere. The choices of each person can be explained in light of their mode of reflexivity and their life concerns.

In Chapter 6, the themes from Part 1 and Part 2 (including culture, the role of institutional policy, inward and outward focused roles, pedagogical issues, legal issues, quality issues, technical issues and recognition and reward) will be discussed in terms of the possible influence of culture and/or structure and/or agency examining the relations between these three aspects of society.

Chapter 6: Discussion

6.1 Introduction

In this chapter, the quantitative and qualitative data that were presented in Chapter 5 are discussed in relation to the main research questions focusing on key themes that emerged. This chapter focuses on explaining the findings in comparison to the literature on OER. The key themes are ordered according to the importance rating completed by participants summarised at the end of Chapter 5 (Figure 5-14, Figure 5-15, Figure 5-16). The concerns for contributors are not the same as the non-contributors, though there is some overlap. The data is interpreted using the theoretical approach of SR to explain why lecturers at UCT are concerned about certain issues and not others in the context of OER contribution and non-contribution. Each theme is concluded with an explanation of the relations between culture, structure and agency. Figure 6-1 illustrates the top concerns of all participants in relation to culture, structure and agency.

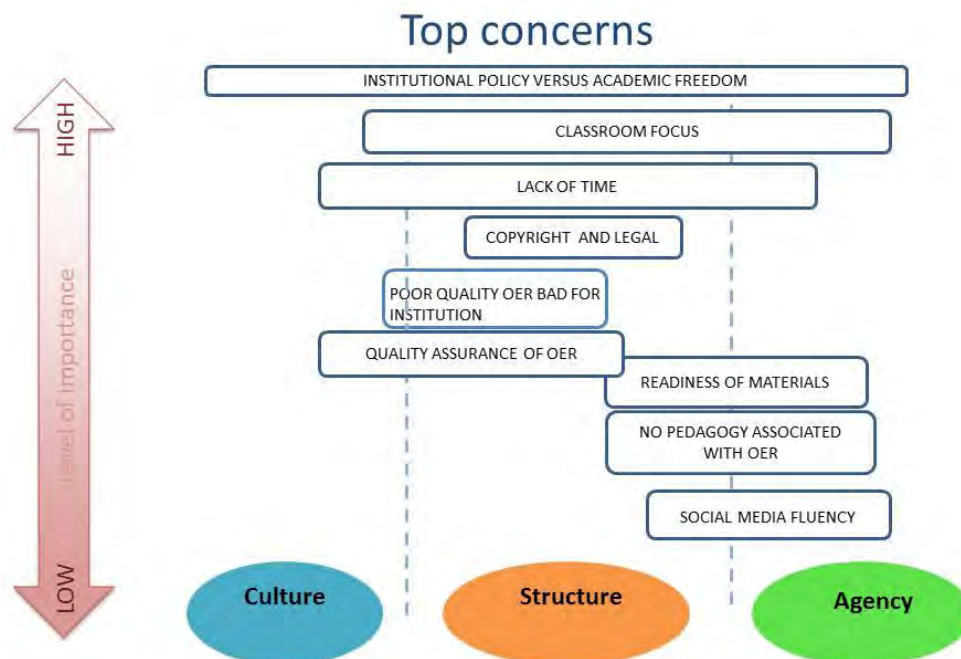


Figure 6-1: Interplay of key factors for all participants

In Figure 6-1, the level of importance (vertical) of each theme has been plotted against the degree to which these concerns are related to culture, structure or agency (horizontal). On the one end of the continuum are issues relate purely to culture, institutional or global. On the other end are the concerns are related to agents personal concerns and how decisions to contribute or non-contribute relate to personal action. In the middle of this continuum are the structures that are in place that may or may not enable contribution. There is also interplay between these three aspects of society where concerns straddle culture and structure, structure and agency, and in the case of policy, all three aspects. The concerns of both contributors and non-contributors skew towards more personal concerns and the power of these personal concerns and agency seem important factors in governing lecturers' actions.

In Chapter 2 and Chapter 5, culture, structure and agency (Archer, 2003) have been separated out analytically as a framework to describe the enablers and barriers to OER contribution identified in the literature by other authors and by the lecturers in this study during their interviews and questionnaire responses. Analytically, it has been useful so far to separate culture, structure and agency as this has facilitated a deeper understanding of tensions and contradictions around materials production and dissemination in the university system. These cracks in the system have been exposed with the introduction of OER. However, there is considerable overlap in social reality, and in this chapter, the three strata of reality will be discussed in relation to key themes that emerged and the complex interplay between culture, structure and agency that this revealed. This chapter endeavours to reveal the underlying causal mechanisms in order to explain the central role of agency in determining individual actions in pursuit of these lecturers' needs and aspirations in relation to OER contribution.

This chapter ends with an explanation of how agency trumps all other enablers and barriers and explains that understanding agency is key to understanding how causal powers may or may not be triggered in any given circumstance (Sayer, 1992).

6.2 The role of policy in a collegial, research intensive institution

At UCT, a contradiction emerged around the importance of policy as a potential enabler of OER. The majority of the lecturers in this study felt that institutional policy would not encourage them to make their teaching materials openly available. In fact, they felt strongly that contribution

should be voluntary. Both contributing and non-contributing UCT lecturers felt that a policy forcing them to contribute would be a potential violation of their academic freedom. Policy was seen as potentially coercive and could create a negative response where lecturers would purposely not contribute in order to defy the policy.

These findings call into question the claim about institutional policy being a key enabler to encourage faculty to contribute their teaching materials (Browne et al., 2010; Lee et al., 2008; Carson, 2009; Reed, 2012; Corral & Pinfield, 2014; Lesko, 2013). Andersen also suggests that policy could be a driver of contribution if “participation in digital activities, should count toward tenure and promotion” (2010:43). The role of policy in a collegial, research intensive institution needs to be reconsidered, and it cannot be held up as the ‘tipping point’ for OER contribution.

Following Archer (2003), these UCT lecturers’ internal conversations shape their courses of action. These internal conversations occur in different modes, and it is these modes that shape actions and help explain why some lecturers respond in particular ways to the culture and structure of the institution.

The contributors, who in this case study are mostly Autonomous Reflexives (ARs; five out of seven), take a strategic stance towards constraints and enablements such as policy. They will only abide by policy rules if they fit in with their ultimate concerns. They are self-driven individuals who will do what works for them in order to achieve their ultimate concerns, whether there is a policy guiding their actions or not. Archer describes ARs as being “agents for change” (2003:254), and in this study of OER contribution, this seems to be the case. ARs do not accommodate themselves to structures such as policies but rather harness structural powers when necessary to achieve their own agential aims.

The non-contributors included five Meta-reflexives (MRs) who, according to Archer (2003) are subversive in their stance to both constraining or enabling structures in their contexts since they will only follow policy if it fits in with their own high ideals and life concerns. According to Archer (2003), MRs are not guided by social structures and they will often ignore bonuses and penalties in the pursuit of freedom of action, often at a personal cost.

This apparent disregard for policy and general expression of subversion to any mandatory procedure represents the collegial-type culture at UCT. At UCT, there is loose policy definition and implementation, and this managerial style is attractive to UCT lecturers who value their freedom of choice (Czerniewicz et al., 2015). Therefore, a structure such as policy may or may not enable a practice. A similar disregard for top down policy was expressed by lecturers at the University of Oxford where academic autonomy and ‘subsidiarity’ are principles of the institution (Masterman & Chan, 2015). In addition, this resistance reveals the importance of agency for these lecturers.

The issue of OER policy highlights the interplay of culture, structure and agency. UCT displays a certain kind of institutional culture which impacts upon the definition and regulation of policy. Open access policy exists as part of the structure at UCT, but lecturers exercise agency and make their choices, such as adherence to policy, according to their concerns. However, the presence of a policy should not be conflated with its enactment. Although the policy exists, its presence does not explain the way people feel about it or act upon it. The adherence to an OER policy depends not only on the institutional culture but also on the lecturers at the institution and their types of reflexivity.

6.3 Traditional inwardly focused vs outwardly focused Open pedagogy

In this study, lecturers with traditional classroom-focused, interactive teaching styles do not produce course notes suitable for sharing with a wider audience. Therefore, they are worried about the lack of pedagogy associated with OER and express concerns about the lack of readiness of their materials for public consumption.

After undertaking an extensive literature review, it appears that classroom focus as a reason for not contributing has not been clearly articulated in other research on OER. A recent paper by Masterman (2015) has begun to explore the possibility of new pedagogies incorporating OER. Masterman’s (2015) conclusion is that perhaps OER can enhance existing models and does not necessarily require a radical change of pedagogy.

Classroom teaching materials are not necessarily designed to be standalone materials for anyone to use, and often they have to be re-designed or go through some preparation for contribution as OER. Interactive classroom experiences are not easily shareable outside the classroom as the materials don't adequately capture the responses of the lecturer to the students' needs. Other authors have suggested that the potential downfall of OER is that they lack pedagogy and that they need more interaction to be useful outside the classroom (Knox, 2013, Sclater, 2010a).

Five of the seven lecturers who contributed OER viewed the roles of teaching, research and their other academic responsibilities as equally important. Non-contributors somewhat unexpectedly viewed teaching as their most important role. The classroom space was very important for the non-contributors, and all of them mentioned their interactive teaching style. The majority mentioned this as a primary reason for not contributing to OER, as they felt their teaching materials were not suitable for an audience outside of their classrooms. All non-contributors of OER were concerned about the potential new audience that OER would bring and how they would need to create and/or re design materials. This would require a change of practice: a new pedagogic model. For non-contributors the value of such a change was not clear.

Following Archer (2003), AR contributors are task and work oriented, self-disciplined and functional in different roles. Their ultimate concerns are focused on educational development across Africa and/or the Global South. They are outwardly focused in their research and also in their contribution of OER. They seem to display a high level of self-confidence, as they do not look for approval from others but from themselves. Five of the multi-tasking AR contributors did not think the lack of pedagogy in OER was an issue. They focused on their various tasks and made time to get materials ready or simply contributed their classroom materials without worrying about how the materials would be used. However, the lack of explicit pedagogical explanations around the use of materials in contexts related to OER has an important impact on ongoing contribution. Thus, even though aspects of Open pedagogy are being used (such as learner autonomy and OER contribution), there is still a need for some change to existing models.

The lack of explicit pedagogical explanations around the use of materials released as OER is a possible reason why some lecturers are not contributing. In addition, those who had not contributed felt that it would be difficult for them to re-design materials, and this is a clear barrier

to contribution. By contrast, the non-contributors used an exploratory dialogic approach in their classrooms and were almost counter culture in their approach, as they claim to focus on teaching and not on research. Because of this focus and time spent on teaching, these non-contributors were not producing a great deal of research which is the emphasis of a research-led institution. Non-contributors of OER are classroom focused, and they also choose to limit their outward focus in research. They may reach the Associate Professorship level in their senior years. However, they may also suffer the consequences of making the choice to focus on teaching to the detriment of their research and, therefore, not achieve Full Professorship (Lance and Gary). The MR non-contributors (n=5) display their agency in deciding to focus on teaching, even though this is a choice that does not come with as much acknowledgement or reward. As Archer (2003) notes, MRs will pursue their ultimate concerns, values and ideals they believe in. They will subvert the lack of recognition and use the freedom that they have to pursue what means the most to them. MRs want to make the most impact in the classroom and they are focused on adding value to their students. They are self-critical and spend time analysing their impact. Contemplating impact outside of the classroom is not part of their ultimate concerns, and they had few projects or practices outside of the classroom.

At UCT, lecturers have the freedom to teach as they see fit in their classrooms. This is based on a culture that does not place strict control on the lecturer. Lecturers can decide to use different teaching styles. For example, they could use a more didactic approach, making use of lectures, or a more dialogic approach, promoting interaction between the academic and the student. UCT's Teaching and Learning Charter and Teaching and Learning Strategy make some suggestions about using innovative and engaging strategies in the classroom, however it is not clear how much attention is paid to these documents by the average academic (Appendix I).

This issue of pedagogy and OER highlights relations between the laissez-faire institutional culture and the lack of tightly implemented structures. This in turn gives the agent more choice about how they conduct their work. In addition, there are relations between concerns like quality and pedagogy. As a way to illustrate the relationship between OER quality (readiness of materials) and pedagogy (lack of pedagogy of OER), a quadrant is used to show how the participants in this study cluster into two opposite quadrants. In Figure 6-2, the top left quadrant includes the lecturers who contributed OER and feel their materials are ready for contribution. These lecturers

are not concerned that OER often do not include any pedagogical guidance in the form of course outlines, interactive activities or assessments of any kind. In the bottom right quadrant are the concerned lecturers (two have contributed materials) who are worried about the readiness of their materials and the possibility that materials are not able to stand alone outside of the classroom.

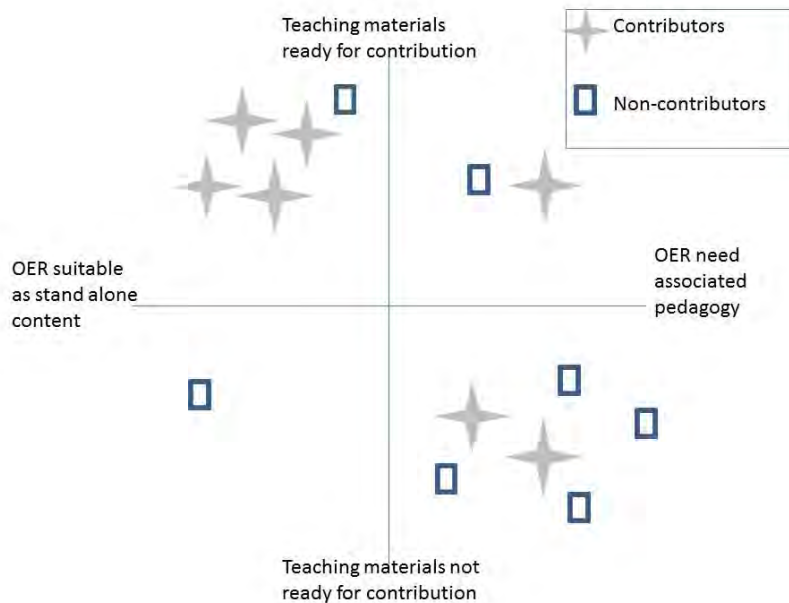


Figure 6-2: Readiness of teaching materials and lack of associated pedagogy

In the literature, the relationships that appear in the Cartesian plane are explained by the idea of ‘pedagogical confidence’, where the academic is confident in their materials (Beetham et al., 2012:5). This confidence can also be related to an academic who can see the value in the materials themselves and therefore becomes a contributor; Van Acker and colleagues (2013:188) call this “knowledge self-efficacy”. The findings in this study support this notion of academic’s confidence in their teaching materials being a factor in OER contribution.

Five of the seven contributors of OER at UCT are confident in the readiness of their materials for use both inside and outside of the classroom. These five OER contributors have not changed their pedagogical models, and the two who are concerned have invested time into re-designing materials. However, non-contributors seem reluctant to move materials beyond the classroom, as

they would have to invest some time in re-design for a public audience. They see no value in changing their existing pedagogical models.

These complex pedagogical concerns also illustrate the interrelationship between the cultural norms and structures of teaching in HE, where the classroom is the focus of attention in residential contact institutions, and there are few structures or guidelines for teaching and teaching materials to allow for academic freedom (as opposed to specific policies for research).

6.4 Constraints of time

Lecturers in this study identified the lack of time to work on teaching materials as a deterrent to the contribution of OER. This idea of lack of time to work on materials or apply for an OER development grant is indicative of a deeper issue around the alignment of personal concerns. Lecturers mentioned high teaching loads and research commitments that needed to be fulfilled in order to be accountable to line managers during annual performance reviews. This is not a new finding, Lee et al. (2008), Beggan (2010) and Browne et al. (2010) have made the same point for HE across various institutions. All the contributors and non-contributors were concerned about the length of time and the amount of effort it took to adapt their teaching materials to contribute as OER. Contributors were particularly concerned about the constraints of time as they were aware of the effort it took to prepare and license materials as OER.

Institutional structures such as grants and student support for OER development can potentially enable those who are willing to contribute their materials. Small grants can be used to employ a student or web specialist to update and clear copyright on materials, and in so doing, lecturers do not have to spend their time preparing materials.

The contributors of OER expressed a similar lack of time to the non-contributors of OER and yet they have made the effort, working after hours, to contribute. The AR contributors (n=5) showed how important agency is and were determined to produce OER despite the constraints. Small OER development grants enabled some of the contributors who had already made a decision to share and who found time to submit a formal grant application in order to transition their project into practice. However, receiving a grant did not explain why these lecturers decided to contribute to OER. It was more likely to be their agency, related to their concerns, which

prompted them to apply for the grant in the first place. Following Archer (2003), ARs achieve their concerns through self-discipline, they do not spend time debating the value of OER. They simply get on with what they believe to be an important task.

Applying for an OER grant, a possible enabler of contribution, was not appealing to non-contributors, as managing a grant was perceived as requiring additional time. The MRs (n=5) mentioned time as a concern, but there are underlying reasons that might explain why they were not contributing. Their ultimate concerns were not focused on contributing OER, and the self-transcendence they display was focused on their own individual development or on their roles as teachers making an impact on students in their classrooms.

At UCT, the collegial culture allows lecturers some freedom to decide how to prioritise their time. Lecturers have the power to choose which aspects of their jobs they would like to spend more time on as long as their day to day job requirements are fulfilled. Lecturers are likely to feel some pressure to produce research but they still have a choice about how they spend their time.

An institutional culture that enables and protects academic freedom gives power to the academic to take agency and act as they see fit. This academic freedom allows for lecturers to embrace change, and it also protects those who may prefer not to change any of their practices. Contributors and non-contributors of OER are faced with the constraint of time pressures as lecturers in HE. At UCT, all lecturers have access to possible structural enablers of OER contribution such as grants. Yet based on their internal conversations that mediate their choices, the agents themselves choose different actions.

6.5 Legal issues: “all a little in the dark...”

Lecturers moving towards more Open practices must not only design their materials differently, they also need to understand copyright and Open licensing. For lecturers in this study, sharing their teaching materials beyond the protection of the university is a move into the unknown area of copyright legislation and Open licensing. They described their knowledge of copyright as being ‘hazy’, ‘never quite sure’ and as a ‘grey area’. Under the legal jurisdiction of ‘Fair use of third party copyright materials for education’, UCT lecturers have been able to sidestep the complex area of copyright, as library staff have managed all copyright processes for textbooks and journal

articles. However, a contradiction emerges when lecturers become responsible for upholding copyright legislation and need to understand Open licenses if they want to make their teaching materials OER.

This is not an unexpected finding. The literature on OER suggests that the lack of clarity about copyright is a barrier to initial contribution and also further contribution of teaching materials (Hysten, 2006; Lee et al., 2008; Lane, 2009; Beggan, 2010; Reed, 2012). Other authors have written about experiencing this same kind of confusion about copyright of materials expressed by lecturers in their studies (Davis et al., 2010; Martins & Baptista Nunes, 2012; Reed, 2012).

Contributors were concerned that they might have infringed the copyright of others. They mentioned how careful they had to be, because they were really quite unsure about how copyright worked. Understanding and attributing third party copyright was a hurdle for them, particularly when it came to images in teaching materials. Similarly, non-contributors were concerned about infringing copyright and similar themes emerged around being uncertain of copyright rules, especially around the use of images in teaching materials.

Not only were the lecturers unclear about traditional copyright issues, they were also unfamiliar with alternative copyright mechanisms such as CC. All lecturers were asked about their understanding of CC licensing: six lecturers had no idea about CC licenses and only one person really understood CC, and that happened to be one of the lecturers from the Law faculty.

In contrast to some reported findings in the literature, both contributors and non-contributors were not concerned about giving away their IP. Both Hysten (2006) and Ngimwa & Wilson (2012) found that this was a concern, however this not a concern for the lecturers in this case study.

Archer's concept of "agency" can provide a possible explanation for why, despite this 'fear' and concern about infringing copyright, lecturers still contribute OER using an Open license. The mostly AR contributors (n=5) of OER are focused on their ultimate concerns and are able to tolerate a lack of knowledge in order to take action. They are concerned about their lack of understanding, but this does not hold them back as they strategically forge ahead using the limited knowledge they have and following guidance from those who are more knowledgeable.

Archer holds that ARs do not need to complete the puzzle in order to see the picture and the bigger picture in this case is to make their teaching materials available to benefit other interested parties in the rest of the world.

The non-contributors (5 MRs) are held back by their uncertainty and cannot let go of their materials, as they are unsure, in part, of the response of the global audience. Although these non-contributors were very concerned about infringing copyright, there are other factors at play below the surface of this structural constraint. Their ultimate concerns lie elsewhere and they have other barriers including a lack of trust in the audience and a reluctance to contribute materials that they believed are not ready. This lack of readiness is an internal judgement based on their self-critical inner conversations.

At UCT, the poor copyright practices of lecturers, where lecturers admit to cutting and pasting, especially images, into teaching materials (usually slides for lectures). UCT's culture of a lack of tight control over academic practices and strict guidelines for teaching practices has resulted in this contradiction where taking teaching materials beyond the classroom is a cause for concern for contributors and non-contributors of OER alike.

Structurally, IP policy is supported by the Research Contracts and IP Services (RCIPS), and experts in copyright and CC are based in the Law faculty. However, these experts do not impact on the average academic who must make their own decision to abandon the 'copy-paste' culture and take care not to infringe copyright by using materials that are available for reuse. There is also support from OER team members in CILT, and more recently, librarians have also been trained in the area of Open licensing. This peripheral support is not built into the day to day practice of lecturers, and in order to draw on this support, it would require considerable effort and willingness on the part of the academic who may view this as an additional burden.

6.6 The Quality of OER

The contribution of teaching materials as OER can expose poor quality materials, and this causes anxiety on the part of contributors and non-contributors. Because of this, it seems necessary to put some kind of quality assurance process in place. Contributors express confidence in the

quality of their materials. The non-contributors, including many accomplished lecturers, are self-critical and hold back their materials, believing they are not good enough to contribute. The findings add to existing debates in the literature about whether OER should have some kind of quality assurance process (Windle et al., 2010; Clements et al., 2011; Masterman & Chan, 2015).

The first quality issue is that contributors and non-contributors of OER believed that their teaching materials would be improved through peer scrutiny. In other words, they would put more effort into updating and editing materials if they knew that their peers would be looking at them.

The second quality issue is that despite the fact that lecturers felt the quality of materials would improve, they still noted that bad quality materials were available on UCT and other institutional repositories. The majority of lecturers were concerned that the quality of materials contributed as OER into the institutional repository may reflect badly on the institution, and this was more of a concern for the non-contributors. This same concern has been observed by lecturers in general at other universities (Sefton, 2010; Masterman & Chan, 2015). This is in contradiction with the first observation; lecturers feel that materials deposited in the repository would be an improvement on the original teaching materials, and yet they do not show much faith in the peer scrutiny process. An explanation for this might be that the institution does not have any specific guidelines for the production of teaching materials, unlike research materials that undergo a rigorous peer review process as part of the publication cycle. At UCT, there is an exception to this rule, as the new MOOC initiative has some guidelines for criteria for the development of quality materials and video which will all be released as OER.

The contributors were concerned about poor quality materials damaging the institutional reputation. The contributors (mostly AR) focus on work and are often ambitious, climbing the institutional ladder. Any damage to the institution's reputation will, by implication, taint their own academic reputations. According to Archer (2003), ARs are focused on work as their ultimate concern and, by implication, would prefer not to have poor quality materials added to the repository.

It was not initially clear why the non-contributing MRs should be concerned about institutional reputation until they voiced concerns about the readiness and quality of their own materials. MRs spend much of their time contemplating how they can add value to society. They are critics of themselves and society and are concerned about contributing OER in case what they add or someone else adds does not add value. MRs (five out of seven) were reluctant to add OER to the institutional repository if they were not of value. For the MRs, a repository filled with materials that did not add value would potentially give the institution a bad reputation and not be valuable to society. The lack of readiness of materials was a complex area as lecturers' ideas of the nature of readiness was not that clear. According to seven of the 14 lecturers, a quality check might possibly diminish their fears that their teaching materials were simply not ready for contribution. Non-contributors were more concerned about their teaching materials not being ready. Several other authors have noted that lecturers are concerned about the readiness of their materials (Davis et al., 2010; Winn 2010; Kursun et al., 2014). This lack of confidence in teaching materials was not expected in this group of accomplished lecturers. This same lack of confidence has been observed by other researchers (Beetham et al., 2012; Van Acker et al., 2013).

The third quality issue related to OER is who is responsible for the quality of OER. This responsibility ranges from the freedom of individual choice to tight control. The lecturers who were contributing OER felt that it was primarily up to the individual contributor. This evidence is in support of the model of quality assurance present in the 'pride of authorship' model (Mawoyo & Butcher, 2012). Two contributing lecturers felt that worrying about the institution's reputation was not important and said it was up to the user or student to be discerning and select suitable materials. The lecturers who were not contributing OER shifted the language to one of quality control, observing the dangers to the institution's reputation if there were no 'filters', 'gatekeepers' or 'checks'.

The fourth quality issue is that lecturers in this study feel that there should be a quality check on OER. This is consistent with findings from prior research that suggests that the introduction of a quality assurance process could allay the concerns of lecturers about poor quality materials being published (Windle et al., 2010; Clements et al., 2011; Kawachi, 2014; Clements et al., 2015). During the interviews, five contributors opposed to a quality check and felt that it would hold up the process of contribution, making teaching more like research. One contributor felt that it would

impact upon academic freedom, and it would be an additional constraint preventing contribution of teaching materials as OER. Those who were against the quality check felt the responsibility lay firmly with the individual academic. This evidence is in support of the kind of quality assurance present in the 'pride of authorship' model (Mawoyo & Butcher, 2012). Unexpectedly, a quality check was rated as more important for the contributors. These contributors, mostly ARs, want control and a guarantee that their materials and other materials in the institutional repository will be of good quality.

And lastly, lecturers had different views of what they considered the 'quality' of a resource to be. The concept of quality was discussed by these lecturers at different levels: (1) quality in terms of simply editing spelling and grammar (accuracy) and some document guidance with regard to the format of the materials; (2) quality in terms of pedagogical guidance to the user; and (3) quality in terms of the actual content and intellectual coherence of the teaching materials. These are related to the concerns of the lecturers themselves where some non-contributors (n=3) would like a spell or grammar check and some document guidance only. The lecturers, both contributors and non-contributors, who wanted a check on coherence and curriculum compatibility were focused on their teaching in the classroom and were unsure about the outside audience. At Oxford, lecturers divided quality assurance into a two tier approach: production and pedagogic quality assurance (Masterman & Chan, 2015). In this study, level 1 would fall into the production quality assurance and level 2 and 3 would fall under the pedagogic quality assurance.

UCT lecturers have free choice to follow their concerns. The contributors had published their materials as OER despite a lack of guidance from the institution, and many felt it was more important to contribute than to worry about quality. Following Archer (2003), the ARs typically do not look for approval from anyone else, and therefore, they are not worried about the readiness of their materials.

By contrast, the non-contributors (MRs) are self-critical, and they agonise over the relevance and quality of their materials as valuable to society. In discussion, they concur that it would be a good idea to contribute OER. However, they are held back, as they critically analyse quality and also several other issues around audience, relevance and value.

The culture at UCT is mostly one that allows lecturers freedom to teach as they please, and although lecturers can refer to the Teaching and Learning Strategy, there are no structures in place to police or implement this document. There are no explicit structures that govern the quality of materials in the institution, and as lecturers contemplate contribution outside of the institution, this contradiction emerges. The complexity of this interplay is highlighted when the audience of teaching materials is extended beyond the institution to a broader community.

The quality of research is the focus of concern at UCT. These quality issues are embedded in the culture of the institution where academic freedom means that there are very few implemented and monitored guidelines for teaching and associated teaching materials. The structure relates to the culture, and therefore, there is a lack of policy about the production of teaching materials and a lack of quality assurance processes. The relations between culture and structure manifest in the concerns of agents about readiness. However, for the lecturers whose ultimate concerns are focused on contributing to the Global South, these possible barriers do not impact on them as “these are people who both know what they want and also know a good deal about how to go about getting it” (Archer, 2003:254).

6.7 Open scholarship: technology fluency and social media

A combination of technology fluency, social media use and OER contribution indicated the presence of some digital or Open scholars amongst these lecturers. The exploration of Open scholarship and social media was a very small part of this study. Social media use is rated 9th as an area of importance to contribution of OER by these lecturers.

Some contributors appear to resemble the profile of Open scholarship identified in the literature (Scanlon, 2014; Veletsianos & Kimmons, 2012). The identified attributes of Open scholars include the contribution of research in Open Access journals and/or as Open data, the contribution of teaching materials as OER and the use of social media to network and to share ideas and thoughts.

Although there were some forms of media that the contributors had not used at all, there were more cases of non-use in the non-contributor group. This supported an observation made by two participants that perhaps lecturers who do not have strong digital identities do not share. This

observation was reinforced by the high level of confidence in four different forms of social media expressed by contributors compared to non-contributors (Figure 6-3). Four lecturers who are contributing OER are very confident users of social media, two use some social media and one does not use social media at all. The contributors (ARs, n=5) perhaps use social media as a strategy to self-promote and climb the ladder but also as part of their quest for “the acquisition of further knowledge” (Archer, 2003: 253). Because of their own self approval mechanisms, they appear to be more confident at taking advantage of these forms of technology. Three of these Open scholars are also ARs, and it would be interesting to look at a bigger sample to see if other Open scholars also have the same mode of reflexivity. These self-confident and ambitious lecturers seem comfortable with Open forms of scholarly communication.

Despite non-contributors saying that a lack of technology fluency was not holding them back, technical competence and use of social media (blogging, Twitter, Facebook and other) appeared to be related to contribution of OER. Five non-contributors were not using social media (Figure 6-3). On the other hand, two non-contributors considered themselves highly fluent in their use of technology and used social media frequently (Mike/Chloe). Therefore, it is not possible to claim that social media use goes hand-in-hand with OER contribution. These two non-contributors had deeper personal concerns that were precluding them from contributing OER. Social media is not necessarily a predictor of OER contribution. However, when those same participants were checked for social media use, the pattern suggests the non-contributors who are worried about the readiness of their materials and the lack of associated pedagogy are also not social media users (Figure 6-3).

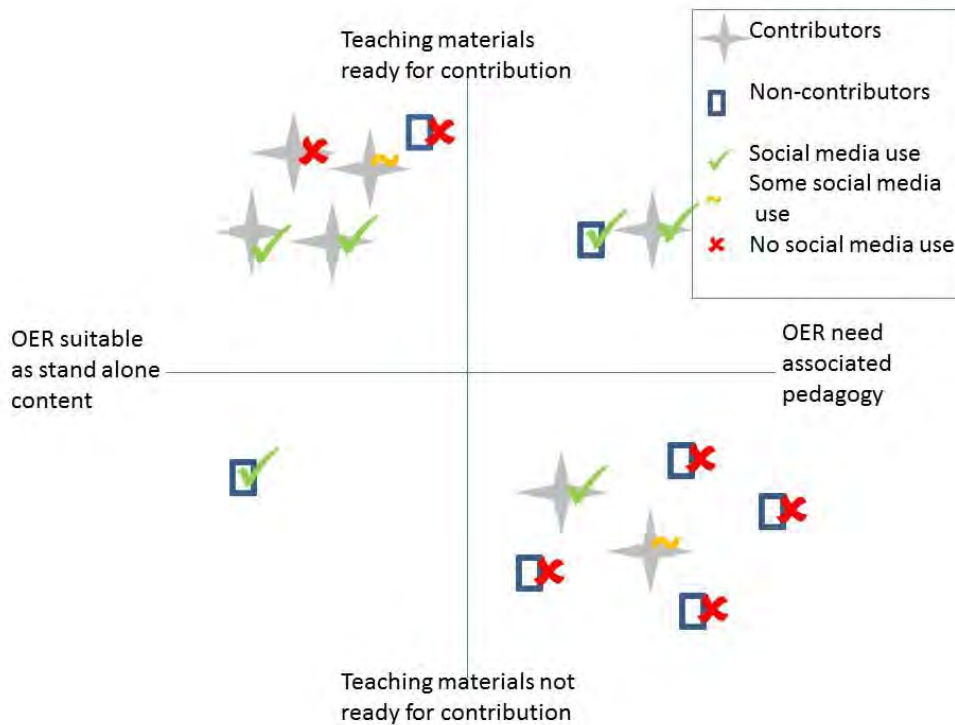


Figure 6-3: Concerns about quality and pedagogy cluster with no social media use

The UCT institutional culture gives individuals the freedom to explore new forms of technology and social networks, and there is no attempt to control this exploration or set out any kind of strategy or guidelines. This freedom enables agents to choose how they want to build their online presence.

6.8 The role of culture: global and institutional (departmental and collegial)

At UCT, 12 of the 14 participants were aware of Open education and 11 were aware that OER were teaching materials. This is good indicator of some awareness even though, in many cases, Open terms were used incorrectly. Six of the seven non-contributors had some awareness, yet this did not necessarily result in contribution. Therefore, knowledge of global Open culture initiatives such as Open education and OER does not seem to directly influence the contribution of OER in this case. In two university studies in the UK only 30% of participants were aware of the Open movement (Rolfe,2012:8).

Lecturers had a range of opinions about the presence of institutional support for Open education. Interestingly, there were different views from within faculties (Law, Health Science, Commerce, Humanities) about institutional support. Lecturers in Science and Engineering were in agreement that there was support of Open education. The sample here is too small to identify any differences across faculties.

In this study, lecturers were contributing mostly for altruistic reasons. It was a choice and conscious decision made in order to achieve their ultimate concerns. This finding does not seem to resonate with Andersen (2010) who argues that a person's natural inclination to share or keep materials can be changed if an institution places value on Openness. This suggests that it is the external motivation that is important for OER contribution. This does not appear to be the case at UCT where there is no ubiquitous culture of sharing. The findings suggest that an Open culture in the university that includes support structures would not necessarily enable non-contributors to contribute OER.

It is also worthwhile noting that those who were already contributing were more concerned about the lack of support than those who were not contributing. Some (n=4) were enabled by the support structures of CILT staff. These lecturers were approached to contribute materials, heard about contributing through a seminar or were given some assistance when preparing their teaching materials.

Non-contributors felt the institution was either marginally supportive or not supportive of an Open culture where lecturers are encouraged to contribute teaching materials as OER. Furthermore, it appears that for those who were not contributing, the support of the institution was not impacting on their decision.

Departmental culture that allows for academic freedom and also encourages collaboration may enable contribution. It seemed from the responses of the lecturers that some of their departments were inclined to contribute teaching materials as OER whilst others were reluctant or even resistant. In some departments, lecturers were already working collaboratively. However, some lecturers (n=3) mentioned that they worked in isolation, focused on their courses and did not want any interference from colleagues. Windle et al. (2010:12) argue strongly that the only way to

get lecturers to share and use OER is to create a community with “a sense of belonging, shared purpose, empowerment and activity”. Nevertheless, creating a community is no guarantee of contributing. One non-contributor was part of a community (department) which seemed to be supportive of internal sharing of teaching materials but be opposed to contributing more broadly.

The influence of colleagues in the same department did appear to have some impact on contribution. One contributor was influenced by colleagues in his/her department. Another contributor had worked collaboratively on his resource and in so doing was influencing his colleagues in his department and peers in his discipline. However, a culture of collaboration at the institutional level or department level is not what made the contributors produce OER. In most cases (n=6), these ARs were working alone, and they were not influenced by colleagues.

Colleagues also had a negative influence on contribution; four lecturers were not contributing because of some influence by colleagues. There is a difference between these two groups, and it is important to explore why lecturers who are not contributing appear to be influenced by their colleagues sometimes. The modes of reflexivity explain why non-contributors were more easily influenced than contributors. MRs (mostly non-contributors) work in different ways both independently and collaboratively. As MRs, they are likely to focus on self-transcendence in order to realise their ultimate concerns, striving to be the best they can in their roles as teachers (practice). These MRs also aim for social transcendence and, therefore, place more importance on working with colleagues. MRs try to align all aspects of their lives, and this includes being content with their social context. Therefore, they aim to build good relationships with colleagues. These last two observations help to explain why these non-contributors seemed to be concerned about the opinions of their colleagues.

The much prized culture of ‘academic freedom’ at UCT means that lecturers are free to collaborate or work alone. Lecturers who choose the path of working alone may be reluctant to have their courses and teaching materials come under scrutiny. UCT has few structures in place to guide how lecturers should collaborate, and the result of working alone means lecturers and focus on their research. The starting point for understanding why these lecturers contributed always comes down to their ultimate concerns and how these agents mediated the surrounding culture and structure in order to transition their projects into practice.

6.9 Technical infrastructure and support

A lack of technological support was not what was preventing lecturers from contributing OER at UCT. Two lecturers (contributors) mentioned that the lack of technical infrastructure and support may hinder contribution across the university. However, when lecturers were asked in more detail whether contributing had been a technical challenge, they felt the technical side of contribution was easy. Those who had not contributed were not concerned about a lack of technological support and did not feel that a lack of technology fluency was a concern or barrier to contribution.

Prior research has shown that lecturers need help with the technical side of preparing and contributing teaching resources and that they are not familiar with the online tools for creating and adapting their teaching materials (Highton, 2012). A lack of technical support has been identified as a barrier to the contributing of teaching materials (Rolfe, 2012). However at UCT, this was not the primary reason for a lack of contribution.

Other studies at institutions in Africa have noted that the lack of technical infrastructure is a fundamental barrier that prevents lecturers finding, using and contributing OER (Tagoe et al., 2010; Ngimwa, 2010; Percy, 2011). Many institutions do not have reliable internet or, in some cases, electricity, and lecturers rely on more traditional paper based modes of teaching. At UCT, there are regular power cuts (termed Load shedding), but these are usually scheduled. When the electricity is functioning, the internet is reliable and quick. UCT is not a typical example of an African institution (as already noted), and therefore, technology is not viewed as a constraint.

The technical structures and support for OER contribution are in place at UCT. Nevertheless, it is not enough to have structures in place and expect OER contribution. The lecturers as agents must decide whether they are willing to contribute their teaching materials or not.

6.10 Extrinsic motivation: Recognition and reward for OER contribution

The contributors of OER at UCT felt it would make no difference if they were to receive formal recognition as part of the annual performance appraisal process, as they would have shared anyway. However, the contributors did recognise that some incentives would support their efforts. Recognition for contributing OER in the form of promotion and/or a reward was

considered an enabler in the literature (Davis et al., 2010; Martins & Baptista Nunes, 2012; Wild, 2011; Ngimwa & Wilson, 2012). By contrast, the findings here do not support those claims that promotion or a reward would influence lecturers' contribution. However, contributors recognise that some support would enable them to contribute more. In the same way, Van Acker et al. (2013) found that a lack of recognition or reward was not a barrier to contribution.

Two contributors who were in the earlier stages of their academic careers felt it would be an incentive to contribute more OER if they received recognition through informal acknowledgement. Moreover, contributors of OER felt a reward in the form of money to employ a student would enable them to share more. Following Archer (2003), ARs contributed to OER because it fit in with their life concerns, projects and practices. Recognition and rewards do not necessarily motivate these lecturers. They contribute as part of their projects and practices. They are also strategic and can see how recognition and reward can free up their time and help them achieve their goals of upward mobility in the institution.

Formal recognition might encourage non-contributors to share, but so many other factors in their contexts would have to change for them to share, that recognition would not be sufficient. Only two of the non-contributing lecturers said a reward, such as a grant, would enable them to share. The non-contributors (mostly MRs) are averse to the idea of any kind of evaluation and would rather take action because they want to. This is a similar reaction that policy infringes upon their academic freedom. As noted above, they do not take guidance from social structures, which could include recognition and reward for OER contribution, but rather strive to achieve their inward focused goals of social and self-transcendence.

This is somewhat unexpected considering recognition and reward is seen as a potential driver of contribution. However, if one considers the culture of UCT where lecturers want the freedom to make their own decisions, an extra pressure of recognition for something they do not want to get involved in might be rejected. At UCT, academic autonomy, a feature of the culture of a research-intensive institution, prevails over structural measures.

Structurally, Open access policy encourages lecturers to add their teaching materials to OpenUCT, and some funding has been set aside for assisting librarians to learn about OER with

the long term objective of having them support lecturers. UCT's Teaching and Learning strategy mentions recognising, rewarding and incentivising sharing OER, but no changes have been made to the performance appraisal and related documentation. Some contributors would like a support structure in place which would encourage them to contribute more OER (n=5).

On the basis of the findings in this research, UCT has a collegial culture that holds academic autonomy sacrosanct, and this seems to motivate lecturers to pursue their roles at the institution. This culture dominates and may counter any structures that may impact on this freedom. Nevertheless some support, such as OER grants, can assist those who are willing to contribute OER. In the case of the non-contributors, a combination of the influence of this culture and their ultimate concerns excludes structures as enablers to contribution.

6.11 Agency in contribution and non-contribution

Enabling institutional structures, such as policy, promotion, reward and technological support, will not necessarily encourage non-contributors to contribute their teaching materials. The current lack of a mandate through policy and recognition for OER contribution does not seem to be a key barrier to contribution. Those agents who have contributed OER as part of their ultimate concerns follow a course of action in order to achieve that concern. It is therefore important to take note of these concerns, as Archer declares, "our currencies are coined in our ultimate concerns, they are non-convertible and their gold standard is the value that their ultimate concern enshrines" (Archer, 2014:292). Their concerns explain why agents find a way to contribute despite constraints in their social contexts. Other authors have come to this same conclusion, that altruism is a driver of contribution (Sclater, 2010a; Rolfe, 2012). However, these authors have not explained why lecturers who acknowledge the altruistic motivation to contribute do not actually contribute. This is where Archer's (2003, 2007a, 2012) modes of reflexivity provide an explanation of the choices lecturers make.

In this study, it was the ARs who were mostly the contributors (n=5). This was somewhat surprising as they did not always put forward altruism as the initial reason for contribution. Some of their concerns and projects were based on self-interest and not on any ideals to uplift society (social justice concerns). This can be explained through the lens of their mode of reflexivity as

ARs. They are practical, task-focused and work strategically towards their ultimate concerns which may include sharing knowledge across the world and/or climbing the institutional ladder.

Participants were asked to consider where contribution and Openness fitted into their ultimate concerns. Those who were contributing felt that it did fit in and gave brief affirmative responses. However, a lack of time since their initial contribution meant they had not added more resources. Accordingly, this lack of ongoing contribution highlights the interplay between structure and agency. This raises an important issue around the sustainability of OER contribution. These agents were willing to contribute because of their ultimate concerns, yet they need some support structures to be in place to sustain this contribution and make it less time consuming.

MR non-contributors (five out of seven) had personal concerns about education and their belief in the importance of education, but their focus was on making a difference in their classrooms. MRs also have altruistic aspirations, but these are focused on their students. Their actions are more inwardly directed on self-transcendence.

Most of the non-contributors (six out of seven) felt that in principle, because of their ideals, contribution did fit in. However, they still had concerns which may not be easy to overcome. They raised concerns about who would use the materials and how lecturers need to work together. They were unsure of the added value of their materials and seemed to require support from colleagues. Although they expressed a personal desire to contribute, this desire was overridden by conflicting concerns that were top of their list of priorities, such as classroom teaching. They referred to a lack of supporting structure and time as being constraints, constraints which are overcome by contributors.

6.12 Summary of Discussion

In the Table 6-1 below, each theme can be explained in relation to the actions of the agents in this study. The different forms of internal conversation (modes of reflexivity) help to explain why these cultural and structural factors are barriers or enablers for some agents and not for others.

Table 6-1: Ways in which the dominant two modes of reflexivity represented in this study mediate structural, cultural and agential factors in relation to key themes

Structural, cultural and agential factors	AR (5 contributors)	MR (5 non-contributors)	Themes
Ultimate concerns	practical order	self and social transcendence (Archer, 2007a:231)	Agency and altruism ARs: contribution to Global South and developing world MRs: focused on the best they can be in the classroom
Action orientations	self-discipline (self-directed)	self and social-transcendence	Institutional and departmental support ARs: work alone or collaborate but do not need others to complete their actions MRs: work alone or collaborate but strive for accordance with their social context and are influenced by colleagues
Look for approval	self (self-confidence)	self-critical/always improving (personal growth)	Quality, pedagogy and legal issues ARs: less worried about quality, pedagogy and legal issues (self-approving) MRs: more worried (self-critical)
Consequences for patterns of mobility	upwards mobility	lateral mobility (volatility)	Challenge of competing roles ARs: work on all roles and are mostly ambitious MRs: teacher role and classroom focus, they do not always climb the institutional ranks
Internal conversations	task orientated	value orientated	Time challenge AR: time on task MR: time deliberating value
Main institutional impact	market/work	third sector/other	Inward and Outward facing roles AR: multiple roles including research and impact outside for classroom MR: excellence in the classroom

To sum up, the underlying causal mechanism of agency explains why some lecturers are contributing and others are not. The ultimate concerns of contributors include a desire to help people in the Global South, whereas non-contributors are focused on making a difference in their own classrooms. Both groups display a level of altruism but the altruism is directed at different audiences. The mostly AR contributors follow the ultimate concern of sharing knowledge with a

wider audience than the classroom with varying degrees of support from the institution and their departments. The mostly MR non-contributors strive to achieve harmony with their colleagues and would rather not contribute if they feel it may upset them even if they think contribution may be a worthy course of action. Structural issues such as the quality of OER, the lack of pedagogy associated with OER and copyright concerns stand in the way of contributors. Even if these concerns were removed, non-contributors would still have deeper concerns as they self-critically deliberate the value their teaching materials have to others.

6.13 Theoretical observations in contrast to Archer

Archer's theoretical framework has proved a powerful tool for understanding the causal mechanisms of agency in explaining contribution and non-contribution. It has been useful to test out Archer's modes of reflexivity through the interview questions and the ICONI tool. These tools are relatively new (developed in 2003), and this research adds to the corpus of empirical studies.

It was not expected that HE would include many AR's. In fact, when I started this research, I did not think that the modes of reflexivity would be my main explanatory tool. I had planned on focusing on 'ultimate concerns' and their role in agency. This was because I assumed, based on Archer's assertion that most lecturers are MRs, that most of my participants would be MRs (Archer, 2012:293). This study has shown that HE consists of both types of reflexivity, necessarily, as these have different purposes in society. ARs help to move HE forward through their ambition and ability to embrace change. This study has therefore provided greater clarity as I have used 'ultimate concerns' and modes of reflexivity together.

Unlike Archer's original sample, many of the participants in this study, whether they are MRs or ARS, felt that their concerns were dovetailing. The mostly AR contributors felt that their concerns dovetailed and mentioned being helped by their working environment and enjoying work.

Amongst the non-contributors, there was also a general satisfaction with their *modus vivendi*. These MRs did not express an intention to move to another institution or to change their current jobs despite the constraints, which is quite different to what Archer (2003) found in her study. These MR non-contributors appeared content in their current positions. They did not talk about

work needs or family. They seemed satisfied and were not looking to change their contexts. Therefore, there does not appear to be any clear relationship between contribution and the current dovetailing of interests of each person. It appears that being satisfied in a current situation in a personal capacity does not relate to contribution or non-contribution.

I also must add a note of caution around the one academic who was classified according to the ICONI questionnaire as being Fractured(FR). It is possible that he could have misinterpreted some of the questions. He is also not a first language English speaker. His next most dominant score was MR. Also, although I have talked about the predominance of ARs in the contributors and MRs in the non-contributors, both groups overlap. The rich interview data includes findings about life concerns and life histories, and for each person, the reasons behind their actions are made clearer through Archer's SR.

6.14 Summary

This discussion has covered all the key themes that have been explored through data collection. The themes were discussed in comparison to the existing OER literature, and S was used to explain why the lecturers in this study may or may not be influenced by culture and structure. The lecturers as agents mediate the cultural and structural constraints and enablements and make choices on whether to contribute or not to contribute their teaching materials as OER. In the final chapter, the research questions set out in Chapter 1 will be addressed and the implications and recommendations from this work will be summarised. In Chapter 7, the claims made in this chapter will be highlighted and related to a set of recommendations.

Chapter 7: Conclusion and recommendations

This chapter includes a final response to all the research questions and a model of how theory has enabled a deeper understanding of contribution and non-contribution in a research-intensive institution. In addition, there are a set of recommendations to university management, administrators, academic developers, librarians, OER practitioners and lecturers who are considering starting or who currently participate in OER initiatives.

This study may have some limitations which include: the small sample size and the case study approach in one institution. However, this in-depth case study approach was relevant as a method in this research as its purpose was to explain whether the understanding of enablers and barriers to OER contribution found at other institutions applied to the UCT context. In addition, when an observation did not fit prior research findings, a theoretical approach was used to give possible explanations of the potential 'black swans' in order to stimulate further investigation by future researchers. Initially, it was thought that this institution, being in the Global South, would be representative of other Global South institutions. However, UCT represents typical research-intensive institutions which exist in the Global South as well as the Global North.

The objectives of this thesis included trying to understand the lack of uptake of OER in an institution. It was noted from the literature review that OER has been suggested as a potential solution to the various challenges in HE: higher demand for, increasing cost of and variable quality of HE. In this study, the argument was made that lecturer contribution is key to the growth and sustainability of OER. The results presented here come at a time when studies of this sort are useful for understanding the way forward for OER initiatives. In this thesis, it has become apparent that lecturers contribute OER because of a combination of personal concerns, such as Global South education and personal agency, manifested in their internal conversations and modes of reflexivity. Lecturers who are not contributing OER focus their concerns on their students and are unlikely to contribute.

7.1 Global and/or institutional culture influences upon lecturers' contribution of OER

7.1.1 Global culture

At UCT, 12 of the 14 participants were aware of Open education and 11 were aware that OER were teaching materials. This is a good indicator of some awareness, even though in many cases 'open' terms were used incorrectly. Six of the seven non-contributors had some awareness, but this did not necessarily result in contribution. Knowledge of global Open culture initiatives such as Open education and OER does not seem to directly influence the contribution of OER in this case.

7.1.2 Institutional culture

The much prized culture of 'academic freedom' at UCT means that lecturers are free to collaborate or work alone. This 'academic freedom' incorporates the feature of 'academic autonomy' with an emphasis on freedom from controls and systems. Thus, the institutional culture empowers the agents, who may choose the path of working alone and may be reluctant to have their courses and teaching materials come under scrutiny. UCT has few structures in place to guide how lecturers should collaborate, and this siloed activity is potentially useful to the university, especially if it means lecturers sit behind closed doors and focus on their research. However, it is not necessarily conducive to collaboration that might encourage the contribution of OER.

Lecturers held a range of opinions about the presence of institutional support for Open education even within a Faculty (Law, Health Science, Commerce, Humanities) about institutional support. The sample here is too small to identify any differences across faculties. The findings suggest that an Open culture in the university that includes support structures would not necessarily enable non-contributors to contribute OER.

The institutional culture appears to lag behind the structures of Open that are present. Instead, structures are introduced by agents who follow global trends in Open education enabled by technology. Because of this laissez-faire culture and the power given to the agent, the entry point for understanding why these lecturers contributed always comes down to their ultimate concerns and how these agents mediate the surrounding culture and structure in order to transition their projects into practice.

It seemed from the responses of the lecturers that some of their departments are inclined to contribute teaching materials as OER whilst others are reluctant or even resistant. Departmental culture that allows for academic freedom and encourages collaboration may enable contribution.

The influence of colleagues in the same department had some impact on contribution. One contributor was influenced by colleagues in her department. However, a culture of collaboration at the institutional or departmental level is not what made the contributors produce OER. Colleagues also had a negative influence on contribution, evidenced by four lecturers who were not contributing because of some influence by colleagues. There is a difference between the contributors and non-contributors. The modes of reflexivity explain why non-contributors were more easily influenced than contributors. As most of the non-contributors were MRs (Archer, 2003), they try to align all aspects of their lives. This includes being content with their social context. Therefore, they aim to build good relationships with colleagues and comply with their colleagues' views.

On the basis of the findings in this research, UCT has a collegial culture that holds academic autonomy sacrosanct, and this seems to motivate lecturers to pursue their roles at the institution. This culture dominates and may counter any structures that could impact on this freedom.

7.2 Global and/or institutional structures that influence lecturers contribution or non-contribution

7.2.1 Campus-based classroom structures

Lecturers who consider teaching their most important role in the institution often have an interactive teaching style. These more traditional, often charismatic teachers develop their teaching methods in an intuitive way and are not used to making what they do explicit and public. Content is created in class, and they do not produce notes or course materials. Therefore, they are particularly worried about the lack of pedagogy associated with OER and the readiness of their materials for contribution as OER.

The face-to-face classroom space, the mode of engagement at a campus based university, was very important for the non-contributors of OER. All of them mentioned their interactive teaching style. The majority of non-contributors of OER mentioned this as a primary reason for not

contributing to OER, as they felt their teaching materials were not suitable for an audience outside of their classrooms. The lack of explicit pedagogical explanations around the use of materials released as OER is a possible reason why some lecturers are not contributing.

Lecturers in this study identified the lack of time to work on teaching materials as a deterrent to the contribution of OER. Time is identified as a barrier in many OER studies. But this idea of lack of time to work on materials is indicative of a deeper issue around the alignment of personal concerns and where agents have contribution as a concern they make time.

7.2.2 Influence of quality of OER concerns on contribution and non-contribution

Overall, lecturers at UCT have concerns about the quality of OER partly because research-focused residential universities do not have widely enforced quality assurance systems that monitor the quality of teaching materials. There is a slight tension here, with contributors having different views to non-contributors. Contributors express confidence in the quality of their materials while non-contributors, including many accomplished lecturers, are self-critical and hold back their materials, believing they are not good enough to contribute.

The contribution of teaching materials as OER can expose poor quality materials, and this causes anxiety on the part of contributors and non-contributors. Because of this, it seems necessary to put some kind of quality assurance process in place.

Four key claims emerged around the quality of OER, and these have been explained and discussed in detail through the lens of SR in Chapter 6. Firstly, contributors and non-contributors of OER believed that their teaching materials would be improved through peer scrutiny. In other words, they would put more effort into updating and editing materials if they knew that their peers would be looking at them. Secondly, despite the fact that lecturers felt the quality of materials would improve, they still noted that 'bad quality' materials were available on UCT and other institutional repositories. Thirdly, opinions differ as to who is responsible for the quality of OER. This responsibility ranges from the freedom of individual choice (a view held by some contributors at UCT) to tight control with peer review of all resources. Fourthly, lecturers in this study felt that there should be a quality check on OER. However, the contributors had published

their materials as OER despite a lack of guidance from the institution, and many felt it was more important to contribute than to worry about quality.

7.2.3 Unexpected findings

7.2.3.1 *Open scholarship*

A combination of technology fluency, social media use and OER contribution indicated the presence of some digital or Open scholars amongst these lecturers. The exploration of Open scholarship and social media was a very small part of this study. Some contributors appear to resemble the profile of Open scholarship identified in the literature (Scanlon, 2014; Veletsianos & Kimmons, 2012). Although there were some forms of media that the contributors of OER at UCT had not used at all, there were more cases of non-use in the non-contributor group. This supported an observation made by two participants that perhaps lecturers who do not have strong digital identities do not share. Five non-contributors were not using social media. On the other hand, two non-contributors considered themselves highly fluent in their use of technology and used social media frequently. Because of this variation, it is not possible to make a claim that social media is a predictor of OER contribution.

7.2.3.2 *Technical support and infrastructure*

A lack of technological support did not prevent lecturers from contributing OER at UCT. The technical structures and support for OER contribution are in place at UCT. Nevertheless, it is not enough to have structures in place and expect OER contribution. The lecturers, as agents, must decide whether they are willing to contribute their teaching materials or not. Those who had not contributed were not concerned about a lack of technological support and did not feel that a lack of technology fluency was a concern or barrier to contribution.

7.2.4 Understanding of copyright legislation and the awareness of Creative Commons influence upon contribution

Uncertainty about the copyright of educational materials was a concern for both contributors and non-contributors. All the lecturers who were concerned about copyright expressed some confusion and uncertainty about copyright. The contributors of OER are focused on their ultimate concerns (the development and education of the Global South) and are able to tolerate a

lack of knowledge in order to take action. Contributors are a little concerned about their lack of understanding, but this does not prevent them from producing OER.

The non-contributors at UCT are held back by their uncertainty and cannot let go of their materials, as they are unsure, in part, of the response of the global audience. Although these non-contributors were very concerned about infringing copyright, there are other factors at play below the surface of this structural constraint. Their ultimate concerns lie elsewhere, and they are mostly focused on teaching in the classroom.

At UCT, the poor copyright practices of lecturers, as well as their lack of awareness and understanding of the copyright of educational materials, is indicative of the *laissez-faire* culture. Lecturers admit to cutting and pasting, especially images, into teaching materials (usually slides for lectures). The result of this poor copyright practice is the reluctance of lecturers to expose their teaching materials as OER.

7.2.5 Enablements and constraints of institutional policy on OER contribution

Both contributing and non-contributing UCT lecturers felt that a policy forcing them to contribute had the potential to violate their academic freedom and negatively influence their decision to contribute OER. An Open access policy exists as part of the structure at UCT, but lecturers exercise agency and make their choices, such as adherence to policy, according to their concerns. The presence of a policy should not be conflated with its enactment. In other words, although the policy exists, its presence does not explain the way people feel about it or act upon it. The adherence to an OER policy depends not only on the institutional culture, but also on the lecturers' types of reflexivity.

The contributors, mostly ARs; (five out of seven), take a strategic stance towards constraints and enablements such as policy, and will only abide by policy rules if it fits in with their ultimate concerns. They are self-driven individuals who will do what works for them in order to achieve their ultimate concerns whether or not there is a policy guiding their actions. The non-contributors included five MRs who, according to Archer (2003), are subversive in their stance to both constraining and enabling structures in their contexts, as they will only follow policy if it fits in with their own high ideals and life concerns.

OER contributors are not constrained by structures, such as policy, but rather they harness structural powers when necessary in order to achieve their agential aims. Policy does not necessarily influence lecturers' willingness to contribute OER in 'collegial type' HEIs where academic freedom is sacrosanct.

7.2.6 The role of institutional recognition and reward mechanisms in contribution

The contributors of OER at UCT felt it would make no difference if they were to receive formal recognition as part of the annual performance appraisal process since they would have shared anyway. However, the contributors did recognise that some incentives would support their efforts. Formal recognition might encourage non-contributors at UCT to share. However, so many other factors in their contexts would have to change for them to share that recognition alone would not be sufficient for them to change their practice.

Institutional structures such as grants for OER development can potentially enable those who are willing to contribute their materials. Four contributors were enabled by grants. Small grants can be used to employ a student or web specialist to update and clear copyright of materials, and in so doing, lecturers do not have to spend their time with the more mundane aspects of the materials development process. Small OER development grants enabled some of the contributors, who had already made a decision to share and who found time to submit a formal grant application, to transition their project into practice. Only two of the non-contributing lecturers said a reward, such as a grant, would enable them to share.

At UCT, recognition and reward for OER contribution is not seen as a potential driver of contribution. However, if one considers the culture of UCT where lecturers want to have the freedom of to make their decisions, an extra pressure of recognition for something they do not want to get involved in might be rejected.

7.3 Lecturers' agency in relation to contribution

The current lack of a mandate through policy and recognition for OER contribution does not seem to be a key barrier to contribution. Instead, it would seem that those agents who have contributed OER as part of their ultimate concerns in their lives follow a course of action in order to achieve that concern.

In this study, five out of seven contributors were ARs. This was somewhat surprising, as they did not always put forward altruism as the initial reason for contribution. Some of their concerns and projects were based on self-interest and not on any ideals to uplift society (social justice concerns). This can be explained through the lens of their mode of reflexivity as ARs. They are practical, task-focused and work strategically towards their ultimate concerns which may include sharing knowledge across the world and climbing the institutional ladder.

MR non-contributors (five out of seven) had personal concerns about education and the importance of education in the development of South Africa, but their focus was on making a difference in their classrooms. While in some cases the non-contributors express a personal desire to contribute, this desire is overridden by conflicting concerns that are at the top of their lists of priorities, such as classroom teaching. They refer to a lack of supporting structure and time as being constraints, whereas it appears that the reasons for not contributing are more personal.

Agency expressed through the mode of reflexivity seemed to highlight the reasons for OER contribution. Contribution or non-contribution of teaching materials as OER appears to be a deep concern and a heart-felt matter for lecturers. Lecturers who believe that contribution is for a good purpose also believe that their materials will be valued and useful to others. This belief is embedded in their personal concerns. What is not clear is the depth and strength of belief if it were to be challenged by an instance of broken trust or misuse. It is also not clear from this study whether a lecturer might shift their beliefs from not seeing value to seeing value in OER contribution. The analysis of internal conversations suggests that unless ultimate concerns change (for example, sharing teaching materials in the classroom to sharing teaching materials beyond the classroom), a belief or way of thinking is unlikely to be transformed. Lecturers' ultimate concerns are shaped by their social conditioning, and if agents do re-evaluate these, it is possible that non-contributors may re-consider their concerns. Contribution is value-driven and emotional, and for those who are governed by the value of teaching or education in a classroom, the value of contribution is not visible (MRs).

7.4 Theoretical tools for examining the interrelationships between culture, structure and agency in lecturers' contribution

This study adopted critical realism as its underlying philosophical approach. It used a unique approach of combining two theoretical approaches. AT was used as descriptive framework in order to tease out the potential enablers and barriers of OER contribution and non-contribution of structures inside and outside of the institution. AT also enabled the articulation and description of contradictions at four levels: within nodes, between nodes, between old systems and between existing systems. The use of the AT framework modelled here can be replicated in other studies in order to compare contradictions in different institutions in different geographic locations. AT was useful, but it was limited in explaining the different actions taken by subjects.

SR has aided an explanation of the relations between culture, structure and agency. Most importantly, the use of SR surfaced the underlying causal mechanism of agency and the central role that agents play in determining their needs and aspirations. It provided a comprehensive language and set of tools to tackle the explanation of contributor and non-contributor. Firstly, analytic dualism was used to separate out enablers and barriers into culture, structure and agency. Secondly, Archer's theory of life concerns was used in order to discover the ultimate concerns, projects and practices of these lecturers to explain why some had contributed OER and some had not. Lastly, modes of reflexivity were identified through ICONI, a tool developed by Archer (2008), and these modes and their stances towards society revealed the pivotal role of agency in the contribution or non-contribution of OER.

SR proved to be a powerful theoretical lens because of the somewhat emotional nature of the topic. Sharing can be close to one's heart, and this theory was therefore useful for understanding personal choices about sharing teaching materials.

7.5 Relations between global and institutional culture, global and institutional structures and individual agency and their influence on contribution

The contribution of OER is the result of the interplay between cultural and structural constraints and enablements and, most importantly, the choices made by agents (Figure 7-1: Relations between culture, structure and agency influencing OER contribution. This study found that contributors are not influenced by global culture or the culture of the institution even though

they indicate that they see the importance of more consistent encouragement of Openness from top management. Contributors recognise the need for structures to be put in place such as a grant system, copyright and CC assistance and some guidelines around the quality assurance of OER in the institutional repository. However, they do not want to be forced to contribute through policy and they would prefer to choose to contribute without being told to do so.

These cultural and structural aspects are related, and for contribution, there is a need for some structure delicately balanced within the culture of academic freedom. Despite inconsistent support for OER and few structures in place to support the murky areas of copyright and quality concerns, these contributors exercised their agency and made the choice to create and share OER. The mechanism that can explain this choice is their mode of reflexivity. To understand why they contributed OER, a detailed understanding of each participant was necessary. Contributors' concerns included educating the people of the Global South. Because of this concern, when an opportunity for a grant or support was presented to them, they were enabled to contribute. Although they are concerned about the wellbeing of people in the Global South, they are also interested in their own personal growth. Contributors multi-task and are able to focus on both teaching and research in their drive to succeed. They are self-interested, self-driven and task-focused. They are not held back by any limitation in technical ability and are not always frequent social media users. Of fundamental importance is that these contributors believed that their knowledge had added value for others, demonstrating the concept of knowledge self-efficacy (Van Acker et al., 2013). Contributors of OER present an interesting blend of altruism and ambition.

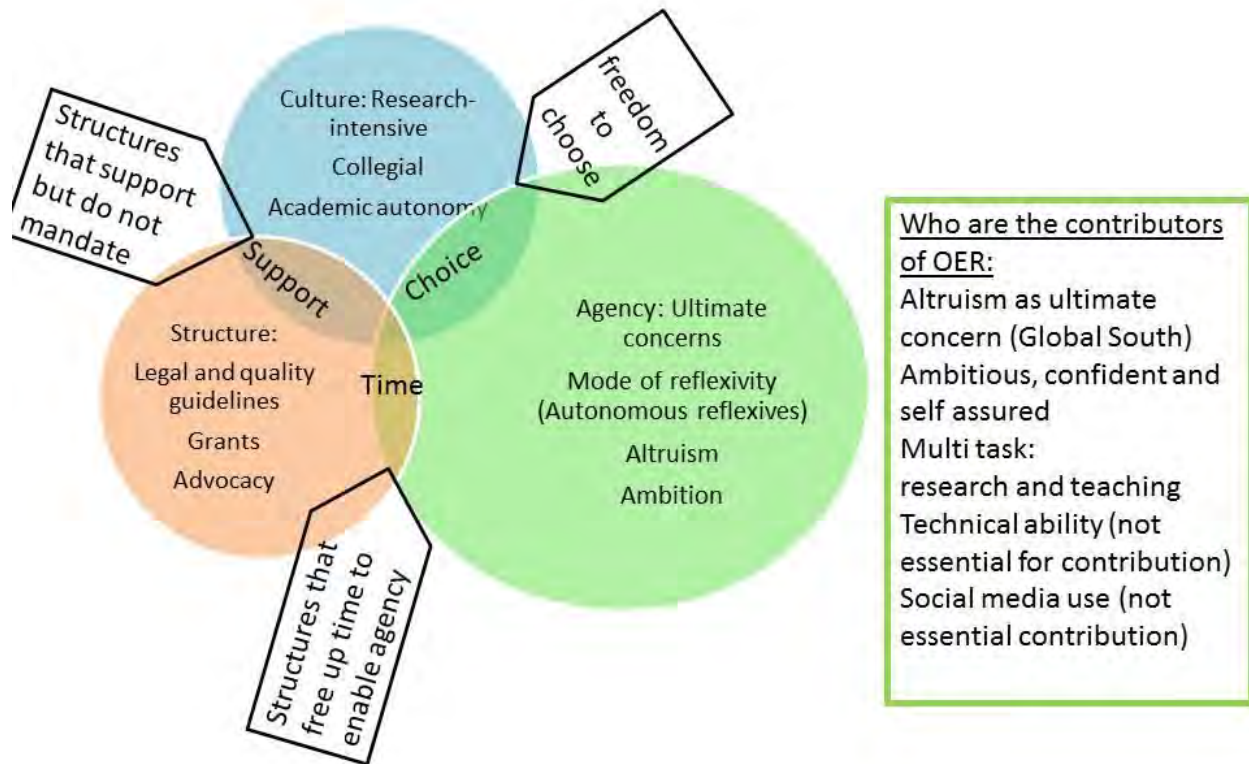


Figure 7-1: Relations between culture, structure and agency influencing OER contribution

The non-contributors of OER are also altruistic, but it appears that their altruism is more inward and value-focused, and they strive for a kind of idealism where their values, ideals, students and colleagues are all in accord (Figure 7-2). The non-contributors of OER are troubled by the thought that they would be forced to contribute via policy. They would not choose to contribute OER even if they were recognised and/or rewarded for doing this. They worry about their own lack of understanding of copyright and their concerns about the quality of their materials to the extent that they hold back on contributing OER. The inconsistent support of OER by the institution and the lack of structures may explain their non-contribution, but the explanation is actually found in the reflexivity of these non-contributors. For the most part, these non-contributors' ultimate concerns are focused on the students in their classrooms. They do not see the intrinsic value of contribution beyond their own classrooms. Even when the possible benefits of contribution are explained, they still have reasons not to contribute. These reasons include concerns about third party copyright infringement and the quality and readiness of their teaching materials. It would

seem that these non-contributors' self-critical inner conversations hold them back from putting materials up as OER.

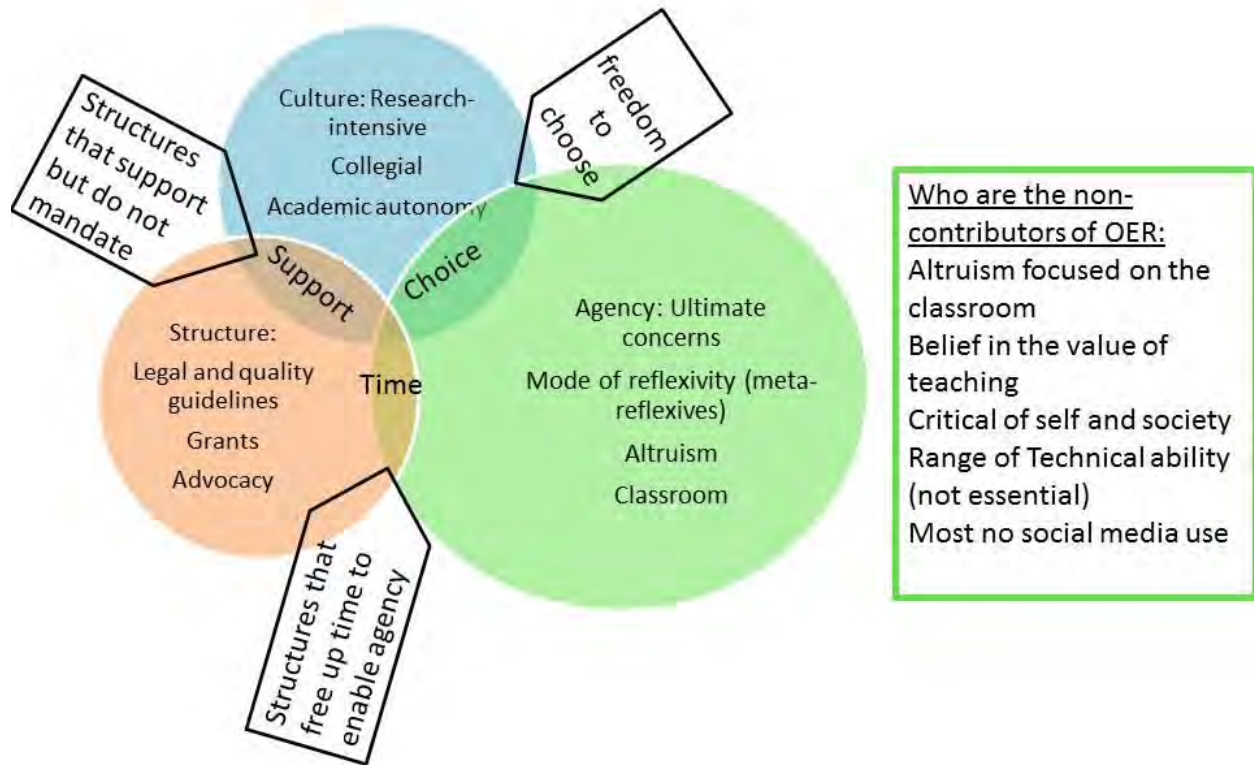


Figure 7-2: Relations between culture, structure and agency (non-contribution)

7.6 Implications of the research

The culture of the institution will influence how Open initiatives are formed, the structures that govern not only those initiatives but all work done in the institution and how those structures are enforced (Figure 7-1: Relations between culture, structure and agency influencing OER contribution). The readiness of the institutional culture needs to be taken into account if an OER initiative is being considered or sustained. In this study, institutional support for Open education seemed to vary from faculty to faculty, and it was not possible to gauge how much of an impact this had on contribution of OER. Perhaps if institutions showed strong support for contribution of teaching materials to create an Open culture, then there may be a more obvious relationship between Open culture and contribution.

Institutions (culturally and structurally) and the lecturers (agents) that work in them are challenged to rethink their traditional pedagogies as new modes appear, such as blended learning and MOOCs. These new, often technologically led, pedagogies alter cultural and structural aspects (the situational logics) of the institution. In addition, lecturers are being asked to share their research in OA journals or in institutional repositories and contribute their teaching materials as OER. If lecturers are concerned about their disciplines and their research, the change might begin in OA and later filter to OER and pedagogy. Lecturers may feel some pressure to change some of their established practices in order to keep up with international trends. Many lecturers are likely to resist these changes and remain focused on teaching in their classrooms. They may be cautious about changing their audience and moving beyond their students. Another explanation is that lecturers are focused on their research and are not willing to put in the extra time and effort to change their pedagogy. OER are just another dimension introduced into the institutional system. For some lecturers, contributing OER is a natural next step beyond their existing sharing practice, but for others, contribution is not part of their concerns.

OER are a new element of pedagogy and curriculum practice due to technological innovation. OER contribution is in the hands of individual lecturers, and at UCT, the rules that govern any teaching material development, including OER, are not explicit or monitored. Because of this exclusivity, the OER idea on its own is unlikely to get more than voluntary traction. The dominance of the principle of academic freedom in the institutional culture allows lecturers the choice of how to engage with global structural (technological) changes (and even social justice needs) and to continue to operate as powerful agents (disciplinary experts). It is the cultural mechanism of academic freedom that is giving institutional space to their agency, thus allowing their individual modes of reflexivity to be so decisive in this context.

Archer (2003) says that people do re-evaluate their ultimate concerns and change them; perhaps some of the non-contributors will shift the focus of their concerns. Different combinations of cultural and structural enablers may move those reluctant to contribute. The culture of support for Open education, including OER, and structures to support contribution of OER should be put in place. This should be done more for the contributors than the non-contributors in order to sustain OER contribution to institutional repositories. Various structural changes are recommended below. From the data, it seems copyright awareness for lecturers is vitally

important and a consideration of some form of quality assurance is needed. Even with all these structures in place, it is still up to the agent, and that choice may be to focus on students in the classroom and not on a more global audience.

7.7 Recommendations

7.7.1 University management/administration

It is suggested that university management/ administration collaborate with academic developers to achieve these recommendations.

This research has found that the presence of a policy does not result in the adherence of policy, and university managers and administrators should approach policy with some caution. OER and OA policies are recommended as guiding documents, but care must be taken to enforce an institutional mandate if the institutional culture embraces academic freedom.

Growing an Open culture and organisational structure

- Promote awareness of Open education through seminars and workshops (in collaboration with academic developers)
- Incentivise contribution of OER through its inclusion and recognition in Ad Hominem promotion both in the Teaching and Social responsibility roles
- Consider alternative metric systems for scholars, such as citations of teaching and research materials
- Offer small grants to enable contribution
- Identify, encourage and reward champions and other externally focused lecturers who might contribute or continue to contribute OER

Supporting the development of quality guidelines for OER created for a university repository.

- Develop a flexible quality assurance mechanism in the context of the institution, its culture and the resources available

Broad quality assurance options can include:

Light touch (facilitative-help and guidance)

- a) Production level editing: grammar check with some attention to design and format

b) Pedagogic level quality assurance: critical reading by colleagues or peers in the same discipline of materials submitted as OER

Medium to heavy touch (organisational-prescriptive)

a) Production level: specific templates and tight design control

b) Pedagogic level: could include a committee or panel who vet all OER to ensure high quality

For many contributors who value their academic freedom and do not want to be evaluated or controlled, a 'Pride of Authorship' model will be sufficient to ensure quality.

These quality assurance processes can be supplemented, if deemed necessary with web tools created by repository designers that encourage peer ratings and feedback. This could be considered light touch and may be the only method used.

7.7.2 Academic developers

It is suggested that academic developers collaborate with Library staff and copyright experts to achieve the following recommendations:

- Invest in training for lecturers on the following: a) understanding the institution's copyright policy, b) how copyright works and c) CC awareness and use of the licences
- Provide guidelines around copyright for educators that can be read quickly and used as a reference
- Interrogating the possibilities of MOOCs and their relationship to OER
- Encourage the Open licensing of teaching materials associated with MOOCs. Volunteer lecturers prepared to step out of the classroom and attempt MOOCs are assured that their materials have been through a rigorous quality assurance process that considers pedagogy and context (performed by academic developers in support units). It is recommended that future research explore the relationship between contribution, non-contribution and MOOCs.

7.7.3 Librarians

It is suggested that librarians collaborate with Academic developers and copyright experts

- Offer advice, one-to-one or one-to-many, on copyright and CC

- Collaborate with educational technologists and academic developers (OER practitioners) to create workshops on finding OER, creating OER and contributing in a range of formats for university scholars

7.7.4 OER Practitioners

It is suggested that OER practitioners collaborate with all stakeholders

- Existing contributors can be encouraged and supported through institutional structures. In addition, there are potential contributors who can be identified and supported with some institutional structures that will enable them to do so.
- Encourage lecturers to contribute their teaching materials as the data here has shown some are willing but just need a little extra support.
- Those who do not want to contribute and who are focused on their classrooms should perhaps be left to do what they do best, as in society agents must invest in the roles that they are concerned about. However, they can be encouraged to release their teaching materials for use by other academics within the university as a means to promoting good practice.

7.7.5 Contributors of OER

- Raise personal visibility by raising awareness of the OER both at the contributors home institution but also through the use of social media
- Consider building your online presence
- Embrace and explore the idea of Open scholarship
- Target key stakeholders and communities that may benefit from the use of your materials

7.8 Future Research

Future research to investigate the role of policy in multiple institutions and its impact on day to day practice would build on the findings in this thesis. In other kinds of institutions reflecting more bureaucratic or corporate management styles, policy is more likely to be tightly implemented and enforced, and the lecturers in those institutions may be more accustomed to less freedom and will perhaps capitulate and do as they are told.

Open pedagogic models and their relationship to social media and OER is a potential area of further study especially using a framework like Archer's to understand why lecturers choose certain actions.

In this study, the discipline associations of the lecturers were removed in order to protect their identities. In future research, the role of disciplines and their associations and councils in the promotion and reward of OER could be explored. These are international bodies and often have more clout than local institutional management in their influence over lecturers. High-flying lecturers are operating in this international rather than local arena, and thus global recognition is what counts for them to further their careers.

The use of Archer's SR, especially the concepts of "ultimate concerns" and also the lens of reflexivity, could be tested on other samples of lecturers to further the understanding of the modes of reflexivity and change in an institution.

Archer's modes could be used to identify the attributes of contributors and non-contributors building on other work that considers OER user attributes and teacher attributes.

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Appendix

Appendix A: Questionnaire 1

Background questionnaire

What is your nationality?

What is your discipline? (within your department)

What is your age?

- 21-30
- 31-40
- 41-50
- 51-60
- 61-70

What are your qualifications?

How many years have you taught at UCT?

How many years have you taught elsewhere?

Please answer the following question about technology. My technology skills are: Choose one of the following below.

- Not fluent
- Fluent
- Highly fluent

Technology offers many opportunities, do you find these opportunities...

- Challenging
- Productive
- Overwhelming

How useful is technology in your teaching?

- Mildly useful
- useful

- Very useful

How might technology help you in your teaching?

Might technology hinder your teaching in some ways?

How motivated are you to learn more about technology?

- Unexcited
- Eager
- Very eager

How do you share your teaching materials with students, colleagues or peers?

Please complete the following grid

	Not used	User	Confident user	Very confident user
Word processing (e.g. MSWord, Open Office Writer)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of specific technologies [Presentation software (e.g. MS PowerPoint, OpenOffice Impress)]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of specific technologies [Learning management systems (e.g. Moodle, Sakai, KEWL, Blackboard)]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of specific technologies [Web-based documents (e.g. Google Docs, Google Forms)]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of specific technologies [Wikis (e.g. Wikis within an LMS; MediaWiki, Wikispaces, PBWiki)]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of specific technologies [Blogging (e.g. Blogger, WordPress, Live journal)]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of specific technologies [Microblogging (e.g.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not used	User	Confident user	Very confident user
Twitter)]				
Use of specific technologies [Social networking (e.g. Facebook, MySpace)]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of specific technologies [Social media (e.g. Flickr, YouTube, Slideshare, Picasa, Vimeo)]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of specific technologies [Social bookmarking (e.g. Delicious, Zotero, Mendeley)]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of specific technologies [Virtual worlds (e.g. Second Life)]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of specific technologies [Concept and Mindmapping (e.g. Bubbl.us, CMap)]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of specific technologies [Instant messaging (e.g. MSN, GoogleTalk, Mxit)]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of specific technologies [Internet phone or video conferencing (e.g. Skype)]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of specific technologies [Lecture capturing – (e.g. Opencast) Podcasting (e.g. Audacity)]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of specific technologies [Screencasting (e.g. Camtasia, Captivate, Wink)]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of specific technologies [Multimedia production; Digital stories (e.g. Movie maker)]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not used	User	Confident user	Very confident user
Use of specific technologies [Mobile technologies – cellphones, PDAs, tablet PCs; E-Readers (e.g. Kindle, iPads)]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of specific technologies [Student response systems - Clickers (e.g. Turning Point) – Dynamically Frequently Asked Questions]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of specific technologies [Electronic portfolios (e.g. Carbonmade)]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix B: Questionnaire 2 (including ICONI)

PhD questionnaire 2

The following questionnaire includes two theoretically informed tools, one designed by the sociologist Margaret Archer (2008) and the other by educationalists Mukute and Lotz-Sisitka (2012). This questionnaire forms part of my PhD research I would appreciate it if you could respond to the following questions as honestly as possible. Respondents details will be kept confidential.

* Required

1. Some of us are aware that we are having a conversation with ourselves, silently in our in our heads. We might just call this 'thinking things over'. Is this the case for you?

- Yes
- No

2. On the whole ...

Strongly agree= 7 to strongly disagree = 1

	7	6	5	4	3	2	1
2.1. I do daydream about winning the lottery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.2. I think about work a great deal, even when I am away from it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.3. I dwell long and hard on moral questions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.4. I blot difficulties out of my mind, rather than trying to think them through	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.5. My only reason for wanting to work is to be able to pay for the things that matter to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.6. Being decisive does not come easily to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.7. I try to live up to an ideal, even if it costs me a lot to do so.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.8. When I consider my problems, I get overwhelmed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	7	6	5	4	3	2	1
with emotion.							
2.9. So long as I know those I care about are OK, nothing else really matters to me at all.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.10. I just dither, because nothing I do can really make a difference to how things turn out.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.11. I'm dissatisfied with myself and my way of life - both could be better than they are.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.12. I know that I should play an active role in reducing social injustice.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.13. I feel helpless and powerless to deal with my problems, however hard I try and sort them out.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. In general, what are the three most important areas of your life now-those that you care about deeply? (List the most important first)

For example; inter-personal relations with family and friends; work, career, performance achievements, financial success or intrinsic interests, socio-ethical pre-occupations, spirituality

4.1. As part of my initial research, the following issues have been identified as possibly impacting upon the contribution or non-contribution of Open Educational Resources by UCT academics. There are 18 concerns. *

Please read them all and then rank each item below on a scale of 1-5 where 1 is the most important issue for you personally and 5 is the least important. Additionally please categorise the ease with which each issue can be addressed some may be personal change but others may be institutional change. : E=Easy, M=Medium, D=Difficult:

	1	2	3	4	5

	1	2	3	4	5
4.1.1 Some academics feel that making an impact on students in the classroom is more important than time spent on contribution for a wider audience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.1.2. Some academics are interested in contribution but they are not sure how to do this and/or who it may benefit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.1.3. Some academics have interactive teaching style and therefore do not prepare notes and presentations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.1.4. Some academics are concerned that OER are content only without any interaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.1.5. Some academics choose to revise and create slides the night before and do not want to change their practice to pre preparation of notes and slides	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.1.6. Fluency with social media and technology in the classroom such as lecture capture makes it easier for academics to prepare materials as OER	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.1.7. Some academics would like some reward or recognition for their contribution and currently at the University there is no reward	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.1.8. New Open access policy may be encouraging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	1	2	3	4	5
contributions but for some academics they would prefer not to be told what to do					
4.1.9. Some academics would like more technical support and structures to be in place before they considered sharing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.1.10. Some academics prefer working in isolation and are not involved in collaborative teaching so sharing would mean a change of practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.1.11. Some academics are really not sure about how copyright works and this stops them from contributing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.1.12. Some academics would like there to be a quality assurance process for OER going into the repository	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.1.13. Some academics are afraid of exposing their materials in case they are not of a high quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.1.14. Some academics are afraid that poor quality materials will reflect badly on the institution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.1.15. Some academics are influenced by the colleagues in their departments not to share	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.1.16. Some academics feel that they do not have the time to spend on teaching materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	1	2	3	4	5
because they need to spend more time on research					
4.1.17. Some academics feel that there is inconsistent support of open at UCT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.1.18. Some academics do not want to use OER created elsewhere they would prefer to use their own materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4.2. As part of my initial research, the following issues have been identified as possibly impacting upon the contribution or non-contribution of Open Educational Resources by UCT academics. There are 18 concerns.

Please read them all and then rank each item below on a scale of 1-5 where 1 is the most important issue for you personally and 5 is the least important. Additionally please categorise the ease with which each issue can be addressed some may be personal change but others may be institutional change. : E=Easy, M=Medium, D=Difficult:

	Easy	Medium	Difficult
4.2.1 Some academics feel that making an impact on students in the classroom is more important than time spent on contribution for a wider audience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.2.2. Some academics are interested in contribution but they are not sure how to do this and/or who it may benefit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.2.3. Some academics have interactive teaching style and therefore do not prepare notes and presentations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.2.4. Some academics are concerned that OER are content only without any interaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.2.5. Some academics choose to revise and create slides the night before and do not want to change their practice to pre preparation of notes and slides	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.2.6. Fluency with social media and technology in the classroom such as lecture capture makes it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Easy	Medium	Difficult
easier for academics to prepare materials as OER			
4.2.7. Some academics would like some reward or recognition for their contribution and currently at the University there is no reward	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.2.8. New Open access policy may be encouraging contributions but for some academics they would prefer not to be told what to do	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.2.9. Some academics would like more technical support and structures to be in place before they considered sharing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.2.10. Some academics prefer working in isolation and are not involved in collaborative teaching so sharing would mean a change of practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.2.11. Some academics are really not sure about how copyright works and this stops them from contributing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.2.12. Some academics would like there to be a quality assurance process for OER going into the repository	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.2.13. Some academics are afraid of exposing their materials in case they are not of a high quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.2.14. Some academics are afraid that poor quality materials will reflect badly on the institution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.2.15. Some academics are influenced by the colleagues in their departments not to share	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.2.16. Some academics feel that they do not have the time to spend on teaching materials because they need to spend more time on research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Easy	Medium	Difficult
4.2.17. Some academics feel that there is inconsistent support of open at UCT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.2.18. Some academics do not want to use OER created elsewhere they would prefer to use their own materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. UCT now has a new institutional repository and also an Open Access Policy. Are you aware of this? And in the past year have you read about or talked about Open Education?

6. In the last year have you considered adding more resources to Open UCT ? If not what is holding you back from contributing additional materials?

7. Is there anything else you would like to add about your views on raising awareness and encouraging the sharing of teaching materials as OER at ICT?

Please can you add your name. *

Appendix C: Pilot Interview questions

Broad:

- 1) What were your reasons for sharing?
- 2) What are your reasons for not sharing teaching materials?
- 3) Are the reasons related to your personal motivation? (implicit)
- 4) What is your perceived value with regards to adding content?

Rules:

- 5) Promotion at UCT is based on research and not producing quality resources, how much of a concern is this for you?
- 6) How significant a deterrent was copyright?

Community:

- 7) Are your concerns related to how the community (all) will use or misuse your materials?
- 8) Are the reasons for not adding related to your peers in your department?
- 9) Are you concerned that your materials are not quite ready for open use?
- 10) Are you concerned about the quality of materials that are put up in the OC directory, and that poor quality materials may reflect badly on the institution?

Division of labour:

- 11) You have several roles as an academic: You are a researcher, a lecturer and you are required to be socially responsive. Are you concerned about the time and effort it will take to re-purpose or create teaching materials as OER?
- 12) Ideally who should add your content?

Tools:

- 13) Are there aspects about the directory itself that are preventing you from adding your teaching materials?

Institutional culture:

- 14) Do you feel that UCT's institutional culture is at odds with the philosophy of openness and the activity of adapting or creating teaching materials as OER?
- 15) In your opinion, do you feel your colleagues will or do value open education resources?
- 16) In your opinion, what value do you feel the institution places on OpenContent?
- 17) Adding teaching materials to OpenContent is changing the usual way the University works, would this be a change in your department's traditional norms and traditions?
- 18) What might hinder /prevent the university from sharing teaching materials on an institution-wide scale?

Pedagogy:

- 19) Do you have concerns that lecturers may use your OpenContent resource out of context?
- 20) Do you have concerns that students will take your OpenContent resource out of context?
- 21) Do you feel your content (added or if you decided to add it) is useful in its isolated form without tutorial support or assessment or fellow learners?

USE:

22) Have you used any OER from UCT's or another repository in your teaching?

If Yes: How

23) Have you Re-used materials verbatim, in other words exactly as you found them?

24) Have you revised (Re-worked) materials so that they better meet your needs? (added)

25) Have you combined verbatim or altered materials with other materials to better meet your needs?

Re-mixed

Other checklist:

Are your concerns about:

Lack of user feedback

Loss of IPR- and that someone will take your materials and re-package them

Loss of commercial opportunities

Materials will be used out of context

Students will no longer come to lectures

Time it takes to adapt and add materials

Effort it takes to adapt and add materials

The Cost to prepare materials

That openness or making materials free devalues them

Appendix D: Interview questions

AWARENESS	Can you explain what you know about the Open education movement?
	Can you explain your understanding of Open Education Resources?
USE AND REUSE	
	Have you used any OER from UCT's or a another repository in your teaching?
	If no: is there any particular reason why not?
	If Yes: How or in what ways?
	Have you used materials verbatim, in other words exactly as you found them?
	Have you revised (re-worked) materials so that they better meet your needs?
	Have you combined verbatim or altered materials with other materials to better meet your needs?
	Have you redistributed any of the revised or remixed materials with others?
REASONS FOR SHARING OR NOT SHARING	
	What were your reasons for sharing? Are the reasons related to your personal motivation?
	What are you reasons for not sharing teaching materials? Are the reasons related to your personal motivation?
	What do you value about adding content to UCT Open Content or any other open platform?
	What issues might concern you about sharing teaching materials openly?
	Are you concerned that students won't come to lectures if you make your teaching materials openly available?
	Are you concerned that openness or making materials free devalues them?
	Is the potential loss of commercial opportunities a concern?

	Is the time it takes to adapt and add materials a constraint?
	Is the effort it takes to adapt and add materials a constraint?
	Is the cost to prepare materials a constraint?
SOCIAL AND CULTURAL CONTEXT	
	You have several roles as an academic: you are a researcher, you are a lecturer/teacher and you are also required to be socially responsive to your community. Please explain which roles you feel are most important?
	How do you feel about adding teaching materials to the open content directory? (Is this an additional responsibility over and above the responsibilities you already have?)
	How much of an impact did your peers in your discipline have on your decision to share teaching materials?
	How much of an impact did your colleagues in your department have on your decision to share teaching materials?
	Are your colleagues aware of the OC directory?
	In your opinion, do you feel your colleagues will or do value open education resources?
	Are your colleagues aware that you have added resources to OC?
INSTITUTIONAL CONSTRAINTS AND ENABLERS	
	Were there any other factors in the institutional environment that had an impact on your decision to share teaching materials?
	UCT's has a strong institutional culture do you feel that is is supportive or at odds with the philosophy of openness and sharing OER and why?
	In your opinion, what value do you feel the institution places on OpenContent?

	Adding teaching materials to OpenContent might be changing the usual way the University works, would this be a change in your department's traditional norms and traditions?
	Promotion at UCT seems to be primarily based on research and not necessarily producing quality teaching resources, how much of a constraint is this for you?
	Would some sort of reward or recognition enable you to contribute OER?
	UCT currently has no policy on sharing OER: would such a policy impact upon your decision to share?
	What might hinder /prevent the university from sharing teaching materials on an institution-wide scale?
	Ideally who should add your content to OpenContent?
	We currently have OER grants: have you received one and how has this enabled you to adapt or create teaching materials to share in UCT OpenContent?
	We currently have OER grants: would you consider applying for one?
	We also have a VC project where students are helping academics prepare their teaching materials for OC, would you consider student support?
TECHNICAL CONSTRAINTS AND ENABLERS	
	What technical support did you receive when adding materials to OC?
	How easy or difficult is the UCT OpenContent directory to use for uploading content?
	OC can be shared in many different file formats, which type did you choose for your purpose?
	Were there any other technical concerns that you had during the process of creating and adding your teaching materials to OpenContent?

LEGAL and INTELLECTUAL PROPERTY CONSTRAINTS AND ENABLERS	
	What concerns do you have about sharing and your intellectual property?
	Do you have concerns that lecturers may use your OpenContent resource out of context?
	Do you have concerns that students will take your OpenContent resource out of context?
	What concerns do you have, if any, that you might have infringed the copyright of others when you created your teaching materials?
	Can you explain your understanding of Creative Commons licensing?
	When you added your materials to UCT OpenContent you were required to add a Creative Commons licensing how easy or difficult did you find this process?
	How significant a deterrent was copyright to creating or adapting your materials for sharing as Open Content ?
QUALITY CONSTRAINTS AND ENABLERS	
	What concerns, if any, do you have about the readiness of your materials for open sharing and use?
	What concerns do you have about the quality of materials that are put up in the OC directory, and that perhaps poor quality materials may reflect badly on the institution?
	What concerns do you have about sharing your teaching materials to peers? Do you feel that the quality of teaching and learning materials will improve if they are made available for peer scrutiny?
	Currently materials are checked for copyright clearance only. Do you feel there should also be some kind of quality check or peer review of materials before they are made available on OC?

PEDAGOGY CONSTRAINTS AND ENABLERS	
	What audience did you have in mind when you designed your materials?
	How difficult or easy was it to design or adapt your materials for online use?
	Open Educational Resources are content without tutorial support or assessment or fellow learners. What concerns, if any, do you have about this lack of pedagogy?
	What other concerns do you have about how users will use your materials?
	Are you concerned that there will be a lack of user feedback?
	Are you concerned that your materials will be used out of context in other words not in the pedagogical context that you had in mind when you designed them?
LIFE PROJECTS	
	Can you describe your life projects or key goals that you would like to achieve over the next few years?
	Checklist:
	Have these been long term concerns?
	How do your lists of concerns work together?
	How much time do you spend time thinking exactly what you should do in light of their concerns?
	Have you seen/noticed anything in your background which was helpful or obstructive in relation to the realising of your concerns?
	How do you feel sharing is at odds with your life concerns, and in what ways?
	How do you feel sharing fits in with your life concerns, and in what ways?

Appendix E: UCT Intellectual Property Policy

Approved by Council on 27 July 2011

Relevant extract from Section 8:

8. Copyright Protected Works and Course Materials

8.1 UCT holds copyright in: • Banks of multiple choice test and examination questions • Syllabuses and curricula • Computer software developed at, or commissioned by UCT to support academic or research administrative processes or the general operational management of UCT • All UCT produced publications (e.g. but not limited to The Monday Paper, Varsity, Research Report, etc.) including electronic media and content on the UCT websites • Photographs and digital images taken by Employees for UCT media or publicity or specifically commissioned by UCT • Specifically commissioned works and course materials that fall outside the scope of normal academic work

- Computer Software developed as part of a research project, unless assigned by research agreement to another party.

8.2 UCT automatically assigns to the author(s) the copyright, unless UCT has assigned ownership to a third party in terms of a research contract, in: • Scholarly and literary publications • Paintings, sculptures, drawings, graphics and photographs produced as an art form • Recordings of musical performances and musical compositions • Course materials, with the provision that UCT retains a perpetual, royalty-free, nonexclusive licence to use, copy and adapt such materials within UCT for the purposes of teaching and or research • Film.

8.3 UCT assigns the copyright in a Student's thesis, to the Student author (or in the case of a work of art that is submitted for examination purposes to the IP Creator of the work of art), subject to UCT retaining a royalty-free right to publish a thesis in any form. Whilst the Student has the right to enter into agreements with the publishers who may wish to publish the thesis in whole or in part, the Student shall ensure that UCT's rights are acknowledged by the third party and maintained and shall with the consent of their supervisor(s) ensure that such publication is not in conflict with any past, or planned future, assignment of rights to another publisher, e.g. of a journal article, or other literary publication.

Relevant extract from Section 9:

9. Open Source and Creative Commons Materials

Open Source and Creative Commons licences are mechanisms for exploiting material that is automatically protected (copyright) or where other forms of Intellectual Property Protection have been sought.

9.1 Open Source. UCT has adopted Open Source as the default for research and teaching related to software development at the university. At the outset of a project involving Open Source licensing, an Employee or Student should submit the Open Source license agreement that is

intended to be used to govern the licensing of the project outputs to RCIPS for review, to ensure compliance with the requirements of the IPR Act and policies and guidelines of NIPMO. 9.1.1 Where necessary RCIPS shall refer agreements to NIPMO to seek approval for their use. 9.1.2 Where necessary and required, RCIPS shall in writing authorise investigators to enter into the Open Source license agreements in their personal capacity.

9.2 Creative Commons. UCT supports the publication of materials under Creative Commons licences to promote the sharing of knowledge and the creation of Open Education Resources. UCT undertakes certain research projects that seek to publish the research output in terms of a Creative Commons licence. 9.2.1 Author(s) of Copyright protected materials that are listed in clauses 8.2 and 8.3 is free to distribute their material under a Creative Commons licence.

9.2.2 Author(s) of Copyright materials that are listed in clause 8.1 should seek permission from RCIPS, who on behalf of UCT, may grant permission for the material to be distributed under a Creative Commons licence.

Relevant extract from Section 10:

10. Public Domain

10.1 Where it is the desire of the IP Creator or a funder of research at below Full Cost to place Intellectual Property in the Public Domain and this desire is supported by RCIPS, and: • IP is governed by the IPR Act; • IP has Commercialisation prospects, or can contribute to the socioeconomic needs of South Africa; and • UCT does not wish to obtain statutory protection, where this is available, or to retain ownership of the IP; and • UCT wishes to place the IP in the Public Domain, RCIPS will seek approval from NIPMO to release the IP into the Public Domain.

Appendix F: Open Access Policy Open Access Policy as adopted by Council, March 2014

UCT recognizes the additional pressure exerted by the policy environment in the global north which increasingly requires academics to make their work available through open access; this creates additional urgency for ensuring the online visibility of academic work from the global south. At the same time the widespread availability of open education resources, open content, open courses etc. from the global north is both an opportunity and a concern as there is an equally urgent need for local teaching and learning resources to be made freely available online.

5. Policy

5.1 Author Responsibilities

An Author, (a) must deposit an appropriate version of Scholarly Publications into an officially designated Institutional Repository or into an acceptable curatorial system which can be harvested by UCT; or (b) if prevented by a publisher's copyright terms or other good reason from doing so, must notify the Institutional Repository in writing that he/she will not be doing so and the reasons for this. An author, unless prevented by publisher agreement, will be deemed when depositing an appropriate version of a Scholarly Publication, to grant UCT a royalty-free, non-exclusive, non-commercial, worldwide licence to the publish the deposited version in a UCT Institutional Repository to which there will be open access.

Where an author voluntarily deposits a Scholarly Publication to which open access is restricted by virtue of a publisher agreement, the author will be deemed when doing so to grant UCT a royalty-free, non-exclusive, non-commercial, worldwide licence to publish this in a UCT Institutional Repository to which there will be open access effective from the date on which restrictions contained in the publisher agreement cease to apply.

The University

(i) encourages Employees and Students to make all forms of works of scholarship available through the appropriate platforms and service in digital format and of a type that is consistent with policies and practices. This includes (but is not limited to) essays, books, conference papers, reports (where permitted by a funder of the research leading to the report), educational resources, presentations, scholarly multi-media material, audio-visual works and digital representations of pictorial and graphical materials.

Appendix G: Letter of appointment

Extract that mentions copyright, there is not mention of Open Education or OER or informal sharing of teaching materials.

Research, secret research, patents and inventions, and copyright

Research is a key part of your job.

We do, however, have policies limiting and regulating research (and private work) which involves secret or classified material, or which leads to results that are secret or classified, because we believe in the free exchange of knowledge and open peer scrutiny of research results. This appointment is subject to these policies.

That said, we encourage research that will lead to the filing of patents for inventions. This appointment is subject to this policy on patents and inventions and to the rules and procedures it prescribes.

In terms of this policy: ownership of patents and inventions vests in the University; but the benefits flowing from any patents and inventions are shared between the University and the inventor(s). We recognise the rights to copyright that vest in the author of a work, but make it a condition of appointment that by accepting appointment you grant to the University a free licence to reproduce, for teaching and examination purposes within this University only, all teaching and examination material you produce in the course of your duties. This licence will be regarded as having lapsed should you publish the material in book form.

Appendix H: Performance appraisal

<http://www.hr.uct.ac.za/hr/service/academic/general>

Promotion

8.1. Promotion of academic staff is through the ad hominem promotion process.

8.2. This is only available to academic staff whose appointments have been confirmed (probation has been completed with a favourable outcome).

8.3. Each faculty has its own ad hominem committee and procedures and makes recommendations for ad hominem promotion to Vice-Chancellor or Deputy Vice-Chancellor, depending on the level.

See: [Ad hominem promotion](#)

Links to faculty criteria (there is no mention of OER in any of these documents)

http://www.hr.uct.ac.za/usr/hr/performance/promotion/academic/science_adhom_performance_descriptions_2015.pdf

Appendix I: UCT Teaching and Learning strategy

Teaching and Learning Strategy Introduction In both its Mission Statement and Strategic Plan 2010-2014, the University of Cape Town (UCT) appropriately recognizes teaching and learning as core priorities, alongside research and engagement with the community and society at large. What emerges from these documents is the interdependence of these three areas: teaching, research and engagement. Indeed it may be argued that UCT should secure its status as one of the premier universities on the continent not only because of its reputation for research but also for its contribution to research- informed teaching and social responsiveness -- all this in the context of a transforming and transformative environment, fully cognizant of its geopolitical role in South Africa, the African continent and beyond.

As noted above achieving these goals will depend on our institutional capacity for responding to educational challenges. To achieve this goal the key objectives are to:

- 9) Ensure that academic staff at UCT are recognized and rewarded for efforts in improving the quality of teaching and learning:
 - Recognising, rewarding and incentivizing effective teaching and supervision
 - Recognising, rewarding and incentivizing staff participation in professional development opportunities
 - Resourcing curriculum development initiatives
 - Strengthening our mechanisms for evaluation of the quality of teaching
 - Monitoring and promoting excellence and effectiveness in teaching and supervision
 - Recognising, rewarding and incentivizing the development of shareable teaching materials (for use as Open Educational Resources and/or in Massive Open Online Courses for example)

Appendix J: Example of coding in Excel (Legal theme)

Q number	Question	Utterance	reference	SAC	ACT	Agree/disagree	code	constraints	enablers	count
25	LEG/IP CC	I'm not even trying to understand the licencing thing.		S	R		effort	CC		1
24	LEG/IP COPY	I'm worried about [unclear] rights.	Bronwyn,1,Page:17,line:1720	S	R	Y	worried	copyright infringement		1
23	LEG/IP CON	Because you have the documentation if you're having to put it up somewhere. You have a place where you put it up with a date and a time. If somebody uses it and doesn't acknowledge you and somebody else comes along and says... (.....) So actually I think you're more protected if you make something legitimately an OER and then somebody else uses it.	Bronwyn,1,Page:18,line:1731-750	S	R	N	OER protects	OER protects your IP		1
25	LEG/IP CC	(...) But even then it doesn't... so the licences don't worry me too much.	Bronwyn,1,Page:18-19,line:1767-774	S	R		not worried			1
25a	LEG/IP CC EA/DI	But I'd look at what was a logical... like what most academics normally did. I mean, there must be a kind of a norm at UCT, who knows.	Bronwyn,1,Page:19,line:1777-779	S	R		EA			1
25	LEG/IP CC	But I find it not really [unclear]... but I haven't been to a single one of those workshops on licencing. It's too complicated and I'm not sure I'd [unclear] quite enough from that.	Bronwyn,1,Page:19,line:1780-782	S	R			too complicated		1
26	LEG/IP COP CON	It just made it harder. Our PPT's are very bland as finding images was hard work and took time and we use copyright academic literature ie books ect we cant share via an OER	Bronwyn,1,Page:email,line:email	S	R,O,DOL	Y	bland, hard work, took time			1
23 a	LEG/IP IP loss	And without crediting the source, ya.	Lance,2,Page:14,line:1525	S	R	Y		IP by lecturers		1
23 b		And also the images being misused.	Lance,2,Page:14,line:1527	S	R	Y		misuse of images		1

Appendix K: Example of manual coding (Quality theme)

INT	Readiness <i>exposed</i> + BIGGEST	Poor qual <i>reflect on individual</i>	PEERS <i>concept</i>	QUAL IMP	CHECK
1	Y	? N - upto indiv.	? Y	Y	Y - confusion + sense
3	N	N - individual responsibility	Y/N - peoples baggage	N - other writers' authority	N - no longer teaching materials
4	N	Y - reflect on what must respect quality	N - no hiding away	Y - improve	N - maybe turning
5	N	N 2) individual choice	N	Y	Y - peer review more credible comments, contact
6	N	Y - justified and fixed	N - not good should have them	Y	N - up to academic
7	Y	Y - individual inhibition	Y - vulnerable	Y	N - up to indiv hold up
11	N	Y - balance bt peer review & individual choice	N	Y/N	N - dependent by system & material
2	N	N - praise of author	N - peer review	Y	Y - for intervention
8	N	Y - people in isolation	N	Y	Y - document guide
9	Y	Y - qual control	N	Y/N	Y - juggling grammar
12	Y	Y	N	Y	Y - adjust - kind of + check BUT peer would diff
13	Y	Y - worrying other material	N	Y	Y - peers but will self-regulate
14	Y	Y - peer errors / people	Y - bring yourself teaching notes	Y	Y - depends what you mean?
15	Y	Y -	Y - depends on who intention	Y	Y - but some bad exp
	7/7	10Y	8N	11Y	9Y

27 QCE RE

(concerns)

(INT)	SAC	ACT	Y/N
3	A	JU	N
4	A	O	N
6	A	R	N
5	S	DOL	N
11	A	O	N
7	A	O	Y
1	A	O	Y

best possible

- * ready for students, ready for OC, ^{no reward} some mistakes
- images with copyright, ready for students. ^{OC} ready. ^{learning exercise}
- some concerns as he uses students work, ^{living document}
- some typing errors more important to get it out there
- not ready have to be ^(pedagogy) prepared, time
- Exposed, when to share - indecision about readiness. Improve, good enough?, tension time/quality

2	A	O	N	- adapting, copyright
8	A	O	N	- would asic stand on its own? (pedagogy) ^{add ANS} ^{Blanchette}
9	A	O	N Y	X not good enough, main concern ^{deep seated} protectionism, ^{pedagogy} big concern, not ready, like writing an article
12	A	SU, O	Y	time
13	A	JU, O	Y	materials not thorough enough or standalone because of interactive teaching style
14	SA	JU, O	Y	look what they're doing in first year... neat
15	SA	O	Y	not ready, maybe in half a year's time.

- * Readiness related to quality check?
- * Readiness related to concerns about lack of pedagogy in DER?

11 and 1 have opposite views...
 4 and 6 same view
 9 and 12 main reason for not contributing

Appendix L: Consent form

To:

Re: Request to Participate in a Research Interview Process for my PhD research.

The title of my project is: "A model of the interplay between open culture, institutional structure and academic agency in lecturers' contribution and non-contribution of Open Educational Resources: A case study at the University of Cape Town"

I would appreciate it very much if you would agree to be interviewed for this research. The interview will last about one hour and I would like to record the interview. This would be a semi-structured interview in which you (the interviewee) and I (the interviewer) will engage in a discussion around the questions and issues in the Schedule attached. There are no right or wrong answers as this interview is about your beliefs in these areas.

This research (PhD) will involve two interviews with 14 UCT academics (First interview in 2013 and a second interview in 2014). I am asking you to participate in both interviews. You have selected as part of a purposive sample of academics from different positions and disciplines within UCT.

Your participation in this process is entirely voluntary and if you decide not to participate I will fully respect your decision. If in the course of the interview you decide to terminate your involvement in the process, once again your decision will be fully respected.

I would like to record and transcribe the interview. A copy of the transcript will be given to you for verification. Your interview and the data taken from the interview will be kept completely confidential. Your name will not be mentioned in the dissertation or in any subsequent scholarly publications or presentations, a codename will be used instead.

My contact details are provided above.

Yours sincerely
Glenda Cox

I _____ *name* _____ agree to participate in the research process on the above terms

I _____ *name* _____ agree to have my interviews recorded and transcribed

Signature:

Date: