

A CRITICAL REALIST EXPLORATION OF THE CULTURE OF RESISTANCE IN EDUCATIONAL TECHNOLOGY INTEGRATION PRACTICES AT A SOUTH AFRICAN UNIVERSITY

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By

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Abstract

This thesis seeks to address a number of troubling concerns related to research and practice in the field of educational technology in South African higher education. Firstly, educational technology research has been criticised for a lack of theoretical rigour resulting in perspectives that are tightly focused mostly on practice but fail to adequately interrogate the socio-political complexities of integrating educational technology. Secondly, while research in the field has been criticised for failing to adequately contextualise the study of educational technology, it also fails to interrogate the impact of colonial legacies and Western-developed technologies on integration practices. Thirdly, there seems to be a disconnect between academics' practices and choices with educational technology, and the expectations and assumptions of educational technologists. As such, this thesis predominantly follows inductive reasoning where literature and theory are applied to the empirical situation retrospectively in order to avoid the potential influences and biases of mostly Western-driven discourses on educational technology integration practices.

Critical realism is used to 'underlabour' this study. This meta-theory asserts that there are multiple perspectives of an independent reality, and the work of research is to use these perspectives to draw closer to an understanding of that reality. As such, it allows me to interrogate my perspectives firstly, and secondly those of my research participants, about factors that constrain educational technology integration in the South African context through the use of theory (abstract concepts) and data (research participants' multiple perspectives). However, critical realism is somewhat cautious in how to access this reality. Therefore, a critical ethnographic epistemology is employed to strengthen critical realism's aim of accessing knowledge. A critical epistemology emphasises exposing hidden power structures, value judgements as well as self-knowledge and reflexivity. The thesis thus shows how a critical realist ontology could be complemented by a critical ethnographic methodology, particularly in critically-orientated research that has an emancipatory focus which seeks to uncover the socio-political context within which educational technology practices take place. A key argument is that critical realism can be employed as an ontological underlabourer for critical research because of: 1) its immanent critique of traditionally-accepted philosophies, 2) its emphasis on critique of our knowledge claims and value judgements, 3) its insistence that knowledge of the social world necessarily precedes emancipation, and 4) its different conceptions of power (oppressive power and transformatory power).

This critical ethnographic research is conducted in a South African university with eight female academics. Data collection is in the form of interviews, observations and reflections, as well as informal and work-related interactions. At each data collection moment, I have had to be reflexively aware of my positionality as an educational technologist, the impact of a colonially-motivated methodology and an ethically-aware approach that seeks to put the needs of the research participants first. Critical ethnography's meaning-making and critical realism's abduction and retroduction are used to analyse and make sense of the data. In my attempt to contextualise the study's findings, I first uncover structural forces and their impact on the academic role before attempting to correlate this with educational technology practices.

The study's findings point to two main structural forces in the socio-political context of South African higher education: the teaching/research tension and the elevation of one dominant culture. In terms of the teaching/research tension, the female academics in this study have to balance the *urgent* teaching function with the *valued* research function. They struggle to find this balance because of ambiguous messages from different structures, their passion for teaching, oppressive departmental dynamics and the pressures of their career trajectory. The elevation of one dominant culture is demonstrated through both oppressive cultural practices and untransformed curricula. The study shows that academics mitigate these structural constraints mostly through subtle every day resistance that seeks to mitigate their effect on both the academics and, where applicable, their students. Archer's morphogenetic/morphostatic cycle is used retrospectively, in response to fieldwork, to conceptualise why this resistance comes about.

A resistance framework developed using Archer is then used to understand educational technology choices and practices. The results of the research show that while academics are often pictured as resistant to technology as a response to different barriers, they actually often employ technology to resist structural forces. That is, with this thesis I show that there is a focus on resistance with technology rather than resistance to technology. The study shows how the research participants resist structural forces (teaching tension and dominant culture) by using technology to create safe and responsive learning spaces. As such, this thesis challenges educational technologists to re-think the way they support academics by recommending support strategies that acknowledge both the structural forces in the South African higher education context, as well as the culture of resistance, both of which impact academics' educational technology choices and practices.

KEYWORDS: educational technology, resistance, higher education, South Africa, critical realism, critical ethnography

Declaration

I declare that the thesis entitled **A critical realist exploration of the culture of resistance in educational technology integration practices at a South African university**, which I hereby submit for the degree Doctor of Philosophy at Rhodes University, is my own work. I also declare that this thesis has not previously been submitted by me for a degree at this or any other tertiary institution and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Nompilo Tshuma

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Chapter 1

Why am I doing this research?

(Introduction and background)

“Education is on the brink of being transformed through learning technologies; however, it has been on that brink for some decades now” (Laurillard, 2008, p. 1)

1.1 Background to the study

The field of educational technology, which is a sub-discipline of Information Systems because of its focus on “how individuals... interact with IT” (Sidorova et al., 2008, p. 467), has been under fire for several decades for failing to interrogate its practice using sound research principles (Bigum and Rowan, 2015; Bromley, 1997; Graham, 2011; Gunn and Steel, 2012; Henderson, 2015; Johnson, 2015; Kerr, 1989; Kirkwood and Price, 2013; Lankshear, 2003; Oliver, 2011, 2013, 2014; Provenzo Jr, 2000; Selwyn, 2000, 2014). Specifically, the field has been accused of elevating practice over theory (Graham, 2011; Gunn and Steel, 2012; Oliver, 2013) through a “conspicuous tendency to mistrust, or even avoid, theoretical approaches” (Selwyn, 2000, p. 94). The prevailing view in the field seems to be that theory is “the antithesis of practice” when in actual fact it “explains practice” (Johnson, 2015, pp. 35–36). This under-theorisation appears to go hand in hand with a lack of methodological rigour (Gunn and Steel, 2012; Henderson, 2015), an untenable position in a young and growing field such as educational technology.

There are also indications that the majority of research studies in educational technology have a narrow single case, once-off focus on “snapshots at a point in time” (Gunn and Steel, 2012, n.p.; Kirkwood and Price, 2014; Selwyn, 2000). The case studies are mostly exploring the efficacy of a particular technology’s affordances, and either fail to provide a contextual home for the study or are so tightly contextualised that it becomes “virtually impossible to consider the work as a contribution to theory or a body of knowledge” (Gunn & Steel, 2012, n.p.). And in a field as relatively young as educational technology, combined with the rapid production of new technologies for teaching and learning, building a body of theory and knowledge based on evidence is critical in order for the discipline to drop its ‘non-field’ (Selwyn, 2012a) status and begin to be taken seriously in the academic arena.

Further, an overwhelming focus on the technology rather than the social context within which it is integrated is another stinging rebuke against educational technology research (Gunn and Steel, 2012; Kerr, 1989; Kirkwood and Price, 2014). There seems to be a lack of understanding that educational technology integration is a socio-political endeavour (Selwyn, 2014) with “complex, multicausal processes of social construction and negotiation” (Friesen, 2009, p. 197) that need to be taken into account. This complex socio-cultural context is already in existence prior to the integration of the technology, and by ignoring it we may be deceived into assuming that it has no effect on technology dynamics. In fact, the “cultural, psychological, and political complexities of learning and the ways in which power complicates all human relationships” (Brookfield, 1995, p. 1) suggest an increase in the messy complexity of human relations as a result of the introduction of technology (Friesen, 2009). Our technologically deterministic blinkers can potentially impede us from recognising that the introduction of educational technology into the teaching mix may engender and magnify existing power dynamics, and further oppress the already oppressed (Bromley, 1998).

The above criticisms point to a possible utopian optimism (Njenga and Fourie, 2010; Selwyn, 2000; Webster, 2017a) that technology will accomplish what it says it will accomplish. This can be seen in research studies that are narrowly focused on matching a technology’s affordances with practice (Gunn and Steel, 2012) rather than exploring its real impact in the social context through appropriate theoretical lenses. This is despite the fact that for over 40 years researchers have pointed to the uncanny ability of technology to frustrate human “ends and intentions... [by] enhancing certain ends, [while] denying or even destroying others” (Winner, 1977, p. 29).

Studies in the educational technology field are usually carried out by different groups of researchers hailing from a range of fields and disciplinary backgrounds (Selwyn, 2012a, 2012b), including academics, support staff and industry personnel. Two of the prominent groups who research and publish on educational technology in higher education are educational technologists and academics from a diverse range of departments, levels of education and research traditions. Educational technology are known by different names in different parts of the world. In South Africa, the name used to describe staff developers working with learning technologies is usually determined by the tradition that the university ascribes to (Hodgkinson-Williams and Czerniewicz, 2007). University websites in South Africa indicate that these staff developers are known as educational technologists, learning technologists, learning designers,

instructional developers and advisors. In this thesis I will use educational technologists to refer to this group of people.

As educational technologists – the people who are supposed to drive and support the use of educational technology in higher education – we seemingly operate in an ‘ed-tech bubble’, and therefore lack an understanding of the milieu within which academics operate (Kerr, 1989; Selwyn, 2012b). Our rhetoric and excited animations about the success of a new technology are rarely in touch with what is actually happening on the ground (Selwyn, 2012b). The opening quotation in this chapter highlights the ‘disappointment’ educational technologists like me have at times felt when technology does not bring about the predicted transformation in higher education (Laurillard, 2008). We have even gone to the extent of viewing academics as barriers to be overcome in order for educational technology to move forward (Kerr, 1989). Our often over-engaged status as technology ‘elites’ has desensitised us to the needs and values of what we consider as the under-engaged ‘masses’ (Morozov, 2011).

The second group of researchers in the field consist of a ‘mixed bag’ of teachers from different disciplines who research and publish in the field in order to meet a range of personal and professional interests and motives (Selwyn, 2012a). Consequently, the kind of research either of these groups pursues (teachers versus educational technologists) is serving their interests (Oliver, 2014), rather than adequately seeking a deeper understanding of the phenomenon and uncovering more contextually appropriate solutions that will move the field forward. This “transient ragbag of individuals... [has contributed to] a notoriously sloppy area of scholarship – brimming over with lazily executed ‘investigations’, ...while also tolerating some highly questionable thinking” (Selwyn, 2012a, p. 6). This has resulted in a lack of consistency in terms of reporting and layout, and even worse, some articles offer sketchy details and often draw unsupported conclusions, leading some to question the authenticity and rigour of research journal requirements in the field of educational technology (Gunn and Steel, 2012). The mixed bag of individuals also means there is a divide between different camps, and particularly between educational technologists and the academics who are actively integrating various educational technologies in their courses (Kerr, 1989; Selwyn, 2012b).

Despite the above criticisms and tensions, there have been attempts to understand the complexity inherent in educational technology integration. This is evidenced by the growing number of studies that seek to understand the motivation and constraints for educational technology use (Bingimlas, 2009; Brinkerhoff, 2006; Ertmer, Ottenbreit-Leftwich, Sadik,

Sendurur, & Sendurur, 2012; Hammonds, Matherson, Wilson, & Wright, 2013; Mueller, Wood, Willoughby, Ross, & Specht, 2008; Schoepp, 2005; Touray, Salminen, & Mursu, 2013). These and other similar studies seek to draw out mostly personal barriers, classroom dynamics and institutional requirements in seeking to uncover why there is a disparity in the way academics integrate educational technology. Most of the published studies in the field also focus almost exclusively on universities in the Western world. The problem relevant to this study is that this is the same socio-cultural context within which the educational technologies used in the African context are developed, and consequently these Western cultures, learning approaches and assumptions about technology for teaching are embedded in its design and development.

1.1.1 Educational technology research in the African context

Discussing research in the African context is not without limitations because of the continent's rich cultural diversity and economic inequalities. As such, research in this field has focused on a range of topics that seek to identify and address varying inequities at student, staff and institutional level. Because my focus in this study is academic staff, I will highlight research that focuses on this aspect of educational technology integration.

Published research into educational technology practices in the African context, although small in number, also seems to follow the popular trend of focusing almost exclusively on barriers to integration (see Section 6.2.3 for an elaboration). A deeper engagement with the socio-political issues plaguing African higher education and their impact on technology integration seems to be explored only in a small number of studies. In these African-based research studies, the barriers have been packaged using various general themes, highlighted in Table 1.1 below.

Table 1-1 Barriers to Technology Integration in African Countries

Barriers to Technology (Theme)	Country where research took place & Author(s)
Institutional policy	Kenya (Makokha and Mutisya, 2016)
Infrastructure issues	Kenya (Makokha and Mutisya, 2016) Tanzania (Sife et al., 2007) Uganda, Kenya, Zambia, South Africa (Ssekakubo et al., 2011) 25 African countries (Unwin et al., 2010)
High software costs	Tanzania (Sife et al., 2007)
Lack of ICT/ teaching with technology skills	Kenya (Makokha and Mutisya, 2016) A range of African universities (Mallinson and Krull, 2013) Uganda, Kenya, Zambia, South Africa (Ssekakubo et al., 2011) 25 African countries (Unwin et al., 2010)
Lack of skilled support	Uganda, Kenya, Zambia, South Africa (Ssekakubo et al., 2011)
Maintenance costs	Uganda, Kenya, Zambia, South Africa (Ssekakubo et al., 2011)
Lack of motivation	25 African countries (Unwin et al., 2010)

While the experiences of academics in different parts of African higher education is not homogenous, there is a sense from the selection of issues highlighted above that the barriers they experience are similar. It seems that these constraints are significant to Africa's unique context and history (see Section 1.2). However, there seems to be a general lack of engagement with how diverse and messy the mix of constraints really is, how they are linked to the colonial history and current economic climate of African higher education, and how they potentially impact the academic role and consequently the integration of educational technology. Divorcing Africa's unique context and history from the study of constraints to technology integration may be responsible for educational technologists' myopic view (see Section 1.1) of academics' experiences with educational technology, and consequently, could negatively impact the kind of support they offer.

The small number of studies researching the messy playing field of socio-political constraints to educational technology integration in the African context have drawn from some of the following themes: the danger in equating technological skills with epistemological access in a South African university (Bharuthram and Kies, 2013); analysing government policies around technology and their possible impact on teaching with technology in South Africa (Cross and Adam, 2007); lamenting the incongruence of Western technologies for African higher education in Burkina Faso (García Almiñana et al., 2012); and educational technologists' tendency for 'compulsive enthusiasm' without considering the needs of academics nor the research that has gone before (Njenga and Fourie, 2010).

This study supports and attempts to extend the work done by these contextualised and politically sensitive studies by focusing on the structural constraints encountered by academics in a South African context, how they employ their agency to resist these constraints and how these actions have possibly had an impact on their use of educational technology. The aim is to use the insights gleaned from this study to develop educational technology support strategies that address these contextually-specific issues.

1.1.2 Drawing on personal experience as an educational technologist

In its attempt to excavate and interrogate the socio-political issues around educational technology integration in a South African higher education context, this study employs the methodological principle that all social inquiry should start with self-inquiry (Habermas, 1986; Krauss, 2017; Mezirow, 1991; Ngwenyama, 2014). I therefore deliberately foreground my role as an educational technologist, its impact on the research process, and how it led to the emergence of the research topic under study (see Chapter 4).

As such and in line with the various positions presented above, the impetus that drove me to embark on this research was the disconnect between educational technologists' expectations and academics' educational technology practices, as well as the practice/theory inconsistencies in educational technology research (see Section 1.1). I was frustrated and dissatisfied with the dichotomy between the highly technical training and support we offer to academics in my institution, and its failure to address the issues plaguing academics in South African higher education. It disturbed me that while I sat comfortably in my office satisfied with a well-run technical skills workshop, academics returned to their classrooms to work with the actual educational technology and, in the process, contend with a complex web of socio-political issues. In line with the studies referred to in Sections 1.1, 1.1.1 and 6.2, my approach to this

study was initially focused on finding out why there was a disparity in the way academics integrated educational technology. My aim was to excavate enabling and constraining factors that were congruent with published research. I was caught up in the hype of educational technology research where the developments in the field happen so fast that “practitioners and researchers [are kept] busy locating problems for which the artifacts are solutions” (Bigum, Bulfin, & Johnson, 2015, p. 6). This solution-before-the-problem phenomenon may well be responsible for the overwhelming amounts of research focussed on barriers and constraints to educational technology integration, as highlighted in Sections 1.1 and 1.1.1. Furthermore, every field (and educational technology is no exception) has accepted stories, knowledge and different ways of describing the research phenomena in the field. Bromley (1997) cautions against ‘following the grain’, so to speak, in the stories we tell about the field:

The way we describe any phenomenon, the stories we tell about it, shape what we do and do not see in it. Some stories highlight social dynamics obscured by other stories. If one’s project is to help equalize the distribution of power in society, stories that illuminate the workings of oppression are essential. Stories which ignore, or downplay, the role of conflict and difference in history imply that what is good for the most visible members of society is good for everyone (as all of us purportedly have interests that are primarily shared), and thereby provide support – not necessarily intentional – for efforts to maintain that group’s position of privilege. It is important to ask what such stories omit (and therefore imply is non-existent or insignificant), and what assumptions must be accepted in order to see the world in such a way. (p. 57)

In effect then, my view of the reality of educational technology integration was shaped by the stories that were being told in the field (see Section 6.2). My understanding was that telling the same stories that had already been told – how we can improve educational technology adoption by eliminating constraining barriers – would help me understand academics’ reality with educational technology integration. Hence, I was only “noticing (or not noticing)” what was dictated by the field as worthy of my attention, rather than “what *there actually is* to notice” (Bigum and Rowan, 2015, p. 16 italics in original).

My exposure to the field’s critical literature, which I refer to in Section 1.1, helped me to begin to see that there was a story behind the story – what we saw as barriers was actually deeply embedded in an already existing socio-political context. I therefore had a strong desire to challenge my own practices as an educational technologist. This would be done by exploring various theoretical and practical tools in order to design a set of guidelines for planning support initiatives which would help academics mitigate structural constraints while accomplishing their teaching goals. And yet I realised that coming up with these guidelines for an effective

support strategy would not be possible without a better understanding of the academics themselves and the structural constraints they have to contend with in and out of the classroom. A theoretical exploration of these issues would help me take the first tentative steps towards a better understanding of the constraints that the use of the various technologies for teaching engender in academics' practices and the motives behind their educational technology choices.

As a female academic who is passionate about working with technology, I was also concerned that there seemed to be a distorted view (in literature, industry and academia in general) about females and how they lag behind in terms of technology use (see next section). While this study is not feminist in nature (see Section 7.5), my observations and work with both male and female academics prompted me to focus on female academics in order to challenge this negative view by showcasing how they were working with technology for teaching. I discuss this further in the section below.

1.1.3 Women and technology in higher education

Women in higher education in South Africa struggle to mitigate the effects of gender inequity in terms of both remuneration and career progression (Shober, 2014). Issues like maternal responsibilities and stereotypes about an emotional and hence less efficient management style, make promotion and career progression an arduous task (Shober, 2014). Furthermore, the relation of women to technology is a complex one, with a range of authors painting a woefully depressing picture of gender inequity in technology education and use on a global scale (Elnaggar, 2008; Gillard, Howcroft, Mitev, & Richardson, 2008; Lindio-McGovern and Wallimann, 2016; Moghaddam, 2010). Even in developed countries where large technology companies like Yahoo, Google and Oracle have had female directors, there is a lament about the constantly dropping numbers of women taking up degrees like Computer Science and Information Systems (Misa, 2011). Besides being in direct contradiction to the growing representation of women in other science fields, this phenomenon has permeated the computing industry where even women who have held technology positions for over a decade suddenly decide to exit and change careers (Castaño and Webster, 2011; Misa, 2011).

Women are also said to be at a disadvantage relative to men when it comes to either learning computers or learning *using* computers because of socialised patterns of “computer anxiety” and stereotypical attitudes that men are more interested and more competent in using computers (Cooper, 2006, p. 320). Of course even though the computer anxiety or the gender stereotypes exist, different people react or respond to them differently (Cooper, 2006) – from accepting

them as ‘truth’, in which case they act as a constraining factor on their behaviour, to ignoring or resisting them in different ways. Some authors posit that gender is not an absolute determinant of computer self-efficacy, rather masculinity as a gender role has been found to be a strong predictor of technological self-efficacy (Huffman, Whetten, & Huffman, 2013). This implies that there is a perception that women may have to acquire a masculine gender role in their use of educational technology in order to enhance their perception of their own confidence and skills in using technology for teaching. As already mentioned, this is coupled with contending with an African patriarchal society (Chitando and Mateveke, 2012; Coetzee, 2001; Essien and Ukpong, 2012; Maseno and Kilonzo, 2011), and fighting for equity in terms of gender, remuneration and career progression (Shober, 2014).

Interestingly, a study by Scherer and Siddiq (2015) expands the exploration of computer self-efficacy in higher education beyond just basic and advanced level computer skills. Their study showed that although men had greater computer self-efficacy in terms of computer skills (both basic and advanced), women trumped men’s scores when it came to their computer self-efficacy in terms of instructional design. This last result begins to uncover how even though stereotypes and expectations were to the contrary, female academics seem to be more confident in their ability to use educational technology to design learning experiences than in using technology for other tasks.

As a black woman who used her first computer in my first year at college, I was challenged by what I felt were misconceptions about women and technology. From my personal experiences with different technologies and supporting a range of academics, I had informally observed that women were quietly resisting these social stereotypes and the structural constraints they engendered. In line with this concern, I selected only female academics as research participants for this study (see Section 3.5).

As this section has emphasised, this thesis starts from a professional, troubling concern – my own lack of understanding of the socio-political context within which educational technology practices take place. To address and understand this concern, I carefully selected philosophical, theoretical and methodological lenses that would aid me to uncover and explain constraining structural forces and propose emancipation pathways to counter the oppressive socio-political context within which educational technology practices take place. The theoretical and methodological selection processes will be further elaborated in Chapters 2 and 3, with Chapter 4 reflecting on how these played out in the field.

The next section begins to paint a picture of the general troubling issues in the context under study, starting with the meta-level African higher education context and drilling down to South African higher education. This will later be related to the constraints encountered by academics in their job roles and specifically how they have developed a culture of resistance to the different structural forces (see Chapter 5). Following on from highlighting issues in the structural context, the next section motivates for the use of the selected ontological, theoretical and methodological approaches. The goals of the research, the problem statement and the research questions are in the next section. And the chapter ends by giving the reader a brief outline of what is to come in the rest of this thesis.

1.2 African higher education context

This research takes place in a higher education institution. As such, the impact of the structural forces in this context will be further explored later in the study. In this section, the state of higher education in both the African and South African context are discussed, and their significance will be highlighted in the discussions in Chapters 5 and 6.

Higher education institutions in Africa have similar challenges to the rest of the world in terms of competing for the best students, marketization of higher education in order to survive a tough economic climate, falling government budgets for education, competing for external funding, and grappling with how to increase research output – all of which are driven by some form of economic interest (Barnett, 2013; Biggs and Tang, 2011; Bozalek and Boughey, 2012; Cooper and Subotzky, 2001; le Grange, 2009; Teferra and Altbach, 2004). World rankings, and the marketing benefit that this engenders for ‘world class excellence’, have also taken centre stage (Hazelkorn, 2015). In effect then, while universities previously aimed to be labelled as research-intensive (such as the university where this study takes place), they now have to re-imagine a new identity as entrepreneurial or corporate universities (Barnett, 2013; Middlehurst, 2001). In this new era, the “university is expected to fend for itself, and ...pursue quite narrow interests, particularly those of money” (Barnett, 2013). In the last two decades there has been the added challenge of opening up access to a massively expanding and diversifying student body and the need to be accountable to government, students and the community at large (Biggs and Tang, 2011).

This new corporate profit-making identity is felt even more keenly in the African higher education landscape and other developing countries, although the degree to which each country struggles with these issues is different (Teferra and Altbach, 2004). But basically, widening

access to a higher education system that was originally built for the mostly white elites has opened up access to the black indigenous¹ population, most of whom are still economically challenged as a result of the oppressive effects of colonialism (Badat, 2010; Council on Higher Education, 2010; Universities South Africa, 2017). Governments and universities have had to rethink the way they fund and finance higher education to ensure that these students are not further disadvantaged by being denied financial access to higher education (Cloete, 2016; Universities South Africa, 2017).

Despite these efforts, the legacy of colonialism continues to add a further layer of oppression for these students, including unnatural national boundaries, exoglossic language of instruction and weak education systems. Each of these will be discussed in turn below.

Firstly, unnatural boundaries between nations were set up by the colonialists which corresponded with their (the colonialists') marked off territories (Herbst, 1989). These boundaries were, in most cases, unnatural for the local tribes as families and trade relations were now separated by borders. In higher education today, this has meant there are students and academic staff who are considered foreigners, although they may share a similar culture and language with locals. They have to contend with the 'baggage' of being a foreigner, including, particularly in South Africa, xenophobic attacks, and a tedious study or work permit application process with government requirements changing regularly (I'm speaking here from personal experience).

The division of countries into borders also meant that natural tribal enemies were now forced to reside in the same country. Multiple ethnic conflicts throughout the continent have been the result; for example the Rwandan Genocide in 1994 (Mamdani, 2001), the Angolan civil war from 1975 to 2002 (James, 1992; Malaquias, 2000) and the Zimbabwean Gukurahundi from 1983 to 1987 (Ndlovu-Gatsheni, 2012; Ngwenya, 2014). Although in most cases these conflicts were politically motivated, they gained momentum because of tribal tensions bubbling under the surface for almost a century. This ethnic cleansing has led to mass destruction of buildings (including universities) and elimination (through murder or displacement) of people, who include university staff and students. Even after a ceasefire, there is intense tension and animosity between the tribes who have to work or learn together in universities.

¹ Black is an accepted and common race label in Africa and South Africa (where this research study took place). And considering the diversity of black African people in South Africa in terms of nationality, I use black indigenous to refer to those who are South Africans.

Secondly, as a result of colonialist rule, the official language of instruction in most African universities is still colonial (Krauss, 2015; Teferra and Altbach, 2004). This exoglossic language is non-indigenous, meaning that it is not the mother tongue for the majority of the population. Unfortunately, this has meant that a large proportion of the student population have to struggle from a young age to learn in a second or third language (Jaffer, Ng'ambi, & Czerniewicz, 2007). This colonialist legacy also means that the culture, ideas and resources used in universities are still mostly the same as what was handed down during the colonialist era (see Section 5.5). This curricula was originally designed to devalue “African creativity, agency and value systems” (Nyamnjoh, 2004, p. 161) and students’ rich cultural heritage – in effect, obliterate our identity as Africans. It is unfortunate that academic staff were schooled under these conditions, and unless they critically examine the effect of this legacy on themselves and on their students, they will likely accept this as the way of being in university. The Western hegemonies have become part of who they are, and without realising it, African academics may perpetuate the oppression to the majority of students who are struggling with the language and culture of university (Suransky and van der Merwe, 2016; Tollefson and Tsui, 2014). Furthermore, the university’s oppressive practices may extend beyond its walls to the community because, as Zeelen (2012) observes, the knowledge and activities of the universities are disconnected from the needs of the communities around them which they should be serving and improving.

And lastly, the colonialists historically segregated school and university admissions along both racial and economic lines where the education system in black schools was weaker than that of the colonialist schools (Cooper and Subotzky, 2001; Teferra and Altbach, 2004). The rationale was that historically the black students were being trained to be labourers rather than white collar workers (Clark and Worger, 2016). These schools and universities were also highly under-resourced and poorly funded, while providing an education that would reproduce an endless cycle of oppression and poverty (Clark and Worger, 2016; McKeever, 2017). As a result, the legacy of colonialism still permeates the lives and identities of the majority of the local population in most African countries as these schools are still under-resourced, and still providing a weaker education system that does not adequately prepare them for university (Clark and Worger, 2016; Ndebele, Badsha, Figaji, Gevers, & Pityana, 2013). Hence, although they have gained independence from colonialism on paper, their lives and identities are still a testament to the strangling hold of oppression that makes it almost impossible for them to break

free even when they do gain physical access to higher education (Cooper, 2015; McKeever, 2017).

These issues add additional layers of oppression which are not necessarily as problematic in Western higher education.

1.3 South African higher education

South Africa has struggled with some of the same challenges as other African countries. They, however, also had the added burden of apartheid, an era marked by institutionalised racism that not only separated whites from nonwhites, but the nonwhites were also divided into different racial groups as well (Clark and Worger, 2016; Cooper and Subotzky, 2001; McKeever, 2017). The apartheid era therefore meant that the South African higher education landscape was fragmented not only along racial, but also ethnic lines (le Grange, 2009). The type and location of institutions, government funding and the study programmes offered (Bozalek and Boughey, 2012) was also different depending on the racial and ethnic composition of the institution. In 1994, which marked the first democratic elections in South Africa, the transformation of higher education was spearheaded by two challenges: “how it will contribute to redress equities of the past and how it will respond to the demands of an economically competitive ‘global society’” (le Grange, 2009, p. 1115).

Unfortunately, in spite of various attempts to redress past imbalances, the country’s higher education sector is still haunted by “the damaging legacy of colonialism and apartheid” (Grant, 2014, p. 522). Historically white universities, like the research site for this study, are still attempting to find ways to extend not just physical, but also epistemological, access to an exponentially growing and diverse student population (Boughey and Niven, 2012). There has been some success as these universities can no longer pride themselves on being “the privilege of elites” (Delanty, 2008, p. 132). But although there is physical access for students from diverse backgrounds, this still seems to be done in order to meet transformation quotas or “equality in quantitative terms” (Vandeyar, 2010, p. 914) and is not accompanied by adequate transforming practices (Clark and Worger, 2016; Cooper, 2015; Krauss, 2015; McKeever, 2017). These efforts have brought South African universities face to face with “political and cultural issues of the wider public sphere” (Delanty, 2008, p. 132), which unfortunately has not been a sufficient motivation to overhaul oppression and social exclusion of these marginalised students once they gain physical access to university. This is evidenced by the fact that currently only 18% of the student age cohort are admitted for university studies each year in

South Africa, with 24% of this small number dropping out in the first year, and 41% *never* graduating at all (Ndebele et al., 2013).

There is also insufficient support from government for a corresponding increase in resources in terms of infrastructure, staffing and funding (Clark and Worger, 2016; McKeever, 2017; Teferra and Altbach, 2004) to cater for the widened access. Where finances are concerned, students have been the main source of income for running public universities (Universities South Africa, 2017). According to Cloete (2016), student fees increased by 42% in just five years (2010 to 2014). Government funding for higher education, which has always been well below the target of 1% of the country's GDP, decreased from about 49% in the year 2000 to between 30% and 40% in 2013 (Cloete, 2016). The burden of increasing costs in a precarious economic climate has therefore been borne mainly by the students, the same students whose families are still reeling financially from the damaging effects of colonialist and apartheid legacies (Clark and Worger, 2016; Universities South Africa, 2017). Even in instances when the government has made funding available for students from previously marginalised communities and underprivileged backgrounds, these have mainly been in the form of loans. This has meant students start off their working careers with a huge debt while at the same time encumbered with the burden of uplifting their families economically. While the complex mix of issues in the South African higher education context are unique, the issue of the burden of tuition fees at university level is a global phenomenon, as indicated by the following studies (Bexley et al., 2013; Bruckmeier and Wigger, 2014; Dearden et al., 2011; Looney and Yannelis, 2015).

These rather depressing statistics indicate that the segregation 'monster' still lingers, but its form has shifted from exclusion to access and success in higher education. The first form of segregation is financial access, where higher education is only available to those who can either afford it or those who qualify for government financial aid (Mabizela, 2015). This effectively excludes a group termed the 'missing middle', who could potentially access higher education but cannot do so because their family's income is too high for them to qualify for government financial aid but insufficient to be able to afford university fees (Mabizela, 2015).

Once students gain physical access to higher education, they face other forms of segregation – academic, epistemological and symbolic access – which are responsible for the low success and completion rates referred to earlier. Academic access is denied students when they are underprepared – or “differently prepared” – to cope with the academic requirements of their

first year of university study (Ndebele et al., 2013, p. 18) mainly because of a weak pre-university education system. As a result, they lack the background foundational knowledge they need in order to succeed at university. The South African education is quite complex to adequately discuss in this section, but McKeever (2017) provides a good overview. Students also have to contend with “epistemological access” (Morrow, 2009, p. 77), which is their specific discipline’s knowledge, “values, norms and conventions” (Ellery, 2011, p. 1079). These epistemic values, as Ellery (2011) explains, have become almost intuitive for disciplinary experts, making it difficult for lecturers to articulate them for students. Lastly, students struggle with symbolic access, where they experience “alienation” or “disconnection” (Case, 2008, p. 323) from the dominant culture of higher education (see Section 5.5).

Students aren’t the only ones who still struggle as a result of oppressive and untransformed higher education structures. The marginalising culture of historically white universities permeates to academic staff as well, even though in this arena there have been changes in staff recruitment policies in order to address academic staff imbalances (Vandeyar, 2010). This tension has resulted in collisions of the worldview of some academic staff with the white, masculine, elitist worldview of higher education (Krauss, 2015). This is aggravated by the “ascendency of ...a more muscular management style” which emphasises efficiency, economy, funding and accountability (Anderson, 2008, p. 251), making the higher education environment especially untenable for women who have to balance this with their maternal roles in a patriarchal African society (see Section 1.1.3). And while historically white universities exhibit an “amnesic fantasy that these issues will disappear on their own” (Vandeyar, 2010, p. 914), the oppressive and marginalising conditions are daily perpetuated in the lives of these academics.

However, academics are exercising their agency despite these constraints by striving to understand their roles, interpret their experiences and determine how they are perceived and recognised by others (Lieff, Baker, Mori, Egan-Lee, Chin, & Reeves, 2012). Their agency also gives them the power to challenge these structural and cultural boundaries and effect social change. Consequently, agency leads to vastly different experiences and views even though academics may seemingly have similar “personal attributes, early socialisation experiences, and contextual factors” (Clarke, Hyde, & Drennan, 2013, p. 18). Through their agency, academics are sculpting themselves and carving out a place for themselves (Stein, Galliers, & Markus, 2013) in the academic space. They are defining not only their role and academic

identities, but taking a stand for or against the structural constraints both they and their students encounter (see Chapters 5 and 6).

Attempts by the government to redress past inequities have had some success in terms of increased staff and student numbers from previously marginalised racial groups, particularly in formerly white institutions like the research site for this study (Cooper, 2015; Vandeyar, 2010). However, as has been shown, these have sometimes been accompanied by a new set of challenges including funding issues and a lack of transformation of the culture of the institution (Bozalek and Boughey, 2012; Clark and Worger, 2016; McKeever, 2017; Vandeyar, 2010). Inadequate funding has been directly responsible for the nationwide student protests (in October 2015 and October 2016), stringent budget cutbacks and an exodus of academic staff, all of which compromise the quality of higher education. An untransformed higher education system has meant that particular staff and students still feel marginalised and oppressed by the system and by their peers (McKeever, 2017; Vandeyar, 2010). This is the context within which educational technology is currently being integrated in South African higher education – a volatile context where power and resistance play out in a multitude of ways. Hence, an educational technology thesis in the South African context cannot but attempt to situate academics' educational technology practices within this oppressive structural context, while considering how their agency mitigates the constraints they encounter.

The nature of the phenomena of interest, which is about uncovering the sometimes hidden oppressive structures that impact academics' educational technology practices, and how academics use their agency to resist them, requires a particular orientation to knowledge that is able to assist the researcher to excavate these structures and the mechanisms that have resulted in their existence. As such, in the next section I will introduce the orientation to knowledge used to situate educational technology practices within a particular socio-political context.

1.4 Philosophical and methodological approach

Critical realism is a philosophical approach (metatheory) that has the potential to assist me to uncover and interrogate the structural constraints encountered by academics, as well as explain how a culture of resistance may play out in the educational technology space. In Chapter 2 I give a detailed account of the critical realist philosophy and how it is used in this study. In this section, however, I briefly motivate for the use of this ontological approach.

Critical realism is a metatheory that looks at the world (ontology) as independent of our knowledge of it (epistemology) (Danermark, Ekström, Jakobsen, & Karlsson, 2002; Mingers, Mutch, & Willcocks, 2013). Hence the aim of research is to come to know the world that already exists but that was previously unknown to us. This separation of ontology and epistemology is a significant motivation for selecting the metatheory as a fitting choice for this research. As I highlighted in Section 1.1, educational technologists like myself have been accused of having a superficial understanding of the reality of educational technology use by academics in higher education. We make assumptions which, consequently, have an effect on the kind of support we give them. This support then fails to address the specific challenges they are encountering in the context, nor does it equip them with tools to resist structural forces that have an impact on their use of educational technology. The critical realist view that there is a separation between my knowledge and their reality helps me approach the study with an open mind and a desire to uncover this reality that is unknown to me.

Secondly, a reality that is independent of our knowledge of it also necessitates an acceptance that different people will perceive that reality differently (Bhaskar, 2008a; Collier, 1994; Sayer, 2000). In effect then, there is one reality (which is the phenomenon under study in this instance) and different perceptions of that reality (see Section 2.4.1.1 for an elaboration of how critical realism differs from other metatheories in this regard). As a researcher I therefore can accept that each research participant will essentially have different perceptions of the research phenomenon based on various individual, social and structural factors. These diverse perceptions will eventually form part of my understanding of the reality. I will be able to interrogate it from different angles (perceptions) and reflect on the contradictions in these perceptions of reality.

Thirdly, critical realism has a view of power that elevates human agency in mitigating oppressive forces (Bhaskar, 2008b, 2016; Norrie, 2010). Agents are said to have transformative capacity (Bhaskar, 2008b) or intentional causal agency (Norrie, 2010) which they exercise not only for their benefit, but also on behalf of those who find themselves powerless to overcome marginalising forces. This conception of power adds to the philosophy's emancipation appeal, which will be further discussed in Sections 2.4.2 and 2.7.4.

And lastly, critical realism has a social arm (social realism) that empowers the metatheory in its analysis of the relation between structures and agents. Social realism attempts to link structure and agency by viewing the two concepts as analytically distinct and yet having a

reciprocal interaction over a period of time (Archer, 1995). Hence, although structures predate the existence of social agents within the structure, the agents' actions can either change (genesis) the structures or re-inforce (stasis) them – this is termed the morphogenetic/morphostatic cycle (see Section 2.8 for an elaboration).

Critical realism therefore seems like a suitable choice for this research because of its separation of ontology and epistemology, its acceptance of multiple perceptions of a single reality, its unique conception of power and the analytical tools from social realism that help to unpack the interplay of structure and agency. The metatheory gives me the toolbox to unearth oppressive socio-political dynamics which are not readily observable, as well as the interaction of the agent with these structural and cultural constraints in their integration of educational technology. In Section 2.5.1 I further motivate why critical realism was the metatheory of choice for me.

Critical ethnography, the methodology I use for this study, has the potential to expand the applicability of critical realist epistemology. Specifically, critical ethnography is the methodology of choice because of its strong focus on critique (rather than just description and moving closer to reality) and emancipation (Madison, 2012; Thomas, 1993). Its strong emphasis on positionality and reflexivity (Carspecken, 1996; Davies, 2008; Madison, 2012) also seems like a good fit for seeking to understand educational technology practices from the position of an insider in the research context. I discuss this further in Chapter 3.

From the commencement of this study, I underlaboured my research using critical realism and applied critical ethnographic principles. However, the selection and use of theory (Archer's morphogenetic/morphostatic cycle in Section 2.8 and Chapters 5 and 6) was done inductively where I retrospectively selected both literature and theory to support the themes that were coming out of the analysed data. I approached my study in this way because, at the commencement of the research, I was overwhelmingly conscious of the gaps in my understanding of the impact of the socio-political context on academics' work. Furthermore, I was worried about the likelihood that the theories and literature I select prior to the collection and analysis of data would only confirm what was already popular in the field, and hence fail to uncover the reality of educational technology choices and practices. Hence my inductive and retrospective approach to the selection and use of theory and literature.

1.5 Articulating the research problem

In order for research in the field of educational technology to move beyond a focus on the hype of new technologies, there should be consideration of the complex socio-political context within which the technology is integrated (Bromley, 1998; Friesen, 2009; Gunn and Steel, 2012; Kerr, 1989; Kirkwood and Price, 2014; Selwyn, 2014). This is particularly pertinent in the African context which is still attempting to address colonialist legacies and its resultant social inequities (see Sections 1.2 and 1.3). And considering that technology is embedded into already existing social structures, the context, its history and the resulting political dynamics, are indispensable for a deeper understanding of educational technology practices.

Furthermore, educational technologists like me have been accused of existing in an ‘ed-tech bubble’ where we are out of touch with academics’ experiences and practices with educational technology (Kerr, 1989; Morozov, 2011; Selwyn, 2012b). As such, we tell the same ‘accepted’ stories which have already been told and fail to interrogate issues of power and oppression in educational technology practices (Bigum et al., 2015; Bromley, 1997; Oliver, 2014). To this end, I interrogate my ability to reflexively understand academics’ contextualised educational technology practices considering the research and hype in the field of educational technology (see Section 1.1.) and my personal assumptions and positionality as an insider researcher.

As such, the research problem is really seeking a better understanding of the socio-political context within which academics integrate educational technology. Based on the theoretical approach of this study (Section 1.4 and Chapter 2), this context has inherent structural forces which constrain or enable the work of academics in some way. The goal of this research is to excavate these structural forces, explore how academics are resisting them and how, possibly, this has an impact on their educational technology practices and choices. I further unpack these as goals and research questions below.

1.5.1 Goals of the research study

My research goals can be grouped into three interacting but distinct categories: personal, practical and intellectual. Personal goals are “deeply rooted individual desires” which are indispensable because the personal is inextricably intertwined with the intellectual in our everyday work. This is further explained by Mills (1959) in his advice to young researchers who have just joined the field:

...the most admirable thinkers within the scholarly community you have chosen to join do not split their work from their lives. They seem to take both too seriously to allow such dissociation, and they want to use each for the enrichment of the other. ...you must learn to use your life experience in your intellectual work, continually to examine and interpret it. ... you are personally involved in every intellectual product upon which you may work. To say that you can ‘have experience,’ means, for one thing, that your past plays into and affects your present, and that it defines your capacity for future experience. As a social scientist, you have to control this rather elaborate interplay, to capture what you experience and sort it out; only in this way can you hope to use it to guide and test your reflection, and in the process shape yourself as an intellectual craftsman. (Mills, 1959, pp. 195–196)

Mills asserts that it is not possible to split our personal lives from the research work we do as our perceptions and experiences of research stem from the personal. Attempting to divorce the two will only result in an incomplete reflection of the processes that have shaped the research and the conclusions that have been drawn, and may suggest an objective representation of the phenomenon under study, which is not possible for qualitative research (see Section 3.3 and 4.5).

While personal goals are critical for assessing the validity of the research’s conclusions (Bazeley, 2013), practical goals are more focused, as the name suggests, on carrying out a particular action (Maxwell, 2013). These two types of goals intersect because a researcher usually starts with personal goals which motivate her to explore the phenomenon to find out if there are grounds for carrying out the research. As the researcher understands the phenomenon, she then moves on to formulating practical goals, what she hopes to accomplish by carrying out the research. Typically, their focus is on “generating... understandable and experientially credible” results and seeking to improve rather than just “assess the impact or value” of a phenomenon of interest (Maxwell, 2013, pp. 31–32). Maxwell (2013) is quick to point out, however, that practical goals are difficult to frame into answerable research questions and are more useful in justifying, defending and planning the study.

This then means that intellectual goals are crucial for bounding and containing both practical and personal goals into feasible research goals. Intellectual goals focus mainly on understanding the phenomenon of interest, as well as the experiences, actions, processes and context from the research participants’ point of view, with the aim of “developing causal explanations” (Maxwell, 2013, p. 31) which “have implications for theoretical considerations” (Mills, 1959, p. 205). And because critical realism relies heavily on abstract theory to understand and put forward possible explanations for social empirical situations, theoretical considerations are indispensable for this study.

In terms of a personal and practical goal, as has already been highlighted in Section 1.1.1, the main motivation for this research was my frustration with the disconnect between the technical support I offered academics, and the challenges they actually faced in practice. I felt that in order to improve my practice I needed a better understanding of the way academics approached their educational technology practices as well as the socio-political context within which this was embedded. I also felt that our Educational Technology Unit – where we support academics in their use of technology for teaching – could (and should) be contributing to the debates around the transformation of higher education which were then (and are still) taking place around the institution, and to challenge people to think differently about the potential oppressive effects of the technologies they use for teaching. But without an understanding of current practices and the causal efficacy of the socio-political context, this would not be possible.

This deeply distressing professional dilemma led me to formulate the following intellectual research goals, which have guided the development of the research questions in Section 1.5.2.

I realised at the start of the research that my presence would have an impact on the data. First of all, the research participants would relate to me in a certain way and give me particular answers because of my job role, particularly the “values and interests” conferred on me by this role (Hammersley and Atkinson, 2007, p. 15), and possibly because of the relationship I had with them prior to the research. Secondly, my understanding and interpretation of their experiences and their responses to my questions would be clouded by a range of issues, including my background, what I knew about them from other circles, my knowledge of the context (both institutional and national), and of course by my own historicity (Davies, 2008; Madison, 2012). Although the explication of my philosophy would mitigate this to some degree, I felt it was important for me to select a research approach that would require me to be reflexive about my positionality, subjectivity and assumptions (Carspecken, 1996; Hammersley and Atkinson, 2007; Madison, 2012; Thomas, 1993). Hence, reflexivity undergirds the approach I take in this study and I have attempted to make this process explicit in its different stages.

The **first** goal stems from a problem highlighted in literature: how educational technologists are over-engaged with technology to the exclusion of the actual experiences of academics with the technology (Section 1.1). In fact, it seems that although we are supposed to be supporting academics in integrating educational technology, we actually lack a full understanding of their

technology choices, experiences and approaches. While this view may not be universal, the literature used in Section 1.1 points to this gap in educational technology research. Hence, my first research goal centres around reflexively interrogating my ability to understand the social context and experiences with educational technology integration.

Once I have interrogated my positionality with respect to conducting this research, my **second** and **third** research goals are to uncover the constraints of the structural context within which academics work and how they resist these constraints. I hope to understand and explain the oppressive and marginalising effects of structural forces. But I am also aware that academics have agency, which gives them impetus to resist these structural forces in different ways. I am also seeking to understand the impact that these resistance strategies have on both the academics and the structural forces. The aim of this goal is to give me a deeper understanding of the interplay between structure and agency in the South African academic context.

The **fourth** and **fifth** research goals move into the domain that is the focus of this study – the integration of educational technology within this South African higher education context. I am interested in evaluating, firstly, what structural forces the academics in this study encounter in their use of educational technology and whether these have any relation to the structural forces uncovered in the second research goal. Secondly, I am interested in seeing how they resist these forces and if there is a match between the resistance strategies in their general academic role and in their integration of educational technology.

Once I have an understanding of the context and practice of educational technology integration and the contentious context within which it takes place (structural forces versus resistance strategies), my **sixth** research goal is to reflect on supportive pathways which are sensitive to the structure-agency dynamic, particularly within the South African higher education context.

My **seventh** and last research goal is seeking to address the concerns of theoretical and methodological rigour in educational technology research (as highlighted in Section 1.1) by explicating the philosophical and methodological underpinnings of this research, while reflecting on their impact at each stage of the research process. During the research I grappled with the suitability of critical realism for use with my selected methodology – critical ethnography. Although critical realism's depth ontology seemed like a good fit, and had been used with both ethnography and critical ethnography (Barron, 2013; Porter, 2002; Rees and Gatenby, 2014), I initially struggled with critiques against its lack of criticality (Klein, 2004). The last research question therefore seeks to explore and define the 'critical' in critical realism,

and its suitability as an underlabourer for critical ethnography, considering the philosophical foundations of the latter.

1.5.2 Research questions

As is the case with a critical ethnographic study, an exploration of the true nature of the phenomenon is part of the research process (Hammersley and Atkinson, 2007). Hence, my understanding of the issues and formulation of the final research questions emerged as I reflected on the data I was collecting around the socio-political context and educational technology practices of my research participants. The following research purpose guided my explorations of the topic:

The purpose of this study is to understand participants' educational technology integration practices by focusing on the culture of resistance they have developed in order to mitigate the oppressive structural forces in a South African higher education institution.

And these are the research questions and research goals which emerged as a result:

Research Question 1: *What structural constraints are female academics vulnerable to in the South African higher education context, and in what ways have they exercised their agency to counter the oppressive and marginalising effect of these constraints?*

- **Goal 1:** Interrogate my ability as an insider researcher to understand academics' experiences of these structural forces and their resistance strategies.
- **Goal 2:** Uncover structural constraints that impede, oppress or marginalise academics.
- **Goal 3:** Uncover the resistance strategies academics have adopted to mitigate the effects of structural forces.

Research Question 2: *How does this culture of resistance permeate their integration of educational technology?*

- **Goal 4:** Uncover the structural forces that have an impact on academics' integration of educational technology.
- **Goal 5:** Understand the resistance response to these forces in their use of educational technology.

Research Question 3: *How should educational technology support be conceptualised differently in order to be appropriately sensitive to structural constraints and the culture of resistance of academics as they integrate educational technology in a South African university?*

- **Goal 6:** Reflect on how oppressive structural forces and the culture of resistance can be incorporated into educational technology support.

Research Question 4: *Is critical realism a suitable ontological underlabourer to not only explicate the socio-political context, but also uncover oppressive structural constraints and academics' resistance in the integration of educational technology?*

- **Goal 7:** Reflect on the suitability of critical realism for a critical research study, and particularly how critical realist ontology and critical ethnographic methodology can aid in reflexively excavating oppressive forces and resistance strategies.

The last section maps out the structure of the rest of the thesis.

1.6 Thesis structure

In this first chapter I have given a brief introduction to the constructs, context and theories used in this research, as well as the motivation and purpose of this study. I have sought to respond to the question: *Why am I doing this research?* by mapping out the argument that will be made in the rest of this thesis, which is the importance of reflexively embedding the study of educational technology integration within its socio-political context. Figure 1-1 below gives an outline of the overall thesis structure:



Figure 1-1: Overall thesis structure

As indicated in Figure 1-1 above, the title of each chapter has been structured in the form of a question. These questions are different from the research questions in Section 1.5.2, and rather focus on the research process and the results of the research. In my quest for a good title for each chapter, I followed the advice provided in literature, but had to also make a personal choice that seemed like a good fit for this thesis. From the literature, I was conscious of firstly, the importance of a good title in not only attracting the reader's attention but also informing the reader about what to expect in each chapter (Grant, 2013; Merrill and Knipps, 2014). Secondly, a good title can assist the writer to remain focused on the topic at hand during the writing process (Grant, 2013). And lastly, I was drawn to Jamali and Nikzad's (2011) categorisation of titles as declarative, descriptive and interrogative (note that there are a range of different categorisations by different authors). Declarative titles include the outcomes or conclusions of the research, descriptive titles state the subject being discussed without stating the results, and interrogative titles state the subject in the form of a question (Jamali and Nikzad, 2011).

A cursory search of thesis chapter titles reveals that most of them follow the descriptive title format by stating the subject that will be discussed in each chapter. However, I selected to use the interrogative question title because it arouses the curiosity of the reader (Ball, 2009; Gustavii, 2017; Jamali and Nikzad, 2011) while providing a roadmap of what will be covered in the chapter. While descriptive titles have their place (and I include them in brackets in each

chapter), I felt that for a deeply personal critical ethnographic research such as this one where my intentions and perceptions are under scrutiny in order to validate the research results, using interrogative titles would assist me in guiding the reader to make sense of both my reflections and the research data. Furthermore, with the mass of data, experiences and events resulting from the research, using questions allowed me to enforce strict boundaries for myself as I reflected on, and wrote up, each chapter. In effect then, the question titles in each chapter helped me formulate what the central issue of each chapter is (Ball, 2009), both for myself and for the reader.

The structure of the thesis does not include an explicit literature review chapter. This is because both literature and theory were used retrospectively in this study. Firstly, I was conscious of the fact that the assumptions I had about academics' educational technology practices was influenced by the prevailing explanations in the field (Sections 1.1.2 and 6.2). As such, I wanted to avoid delimiting the experiences of the research participants based on the same assumptions I was trying to undo (Sections 1.5 and 1.1.2). I also hoped to challenge the extant knowledge in the field about educational technology practices in South African higher education. Hence, I reasoned that using literature retrospectively, rather than using it to frame the data as it emerged, would help me do this (Sections 4.4 and 6.2). The literature is therefore integrated in the presentation of the data in Chapters 4, 5 and 6.

In line with Figure 1-1 above, the rest of the thesis is structured thus:

In Chapter 2 I provide an answer to: *How am I approaching this study?* by introducing the philosophical and theoretical constructs that will be used in this study. This chapter extends the brief introduction in Section 1.4 by not only introducing the critical realist philosophy, but also arguing for the central role of reflexivity.

Chapter 3 provides a response to: *What tools am I using?* by laying out the study's methodological approach (critical ethnography) and reflecting on its suitability for a critical realist research study, as well as its fit for the context. Selection of research participants, the various data collection tools used as well as the research's ethical considerations are also outlined in this chapter.

In Chapter 4, prompted by one of the central issues highlighted in this chapter around the ability of educational technologists to understand academics' use of educational technology, I reflect on the question: *How did the research problem emerge?* This self-reflective chapter shows

how I applied the methodological principles in the field, the process of topic discovery, and how I went about excavating meaning from the data I collected through the use of personal experience, literature and theory.

In Chapter 5 I begin to tell the research participants' stories by responding to the question: *What resistance strategies have emerged in response to structural forces?* This chapter outlines broad structural constraints encountered by the research participants and how, through their agency, they have developed an arsenal of resistance strategies, what Scott (1986, 1990) terms the culture of resistance (see Section 4.4.5.1). As will be shown, these resistance strategies are mostly clandestine and personal in nature.

Chapter 6 attempts to respond to the question *What is the significance of resistance on educational technology integration?* by linking the socio-political context back to educational technology practices. The chapter briefly highlights structural constraints specific to educational technology integration in the research context, and draws parallels between resistance strategies used in other academic roles and the resistance exhibited in the way the research participants choose to integrate educational technology. In effect, then, rather than resisting the use of educational technology (as highlighted in Section 1.1 and 6.3), the academics in this study use educational technology to extend their resistance practices. This has implications for the educational technology support offered to academics, as is also discussed in this chapter.

In Chapter 7, *What does this research contribute to the field of educational technology?*, a summary of the study, its key contributions and major findings are presented as well as its limitations and recommendations for future research.

Chapter 2

How am I approaching this study?

(Research Philosophy & Explanatory Theory)

“While it is possible to develop practical or emancipatory critiques of technology, the default position has been to rely on common-sense understandings of what technology is and how it can be used, rather than to theorise it... [resulting in an] account of educational technology that can only explain ‘education’ and not ‘technology’” (Oliver, 2013, pp. 32–33, 31)

2.1 Pre-text

This chapter is separated into two parts, both aimed at elaborating the philosophical and theoretical approach of this study. In the first part of the chapter (Section 2.2 up to 2.7), I map out the philosophical lens underpinning the theoretical, methodological and literary choices of this study. In laying out this framework, I will also reflect on why this is a fitting choice based on my positionality, research assumptions, context, as well as the research phenomenon under study (extension of Section 1.4). In the second part of the chapter (Section 2.8), I expound on the theoretical lens used to understand and explain the data. As will be elaborated in that section, this theory, which I utilise in Chapters 5 and 6, emerged after the initial analysis of the data (inductive). Before embarking on this process, however, it would be useful to note the research journey so far.

As highlighted in Section 1.1 and in the opening quotation above, there is a dearth of educational technology research studies that are explicit about their theoretical approaches. Most studies in the field tackle research from a technology and practice point of view, rather than considering the social context within which the technology is being embedded. Other issues highlighted in Section 1.1 include single-case research over a short period, and the deficit of educational technologists’ understandings of academics’ educational technology choices and practices. These and other issues have contributed to the failure of educational technology research to offer sustainable and scalable solutions to the constraints faced by academics actively using technology in their teaching, particularly in the African context.

This chapter attempts to respond to the above critique by providing an initial response (expanded in Chapter 3) to Research Question 4 and its associated goal:

Research Question 4: *Is critical realism a suitable ontological underlabourer to not only explicate the socio-political context, but also uncover oppressive structural constraints and academics' resistance in the integration of educational technology?*

- **Goal 7:** Reflecting on the suitability of critical realism for a critical research study, and particularly how critical realist ontology and critical ethnographic methodology can aid in reflexively excavating oppressive forces and resistance strategies.

In addressing this goal and the related question, this chapter builds the argument made in this thesis around the indispensability of both context and theory in seeking to understand educational technology practices. The selection of a suitable philosophical and theoretical lens provides the required tools to enable the excavation of structural constraints that may hinder educational technology integration in the social context of South African higher education, and particularly how academics mitigate these marginalising forces through a culture of resistance.

As indicated in Section 1.4, critical realism has been selected as the philosophical lens for this study. The philosophy's considerations have impacted the majority of activities in the research process – particularly those that deal with ontological issues. Chapter 3 will elaborate on the epistemological approach selected for this study – critical ethnography – and how the two approaches can potentially complement each other. Figure 2-1 below is a visual representation of the underlabouring work done by critical realism, and which aspects of the thesis have been directly impacted by both critical realism (ontological considerations) and critical ethnography (epistemological considerations). Each of these considerations and their impact on the research process will be highlighted in the relevant chapters. Figure 2.1 below gives a broad overview of the impact of critical realism in this thesis.

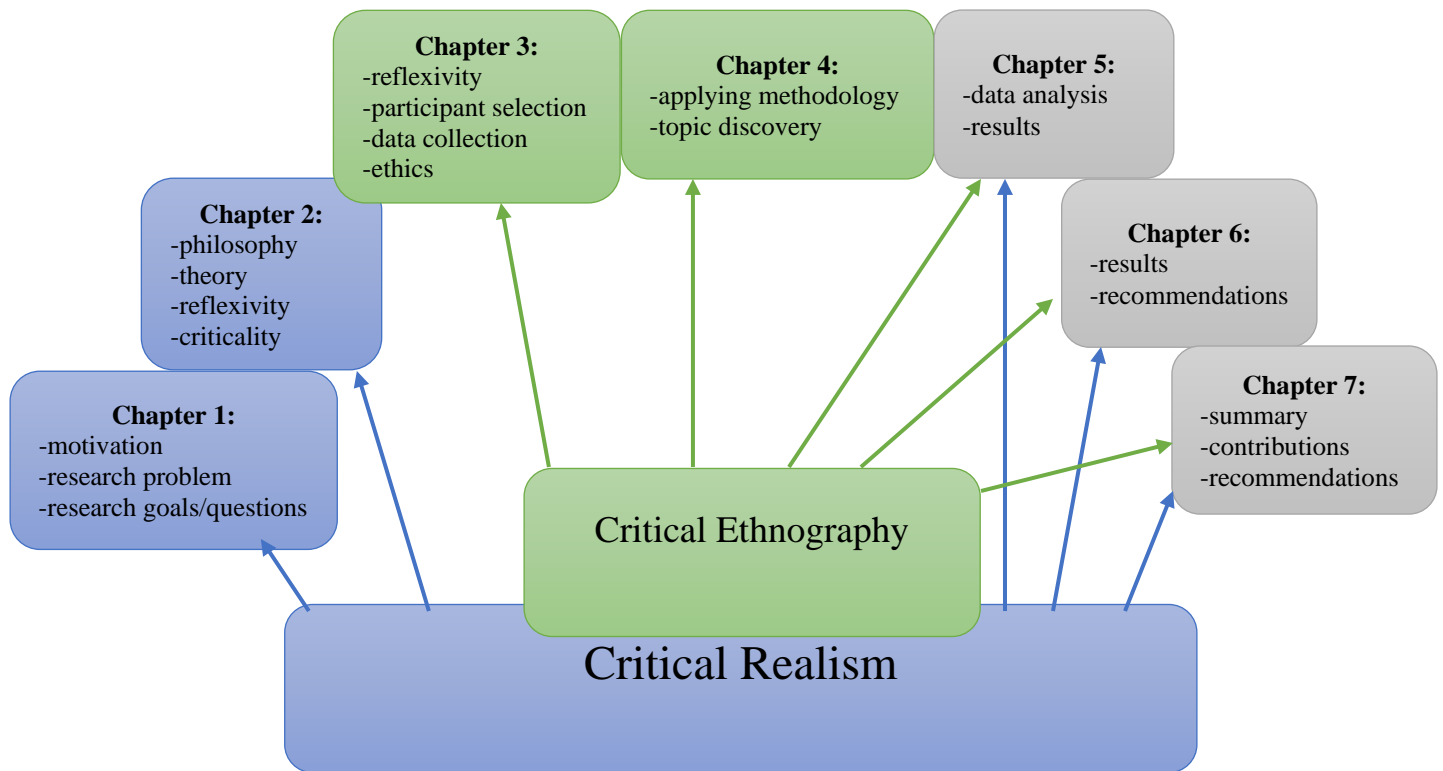


Figure 2-1: Critical realism as underlabourer for the research process

2.2 Introduction to the research philosophy

In this study, I am attempting to understand educational technology integration practices by focusing on the structural and cultural context within which they persist. Before attempting to explore this, however, I need a philosophical lens that will provide me with the tools to bring to light hidden socio-political constructs and the power dynamics they engender. These tools should also deal with the agency of the research participants in resisting or counteracting the effects of these contextual constraints on their use of educational technology. And since the technical is mediated by social and political dynamics, I need a philosophical and theoretical lens that will help me uncover the sometimes hidden oppressive practices in the context within which educational technology integration takes place.

This first part of the chapter commences the discussion by outlining why it is crucial to be explicit about our philosophy in research. It then moves on to motivate for the critical realist approach by first giving a brief synopsis of its underlabouring role and how this was influenced by the experiences, reflexivity and critique of one of its major originators – Roy Bhaskar. An introduction to its ontological and epistemological positions as well as aspects of dialectical

critical realism are then followed by some critiques of the metatheory and how they are mitigated either by further developments of the metatheory or by the application of a critical ethnographic methodology. My understanding of what ‘critical’ in critical realism means follows in an attempt to pool together the themes discussed in this part of the chapter.

2.3 What’s the point of philosophy?

‘Doing’ philosophy is a necessary part of the doctoral research process. According to Lee (2004), because PhD scholars pursue a doctor of *philosophy*, by the end of it they should, technically, be conversant with philosophical perspectives and constructs. Therefore, the requirements of the *kind* of degree that I am pursuing demand that I engage with philosophy and make it explicit in my research. Furthermore, a strong thesis argument is characterised by a theoretical or philosophical perspective which is an appropriate fit for the research questions put forward in the study (Ngwenyama, 2015). These research questions, in turn, are based on a research phenomenon that exists and persists in the field (Ngwenyama, 2015). Hence, following on from the previous chapter which outlined the enduring nature of the research phenomenon and resultant research questions, I attempt in this chapter to carry forward my case by expounding my philosophical approach.

At the commencement of this research, I was keenly aware that my scientific, quantitative and theory-deficient background in Computer Science had ill-equipped me to do philosophy and effectively apply it to a qualitative research project. As Lee (2004) points out, my inhibition was not unique. He laments the ironic resistance of Information Systems scholars to do philosophy as akin to resisting a technology of knowledge. How then can “scholars who bemoan resistance to technological innovations, ...be guilty of the same?” (Lee, 2004, p. 2). Reading Gramsci (1971) helped me understand that philosophy is not reserved just for disciplinary specialists and experts, but everyone does philosophy at some level through societal norms such as language, customs and religion. This ‘spontaneous’ (Gramsci, 1971) or ‘bad’ philosophy (Collier, 1994) is detrimental to research because it arises from an assumption that I have no philosophy, when in fact I am working from a particular viewpoint that I have not engaged with or made explicit (Collier, 1994; Myers, 2013).

The research philosophy is crucial because it will help me articulate for the reader my “beliefs about what comprises the real world [as this has] an effect on what one seeks to observe, what one subsequently observes, how one explains what one observes, and the reasoning process by which one performs each of these” (Lee, 2004, p. 6). Being aware and critical of my view of

the world (Gramsci, 1971) can help me expose and criticise my “common-sense thinking... prejudices, superstitions and unquestioned assumptions which are obstacles to scientific progress” (Benton and Craib, 2011, p. 1). Philosophy provides me with tools to interrogate and make explicit the practices and knowledge that are implicit in everyday life (Collier, 1994), particularly in my position as an insider researcher. It can also help me avoid errors in my results (Hammersley, 1992) by laying a good foundation for the theories, methodologies and analysis that will be used in the research (Myers, 2013). Selecting and arguing for a philosophical position also sets the foundation to emancipate me from the potential hegemony of the intellectual groups I belong to (Dobson, 2001), in my case Information Systems, Educational Technology and Higher Education. Through philosophy I can choose my “sphere of activity,” the lens with which to interrogate my research, “refusing to accept passively and supinely” the dictates of my disciplines (Gramsci, 1971, pp. 323–324).

Yet in the confines and time limits of a PhD research project it is not possible to completely escape external influence and set sail my own philosophical boat. Hence, the selection of a philosophical lens means I am still conforming to a particular intellectual tribe. I therefore need to be critically aware of the philosophy’s position and assess that this philosophical lens fits with my view of the world (ontology) and how I come to know that world (epistemology) (Danermark et al., 2002). There are limitations to every philosophy, however, and “the critical or analytical philosopher of science can only say as much as the philosophical tools at his disposal enable him to say” (Bhaskar, 2008a, p. 6). What is important to remember is that whatever philosophical perspective I select with which to view the world, I need to be explicit about its work in the background in terms of my theoretical, methodological and literary choices.

2.4 Critical realism as underlabourer

The philosophical perspective that I have selected to guide this research is critical realism. The background work that this philosophical perspective has done for my research is much like that of an underlabourer. The everyday understanding of an underlabourer is that of an assistant or blue collar worker who does the dirty work – the menial tasks – thereby opening up space and time for the expert to get on with the ‘real’ job valued by the company’s stakeholders and rewarded with bonuses and awards. The underlabouring work done by critical realism for the research process – from conception, to data collection, analysis and writing – is, in theory, somewhat similar.

The term originated from John Locke, a 17th century philosopher, who humbly likened his work to that of underlabourer to such great ‘master builders’ as Isaac Newton, positing that:

The commonwealth of learning is not at this time without master-builders, whose mighty designs, in advancing the sciences, will leave lasting monuments to the admiration of posterity: but every one must not hope to be a Boyle or a Sydenham; and in an age that produces such masters as the great Huygenius and the incomparable Mr. Newton, with some others of that strain, it is ambition enough to be employed as an under-labourer in clearing the ground a little, and removing some of the rubbish that lies in the way to knowledge. (Locke, 2016 n.p.)

John Locke personifies philosophical humility by regarding his work as that of clearing away the dross – the “frivolous use of uncouth, affected, or unintelligible terms, introduced into the sciences, and there made an art of” – so that the great thinkers, the master builders, could get on with their “ingenious and industrious” work that would benefit generations to come (Locke, 2016 n.p.). It seems his work of underlabouring had to do with challenging the accepted ways of viewing science and philosophy, and particularly assumptions about knowledge at that time, and he gives the impression that he is laying the groundwork for the attack that follows on “the sanctuary of vanity and ignorance... and hindrance of true knowledge” (Locke, 2016 n.p.).

In a similar vein, the motivation for the development of the form of critical realism used in this study was prompted by the need to sweep away the “philosophical rubbish that lies in the way of scientific knowledge” (Bhaskar, 2016, p. 2). Critical realism’s main aim was to challenge positivist empiricism as well as constructivist or interpretivist idealism before moving on to challenge a range of other non-realist viewpoints (Bhaskar, 2011; Mingers et al., 2013). In the theory-deficient field of educational technology (see Section 1.1) where the popular positivist and constructivist approaches have failed to meet the promises of a transformed higher education landscape (Kirkwood and Price, 2014; Laurillard, 2008; Oliver, 2013), Bhaskar’s immanent critique of popular theories has been one of my main motivations for selecting critical realism as an underlabourer for my research. In this field, sloppily-applied theories, lazy investigations and questionable conclusions (Selwyn, 2012a) have resulted in a theory-practice divide (Graham, 2011; Gunn and Steel, 2012; Oliver, 2013) and a disconnect between what academics actually do, and what educational technologists *think* they do (Selwyn, 2012b). As an educational technologist, I wanted to uncover academics’ experiences with, and use of, educational technology as dictated by socio-political forces in order to give them the kind of support that would meet their needs. And critical realism offered me the philosophical tools to dig beyond surface appearances and challenge the dominant approaches in the field which

usually focus on ‘education’ but not ‘technology’ (Oliver, 2013) (constructivist), and ignore the social context within which the technological practices are embedded (positivist).

Additionally, critical realism’s underlabouring work is manifested in its attempt “to aid and empower the... human sciences, in so far as these illuminate and inform projects of human self-emancipation” (Bhaskar, 2011, p. 180). The exact form of the emancipation espoused by this philosophical perspective has been debated, including the meaning of the term ‘critical’ in critical realism (Bhaskar, 2011; Danermark et al., 2002; Klein, 2004; Vandenberghe, 2014). In Section 2.7 I discuss different views of the ‘critical’ prefix in critical realism, and throughout this chapter I also emphasise self-reflection as a necessary but often under-emphasised aspect of critical realist emancipation. This theme will be carried over to Section 3.4 where I discuss how critical ethnography can potentially strengthen critical realist epistemology.

2.4.1 Critical realist ontology

The form of critical realism adopted in this research was developed mainly from the work of Roy Bhaskar, although a range of other social theorists have collaborated in its development and expanded its use to different fields (Gorski, 2013; Vandenberghe, 2014). Bhaskar’s critical realism, however, is the term used to distinguish it from other forms of realism mainly because he “has given critical realism a coherent philosophical language and has developed parts of the philosophic tradition” (Danermark et al., 2002, p. 4). Furthermore, his “demolition of positivism [was] so rigorous, radical and powerful” that his contributions are still considered as the cornerstone of critical realism (Vandenberghe, 2014, p. 3).

Critical realism, unlike most other metatheories, starts with an explication of reality – its understanding of what the world is like – before attempting to explain that reality because the way we conceptualise our world has a direct impact on how we understand the events and actions we observe (Danermark et al., 2002). Critical realist ontology sees the world as consisting of “real structures which endure and operate independently of our knowledge, our experience and the conditions which allow us access to them” (Bhaskar, 2008a, p. 15). This does not mean that these real structures (also known as the *intransitive* dimension) are ‘unknowable’, just that each event, action and perception moves us closer to understanding this reality (Bhaskar, 2008a; Collier, 1994). As Sayer (2000, p. 11) explains: “there is no reason to believe that the shift from a flat earth theory to a round earth theory was accompanied by a change in the shape of the earth itself.” In effect, then, our understanding and representation of the world is fallible – i.e., it can be proved then disproved countless times, which really is the

goal of science (Chalmers, 2013). In the context of this study, the intransitive dimension consists of the structures where educational technology practices take place. My job then, is to excavate these real structures embedded not just in the institutional culture and practices, but also in the experiences and minds of the research participants as they use educational technology.

Critical realism's view of reality is that of a depth ontology in an open system (Bhaskar, 1998; Sayer, 1992), as opposed to the flat ontology of empiricism or positivism, whose ontology is based on observable phenomenon only. This depth is viewed as the three ontological domains (see Figure 2-2 below): the *real*, the *actual* and the *empirical* (Bhaskar, 2008a).

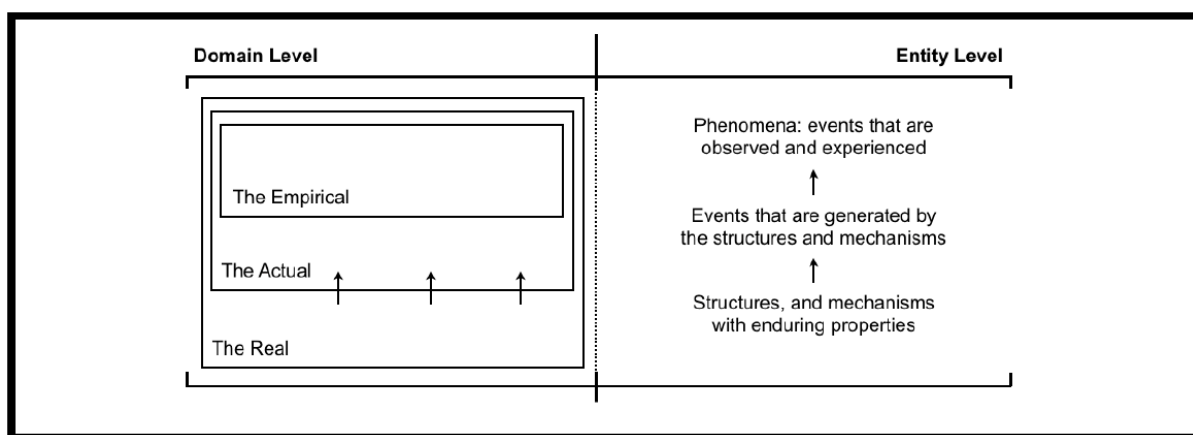


Figure 2-2: Stratification and emergence in critical realism (Zachariadis, Scott, & Barrett, 2013, p. 858; adapted from Bhaskar, 1975)

The domain of the *real*, or the intransitive dimension, encompasses the natural, physical, conceptual and social structures and mechanisms that exist in the world (Danermark et al., 2002; Sayer, 2000) which cannot be observed or experienced directly. These real structures are termed generative mechanisms, which are “the ways of acting of things” through their tendencies or causal powers (Bhaskar, 2008a, p. 3). In the domain of the *actual*, events take place as a result of causal powers being activated (Sayer, 2000). These events may or may not be observable or experienced (Danermark et al., 2002). The domain of the *empirical* consists of observations and experiences which help us infer both the real and actual domains (Sayer, 2000). The goal of critical realist research then is to uncover through the empirical – and to some degree the actual – domains, the generative mechanisms that “are often counter-phenomenal, hidden or dormant and so need careful, systematic excavation” (Boughey and Niven, 2012, pp. 642–643).

These three domains interact in an *open* system, meaning that they “cannot be studied or understood in isolation from their environment” because of the complexity and unpredictability of social systems (O’Mahoney and Vincent, 2014, p. 6). As highlighted in Section 2.8, this necessitates the use of explanatory theories in critical realist research in order to attempt to avoid common-sense understandings of the research phenomenon and its socio-political context (O’Mahoney and Vincent, 2014).

In the context of this research, the domain of the empirical and actual would consist of mostly the primary data I gathered from observations and interviews. The use of educational technology, however, cannot be explained only from this data. I need to use critical realist analysis methods, namely abstraction and retrodution (see Sections 3.7 and 4.6.2) (Danermark et al., 2002; Wynn Jr and Williams, 2012), in order to infer the kind of generative mechanisms that could be responsible for the observed use of educational technology. In some instances, the research participants may be aware of the generative mechanisms leading to their educational technology practices, in which case the interviews can be used to confirm the efficacy of the inferred generative mechanisms. In some cases, however, the research participants may be reproducing a system whose purpose and history they do not understand. They then perpetuate oppressive educational technology practices immortalised by institutional hegemonies (see Section 1.3). The use of a critical ethnographic methodology, which will be discussed in detail in Chapter 3, has been selected in order to help me as the researcher not only uncover these oppressive hegemonies, but also reflect on my insider status and how I am possibly perpetuating the same in my own research practice.

2.4.1.1 Contrast with other ontologies

Critical realism’s independent real structures which are only partially accessible to the researcher, stand in contrast to other metatheories’ ontological positions. Positivism has similar ontological views to critical realism in terms of an independent reality driven by “immutable natural laws and mechanisms”(Guba and Lincoln, 1994, p. 109), although critical realism extends this to social mechanisms as well. However, the stark difference is positivism’s flat, apprehensible reality with “measurable properties [and] predictive understanding” through generalisations, objective classifications and cause-effect laws (Guba and Lincoln, 1994; Myers, 2013, p. 38). Critical realism objects to this flat, easily accessible ontology, as discussed in Section 2.4.1.

Interpretive researchers elevate the social construction of reality through people's shared meanings of the research phenomena, by focusing "on the complexity of human sense-making" (Myers, 2013, p. 39). Critical realism borrows from this view by understanding reality to be not only physical, but social structures as embodied in cultural constructs and social agents (Archer, 1995). However, critical realism emphasises two main differences: firstly, that this physical, cultural and agential reality is only partially apprehensible by a researcher; and secondly, that it may be influenced by generative mechanisms in other structures (Archer, 1995; Bhaskar, 2016; Danermark et al., 2002). Hence, critical realism emphasises the situatedness of the interpretivist's social constructions.

Critical theory, on the other hand, views reality as "historically constituted" (Myers, 2013, p. 43) or "historical realism" (Guba and Lincoln, 1994, p. 110) shaped by various social factors over time. Social actors produce and reproduce this reality and the goal of critical research is then to critique this reality and, if possible, empower people to change it (Myers, 2013). Basic critical realism with its focus on a stratified emergent ontology, has traditionally separated structures from history, viewing each as separate entities which are brought together by different processes (Roberts, 2014, p. 10). However, critical realism's dialectic turn (Section 2.4.2) strongly emphasises how structures and history are dialectically entwined in a shared historical totality (or system) (Roberts, 2014). The emphasis here is not just on the embeddedness of structures in history, but also on the sometimes dialectic (contradictory) relation of these elements of historical totality (Bhaskar, 2008b). Critical realism, then, is transcendental in nature as it "*transcends* the one-sidedness" of these philosophies and carries "forward what is true" (Dean, Joseph, & Norrie, 2005, p.7, emphasis mine) from positivism, interpretivism and even critical theory (Mingers, 2014).

In seeking to understand academics' educational technology integration practices within the current South African higher education context, I selected critical realism rather than the above paradigms because, for me, it seemed to pick the 'best' aspects of each paradigm which was a good fit for the kind of research I am pursuing. Critical realism allowed me to view educational technology practices as an independent, stratified reality that I am seeking to understand. It helped me accept that I may not fully understand the complexities of educational technology integration, and that it was okay for me to present my findings knowing that they are fallible and someone else may come up with a better explanation later on. The idea of a stratified reality allowed me to explore the research participants' perceptions of their use of educational technology and attempt to understand this from their point of view. I was then able to bring my

observations and their understandings together and explain it through the lens of historical totality (Section 2.4.2 and 2.6.1.1) within the oppressive, volatile, complex and messy state of South Africa's higher education landscape.

2.4.2 Dialectical critical realism

Dialectical critical realism, the second stage in the development of this metatheory, was developed as a way to address the shortcomings of basic critical realism (see Section 2.6 for critiques of critical realism). It has four distinct but interacting stages which have been designed to expand and deepen the way critical realism tackles ontology (Bhaskar and Hartwig, 2010). Dialectical critical realism is a complex and involved expansion of basic critical realism (Norrie, 2010; Roberts, 2014) with some authors considering the work "esoteric or pompous" (Patomäki, 2002, p. 6). However, I have found that some elements of the dialectic have the potential to strengthen some weaknesses of critical realist ontology. These select number of elements will be used in this thesis, and have been carefully chosen because of their ability to address criticisms of basic critical realism (Section 2.6) while supporting the critical ethnographic methodology.

In different sections of this chapter (2.6 and 2.7) I explain briefly some aspects of dialectical critical realism (totality, absence and transformative capacity) which were employed in the research (Chapters 5 and 6). This section will briefly outline the four stages of dialectical critical realism in order to show how they are related, and consequently where this study is situated within the critical realist dialectic.

Bhaskar's critical realism has gone through several stages, starting with what is now known as basic critical realism (which encompasses the original transcendental realism and its social focus, critical naturalism), followed by dialectical critical realism and then moving on finally to the philosophy of meta-reality. As Bhaskar elaborates, these stages have been developed to expand and deepen the way critical realism tackles ontology (Bhaskar and Hartwig, 2010). This is, consequently, one of the criticisms of critical realism: how it has deepened our understanding of ontology without giving epistemology – how we can come to a better knowledge of this reality – the same rigorous attention (Bhaskar, 2016). In Section 2.6.3, I highlighted this as a major criticism of the critical realist metatheory and intend to show how a critical ethnographic methodology can aid the rather cautious critical realist epistemology (Section 3.4).

Table 2-1 below (adapted from Bhaskar, 2008b, 2016; Hartwig, 2007; Norrie, 2010) outlines the basic tenets of the complex dialectical critical realist approach. Dialectical critical realism's four levels are termed first moment (1M) which focuses on non-identity; second edge (2E) focusing on negativity and absence; third level (3L) which explores totality; and the fourth dimension (4D) which focuses on transformative praxis through reflexivity. The dialectic's MELD schema is derived from the elision or joining of these conceptual representations: 1M, 2E, 3L and 4D.

Table 2-1 Dialectical critical realism's MELD structure

MELD Schema	Concepts
First moment (1M): <i>non-identity</i>	Reality or being is what it is – independent, stratified and emergent Most comparable to basic critical realism
Second edge (2E): <i>negativity</i>	Being is seen as a process of moving from an undesirable <i>absence</i> to a desirable <i>absenting of the absence</i> Accentuates negativity and absence in both the transitive and intransitive dimension
Third level (3L): <i>totality</i>	Being is viewed in totality – the context together with the agent Relationality and holistic causality
Fourth dimension (4D): <i>praxis</i>	Being as reflexive with an emphasis on the transformative capacity of agents (power ₁ and power ₂ relations) Intentional causality

At the risk of over-simplifying the concepts of the MELD schema (it took Bhaskar two full books to expand this critical realist turn), I will give a brief summary of the above constructs. Basically the first moment (1M) specifies being as such (Bhaskar, 2016), which means that being or reality is stratified and differentiated; it is what it is whether or not we acknowledge its existence and it will continue to exist despite the knowledge we have of it (Bhaskar, 2016; Bhaskar and Hartwig, 2010; Mingers, 2014; Norrie, 2010; Price, 2016a). The first moment ties in most closely with the ontological and epistemological view of basic critical realism that I discussed in Sections 2.4.1 and 2.4.3.

The second edge (2E) is characterised by negativity and absence, and consequently absence is the central focus of critical realism's dialectic because it “makes possible ... the understanding and analysis of *change*” (Bhaskar, 2016, p. 115; Norrie, 2010) (see Section 2.7.3 for more on

absences). In the second edge, being is seen as a process, where our analysis focuses not just on the intransitive reality of critical realism and its fallible transitive dimension, but also on the process of production of this reality (Norrie, 2010). Absences (some lack or ill) are used to analyse this processual change with the understanding that “change involves the *absenting* of something that was there and/or the *presencing* of something that was not there” (Bhaskar, 2016, p. 115).

The third level (3L) views being or reality as a whole, and emphasises the relationality and holistic causality of structures and agents (Bhaskar, 2008b; Norrie, 2010). This, as highlighted in Sections 2.6.1.1 and 2.8.1, will be the basis of my analysis of the socio-political context within which educational technology integration takes place. In this level, the agents are part of a whole and hence they are impacted by the forces of this whole. They, in turn, impact whether the structural forces change or remain the same.

The fourth dimension (4D), which is the final stage of the MELD schema, is founded on the principle that “human agency [is the missing link] that must resolve the contradictions and dilemmas of social life, even when these are purely theoretical ones” (Bhaskar, 2016, p. 131). The human agent therefore exercises intentional causality (what the dialectic terms $power_1$ relations) to act in a particular way in order to counter the effects of absences and oppressive structures (termed $power_2$ relations) in the totality of their existence (see Section 2.7.4 for an explanation of $power_1$ and $power_2$ relations). In this dimension, as agents identify absences in the second moment (above) and relate these to structural forces in the structural totality (third level, also above), they may exercise their transformative power in order to mitigate or change them. This transformative praxis is not only for themselves, but they can also take up an advocacy role in fighting for the rights of others.

2.4.3 Critical realist epistemology

Epistemology is the way we come to know reality. Hence our perception of what reality is necessarily impacts the way we come to know that reality (O’Mahoney and Vincent, 2014). In critical realism, epistemology is a process of discovery where the researcher uses both empirical data and inference in order to excavate the generative mechanisms which may have led to observable actions and events (Bhaskar, 1998, 2008a). Hence, critical realist epistemology is not about finding the absolute definitive ‘truth’, but coming up with better interpretations of the reality we are trying to understand through the use of fallible theories (Cruickshank, 2003). Both our knowledge of reality and the theories we use are considered

fallible (the *transitive* dimension) because they are a “constructed and relative” (Boughey and Niven, 2012, p. 642) description of an *intransitive* reality. Our attempts to understand the phenomenon are “mediated by our perceptual and theoretical lenses” (Mingers et al., 2013, p. 795) and “always in terms of available descriptions or discourses” (Sayer, 2004, p. 6). Hence my strong focus on reflexivity – a process which will help me interrogate my perceptual and analytical lenses, as well as my representation of the data.

In contrast with positivism, which has a single knowable reality, as well as interpretivism and critical theory with multiple realities, critical realism has multiple *perceptions* of a single intransitive reality (Healy and Perry, 2000). These “subjective interpretations [of reality] ...influence the ways in which it is perceived and experienced” (O’Mahoney and Vincent, 2014, pp. 2–3). As discussed in Section 1.1, I was disgruntled by how inadequate the skills workshops we ran for academic staff were in assisting them to deal with a complex socio-political context where transformation discourses and institutional changes were taking place on a large scale. It appeared to me (and from Section 1.1 this is also highlighted in literature) that as educational technologists we have a different perception from academic staff about the constraints they encounter in their use (or attempts to use) educational technology. And because they are experiencing the reality of both the context and the technology, I concluded that their perception is closer to reality than mine, and embarked on this research journey in order to more closely align my perception with their reality.

Our perceptions or fallible claims about the domain of the real can be refuted and evolve once we get a better insight about the phenomenon we are studying, a concept known as transphenomenality (Collier, 1994). This, however, is not a straightforward process because reality can sometimes have “misleading appearances” which often take a defiant stand against “our desires of it and attempts to understand and change it” (Benton and Craib, 2011, pp. 121, 120). In some cases, because our knowledge should go beyond the empirical, “knowledge of the deep structure of something may not just go beyond, and not just explain, but also *contradict appearances*,” a state known as counter-phenomenality (Collier, 1994, p. 7). In this instance, the events and experiences I observe can contradict what is really happening in the realm of the real. For example, as Danermark et al. (2002) point out, the fact that a bird flies does not negate the existence of gravity, but rather proves that the bird has generative mechanisms which alter the effect of gravity on the bird. In other words, when there are contradictory appearances, it does not mean that the mechanisms are not there, but rather that “they are not operative, or ...their effects are modified by the activity of other mechanisms”

(Danermark et al., 2002, p. 192). Contradictions are a part of critical research and help researchers reflect on and excavate the real and hidden meanings, as well as powers and hegemonies that perpetuate oppressive structural forces.

In summary, the underlabouring work of critical realism is our conception of what reality is – a stratified and independent reality, generative mechanisms and our fallible knowledge about this reality. In my attempt to underlabour context, its structural forces and resistance in academics’ use of educational technology (themes which emerged as the research progressed), this ontological approach allows me to view these three concepts (context, forces and resistance) as different strata of an emergent social reality (see Section 2.8.1). This conception of reality is an ontological position that is different to that espoused by most other research philosophies. Despite this, it can be used to covertly support the work done by a range of theories, methodologies and research approaches whose aim is *Eudaimonia* or human flourishing (Bhaskar, 2016; Hartwig, 2016). The possibility of human flourishing and emancipation starts with self-knowledge and reflexivity, and this is the focus of the next section, which discusses the centrality of reflexivity in critical realism.

2.5 Reflexivity and the birth of critical realism

In this section I elaborate on how reflexivity influenced the birth of critical realism, and motivate for a similar self-reflexive approach in my application of critical realism as an underlabourer for critical ethnography (see Sections 2.5.1 and 3.4.3). Bhaskar’s desire to develop a philosophical position that sweeps away the ‘philosophical rubbish’ standing in the way of knowledge while illuminating and aiding self-emancipation, originated from his personal experiences. As a child he had endured “intense racist bullying” (Hartwig, 2008, p.xii) where even a headmaster took out his anger over India’s actions as a nation on a young Bhaskar (whose father is Indian), thereby giving licence to the other students in the school to bully him physically (Bhaskar and Hartwig, 2010). Bhaskar was also caught in an almost-constant social conflict, where he had to find ways to resist severe paternal pressure and demand to follow his father’s footsteps and become a medical doctor (Bhaskar and Hartwig, 2010; Hartwig, 2008, 2016). He also recounts how he found himself “to be very much an outsider in most of the contexts” that he was part of mainly because he did not fit in to the Indian society whenever they visited, with its exclusively segregated caste system, and the “very, very racist” nature of British society that excluded him as a half-Indian (Bhaskar and Hartwig, 2010, pp. 7, 11). As a result he often found himself empathising with oppressed individuals in a diverse range of

contexts, and whenever he could, defending their dignity in light of the marginalising forces they were experiencing. From personal experience, I can relate to the power of alienating and oppressive experiences in giving one a keen perception and sensitivity to the general suffering of others. As such, I found that his approach to reflexivity aligned with my reflexive processes during this study.

A few interesting aspects that have fed into his explanatory-emancipatory philosophy seem to have stemmed from this period in his life. Firstly, because he was required to accompany his father on his rounds as a doctor, he tried “to compensate for what [he] perceived to be the poverty of the activities in which [he] was forced to engage” (Bhaskar and Hartwig, 2010, p. 4). This was done by burying himself in books, which developed an active imagination and what he calls “a kind of inner reflectedness” where he found himself leading a double life: the “active fantasy world” he revelled in, and the “overt behaviour [he] had to display in the social world” (Bhaskar and Hartwig, 2010, p. 4). As will be shown in Chapter 5, this relates to the quiet resistance displayed by the research participants in this study as they attempted to mitigate various structural forces. Secondly, this life condition made him aware of “permitted injustice” – the kind that is socially sanctioned or authorised, which people experience “when they are born into a situation or a context in which they have very limited opportunities for fulfilment” (Bhaskar and Hartwig, 2010, p. 7). The concept of permitted injustice in this thesis emerges from the research participants’ experiences of oppressive and marginalising structural forces which have become institutionalised and, in most instances, were in existence even before they became academics (see Chapters 5 and 6). Thirdly, he questioned the difference in classes and often found himself identifying with the underdog because of his failure to fit in in different contexts. And lastly, inner conflict and incongruence resulting from the dialectic in his experience and that of other underdogs led him to continually question and challenge himself and the world (including his parents and other authority figures) and eventually led into a battle against these oppressive powers. His battles then seem to employ similar weapons to the ones used by critical realism to challenge the philosophical positions of other theories. He often challenged authorial inconsistencies between theory and practice – what he calls “the hypocrisy of parental positions” (Bhaskar and Hartwig, 2010, p. 5) – by using an authority figure’s words or actions against them in order to challenge a rule or expectation (similar to critical realism’s immanent critique discussed in Section 2.7.1). He did this to try and gradually “out-manoeuvre... and then to seize an opportunity to have an engagement on favourable terrain” (Bhaskar and Hartwig, 2010, p. 4). The culture of resistance that emerges as the main theme in

this thesis seems to stem from similar experiences for the research participants – although, as will be shown in Chapter 5, they employed a mostly quiet form of resistance.

Bhaskar's personal experiences of various oppressive and marginalising powers had given him a compassion for people and a desire to prosper the project of human flourishing (Bhaskar, 2011; Bhaskar and Hartwig, 2010). This led him, during his university years, to become increasingly frustrated by the inability of the dominant theories of the time for an explanatory-emancipatory critique of the world he had viewed as unequal since childhood (Bhaskar and Hartwig, 2010; Hartwig, 2008, 2016). During his PhD studies in Economics, Bhaskar was seeking to understand the efficacy of economic theory to explain poverty in underdeveloped countries (Bhaskar, 2016; Bhaskar and Hartwig, 2010; Hartwig, 2008). Similar to many current African scholars, he was disillusioned with the deficit explanations offered by the dominant philosophies (empiricism and positivism) at the time which made no provision for comparing theories about the world with the world they were referring to (Bhaskar, 2016; Gorski, 2013; Lotz-Sistka and Price, 2016). There was a “yawning gap” between these philosophies of science and the actual practice of science, and particularly as they related to the social world (Gorski, 2013, p. 663).

Bhaskar also encountered intense opposition from his doctoral supervisors in Economics when he attempted to talk about the world as something that was knowable because at the time “the postgraduate was inculcated with the notion that it was wrong to ask questions about the relevance or the realism of any body of theory” (Bhaskar, 2016; Bhaskar and Hartwig, 2010, pp. 31–32; Hartwig, 2008). Talking about theories was acceptable and encouraged, as long as the student was expressing them more succinctly or working out their logical conclusions; but talking about reality – what people were actually experiencing in the world – was taboo (Bhaskar, 2016; Bhaskar and Hartwig, 2010; Lotz-Sistka and Price, 2016). He challenged this view by showing that a conception of what the world is has to precede any attempt to know and change the world (Lotz-Sistka and Price, 2016). The intense opposition led him to leave Economics altogether and move to Philosophy, where, although the situation wasn't much better in terms of finding theories that explained reality, there was room for him to critique this view of science (Bhaskar, 2016; Hartwig, 2008). The publication of his first book on critical realism actually came directly from his doctoral thesis (Bhaskar and Hartwig, 2010).

From the above narrative we can deduce that the development of Bhaskar's critical realism was a reflective and critical exercise that came about as a culmination of a range of influences.

There were contradictory experiences, identity incongruence, a perception of permitted injustice, keen observation of humanity, a strong desire to align with the underdog, questioning and challenging authority, an avid love for reading and a disconnect between theory and reality (Bhaskar and Hartwig, 2010). Bhaskar's self-reflective pattern comprises of these steps: 1) faced with contradictions and a disconnect from reality caused by going against the grain, failing to meet expectations, failing to fit in, or encountering institutionalised injustice, 2) leads to identity incongruence and possibly leading a double life until the incongruence can be resolved, 3) questioning and challenging self and the world for the existence of this disconnect by reading relevant literature and keen observation of people and their social context as a way of excavating the source of the contradictions, and 4) finding ways to either resolve it, ignore it or accept it and live with it. And although he seems to have followed this highly self-reflective path in his personal and professional experiences to develop his philosophical approach, self-knowledge does not come through strongly as an approach to critical realist epistemology.

In this study, I follow a self-reflective process similar to Bhaskar's because I believe that I am more limited in what I can know about the world if I do not understand how I, and my experiences of the world, fit into that world. Furthermore, I see reflexivity as central in this study because I cannot escape the fact that the process of doing research becomes a part of the product of the research. And the phenomena of interest (understanding academics' educational technology integration choices and practices) requires prioritising self-reflexivity because of the disconnect between educational technologists' understanding, and the actual practices of academics with educational technology.

2.5.1 Personal reflections: Why critical realism?

Critical realism is the theory of choice for me for a number of reasons, most of which are deeply personal. I highlighted a few of these in Section 1.4.

I have found myself identifying with Bhaskar's struggles, personal tensions and reasoning processes during his childhood, making the development of the theory a logical process for me. Furthermore, as will be briefly highlighted below, critical realism made sense to me because its ontological and epistemological approach resonated with me personally and with the research phenomenon I intended to study. As pointed out by Walsham (2006), choosing theory is a deeply subjective process where the theory is perceived by the researcher to be a good fit for an insightful illumination of the research phenomenon. Once the researcher is convinced of

the efficacy of the theory, she can then argue for its suitability for the context and phenomenon under study (Walsham, 2006). Furthermore, because of the personal nature of the selection of a philosophical approach, “there is no way to establish [its] ultimate truthfulness” no matter how well argued it is (Davies, 2008; Guba and Lincoln, 1994, p. 107). What is important is for me to convince myself first (Walsham, 2006) about how I choose to see, perceive and analyse the world (Davies, 2008) and then be explicit about my reflections on this selection of theory or philosophical approach.

As highlighted in Section 1.1, one of the biggest struggles which prompted this study has been the apparent disconnect between educational technologists’ understanding of academics’ practices with technology for teaching and what they actually do in the classroom. Critical realism was for me a way of uniting “theory and practice... [by] walking one’s talk” (Bhaskar, 2016, p. 2) and ensuring that “practices and behaviour are consistent with... knowledge and belief” (Wilkinson, 2015, p. 42). As has already been highlighted, the theory-practice divide was a big tension for Bhaskar from childhood, and his theory seeks to overcome this by proposing a philosophical approach that stays true to reality as I have personally perceived and experienced it (Bhaskar, 2016). For example, if a student breaks into tears during my lecture, my first thought would probably be, I wonder what’s wrong. I would immediately sift through what took place during the class to see if anything could have triggered this, and maybe conclude that there are other issues that I am probably not aware of that have caused the tears. Critical realism therefore tries to take this common sense reasoning process – if something happens, then there should be a cause we may or may not be aware of – and structures this process using theoretical constructs.

Critical realism also makes sense to me because it relates to the beliefs that I have about reality. I feel strongly that selecting an ontological view that harmonises with my personal views and makes sense to me would lessen the tensions and cognitive dissonance that I would feel during the research process. Critical realism resonates with my understanding that there is a reality we are trying to understand as researchers, whose true nature sometimes eludes us. Our job of careful excavation is intended to uncover this reality. We may form our own conceptions of what we observe, but that does not change what the reality is – and this goes for both natural, social and technological phenomena. It therefore recognises the pre-eminence of ontology over epistemology (Bhaskar, 2016; Mingers, 2014).

Critical realism was also my metatheory of choice because it shows how our personal and research experiences can be tested on the arguments and concepts it has put forward (Bhaskar, 2016). This is another reason why critical realism has kept drawing me back, despite the multiple times I have attempted to abolish it from my thesis. Besides making sense to me personally, as I got to understand its basic concepts like generative mechanisms, stratification and emergence (see Section 2.4), I could see how these principles played out in my everyday life and in the research data. This helped me strengthen the self-reflective process I was engaging in through-out the research, allowing me to dig deeper in my self-knowledge and attempt to understand personal contradictions and tensions resulting from the process of doing the research.

Lastly, critical realism has been hailed as a suitable philosophical approach because of its departure from the material concerns and pursuits of Western societies, to a concern with humans and their emancipation (Njihia, 2011). The philosophy has the potential to allow researchers to break free from captivating Western themes and modes of thinking, which are often still used even when “criticizing the West or as anti-colonial rhetoric” (Njihia, 2011, p. 77). Its use can potentially help Africans conceptualise ‘Africa-specific’ solutions to African problems by being “centered on freedom, emancipation, and a historically grounded self-awareness” (Njihia, 2011, p. 77; Wamba, 2003). Through the concepts of totality (relating the structures and their historicity to the current reality of social agents, see Sections 2.4.2 and 2.6.1.1), identifying oppressive ideologies and elevating the African’s ability to think and self-determine, the application of critical realism can meet our goals of both individual and collective emancipation (Njihia, 2011; Wamba, 2003).

In this section I emphasise self-knowledge as my path to a better understanding of the reality I am attempting to understand. Although this is a basic principle of social science research, namely that of pursuing self-knowledge or knowledge of self-reflection as a precursor for understanding social phenomena (Habermas, 1986; Mezirow, 1991), it has been underemphasised in critical realist epistemology. It is therefore that my philosophy prioritises self-reflection as a key tenet of epistemology.

However, critical realism does have shortcomings which, if not made explicit or addressed, may serve to compromise the validity of my findings. These are particularly pertinent for a research study of this nature with a critical slant, which seeks to bring to light oppressive

structures and practices, as well as participants' resistance to this oppression in the process of educational technology integration. These are discussed in the next section.

2.6 Critiques of critical realism and responses

2.6.1 A priori knowledge of mechanisms and their powers

Critical realism has been criticised for making the assumption that as the researcher, in order to infer possible generative mechanisms, I should already have knowledge about their existence, their causal powers and the conditions under which these powers are exercised (Kemp and Holmwood, 2003). Consequently, in attempting to explain an empirical incident the researcher does not reveal anything new about generative mechanisms but rather relies on information already known to the researcher about the mechanisms and how and when they exercise their causal powers (Kemp and Holmwood, 2003). This then means that different researchers can potentially have conflicting accounts of generative mechanisms and their causal powers depending on the *a priori* understanding they have of the work of these mechanisms (Roberts, 2014). For example, in my thesis critical realism asserts that I embark on the research with an *a priori* understanding of the real structures whose causal powers have led to the current educational technology practices, and the disconnect between these practices and educational technologists' understanding of them. This initial knowledge is what, apparently, helps me identify the generative mechanisms at play, a situation which potentially negates the need for research because I am then using research to 'put a stamp' on what I already think is going on in the research context. This general assertion about the weakness of critical realism was addressed in this study through the use of dialectical critical realism's concept of totality, which is discussed below.

2.6.1.1 Response: Historical totality

Dialectical critical realism, the second wave in the development of this philosophy, can potentially overcome this weakness through its emphasis on totality. Totality is the third of four levels of dialectical critical realism (Section 2.4.2), and it views reality as a whole (Bhaskar, 2016). The relationship of the whole with its elements is such that they causally affect each other: the whole is causally affected, to a lesser or greater degree, by the characteristics of its elements and their interrelations, while each of the elements and their relationships are causally affected by the structure of the whole (Mingers, 2014). Critical realist causal effect is complex in the sense that a generative mechanism has causal powers which it

may or may not exercise, and these powers are affected by yet other causal powers in an open system.

The concept of totality challenges the criticism that I am relying on my prior knowledge of structures and their causal powers in order to infer the presence of generative mechanisms. Dialectical critical realism argues that as the researcher, my initial knowledge of structures “is only pre-existing knowledge concerning the determinants of a historical totality” which does not necessarily translate to the specific research context (Roberts, 2014, p. 12). I still need to “...observe social structures via the activities and concepts of human beings or the material traces and artifacts they generate” (Gorski, 2013, p. 666). My knowledge of the historical structures is also only partial, and the process of understanding them is part of the research process. For example, in my study I suspect that the social context of higher education has had an impact (or is a possible generative mechanism) on the integration of educational technology. This understanding is based on my personal reflections resulting from my experiences as well as published literature, as highlighted in Section 1.1. At the start of the research I did not necessarily know *how* the structures had impacted educational technology use, or in effect *what* causal powers had been exercised and their resultant effects.

Dialectical critical realism’s totality helped me in two ways. Firstly, it allowed me to be true to my research methodology – critical ethnography – by acknowledging that I did not commence the research on a blank slate with no prior knowledge of the structures at play in the research context. Instead, as critical ethnography demands, I need to be reflexive about this knowledge and the way it was brought to bear on the research results (see Section 3.4.3). Critical ethnography also acknowledges that different researchers will likely have different interpretations of the research results, and accepts that this difference is based on the biases, positionality and historicity of the researcher. This is why reflexivity is a key contribution of this thesis, demonstrating how it can strengthen critical realist epistemology through the use of critical ethnography.

Dialectical critical realism’s totality seeks to explain my pre-existing knowledge of the structures at play in combination with concrete empirical data in the social context by recognising that they are part of the same historical totality (Roberts, 2014). Their interaction may be contradictory at different levels (Roberts, 2014) or for different research participants, producing conflicting or dialectic actions at the empirical level. These contradictions are embraced and require detailed exploration and analysis (Roberts, 2014) as they are

instrumental in uncovering the causal powers at play, and particularly those whose powers are unexercised in some instances.

In my research context, there have been political and cultural influences at the national and institutional level that have changed the higher education landscape over the last 23 years since the country's independence. These structural forces have impacted the practice of academics in different, and sometimes conflicting, ways. For example, I have two research participants in the same department who have experienced the departmental power dynamics very differently. Thandi applauds the support she has received for her research and teaching, commending the different members in the department for their openness and non-judgemental attitude. Alexa, on the other hand, speaks about the same department in rather bitter tones, lamenting how she has sometimes felt her research was not appreciated or acknowledged but instead there seemed to be efforts to hinder her growing research and publication success.

Historical totality therefore allows me to trace the development of generative mechanisms and how they have perpetuated through political and cultural structures, but also how their contradictory influence is experienced by different research participants.

2.6.2 Developed for natural science

Critical realism has been critiqued for its attempt to base its social science philosophy on natural science, while failing to recognise that natural science has the advantage of closed experimental systems which allow for validity testing of causal mechanisms (Kemp and Holmwood, 2003). Basic critical realism was originally developed for the natural sciences (transcendental realism) and later extended to incorporate the social sciences (critical naturalism, and later critical realism) (Bhaskar, 2016; Danermark et al., 2002; Sayer, 2000). Critical realist analysis tools like abstraction and retrodution may help the researcher infer a number of generative mechanisms as leading to the emergence of the phenomenon of interest. The challenge comes when the researcher now has to judge which generative mechanism is the most likely one for that particular context considering that social generative mechanisms work in an open system. In the research context, for example, there were institutional, departmental and personal generative mechanisms which led to the emergence of educational technology practices for the academics in the study. However, I had to find a way to judge which generative mechanisms were the most likely to have had an impact on observable practices. Critical realism's epistemic relativism (see next section) and critical ethnography's emphasis on value

judgements (see Section 3.4.2) were instrumental in assisting me to mitigate this critical realist shortcoming.

2.6.2.1 *Response: Epistemic relativism*

This issue – attempting to isolate the most valid generative mechanisms using scientific-based methods – fails to recognise that there are ontological and epistemological differences between natural and social phenomena (Gorski, 2013). Natural structures are often physical in nature and can be observed, while social structures can take the form of ideas and norms in people's minds, personal beliefs, physical structures and a range of other mechanisms like relationships, accepted ways of being, etc. This then means, as has already been mentioned, that our knowledge of reality is socially-constructed and fallible (Benton and Craib, 2011) because “the world in general [and social reality in particular] defies any attempts at overall orderly accounting” (Law, 2004, p. 6). Critical realism then needs an approach that will be able to ‘test’ in some way the efficacy of social generative mechanisms, and it does this by accepting epistemic relativism while at the same time rejecting judgemental relativism. What this means is that critical realists accept that all knowledge is socially constructed and ‘contingent’ but reject the notion that we are unable to judge which knowledge is more valuable than others (Danermark et al., 2002). Critical realists believe that a theory's force in explaining a particular phenomenon or generative mechanism can be measured through the use of “historical, emancipatory, critical, and instrumental” criteria (Danermark et al., 2002, p. 202). I concur with this view, and further motivate that reflexivity can contribute to critical realism's epistemic relativism by making explicit the researcher's value judgements and the criteria she has used to make her choice of generative mechanisms. The critical ethnographic methodology also, consequently, emphasises the centrality of values in selecting the most likely generative mechanism (see Section 3.4.2).

2.6.3 *Advanced ontology, cautious epistemology*

Critical realism has been criticised for having an advanced ontology, while failing to close the yawning gap in the literature in terms of “work delineating the consequences of these views for research *practice*” (O'Mahoney and Vincent, 2014, p. 1 italics in original). This, to me, seems like a contradiction in purpose considering that one of the main reasons that Bhaskar explored and developed this philosophy in the first place was the theory-practice inconsistencies he had encountered during his postgraduate research studies (see Section 2.5). It seems critical realism has hammered away at the ontological shortcomings of other

approaches for so long that it has somewhat lost its way and failed to push its epistemological approach (Bhaskar, 2016) and the resulting methodological consequences (O'Mahoney and Vincent, 2014). In this thesis I attempt to address this by using a critical ethnographic epistemology to extend the kind of knowledge that critical realism can explore. This is further elaborated in Section 3.4.

This section has highlighted some criticisms of critical realism which potentially have an impact on this thesis. Where possible, I have given responses to these criticisms from within critical realism itself (especially its dialectic turn) and also pointed to the next chapter which will address issues with critical realism's epistemology. One of the most common criticisms of critical realism is addressed in a separate section as this is one of the key contributions of this thesis. In this next section I unpack the meaning of the word 'critical' in critical realism, which has been a bone of contention in the literature for a number of years.

2.7 The 'critical' in critical realism

There is a general understanding that the critical prefix in information systems research – e.g. critical theory, critical social theory, critical ethnography – signals a concern with five epistemological themes: emancipation, critique of tradition, non-performative intent, critique of technological determinism and reflexivity (Howcroft and Trauth, 2005). However, when it comes to critical realism there is a general lack of agreement about what 'critical' means, which, consequently, is one of the criticisms of this metatheory (Klein, 2004; Vandenberghe, 2014). This section will attempt to unpack and synthesise the thinking around the critical prefix in critical realism and show how, ontologically and epistemologically, this research can be deemed 'critical' in the popular sense of the term. In the process, I also attempt to address the lack of clarity on the meaning of the word 'critical' in critical realism.

This is pertinent for this thesis because I am interested not only in the socio-political context, but the structural oppression and how agents have developed a culture of resistance to this oppression. This section seeks to meet the requirements of the third research question – showing that critical realism can be a suitable underlabourer for a critical study. Because this particular criticism of critical realism is one of the goals of this thesis, I address it here in a separate section from the other criticisms (see Section 2.6), and give my understanding and reflections on what 'critical' means, particularly in the context of this thesis.

2.7.1 Critical realism's immanent critique

Critical realism has found its strongest foothold and has rapidly advanced in the social sciences because of its immanent critique on other metatheories. Bhaskar started out on the critical realist path as a result of the influence of his teacher, Rom Harré, who strongly criticised positivism and motivated for the existence of generative mechanisms (Danermark et al., 2002). Bhaskar was also dissatisfied with the dominant metatheories at the time and their “injunction *not to do ontology*” (Bhaskar, 2016, p. 5 italics in original), their conflation of ontology and epistemology, and the primacy of epistemology over ontology. Consequently, his main critique of other metatheories centred around re-establishing the pre-eminence of ontology and defining a structured, differentiated and transformable reality (Bhaskar, 2016). As a result, most of his earlier books which were aimed at laying out the foundations of critical realism, seem to focus quite a bit on finding the Achilles heel in empiricist and idealist philosophies.

In his book entitled *What's critical about critical realism?*, Vandenberghe (2014) advances his understanding of the critical prefix by asserting that critical realism can be considered critical because of the war it has waged in dethroning both positivism and idealism. Its “radical critique” has entailed the separation of the ontological from the empirical, and strongly maintained that the former is irreducible to the latter (Vandenberghe, 2014, p. 3). Unlike other philosophical approaches which have only had a “parasitical” effect by attacking positivism’s application mainly in the social world, critical realism’s success lies in its “question[ing] the very validity of positivism in the natural sciences” (Vandenberghe, 2014, p. 4). He further emphasises the combative nature of critical realism: “As a militant anti-positivist, I first became interested in critical realism because it offered the hammer I was looking for to crush the numbers” (Vandenberghe, 2014, p. 3). Concurring with Vandenberghe, Danermark et al. (2002) affirm that the critical prefix in critical realism is a critique of positivism’s flat ontology and its epistemological claim to an absolute truth. In the social sciences, critical realism is critical because it avoids a conflation of structure and agency (Danermark et al., 2002; Vandenberghe, 2014), which, according to Danermark et al. (2002), was how Bhaskar originally intended ‘critical’ to be understood.

With its roots in science and scientific discovery, positivism and empiricism grew in popularity because science and its methods were “highly esteemed... [as having] some kind of merit or special kind of reliability” (Chalmers, 2013, p. xix). In my experience, even in everyday communication, percentages, statistical comparisons and graphical representations seem to

convince people that the ‘facts’ or knowledge presented can be seen as reliable and valid, and hence ‘true’. I concur with Mingers’ assertion for the reason why anything referred to as ‘scientific’ (and most often developed from a positivist or empiricist framework) has iconic status:

Over the last 500 years, science has been incredibly successful in generating knowledge about the world and producing the vast array of technology that now shapes every minute of our lives. It is not surprising therefore that (natural) scientific knowledge came to be seen as the only valid form of knowledge. (Mingers, 2014, p. 10)

Each one of us, at every moment, physically experiences the effects of science and the results of scientific innovations. This is particularly true with regards to information systems and education, the broad fields within which this research is situated, a field which has been responsible for advancing communication, simplifying everyday tasks, transforming the way we do business and opening up new pathways to student engagement. These technological advances, which were virtually unimaginable a few decades ago, have strengthened the natural sciences’ claim to ‘validity’. Their methods then, according to Chalmers, could potentially be understood and then emulated in order to raise the status of the ‘lesser’ social sciences (Chalmers, 2013). This view fails to recognise the ontological differences between natural and social phenomena (as highlighted in Section 2.6.2.1). It also blinds researchers to the fact that technology needs to be treated like any other social phenomenon – through the concept of totality (Section 2.6.1.1). The researcher seeks to understand the phenomenon by looking at the world within which the phenomenon is situated, and how it is internally and externally related to this world (Bhaskar, 2016).

Long before Bhaskar’s criticisms of it, other philosophers and sociologists (most notably Popper) started poking holes in the seemingly fool-proof armour of positivist empiricism (Chalmers, 2013; Mingers, 2014). Bhaskar’s criticism of positivist empiricism and constructivist idealism, however, has been one of the most extensive and convincing (Vandenberghe, 2014) because of his particular type of criticism called immanent critique. Rather than critiquing through comparison, immanent critique involves subjecting a theory and its claims about itself to scrutiny in order to uncover its “inherent contradictions” (Roslender, 2016, p. 82). It does this through the identification of “...a theory/practice inconsistency, showing that the position being disputed involves a claim or analysis that would undermine the point, values or substance of the position; so that it undermines or ‘deconstructs’ itself” (Bhaskar, 2016, p. 3).

As discussed earlier (Section 2.5), Bhaskar's immanent critique was a defence mechanism he developed early in life in order to overcome paternal pressure and other forms of 'permitted injustice'. Although this is not made explicit in the critical realist literature, an immanent critique requires the researcher to be reflexive as it demands both a thorough knowledge of the system or structure being critiqued as well as self-knowledge in order to understand one's position with regards to these structures so as to guide the critique. As in Bhaskar's example during his years as a postgraduate student (Section 2.5), his rejection of the dominant metatheories of the time was guided by his value system, which had been shaped by his childhood experiences.

As a weapon to bring down the walls of long-standing paradigms, the critical prefix could be seen as aligning with the second theme of critical epistemology, according to Howcroft and Trauth: critique of tradition. Although Howcroft and Trauth (2005) specifically define this theme as pertaining to disruption and dissent rather than reproduction and acceptance of the 'natural' ways of being in the social context, as well as challenging power and hegemony, I propose that disrupting long-standing and widely accepted paradigms and unsettling accepted ontological and epistemological positions can be considered a critique of tradition. I submit that critiquing our understanding of being, or what the world is, and how we come to know that world, is a first step in unsettling the status quo. In Chapter 6 I critique the traditional view of resistance in the technology field by challenging the long-standing view about academics' resistance to educational technology – resistance with, rather than resistance to, technology.

2.7.2 Critique of knowledge claims

Critical realist epistemology is fallibilist – meaning that our knowledge claims about reality are open to critique. These knowledge claims about a particular social context are “mediated (if not determined) by human language and social power” (Gorski, 2013, p. 664) and hence there is a possibility of not only “the social situatedness of knowledge... [but also] the social distortion of knowledge” (Potter and López, 2001, p. 14). Here critical realism allows us to go beyond just choosing which explanation of reality is the most rational, but also locating why different explanations exist (Potter and López, 2001). For example “the possibility of social scientific examination and explanation of social inequality... gives rise to a further possibility: the social scientific explanation of the effect of social inequality upon explanations (including explanations of social inequality)” (Potter and López, 2001, p. 14).

Hence, besides insisting on the shifting nature of knowledge as we get closer to an obdurate reality, critical realism also asserts that the basis of our knowledge claims needs to be explored. In Section 3.4.2 I explore how value judgements are the basis on which a critical ethnographer makes decisions about the most suitable explanation (from a range of sometimes conflicting views) about the nature of the research phenomenon. Critical realism posits that these value judgements need to also not only be laid bare for the readers, but also critiqued as they have developed out of an accepted way of being, which consequently has been influenced by some form of social power. For example, if I strongly believe that women's ability to use educational technology effectively is constrained by the social perception that they have a lower computer self-efficacy than men (see Section 1.1.3), then this will lead to a particular understanding of the way they use technology. If, on the other hand, my perception is that this social perception has no effect on them, and that women resist it in different ways, then my conclusions will likely be vastly different.

2.7.3 Knowledge and emancipation

Critical realism submits that in order for emancipation from oppressive powers to take place, there first has to be a knowledge of the current state of social life – a knowledge which is used as the basis for the kind of emancipation espoused by this metatheory (Benton and Craib, 2011; Bhaskar, 2016). Our excavation of the current social world assumes that “another life and another world must be possible, which presupposes that change is possible, and possibility must be real” (Bhaskar, 2016, p. 4). As reality goes about its business of ignoring what we know and believe about it, research brings us closer to understanding this reality. Consequently, this mind-independent reality is knowable to some extent, and therefore open to change based on the ‘limited’ knowledge that we have acquired of the world (Benton and Craib, 2011).

One possible approach to achieving this emancipatory change is critical realism's explanatory critique, which seeks to not only give insightful explanations about generative mechanisms and their causal powers, but also critique the social structures that have led to the emergence of those mechanisms, and if possible replace or transform those oppressive structures (Bhaskar, 2009; Collier, 1998; Danermark et al., 2002). Explanatory critique understands that society exists through the actions of human agents, actions which are guided by the ideas human agents have about both the object (society) and its features (Collier, 1998). Furthermore, social structures dictate human actions by determining what ideas and actions are acceptable or unacceptable in different social situations (Danermark et al., 2002). Thus the ideas or beliefs

about society (as explained by human agents or research participants) can contradict the mechanisms and causal powers discovered during the research process. This leads to a critique of part of the research object, and a replacement or transformation of structures causing these false beliefs (Collier, 1998). Explanatory critique therefore has “a *socially* emancipatory objective... directed against structures” and the false beliefs they cause, perpetuate, and legitimate (Danermark et al., 2002, p. 193 italics in original).

Dialectical critical realism also has the potential to expand how knowledge can bring about emancipation. Its second edge (see Section 2.4.2) extends our understanding of ontology by viewing being as a process with the potential for transformation (Bhaskar, 2016; Price, 2016a). This transformative change takes place through the lens of Hegelian absence, where our task as researchers is to understand that change involves either the presence of something that was not there (absenting of absence), or the absenting of something that was present before (Bhaskar, 2016; Norrie, 2010). The concept of absence is, consequently, the most important element of the dialectic focus of critical realism (Bhaskar, 2016; Price, 2016b) because it defines how the process of change is almost always in “response to lack” (Price, 2016b, p. 28) or to negativity in the form of “contradictions and dilemmas” (Bhaskar, 2016, p. 131) and is therefore an “inner urge” rather than an externally-, or socially-imposed, activity (Bhaskar, 2008b, p. 277). The research context for this thesis, the South African higher education landscape, is still stained by the vestiges of colonialism and apartheid. As highlighted in Sections 1.2. and 1.3, there is evidence that some students and lecturers are still suffering oppression and marginalisation as a result. In the context of dialectical critical realism, change can only take place in response to the dissatisfaction of these agents with these constraints and an ‘irrepressible’ desire to absent the absence that is causing their suffering (Bhaskar, 2008b). Hence knowledge of absences, and the possibility for absenting them, is a feasible path to emancipation.

Emancipation itself, although central to critical research, does not have a clear path laid out for its attainment. Emancipation is commonly understood as referring to the process of exposing and freeing human agents from oppressive power structures (Madison, 2012), but “the ways in which power relations are theorized, resisted and overthrown are seriously contested within the various intellectual traditions” (Howcroft and Trauth, 2005, p. 3). Critical realism’s layered ontology and its epistemological goal to expose hidden structures and mechanisms in the domain of the *real* is a potential approach for underlabouring the theorisation, resistance and overthrowing of oppressive social structures and their mechanisms. As highlighted in Section

2.4.2, the critical realist researcher is likely to encounter *absences* and contradictions which compel her to be reflexive and dig deeper to find their causal powers. The absences and contradictions are a desirable outcome because they may reveal “repressive social and ideological conditions” (Alvesson and Willmott, 1992, p.432) which are usually not obvious because those in control may keep them hidden or may not even be aware of their oppressive practices. Hence, without a philosophy that advocates counter-phenomenality (contradictory appearances and experiences, see Section 2.4.3) “empirical study is understood to solidify and legitimize existing dogmas and prejudices” by turning a blind eye to cultural and historical lenses and how the research approach can actually construct and perpetuate “a *construction* of reality” (Alvesson and Willmott, 1992, p. 435 italics in original).

2.7.4 Different conceptions of power

Unfortunately, no matter how many oppressive structures are uncovered by critical realism’s explanatory critique and conceptions of *absences*, knowledge alone is sometimes not adequate to bring about emancipation (Bhaskar, 2009). The oppressed may be powerless to initiate their emancipation, and informing them about their oppressive situation may just increase their despair, rather than empowering them to break free (Collier, 1998; Sayer, 2000). Dialectical critical realism manages this rather delicate balance by explicating power₁ and power₂ relations in social contexts, which I briefly introduce in Section 2.4.2 and elaborate on in the next 2 paragraphs.

In the fourth dimension of dialectical critical realism (see Section 2.4.2), Bhaskar adds a new category to Hegel’s dialectic: human agency or transformative praxis (Bhaskar, 2016). This intentional causal agency (Norrie, 2010) is the power of the subject to be reflexive and in the process change their world and their environment. In response to *absences* comprehensible through self-knowledge, contradictions or research, a social actor has the potential to exercise her agency and obtain freedom from lack, from oppression, from marginalisation, and other social ills.

Bhaskar’s transformative praxis approaches the idea of emancipation through its separation of power into two categories: power₁ and power₂. Power₂ is the traditional Marxist and Foucauldian view where power constitutes all “socially structured power relations” (Bhaskar, 2016, p. 131) that tend towards “domination, exploitation, subjugation and control” (Bhaskar, 2008b, p. 55). This is the master-slave kind of power which most critical research normally seeks to uncover. But dialectical critical realism goes a step further by explicating power₁, the

“transformative capacity of the agent” (Price, 2013, p. 19). Power₁ is essentially the power that all individuals have that allows them to act (gives them agency) in any situation (Bhaskar, 2016). However, not all people are able to exercise their power₁ relations because oppressive constraints hinder them from doing so. Hence, those who are able to exercise their transformative agency have an ethical obligation to not only transform the oppressive situation for themselves, but also for everyone else who is suffering the effects of the structural constraints in terms of power₂ relations, but is powerless to challenge or overthrow these oppressive structures.

Dialectical critical realism’s conception of power is key to my research because it shows how the metatheory has set “itself the task of underlabouring for human emancipation” (MacLennan and Thomas, 2003, p. 172) through a “commitment to *changing* unsatisfactory or oppressive realities” (Benton and Craib, 2011, p. 120 italics in original). It does this by bringing together master-slave type power (power₂) and agential transformative capacity (power₁) to show that transformation is a collective – not individual – project. Its focus on *Eudaimonia*, or human flourishing, is, according to Norrie (2010), what makes a dialectic transformation ethical because “the freedom of each depends on the freedom of all” (p. 17). In this instance therefore, those with power₁ transform or eliminate oppressive or power₂ structures not only for themselves, but also particularly for those who are constrained from attaining to and exercising their power₁.

I have personally found the explication of power₁ and power₂ relations to be consistent with what I set out to accomplish in this thesis and the data that has emerged about academic practices in higher education. From the onset of this research, I was seeking a better understanding of the constraints and barriers (power₂) encountered by academics in their use of educational technology, particularly those embedded in the social and cultural structure of higher education in South Africa. I hoped that this would help me exercise my transformative capacity (power₁) in order to help these academics overcome power₂ relations. Surprisingly I found that research participants were already using their power₁ relations to combat the effect of a range of power₂ oppressive structures, and not only for themselves but for other academics and students (see Chapters 5 and 6). Even in instances where the resistance was aimed at individual emancipation, the result was usually *Eudaimonia* – collective human flourishing.

This section has put forward an explication of what the critical prefix means for critical realists, and, where appropriate, has drawn on dialectical critical realism and critical epistemology in

order to strengthen the argument. A basic tenet of a critical research approach is seeking for emancipation from oppressive powers for some marginalised social group (Madison, 2012; Myers, 2013; Thomas, 1993). This is prompted by the value orientation of the researcher: a concern with social inequalities and social theory's struggle to deal with "the nature of social structure, power, culture, and human agency" (Carspecken, 1996, p. 3). Hence, critical research is not just used to describe the social context, but also to "refine social theory" because of the difficulty in explicating the above issues. I motivate that self-knowledge through reflexivity is a starting point for critical realism's critical approach. I have also shown above that the critical in critical realism can be seen as encompassing the following four constructs:

- 1) An immanent critique of other meta-theories' view of ontology, which is the use of a meta-theory's inconsistencies to critique its values and claims.
- 2) Because knowledge claims are fallible, we are able to critique contradictions between different research participants' knowledge of reality. In the process we are able to show the source of these contradictions and their causal power on educational technology integrations.
- 3) The knowledge we excavate through research is the impetus for emancipation because it reveals the generative mechanisms leading to oppressive and unwanted situations.
- 4) The explication of power₁ and power₂ relations allows the researcher to separate between transformatory and oppressive power, respectively. The transformatory power (power₁) is also exercised on behalf of others who are unable to exercise their power₁ against oppressive power₂ relations.

In this first part of the chapter I motivated for the importance of philosophy in social research, gave an introduction to the basic tenets of critical realism as an underlabourer, and highlighted the importance of reflexivity in critical realist research. I also responded to critiques of critical realism and provided my perspective on what the 'critical' prefix in critical realism means. The goal of this first section was to demonstrate that critical realism can be a suitable underlabourer for a critical research that seeks to uncover sometimes hidden oppressive practices in the socio-political context.

While this first part also attempted to give examples of how the different critical realist concepts would be used in this thesis, critical realism is a meta-theory and as such, it is not always possible to link each of its concepts directly to empirical research activities (Bhaskar, 2014; Morton, 2006; O'Mahoney and Vincent, 2014). While applicability to practical research

is the aim of critical realism (Bhaskar, 2014), and the meta-theory recommends its own approach to data analysis (i.e., abduction and retrodution) (Danermark et al., 2002), it has a greater focus on ontology than epistemology (see Section 2.6.3). It “is not a testable body of ideas... [but rather] a general orientation to research practice” which does not prescribe methods for empirical research but rather helps the researcher seek generative mechanisms and their causal relationships (O’Mahoney and Vincent, 2014, pp. 12–13). The meta-theory “seeks to be an ontological ‘underlabourer’ for a range of substantive theories in the natural and social science” (Mutch, 2004, p. 430). As such, the second part of this chapter elaborates on the explanatory theory that I used to describe the research phenomenon in Chapters 5 and 6.

2.8 Introduction to explanatory theory

In this second part of the chapter, I elaborate on the explanatory theory that was retrospectively selected to frame my emerging understanding of the data.

Critical realism is a meta-theory, and as such it is not strictly applicable to empirical research (Morton, 2006; O’Mahoney and Vincent, 2014). Following the example of other researchers in information systems (Allen, Brown, Karanasios, & Norman, 2013; Morton, 2006; Njihia and Merali, 2013; Volkoff and Strong, 2013; Williams and Karahanna, 2013) and other fields (Ali, 2016; Fletcher, 2017; Potter and López, 2001; Rees and Gatenby, 2014), I have had to rely on social theories in order to explain the mechanisms (structure and agency) excavated during the research process. Most of the above studies signal that in order for a theory or model to be effectively underlaboured by critical realism, it should have the same ontological focus, i.e., a stratified, intransitive reality in an open system. Other authors, however, attempt to draw philosophical parallels between critical realism and other ‘unrelated’ theories before using them together, i.e., Allen et al. (2013) with activity theory and Mingers (2014) with systems thinking.

Because of the abstract nature of critical realist ontology, a researcher who fails to utilise social theories may run the risk of relying on their knowledge of the social context and the research phenomenon in order to explain it. O’Mahoney and Vincent (2014) warn against relying on every day understandings of the social world in order to explain social phenomenon in an open system, because:

lay-knowledge tends to be susceptible to the self-interested narratives of powerful groups and neither critically evaluated or tested. ...the layperson’s predilection to accept the truthfulness of widely accepted socially constructed versions of reality is

often part of the problem in the first place, so unless our ontology is able to separate people's beliefs from the reality they represent we will end up with another form of thin explanation. (p. 6)

Explanatory theories and concepts are therefore an indispensable tool in helping the critical realist researcher to both *explain* and *critique* social phenomenon in an open, complex and unpredictable system (O'Mahoney and Vincent, 2014). The researcher is seeking to understand, explain and theorise causal mechanisms in terms of social structure, culture and agency (Morton, 2006).

The explanatory theory selected for this study emerged during the final stages of data analysis, hence my use of theory is inductive and retrospective to confirm and help interpret findings. As highlighted in Section 1.1, throughout the study I was almost constantly aware of the need to overthrow my assumptions about the research participants' educational technology practices. As such, I reflected on my reactions and understandings of the data, reflected my understandings back to the research participants, used literature (both within and outside the field) to try and find similar themes from other studies, and presented my findings to different groups of academics who were not part of this study. I picked up and discarded a number of explanatory theories and models, and even considered developing my own explanatory theory. However, I discovered the model elaborated on below towards the end of my study and it seemed to fit in well with the concepts I had uncovered in the thesis. I elaborate on this analysis process in Section 3.7.

Archer's morphogenetic/morphostatic cycle was used to frame the structural and cultural generative mechanisms excavated during this study as having causal power to bring about the observed educational technology practices in a South African higher education institution.

2.8.1 Archer's morphogenetic/morphostatic cycle

Archer's morphogenetic/morphostatic cycle is derived from social realism – which happens to be critical realism's social arm, providing a theoretical lens to interrogate the social world. It was originally developed by Margaret Archer in order to articulate the way critical realism handles the interplay between structure and agency. In the first instance, social realist theory acknowledges that “social reality is unlike any other because of its human constitution” (Archer, 1995, p. 1) where “[t]he complexities of human ambition, desire, interests and relationships” result in intricately rich social dimensions (Carter and New, 2004). In these social systems, it is impossible to control the context or the agent, and consequently the

emergent actions or events. Hence, the social world is an open system – contrasted here with the closed system of stable, constant and controllable experiments in the natural scientific world (Danermark et al., 2002; Sayer, 2000).

Social realism links structure and agency by attempting to view them as analytically distinct and yet having a reciprocal interaction over a period of time (morphogenesis) (Archer, 2003). The two are viewed as ontologically distinct, meaning in critical realist terms that they belong to different levels of strata with different properties and powers (see Section 2.4.1 for an explanation of emergence and strata in critical realism). In viewing them as ontologically distinct, social realism allows us to unpack the interplay between structure and agency, i.e., how they impact each other.

In social realism, human agents can be transformed by their context just as they have the power to bring about change in that context (Archer, 1995). Therefore, in order to investigate the causal powers of generative mechanisms in the social world, social realism asserts that it is crucial to analyse structure, culture and agency both separately and together to determine the interplay between their properties and powers (Boughey, 2012). Structures are material interests and resources and the social constructions that have developed around these resources, including technology, departments, academic hierarchies, relationships, education, race and gender (Boughey, 2012; Quinn, 2012). These have a power₂ relation – which is often viewed as marginalising or oppressive in some way (see Section 2.7.4) – on the agents in the social context. Social realism understands culture as beliefs, values, concepts, theories and ideas (Boughey, 2012). An agent is the human being, and agency is the power the human has to act voluntarily and relate personally and psychologically to the roles she has in the society (Boughey, 2012), her power₁ relations or transformatory agency. In spite of structural and cultural constraints, human agency empowers people to act “so rather than otherwise” (Archer, 2003, p. 3) by resisting or defying oppressive powers and social structures.

Agents reflexively act to counter or mitigate the effects of structures, and in the process either reinforce the structures (stasis) or change them (genesis). Hence, when an agent exercises her power₁ relation in the social context, social realism suggests that she does so through reflexivity (Price, 2016b). In my research context, the various structural forces that marginalise or oppress academics in their work can be responded to in one of two ways. Academics can perpetuate those oppressive power₂ forces through their actions, or alternatively, they can overcome or

mitigate the marginalising forces which can potentially lead to change in the structural context. This process happens over a period of time, and is referred to by Archer as morphogenesis.

Social realism approaches the exploration of the interplay of structure and agency over time through the morphogenesis/morphostatic approach (see Figure 2-3 below). Although the three parallel lines in the figure below do not look like a cycle by any stretch of the imagination, Archer concedes that the diagrammatic representation is for analytical purposes only, and is a way of separating structure and agency by “breaking up the flows into intervals determined by the problem in hand” at a particular point in time (Archer, 2010, p. 238). In effect then, if the lines were extended in both directions, they would connect up into a morphogenetic cycle (Archer, 2010). Hence, each of the three lines represents a temporal phase in the cycle (Ali, 2016).

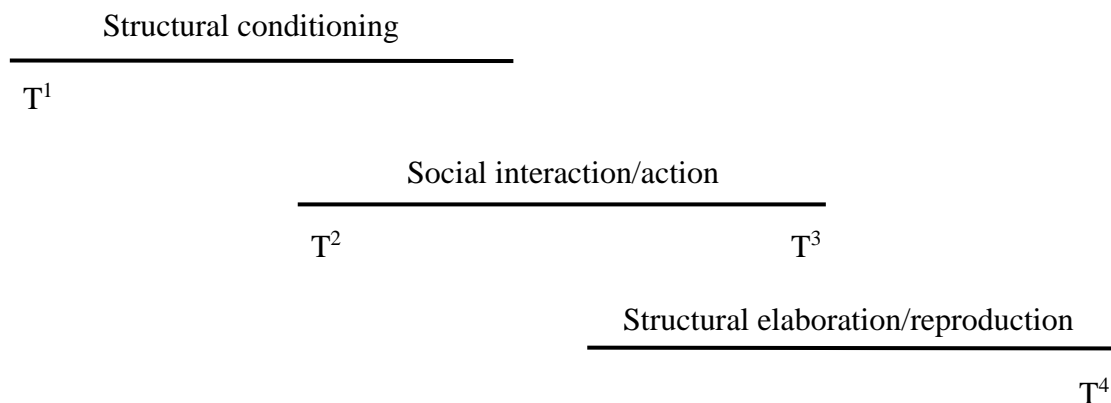


Figure 2-3: Morphogenetic/morphostatic approach (adapted from Archer, 1995, p. 76, 1998, p. 375)

The morphogenetic/morphostatic approach begins at T^1 . This is the time period designated, for analytical purposes, as representing the initial state of the structural context and the temporal constraining power it manifests by “conditioning the context of action” (Archer, 1995, p. 77). This conditional influence is in the form of various forces that shape what can and can’t be done by social actors in an attempt to maintain the various structural properties. The influence of these structural forces necessarily extends beyond T^2 , which represents the starting time (for analytical purposes) of the actions of social actors as they attempt to resist various oppressive and marginalising structural forces (Archer, 1995). Additionally, as shown by the overlapping length of the T^1 line, structural forces do “not peter out immediately, even given a collective determination to transform [them]” (Archer, 2010, p. 239). Hence, changing an undesirable structural property takes time, and this delay in time actually acts as a further constraining

factor on social agents who are striving to mitigate the effects of these structural forces (Archer, 1995). These structural forces linger for a number of reasons, including that they “resist collective pressures to change, remain because they represent the vested interests of the powerful, or are in fact ‘psychologically supported’ by the population” (Archer, 2010, p. 240). In this thesis, the state of the structure was discussed in Sections 1.2 and 1.3, highlighting the various higher education forces that have had a conditioning effect on the actions of the research participants. These will be further discussed in Sections 5.4 and 5.5, looking more specifically at how academics have experienced these structural forces as marginalising or oppressive. The persistent nature of these forces despite the reflexive actions of academics is also explored.

T^2 to T^3 signals the time period (also delineated for analytical purposes) when social agents interact with the conditioning structural forces, and the reflexive action they take as a result (Archer, 2003, 2010). Firstly, T^2 interaction and action takes place in a context that the social agents did not produce. Hence, when academics experience structural forces in the higher education context, these constraining forces were already in place at T^2 , and the actions of academics are an attempt to mitigate or eliminate their oppressive effect. Secondly, the “politics of the possible” (Archer, 1995, p. 79) are determined by both the power₂ constraining relations of the structural forces and the power₁ transformatory capacity of the social agents. Consequently, this social interaction/action (T^2 to T^3) phase is the main focus of this thesis – exploring *what* resistive actions the research participants have engaged in in order to mitigate the effects of structural forces and how these play out in their integration of educational technology (see Sections 5.6 and 6.4).

The last phase of the morphogenetic/morphostatic approach, T^4 , is the structure’s response to the relational actions of the social agents. If the actions are successful, then this results in social elaboration (genesis), which is a change in the structure’s properties. However, T^4 can also result in social reproduction (stasis) where the structure’s properties remain as they were in T^1 in spite of the actions of the agents. In this thesis, the culture of resistance that unravelled from T^2 to T^3 (social interaction/action) has the potential to bring about change at the structural level. I am interested specifically in how the research participants exercised their agency in order to resist and mitigate varied structural forces. Their intention, as will be demonstrated in Chapter 5, was not necessarily to overthrow the structural constraints, but rather to manipulate them to their advantage and in line with their academic values. The result of their transformative

agency, however, was genesis or social elaboration at the individual, and at times collective, level.

2.9 Summary

Articulation of one's research philosophy is an indispensable process that allows the researcher to interrogate her assumptions about reality and knowledge about that reality (Section 2.3). This lays the foundation for the explication of methodology, data analysis and writing the thesis. In this study, I selected to use critical realism because of its depth ontology that has an intransitive reality and multiple perspectives of that reality (Section 2.4 and 2.4.1). The meta-theory views reality as consisting of generative mechanisms which interact in an open system and have causal efficacy (which can remain unexercised) to bring about observable changes in the social and natural world. My strong desire as an educational technologist to understand not only academics educational technology choices and practices, but also the socio-political context within which these practices take place, drew me to the idea of multiple subjective perceptions of an objective reality. I was also drawn to critical realism because of its emphasis on emancipation through knowledge (Section 2.7.3) as well as the self-reflective path that Bhaskar followed in the development of the meta-theory (Section 2.5).

Several criticisms of critical realism were also addressed in this chapter, and I had to draw on concepts from dialectical critical realism (the second wave in the development of this meta-theory) in order to do so (Section 2.4.2). These concepts – historical totality, absences and different views of power – will also be utilised in later chapters in order to avoid the meta-theory's pitfalls as highlighted in Section 2.6. One of the major criticisms of critical realism is a lack of congruence in the understanding of its 'critical' prefix. Hence, one of the key contributions of this thesis was to provide an explanation of what 'critical' in critical realism means (Section 2.7).

The chapter rounds up by elaborating on an explanatory model that will be used in framing the analysed data in later chapters (Section 2.8). The morphogenetic/morphostatic cycle is drawn from social realism – which is critical realism's social arm – and will help frame the interaction of structural forces and agency in the integration of educational technology.

The critical realist concepts in this chapter will be used in the next chapter to show how critical realism can underlabour critical ethnography.

Chapter 3

What tools am I using?

(Research Methodology)

3.1 Pre-text

Chapter 2 presented the first of two steps explaining how I am approaching this thesis by focusing on the ontological and epistemological concepts of the critical realist philosophy. These may initially seem abstract and disconnected from the realities of doing research. And yet, as I elaborated in that chapter, explicating my philosophical underpinnings is a crucial first step that impacts the rest of the research process. This is because critical realist philosophy works as an underlabourer – influencing the decisions I make about methodology, data collection, analysis and the writing style used in the thesis. In this second part I demonstrate how the cautious (see Section 2.6.3) critical realist epistemology can be strengthened using critical ethnographic methodology.

As with the previous chapter, this chapter addresses the last research question. It responds to the second part of its associated research goal in motivating for the efficacy of a critical realist approach coupled with a critical ethnographic methodology:

Research Question 4: *Is critical realism a suitable ontological underlabourer to not only explicate the socio-political context, but also uncover oppressive structural constraints and academics' resistance in the integration of educational technology?*

- **Goal 7:** Reflect on the suitability of critical realism for a critical research study, and particularly how critical realist ontology and critical ethnographic methodology can aid in reflexively excavating oppressive forces and resistance strategies.

Below (Figure 3-1) I reproduce the same diagram used at the beginning of Chapter 2 in order to remind the reader where critical realism and critical ethnography informed different parts of the research process. Each of these will be unpacked further in the respective chapters.

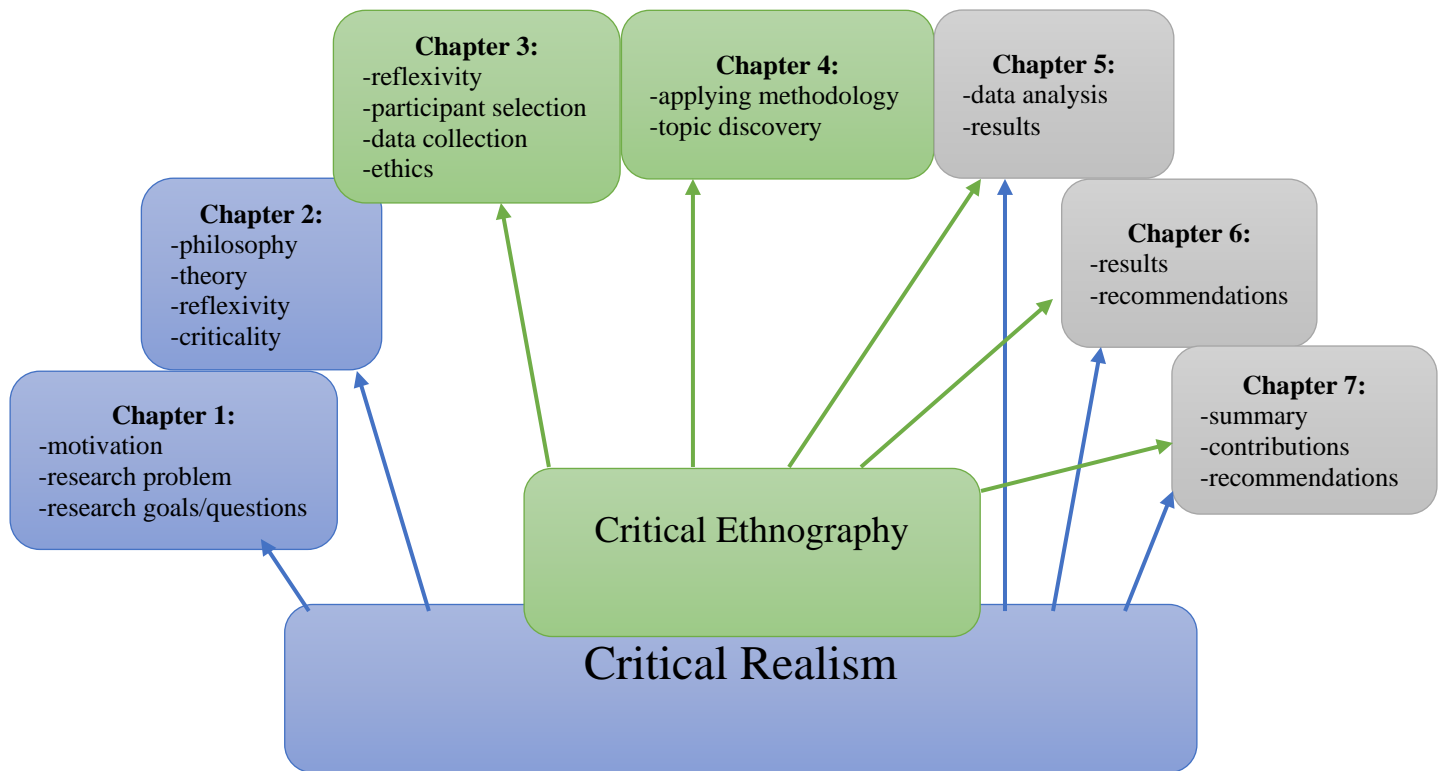


Figure 3-1: Critical realism as underlabourer for the research process

3.2 Introduction

Methodology is the crucial link I need to act as an interface between the metatheory (ontology and epistemology) and the practical fieldwork methods I will use in the research (Danermark et al., 2002; Davies, 2008; Harvey, 1990). Methodology is understood to be the principles of method “embracing philosophy, assumptions about validity, and ... preferred methods” (Bazeley, 2013, p. 8). As metatheory and methods overtly coalesce at the point of methodology (Harvey, 1990), abstract philosophy is connected with real life data collection methods, thereby visibly permeating the research process. Methodologies have specific ontological and epistemological underpinnings and hence, they should rather be associated with metatheories with a good fit for their view of reality and knowledge about that reality (Bazeley, 2013). In bringing together philosophy and methods, methodologies actually act as a justification for the methods we have selected to use, a form of “data transparency” aimed at strengthening the validity of the collected data (Madden, 2010, p. 26).

In this chapter I will articulate the link between the philosophical underlabourer, critical realism, with the methodology I have selected for this research – critical ethnography. Thereafter, I will elaborate on the methods and ethical considerations as they relate to my

particular ontological and epistemological stance, and how I have used reflexivity as a path to self-knowledge.

3.3 Critical ethnographic methodology

Critical ethnography is a research methodology based on ethnography: a methodology that seeks to examine, understand and describe a social and cultural context from the point of view of the research participants (Harvey, 1990; Myers, 2013). As will be discussed later in this section, each of these activities – examining, understanding and describing – is complex and contentious, particularly when approached from a critical stance. For purposes of clarity in this introduction, I will first define how they are understood in ethnography and leave the tensions inherent in their use for later in this section, as well as Section 4.5, where there is a description of how the critical ethnographic methodology unfolded in practice.

Ethnography first of all seeks to *examine* a particular social context through the use of a range of research methods (Tedlock, 2000). In my research, the rationale for using a mix of methods is that understanding lecturers' perceptions and practices with educational technology from just observation, or just interviews, would give an inadequately one-sided and biased view of the academic culture. Hence, triangulating the data gathered through various methods would allow me to gain a fuller picture (albeit still incomplete and value-laden (Carspecken, 1996; Hammersley and Atkinson, 2007; Madison, 2012; Van Maanen, 1988)) of the research context and the culture of the research participants. In seeking to *understand* the research data, an ethnographer will use suitable analysis procedures and ensure that she captures the meanings intended by the research participants (Fetterman, 2010; Hammersley and Atkinson, 2007). *Describing* the ethnography involves writing a narrative that explains the subjective understandings of a particular group and, because this is a critical realist study, linking them to "various layers of context and social structure" (Rees and Gatenby, 2014, p. 132). Describing alone is not enough however, and through the use of theory and reflexivity, ethnography provides "greater depth and validity" to the cultural description than just retelling stories and experiences of the 'other' (Davies, 2008, p. 45), and allows me to situate my experience as the researcher in the development and formulation of the stories.

As an ethnographer it is not possible to ignore the *context* as it determines what the phenomenon is and why it is important to study it (Myers, 1997). In fact, considering that the context is "the socially constructed reality" (Myers, 1997, p. 278) of the social agents, and that technology is embedded in a constantly changing and highly complex social context, the first

step towards examining, understanding and describing the culture of social agents in a technology environment is to immerse myself in their context (Myers, 1997, 2013). An ethnography can be viewed as both the “process and the product” (Tedlock, 2000, p. 455), the methodology for understanding the research participants and their cultural context as well as the final written product produced at the end of the research (Creswell, 2012; Fetterman, 2010).

Ethnographic methodology also recognises that an ethnographer is attempting to portray another’s culture in terms of her own (Van Maanen, 1988). She is “representing the social reality of others through the analysis of [her] own experience in the world of these others... [making] ethnography... highly particular and hauntingly personal” (Van Maanen, 1988, p. ix). This allows me to represent the culture of my research participants as viewed through my own experience – which fulfils my purpose to prioritise self-knowledge and reflexivity as part of the research process. In effect then, because this study’s research process has been highly subjective and deeply personal as I am part of the culture being researched, it is not possible for another researcher to reproduce the exact research results that I will have. The explication of the research process has been done for purposes of validity and reliability so that readers can verify the quality of the research process, but not for reproducibility. As Behar (2003) contends, each ethnographic account:

...depends on the nuances of the ethnographer’s sensibility and the historical moment in which the ethnographer happened to be present as an observer. ...[E]very ethnography emerges from a unique encounter between an ethnographer and those who become the subjects of the ethnography. These encounters are *not repeatable*, not easily verifiable... Every ethnographer, to some extent, has to reinvent the genre of ethnography to make it fit the uniqueness of his or her fieldwork experience. (pp. 20, 35, emphasis mine)

Seeking an understanding of a culture is what distinguishes ethnography from other qualitative research methodologies (Creswell, 2012; Fetterman, 2010; Wolcott, 1999). And considering the multiple understandings of the term *culture* in different social science disciplines, I concur with Wolcott’s definition that culture denotes “patterns of behaving that can only be inferred” (Wolcott, 1999, p. 253). Culture, which is unique to a society or subgroup, is socially constructed and comprises of beliefs, values and accepted norms of behaviour and therefore needs careful excavation based on primary data. In this study, I am excavating the structural forces in the context within which academics work, and specifically how they have developed a culture of resistance which plays out in their integration of educational technology. Hence my use of critical ethnography.

Critical ethnography expands the ethnographic methodology to encompass critical goals. It focuses not just on culture, but on the interaction of society and politics over time (Barron, 2013) with emancipatory goals that seek to negate constraining and repressive thoughts and actions (Thomas, 1993). With critical ethnography the researcher collaborates with “research participants as dialogic... or epistemic partners” in the research project (Lassiter and Campbell, 2010, p. 760). The researcher’s impact on the observations and the data is embraced (Davies, 2008) and the methodology acknowledges the complicated and contentious process of authentically representing the other (Madison, 2012). As with ethnography, critical ethnography includes description and analysis, but also “open[s] to scrutiny” (Thomas, 1993, p. 2) the constraining politics and hegemonies in the social context. In order to overthrow the oppressive and repressive situations, “critical ethnography proceeds from an explicit framework that, by modifying consciousness or invoking a call to action, attempts to use knowledge for social change” (Thomas, 1993, p. 4). Critical ethnography is therefore agenda driven.

My interest in using critical ethnography was its critical stance which went beyond ethnography’s ‘neutral’ account of social actors that ignores structural constraints (Anderson, 1989) and reveals “the links between [agents’] subjective understandings and their structural origins” (Rees and Gatenby, 2014, p. 132). It therefore offered me the tools I needed to uncover and critique the structural constraints that the research participants were experiencing as oppressive. Furthermore, it helped me understand and describe the culture of resistance that they had developed as a result, and how this was reproduced in their work – and particularly in their use of educational technology. It also gave me the freedom to explore and reflect on my impact on the study as an insider researcher who was already part of the research context before the commencement of the research. This fulfilled my first and second research goals as detailed in Section 1.4.3. I was also drawn by critical ethnography’s *change* framework which went beyond asking ‘what is’ in order to describe the current situation, and rather focused on ‘what could be’ (Thomas, 1993).

3.4 Critical realism as underlabourer for critical ethnography

Having briefly touched on the fundamental elements of critical ethnography, in this section I argue that critical realism can be a suitable underlabourer for this methodology. Although a range of other quantitative and qualitative research methods can be underlaboured by critical realism (Danermark et al., 2002), as indicated below, I selected the critical ethnographic

methodology because I felt that it addressed one of the basic criticisms of critical realism (see Section 2.6.3). The philosophy has been criticised for having an under-developed epistemology (Bhaskar, 2016) by being “ontologically bold and epistemologically cautious” (Outhwaite, 1987, p. 34). This means there has been very little attention paid to the impact of critical realism on methodology and consequently on its use in practical research and its impact on the research process and results (Ackroyd, 2009; Fletcher, 2017; Oliver, 2012). As Roy Bhaskar, one of the main founders of critical realism, laments:

...if CR [critical realism] is to be ‘serious’, it must be applicable... Furthermore it is in its applications that, on its own self-understanding, the whole point and value of CR as an *under-labourer*, and occasional midwife, lies. So much so, that one could say that applied or practical realism or indeed ‘critical realism in action’ is, or should be, the soul or heartbeat of CR. Despite this, there is a dearth of such texts. For even when one has begun to grasp some principles of basic critical realism, it will not be obvious how exactly one is to ‘do it’. (Bhaskar, 2014, p. v)

Thus this thesis addresses this gap – the lack of actionable guidance on how to ‘do’ critical realism in practical research – and consequently how critical ethnography’s strong epistemology can aid in this regard. As will be shown in this section, critical realism and critical ethnography can complement each other’s weaknesses in the following three areas: conception of power, value judgements and reflexivity. In the rest of this section I will refer to critical ethnographic epistemology as just critical epistemology because of its foundations in critical theory (Carspecken, 1996; Madison, 2012; Scotland, 2012).

3.4.1 Understanding power relations

Critical realism can aid critical ethnography’s attempt to conceptualise power relations. The first step towards this was accomplished in Section 2.7 of the previous chapter where I clarified the meaning of ‘critical’ in critical realism. I showed how, although critical realism approached its emancipatory goal from the perspective of knowledge, the critique of knowledge claims as well as different conceptions of power, the final goal was still the same as that of any critical research – emancipation from oppressive powers. Its strong focus is actually on the power of agents to not only overthrow oppressive powers (power₂ relations) through knowledge, but also exercise their transformatory power (power₁ relations) on behalf of the powerless (see Section 2.7.4). I elaborate in Sections 5.4 and 5.5 on the structural constraints in higher education that exercise power₂ relations on academics and how they have exerted – sometimes forcefully, sometimes quietly – power₁ relations in order to resist this oppression (see Section 5.6). My assertion in this study is that these power₁ and power₂ relations also play out in

academics' educational technology integration practices (see Section 6.3), and hence, the kind of support we as educational technologists give lecturers falls short in terms of supporting the development of their transformatory capacity and overcoming these repressive powers in their use of educational technology (see Section 6.6).

A critical epistemology has the potential to extend *what* knowledge a critical realist can know about reality. This is done by being cognisant of the *type* of knowledge that is knowable – namely power structures as well as hidden and overt oppressive practices. This ties in with critical realism's ontological views of power as well as my research aim to uncover oppressive structural forces impacting the use of educational technology. Even though critical realism expounds on these power structures at the ontological level – particularly how agents' power relations are exhibited as intentional transformative agency (see Sections 2.4.2 and 2.7.4), how they are handled at the epistemological and methodological level is ambiguous; and it is here that I leverage on the strengths of critical ethnography to interrogate power dynamics in the problem setting.

3.4.2 Emphasising value judgements

Critical realist epistemology is based on the principle that our knowledge of reality is socially-constructed and fallible, and is limited by the language we have available to describe that reality (Benton and Craib, 2011) because “the world in general [and social reality in particular] defies any attempts at overall orderly accounting” (Law, 2004, p. 6). In this sense, critical realism accepts that all knowledge is socially constructed and ‘contingent’ but rejects the notion that we are unable to judge which knowledge is more valuable than others (Danermark et al., 2002). Critical realists believe that we can make this judgement through the use of “historical, emancipatory, critical, and instrumental” criteria (Danermark et al., 2002, p. 202). The philosophy is however not specific about the source of this criteria, while critical ethnography offers more direction in this regard.

Critical ethnography rejects, just like critical realism, the notion that there is no way to judge the epistemological value of contradictory knowledge unearthed during the research (Carspecken, 1996; Danermark et al., 2002). As a conduit for strengthening critical realist epistemology, a critical epistemology emphasises that the critical ethnographer's value orientation is the basis for making judgements about the value of knowledge and theories (Carspecken, 1996). A critical epistemology is explicit about the researcher's values and insists that these are intertwined with the socially constructed knowledge; therefore critical

epistemology is always “*value mediated*” (Guba and Lincoln, 1994, p. 110). The values which drive a critical ethnographer’s research choices are usually driven by a deep-seated “ethical responsibility” to change an oppressive situation for social actors (Madison, 2012, p. 5). In fact, critical ethnography “widens our experiential capacity to see, hear, and feel. It deepens and sharpens ethical commitments by forcing us to develop and act upon value commitments in the context of political agendas” (Thomas, 1993, p. 2).

My research choices have been driven by an ethical commitment to empower academics in their resistance against oppressive powers that hinder or constrain their use of educational technology. These powers are located in different spheres, including in the structure and history of higher education, in the institution and in the educational technologies themselves (see Sections 1.2, 1.3, 5.4, 5.5 and 6.3).

3.4.3 Self-reflection for self-knowledge

A critical epistemology also strengthens critical realist ontology by being explicit about self-knowledge and reflection. In Section 2.5 I discussed how the development of critical realism was foregrounded by a strong self-reflexiveness on the part of its originator, Bhaskar, but that this self-knowledge and reflexivity had not been emphasised as a basic tenet of critical realist epistemology. A critical epistemology’s emphasis on value orientations is therefore indispensable, in this instance particularly self-knowledge about what those value orientations are and the way they impact both the thesis and the perceptions of the researcher. I discuss this issue under the following themes, namely; reflecting on the origins of ethnography, reflecting on my positionality and subjectivity, reflecting on the politics of the gaze and reflecting on representing the other. How this reflection played out in the field and helped me understand the emerging topic is further expounded in Section 4.5.

3.4.3.1 *Reflecting on the origins of ethnography*

In order to meet the requirements of validity, reliability and rigour, my self-reflections have to encompass a number of areas. The first of these, which I have listed first because it is deeply personal to me, is the need to reflect on the colonial foundations of ethnography. As a methodology that was first used to study cultures in colonised states, Erickson (2018) elaborates on its purpose as the understanding of ‘uncivilised’ peoples in terms of “anatomical and medical observations, clothing, navigation, food, religion, laws, and ‘contact with civilized races’” (p. 39). A myriad of deeply disturbing and dehumanising activities bore the name of research, including acts like “...measur[ing] our ‘faculties’ by filling the skulls of our ancestors

with millet seeds and compar[ing] the amount of millet seed to the capacity for mental thought, [a process which] offends our sense of who and what we are, ...our deepest sense of our humanity” (Smith, 2012, p. 1).

In carrying out these dehumanising acts of research, British ethnographers followed guidelines outlined in a booklet entitled *Notes and Queries on Anthropology for the Use of Travelers and Residents in Uncivilized Lands*, which, over six editions eventually evolved into different branches of anthropology as we know it today (Erickson, 2018). The colonial ethnographers’ oppressive contact with the “exotic, and often dark-skinned ‘other’” (Denzin and Lincoln, 2018a, p. 9) was perpetuated by their arrogant assumption about who could tell the stories and to whom (Behar, 2003). The represented actors had no say in how the knowledge about their culture was mined, how they were represented, and often had no idea what their stories were and who got to be told about them. This, unfortunately, is still the case in many indigenous communities studied by ethnographers today (Bishop, 2008; Sarra, 2011; Smith, 2012) despite the fact that we claim that the purpose of said research approach has changed as we are critiquing the oppressive status quo with critical ethnography.

However, this claim fails to acknowledge that as critical ethnographers we are still focusing on “predominantly members of socially disadvantaged groups” (Mayall, Hood, & Oliver, 1999, p. 1). As Mayall and colleagues (1999) point out, the distinction between disadvantaged and advantaged groups is still decided by powerful social structures, and those belonging to the latter group are usually protected by these structures from research scrutiny. The disadvantaged are, unfortunately, labelled as needing intervention because they are seen as problems that are threatening social order (Mayall et al., 1999). They are also seen as needing help because they are deprived or marginalised in some way – even though this marginalisation and deprivation is coming from the very social structures that have labelled them as disadvantaged (Mayall et al., 1999). Furthermore, most critical ethnographic research is done by academic researchers and hence the final written reports are usually not accessible to the research subjects. They may gain physical access to the written reports, but because of their disadvantaged status, may fail to fully understand the story being told about them or, even more likely, the possible repercussions that could result from its publication. The fact that “more than one ethnographer has been taken to court” in the last few years for misrepresenting the culture of their research subjects (Denzin and Lincoln, 2018b, p. xvi) is both alarming and comforting. It is alarming because it points to the fact that we have not learnt from ethnography’s cruel past and have failed to evolve from the original approaches and intentions of the methodology. It is

comforting in that it shows there is an improvement in epistemological access to the final research reports for the participants.

My reflections therefore have to address the colonising and dehumanising past of ethnography, and how these are possibly still being perpetuated at different stages of the research process. Critical realism's concept of totality (see Sections 2.4.2 and 2.6.1.1) supports this approach by giving me the leeway to trace how the history of critical ethnography is intertwined with current practices and principles of the methodology, and possibly how the relation between past and present may be complementary or contradictory to the emancipatory purposes of the methodology.

3.4.3.2 Reflecting on my positionality and subjectivity

A critical epistemology emphasises reflection on my positionality and subjectivity as the researcher, a concept which is underemphasised in critical realism. This is an unavoidable step in the self-reflection process because of the long-term and often close and multi-stranded relationship that the critical ethnographer develops with research participants (Davies, 2008). In this regard, I need to recognise that the whole research process is actually an “act[] of domination even as critical ethnographers reveal the same in what they study” (Noblit, Flores, & Murillo Jr, 2004, p. 5). Hence, I need to evaluate the ways in which the research activities and instruments may have been oppressive in some way. As a research ‘instrument’ myself, I am included in this evaluation through the contextualising of my positionality by “making it accessible, transparent, and vulnerable to judgement and evaluation” (Madison, 2012, p. 9). The process helps me give the research choices and activities a ‘self’, by revealing human influences such as hidden biases, assumptions and power, as well as emotions, senses and intuitions (Madison, 2012).

This means I also need to be keenly aware of the effect of my presence, as well as my words or silence, the activities I engage in and the research methods I choose to employ, on the social context and the agents under study. Unlike conventional ethnography where I “try to minimize any distortion of [my] findings by [my] political convictions or practical interests” (Hammersley and Atkinson, 2007), with critical ethnography I celebrate that the research choices I have made are directly linked to my ‘self’. I recognise and embrace how “the results of research are artefacts of the researcher’s presence and inevitable influence on the research process” (Davies, 2008, p. 3), that a different person would have likely had diversely different

experiences from me in terms of research processes, impact on the research, and hence could have likely arrived at different results.

3.4.3.3 Reflecting on the 'politics of the gaze'

Collecting data from social agents is difficult because “there is no clear window into the inner life of an individual” (Denzin and Lincoln, 2018a, p. 17) no matter how many methods are used to triangulate (i.e. findings ways to confirm, refute, reinterpret from different perspectives) the data. All that researchers can really have access to is the data they have constructed as a result of their interactions with the research participants (Davies, 2008) – data which is collected using methods that give us only “selective perception and observation” (Harvey, 1990, p. 10) of the research phenomenon. I therefore need to be aware that I only have a hazy view of the social agents’ culture, laden as it is with my own prejudices and historicity. Furthermore, as a researcher I have to continually interrogate my perceptions of the data in order to avoid what Gee (2013) terms the ‘confirmation bias’, where my beliefs, assumptions and biases so cloud my understanding of the data that whatever the research participants say or do in my presence only serves to confirm what I already believe to be the ‘truth’.

Critical realism offers a possible approach to potentially minimise the politics inherent in my perceptual understanding of the data. As elaborated in Section 2.4.1, its ontology highlights the existence of an independent reality that I am seeking to understand. This reality comprises the generative mechanisms whose causal powers have led to the emergence of particular educational technology integration choices and practices. The process of inferring these mechanisms and their powers is not wholly a personal and private process for the researcher as this is what could lead to the issue highlighted in this section. Instead, the researcher uses interviews to ask the research participants about their perception of reality and its causal powers. These may contradict what the researcher infers from the data – and these contradictions are the grounds from which the researcher bases her reflections on the generative mechanisms and their dormant or active causal powers.

3.4.3.4 Reflecting on representing the other

Finally, as the researcher I have to interrogate the way I choose to tell my research participants’ stories. Since the narratives are embedded in the social context and processes (Myers, 1997) of the social actors, it makes them complex and difficult to define. Because of this complexity, we tend to “make a mess” of our representations of the ‘Other’ and any attempts to offer simple descriptions “simply increases the mess” (Law, 2004, p. 2). Additionally, researchers

commonly represent the culture and identities of the research participants through commonalities, a process which “conflates enormous differences [in terms] of power, culture, belief, political commitments, ethnicity [and] class” (Wasserfall, 1993, p. 23). Even for researchers who can tell skilfully crafted and attention-gripping stories, the process is still complicated and contentious (Madison, 2012) because “we hold the meaning of people’s lives in our hands” (Bar-On, 1996, p. 20). Research participants will likely be treated in the way that they are represented, thereby giving the researcher the power to interpret and shape how the readers will conceive the represented culture and lived experiences:

...how things are represented and the ‘machineries’ and regimes of representation in a culture do play a *constitutive*, and not merely a reflexive, after-the-event, role. This gives questions of culture and ideology, and the scenarios of representation – subjectivity, identity, politics – a formative, not merely an expressive, place in the constitution of social and political life. (Hall, 1996, p. 444)

Furthermore, publication of the research participants’ stories may lead to certain actions or change the research context, and not always in a desirable direction (Hammersley and Atkinson, 2007). Critical ethnography’s insistence that the researcher should be “dialogically attuned” to the research participants (Lassiter and Campbell, 2010, p. 759) by constantly engaging them as dialogic partners in the research process (Madison, 2012) is a possible path to curtailing the effect of this representation issue. This, however, also has to involve ensuring that the participants *understand* what has been written about them, and any possible effects that the researcher may be aware of. This may involve explaining the report to the research participants, and possibly being available to help them mitigate any negative effects that may result from its publication.

My self-reflective process will include these four areas – the oppressive history of the methodology, my positionality and biases, the data collection process and the way I choose to represent the culture of the research participants. This, as has been shown, can be accomplished through the complementary work of both critical realism and critical ethnography.

3.4.4 Can critical realism underlabour critical ethnography?

So is critical realism a suitable underlabourer for critical ethnography? I believe that it can be considering the argument put forward in this section about how the two can complement and strengthen each other. The quote from Thomas below sums up the importance of critical realism’s ontology for a critical ethnographic methodology:

Critical ethnographers begin from a view of ‘what is out there to know,’ or an *ontology*, that furnishes a set of images and metaphors in which various forms of social oppression constitute what is to be known. ...Borrowing from Lukacs (1971a), critical realism penetrates to the deeper levels of meaning that lie beneath surface appearances. Bodies of ideas, norms, and ideologies create meanings for constructing social subjects and concepts like ‘gender,’ ‘race,’ and ‘student.’ ...[which] typify the invisible realm of meanings that stratify people and distribute power and resources in subtle ways. For critical thinkers, the ontological assumption is that there is something else there that will take us beneath the surface world of accepted appearances and reveal the darker, oppressive side of social life. (Thomas, 1993, p. 34)

While critical realism urges the researcher to uncover an unknown social reality, a critical epistemology gives us the finer-grained tools to excavate what our intuitions and values tell us is brewing under the surface of observable empirical situations. We may not be aware of the nature of what this is, but the research process is designed to bring us closer to this reality. This empowers the researcher as well as the social agents to “realiz[e] alternative possibilities” (Thomas, 1993, p. 4). In the context of this study, the researcher is seeking to understand the disparity in the way academics integrate educational technology into their teaching by focusing on the social context within which these practices take place. The aim is to excavate structural constraints that impact academics educational technology practices, how they mitigate these structural forces, and consequently transform the kind of educational technology support offered to them. Hence, both the researcher and the researched may move closer to understanding what we believe may be the reality (in critical realist terms) of educational technology practices.

Foregrounded by the critical ethnographic principles discussed in the last two sections, the following sections lay out the research process, including selection of research participants, data collection methods, analysis of the data, and ethical issues encountered in the field.

3.5 Selection of research participants

The process of selecting the research participants was foregrounded by both a critical realist ontology and a critical ethnographic epistemology. The following principles were used to guide my selection of which research participants would help me understand the educational technology practices of academics as well as the structural context within which these practices were embedded.

My initial concern at the commencement of the research was the sample size, considering the need to dig deeper rather than wider in my understanding of the culture of educational technology use in South African higher education. In light of this, ethnography ideally

recommends the selection of a few cases which are part of the larger social context under study (Hammersley and Atkinson, 2007). There seems to be some contention in the literature about whether this small sample (sometimes involving one case or one participant) should be representative of the population (Gentles, Charles, Ploeg, & McKibbin, 2015). Some authors even argue that “generat[ing] a small group that represents as accurately as possible the characteristics of the population” should be the researcher’s guiding objective in selecting research participants for an ethnographic study (Schensul, Schensul, & LeCompte, 1999, p. 232). However, this assertion makes the assumption that the results of the research will be generalised back to the larger population.

Unlike quantitative randomly selected large samples (Lee and Baskerville, 2003; Patton, 2002), qualitative research – and particularly ethnography – is not aiming for the selection of a representative case study that can be generalised to the population (Lee and Baskerville, 2003; Ruddin, 2006). Instead, the driving forces behind the selection of research participants in an ethnographic study are the research’s conceptual and theoretical concepts (Miles, Huberman, & Saldaña, 2014; Patton, 2002). The sampling process is usually theory-driven, with empirical data allowing the researcher to develop general constructs which are relevant across cases. This is generalisation in qualitative research – not the assumption that a sample is representative of the whole context, but that the conceptual and theoretical constructs can be generalised across cases, and hence improve on the theory (or develop new theories) (Curtis, Gesler, Smith, & Washburn, 2000; Miles et al., 2014). In fact, Lee and Baskerville (2003) contend that the value of a theory is in its generalisability – that is, its applicability to different situations from which it was empirically assessed and verified. The application of the theory’s constructs to different contexts by other researchers actually serves to confirm the generalisability of the research, what Ruddin (2006) terms ‘naturalistic generalisability’.

Rather than focusing on the sample size, ethnography recommends that the research participants should be selected based on their ability to illuminate the research phenomenon and the culture within which it is embedded (Hammersley and Atkinson, 2007; Madison, 2012; Miles et al., 2014). In fact, ethnography’s logic and power lies in its ability to illuminate the research phenomenon through the use of information-rich, small samples (Patton, 2002). Hence, before selecting research participants who could meet particular theoretical constructs, I needed to have a better understanding of what the research phenomenon is, considering the criticisms levelled against educational technologists (see Section 1.1) about their lack of understanding of the constraints faced by academics. This first phase of the research was

accomplished through an initial exploration of the nature of the research phenomenon (Hammersley and Atkinson, 2007). My initial exploration was confined to the courses run by my colleagues for academic staff in our institution and other universities in South Africa, and consisted of a few questions added to their course evaluation surveys. I selected to survey these research participants because they consisted of a mix of academics with diverse experience in using educational technology, and who had been exposed to my department's focus on modelling the use of educational technology in their staff development courses (Mostert and Quinn, 2009). The responses from this questionnaire are in Appendix A.

Despite the benefit of this initial exploration, I was still faced with the dilemma of deciding how many participants I would request to be part of the study. Several rather vague responses to this question are highlighted in the literature, ranging from saturation, methodological guidelines and 'it depends' (Baker, Edwards, & Doidge, 2012; Dworkin, 2012; Marshall, Cardon, Poddar, & Fontenot, 2013; Mason, 2010). Based on their survey of information systems journals and publications, Marshall et al., (2013) recommend three possible approaches to justifying the sample size: 1) citing the recommendations of qualitative methodologists; 2) following the precedent set by studies which are similar to mine in terms of research problem, methodology and design; and 3) statistically demonstrating that saturation has been achieved. As already indicated, ethnographic texts are vague on the recommended number of informants, while saturation is a difficult concept to prove statistically. As such, I have elected to follow the precedent set by researchers in my field. Seeking to understand students' distractive use of technology, Aagaard (2015) selected six teachers for one interview each and ethnographic participant observation in their classes over a six-month period. He also had one interview each with 14 students. Adachi, Tai and Dawson (2018) interviewed 13 academics in their attempt to explore the benefits and challenges of self and peer assessment. While Englund, Olofsson and Price (2017) conducted a 10-year longitudinal study with nine academics which sought to examine how they conceived of, and approached, educational technology use. Each of these three studies used a small sample size and focused rather on in-depth excavation and analysis of the data collected over a long period of time. Following on from these studies, I had eight research participants for the duration of this research study.

The issues mentioned by academics in that initial exploratory questionnaire, together with the research's ontological and epistemological approaches, guided both the selection of research participants and the gradual emergence of the research phenomenon (see Chapter 4).

As highlighted in Section 3.3, critical ethnography emphasises a contextualised understanding of the research phenomenon, and the context is considered to be the socially-constructed reality of social agents. As such, in my attempt to excavate this reality (in critical realist terms) of educational technology integration practices, the context was indispensable. Furthermore, there were structural changes taking place in the South African higher education landscape at the start of my research (2014 and 2015), and my desire was to select research participants who had experienced these changes. Hence, they needed to be thoroughly enculturated in the research context so that they could explain to me what was going on in terms of the research phenomenon (Spradley, 1979).

The exploratory questionnaire responses suggested that individuals experienced constraints to educational technology use differently. This corroborates with the critical realist principle that while there is one reality, there are different perspectives and experiences of that reality (see Sections 2.4.1 and 2.4.3). Hence, different social agents may perceive this reality differently. As such, the research participants were also selected based on a continuum of expertise and practice with educational technology integration – starting from those who considered themselves non-users, to power users. Furthermore, following on from Henkel's (2005) characterisation of academic identity as both individually distinctive (profession) but also socially constructed (discipline and institution), as well as the causal efficacy of different academic tribes (Becher and Trowler, 2001), I selected participants from each of the six faculties in the institution. My intention was not aimed at making comparisons between different disciplines, but rather to cast a wider net in terms of uncovering different structural constraints to educational technology integration – some of which may be specific to particular disciplines.

I was also seeking to select participants who would be willing to set aside their time to allow me to collect primary data from them, and Spradley (1979) points out that participants who have a keen interest in the study “will often *make* time” (p. 52). In the highly pressured higher education landscape where academics struggle to balance the range of activities they have to accomplish in order to progress in their disciplines, it was important for me to find people who would be interested enough in the research to carve out the time for the various data collection activities over the period of the research, i.e., observations, interviews and informal conversations. Although this worked well in theory, the practice was quite different as research participants were caught up in roles they had not anticipated as a result of the student protests and other university obligations.

As mentioned in Section 3.4.3.1, ethnography has disturbingly oppressive roots where research was done for colonialist ends in order to mine the riches of native lands. There are also records of atrocities and violations of research subjects in the name of medical advancement, as in Nazi-led research and the Tuskegee syphilis experiment (Angell, 1997; Brandt, 1978; Hammersley and Traianou, 2012). The result of these early ethnographic studies was often repression, cruelty, shame and often a violent and painful death. Because these research participants (who often were unaware that they were taking part in a study) were considered lower down the rung of ‘humanness’, these atrocities were encouraged because they revealed the ‘dark’ and ‘uncivilised’ cultures of these lesser humans (Smith, 2012). The atrocious ethnographies were also revered as breakthrough science (Erickson, 2018).

Disturbingly, as also mentioned in Section 3.4.3.1, critical ethnographic researchers today select their research participants based on their marginalisation (could this mean ‘dark’ and ‘uncivilised’ as opposed to the ‘enlightened’ and ‘progressive’ culture of the researchers themselves?). Granted, their aim is to bring about emancipation for these oppressed groups. But I would like to put forward that labelling and selecting them because of their marginalisation is an oppressive act in itself. One of these labels – which has been deeply disturbing to me for many years because of my passion for technology – is the characterisation of women as lagging behind in terms of technology use (Cohoon and Aspray, 2006; Misa, 2011), particularly in the African context (see Section 1.1.3). Because I wanted to challenge – rather than confirm – this false perception of women, I selected female participants for this research. I hoped to show that this stereotypical marginalisation actually perpetuates as an oppressive power, and that most women quietly resist it in their use of educational technology. My choice of research participants was therefore deeply subjective. And I wanted to be able to superimpose – contrast and compare – what I see and experience as a woman working in South African higher education, with what my research participants see and experience. I was therefore looking to find participants like me who might experience higher education and educational technology in similar ways to me and who would be able to ultimately confirm or refute my self-understanding practices. I also didn’t want to succumb to the same assumptions as other ethnographers that the people I engage with are automatically labelled as ‘the oppressed’ in line with the historic roots of ethnographies (see Section 3.4.3.1), but rather that they are seen as research participants assisting in excavating and articulating oppressive structures that constrain their use of educational technology.

3.5.1 Introducing the research participants

The research participants were selected based on critical realist and critical ethnographic requirements, and the process was also further informed by an initial exploratory survey that was designed to explore the nature of the research phenomenon. The research participants were selected based on their ability to provide a contextualised understanding of the research phenomenon. Hence, they needed to have ideally experienced the structural constraints, the culture of South African education, and the changes taking place in the higher education landscape. Each of the research participants had been an academic for at least three years. I felt this was adequate time mainly because the university's probation period is three years before an academic can apply for tenure. Furthermore, this would have given new academics time to experience the structural constraints of higher education and come to understand its culture.

At the start of the research, I intended to ideally seek out research participants who had some experience with educational technology and were at different levels of expertise. But because of the evolving nature of ethnographic research (Hammersley and Atkinson, 2007), one participant was selected specifically because she insisted that she did not use technology in her teaching and wasn't interested in doing so (see Section 6.6.2.2).

I also sought participants who were at different levels academically and were in different faculties. As already mentioned in Section 3.5, the number of participants followed the precedence of previous studies. Although I had originally intended to request two participants from each of the six faculties in the university, I ended up with two participants each from the faculties of Education and Humanities, and one participant each from Science, Commerce, Law and Pharmacy faculties, as these eight participants were the ones who agreed to take part in the study and commit to the time required to collect the data. I had also hoped to have greater diversity in terms of race, but those who were willing to take part in the study were two black academics, one Indian academic and five white academics. These female academics ranged in academic level from lecturer, senior lecturer, associate professor to professor, with three of the participants getting promotion to a higher academic level during the study. And finally, as indicated in Sections 3.5 and 1.1.3, the research participants were all female in order to contrast my experiences as a female academic with theirs.

Allison² is a young³ white⁴ academic who is a lecturer in a Humanities discipline. She is in possession of a Masters degree and a postgraduate professional degree that allows her to practice as a practitioner in her discipline. At the start of my data collection in August 2015, she had been in academia for three years after working as a professional for a few years. She is supervising two Masters students and a number of honours students (the number varies each year). She is also involved in preparing the department's honours students for a professional international competition that feeds into their qualification and their professional career. I selected Allison to be a participant in this research because:

- She has experience as both a professional and an academic, and hence could use that perspective to reflect on the structural forces in South African higher education.
- She is in a discipline where most of her colleagues are not keen on using educational technology, and yet she has sought out the assistance of our unit for training and support with educational technology.
- Her involvement in a range of student-related support activities and committees showed her keen interest in students. This could have an impact on the way she experienced structural constraints and how she exercised her agency to resist them.

Zara is an Indian academic who is in a science discipline. She too has worked as both a professional and an academic, and in August 2015 had over 12 years of experience in South African higher education. She was one of the research participants who applied for, and was promoted, during the course of this study. Her supervision experience extends from undergraduate to Masters students, and she has won institutional, national and international awards for her teaching and research. Zara is driven by a strong passion to change her students' mindset about their relation to the community and its rich cultural heritage. She also identifies herself as a mother striving to find a work-life balance – planning out and working towards her

² Pseudonyms

³ I refer to some of the female academics as 'young' based on the fact that they were less than 40 years old at the start of data collection in August 2015, and not necessarily based on the number of years they have spent in academia.

⁴ Race descriptions in this study are not accompanied by any other information about the participants, e.g. country of birth/origin. Instead I use black, white, Indian (of Indian descent, and may or may not be born in India) as these are the commonly-used race names in South Africa. I avoided adding any further information for ethical reasons as some of the participants wanted to remain anonymous, and adding further information would have made them easily identifiable.

career goals while fulfilling her maternal role in a patriarchal culture. She was selected as a participant for this study because:

- As with Allison, she had experience as both a professional and an academic and the perspective of structural forces that this engenders.
- She had experience of different higher education systems in South Africa and other countries, and therefore had an outsider's perspective of the South African system.
- She had requested assistance from our department for various educational technology innovations over the years, and was in a department where there was relatively regular use of the institutional learning management system (although not necessarily other technologies).

Khanyi is a black young academic in a social science discipline and in November 2015 had been an academic for about five years. During this time she had to balance postgraduate studies and the demands of external funding, and her extensive involvement in various student support structures. Khanyi considers herself as coming from a disadvantaged background (both socially and economically) and was the first person in her family to attend university. She has supervised honours students, and during the research she started supervising a Masters and two PhD candidates. I selected Khanyi to take part in this research because:

- She is in a department that has a low uptake of the institutional learning management system, and during informal conversations stated that she is not interested in using technology in her teaching. Her strong views *against* technology use would hopefully shed light on a different experience of the structural constraints in South African higher education.
- She identifies strongly with the majority of black students, and is involved in a range of student support services and committees. Her partiality to students and how they experience the higher education system would hopefully give her a different approach and perspective to her academic role.

Alexa is a young white academic who had taught in higher education for 12 years (as at October 2015). She is in a social sciences discipline, and she too has had to balance her postgraduate studies with a teaching and supervisory load. She changed disciplines about eight years prior to this study and has struggled to fit in to the new department. Alexa is passionate about transformation, as evidenced by the committees that she is involved with, her teaching and her

desire to engage and challenge her students to be uncomfortable and think differently about themselves and about the university. She also, just like Zara, attained promotion during the data collection phase of this research. Although she is also a mother, she has strong support from her partner in this parental role and seems to have managed to find a work-life balance and demarcate her personal and professional lives. I selected Alexa to be a research participant because:

- My professional encounters with her had shown that she was always willing to push the boundaries in her use of educational technology and try out new approaches that had not yet been used in the institution.
- She was critically reflective about her use of educational technology by seeking feedback from her students and colleagues.

Stella is a white academic in a pure science discipline and has been an academic for over 30 years. Starting out as a research assistant, she moved on to a quarter-time lecturer position and then a full-time employee. She is passionate about the community in which the university finds its home, and her work has a strong focus on empowering students in under-resourced high schools with science and mathematics skills. She is involved in supervision of honours students and Master's students, as well as co-supervising doctoral students. She also has an administrative/managerial load in the department. I selected Stella to take part in this research because:

- She had implemented a few innovative educational technology approaches in her courses which, although most of them were used elsewhere in the institution, were new to her department.
- The length of time she had been in the institution would hopefully give her a different perspective from newer academics on the structural constraints and systemic changes taking place in South African higher education.
- Her strong focus on empowering the community would hopefully mean she had a wider perspective in terms of the oppressive state of higher education in the country.

Emma has been employed in South African higher education in a Humanities discipline for over 20 years. Her professional career lasted just one year, before she came back to pursue an academic career. As a white woman, her passion for gender equality has driven not only her research trajectory, but also the committees that she is a part of. Emma also applied for and

was granted promotion during the data collection phase of this study. She has also had to balance her postgraduate studies with a heavy teaching load where she was teaching or tutoring every day of the school year. Her identity has shifted somewhat over the years from a strong teaching focus to a strong research focus, and she now sees herself as viewed very differently from what she was in the institution before this shift. I selected Emma to participate in this study because:

- She is in a department that has a mix of innovative users and non-users of our institutional learning management system. She will hopefully be aware of some of the barriers experienced by non-users and how she, and other innovative users in her department, have overcome these.
- Through the help of our support unit, she implemented an innovative educational technology approach that overhauled the structure and presentation of her course.

Claire is a white academic who, in August 2015, had been a lecturer in a social science discipline for 17 years. She has won institutional and national awards for teaching and research, and is also involved in institution-commissioned research, as well as directing a national research project in her field. These extra activities have unfortunately lessened the amount of time she is able to spend teaching first year students, and she has had to share the load with new colleagues in the last year, an unavoidable but regrettable situation brought on by the extension of her responsibilities and her career trajectory. I selected Claire to take part in this research because:

- She has not just innovated, but also published, on her teaching with technology activities on her own and with colleagues.
- Despite this success, she continues to seek out new ways to use technology for teaching while aligning her approach with current challenges in South African higher education.

Thandi is a young black woman who has been an academic in a social science discipline for the last 13 years. Her experience in South African higher education spans different kinds of institutions in the country, and she has been heavily involved in national higher education conversations, giving her a deeper understanding of the systemic changes taking place in universities. I selected Thandi to take part in this research because:

- Her experience in different kinds of universities and at the national level would hopefully give her a different perspective and experience of the structural constraints in higher education.
- She used the institutional learning management system using the same structure as most of her department, and did not venture much beyond that.

This section has discussed the critical ethnographic principles that guided the selection of research participants. These included selecting participants who are part of the social context under study, have been enculturated in its practices and have ideally experienced the structural forces in this context; are able to give insight on the research phenomenon under study; and are able to commit to the time required for data collection. As highlighted, I also selected female participants in order to challenge the perception that they lag behind in terms of technology use (see Section 1.1.3). The section also briefly introduces each of the eight research participants who kindly agreed to be part of this study. Their stories are told in Chapters 5 and 6.

The next section discusses the various data collection methods employed.

3.6 Data collection methods

As highlighted in Section 3.3, ethnography has three main steps: examining, understanding and describing the cultural context of research subjects from their point of view. The process of examining the research context involves the use of a range of data collection methods whose deployment should be underpinned by methodological principles in order to be considered ethnographic (Pole and Morrison, 2003). Ethnographic methodology emphasises the centrality of presence in the field, “studying *at first hand* what people do and say [through] ...fairly lengthy contact, ...participant observation in relevant settings, and/or through relatively open-ended interviews designed to understand people’s perspectives” and sometimes complemented by the study of different documents (Hammersley, 2006, p. 4). Furthermore, as the tools researchers use to “identify and analyze the obdurate character of the empirical world,” methods are only valuable based on their suitability to meet this requirement (Hammersley and Atkinson, 2007, p. 7). While these methods are cautionary indications of direction (Brewer, 2000), I have chosen my epistemological and ontological views, i.e., criticality and critical realism, as the primary guide in the way I utilise the methods. As such, I have been led to question the Western biases of critical ethnography (as highlighted in Section 3.4.3.1) because of

...a set of contingent and historically specific Euro-American assumptions... The implication is that method hopes to act as a set of short-circuits that link us in the best possible way with reality, and allow us to return more or less quickly from that reality to our place of study with findings that are reasonably secure, or at least for the time being. But this, most of all, is what we need to unlearn. Method... will often be slow and uncertain. A risky and troubling process, it will take time and effort to make realities and hold them steady for a moment against a background of flux and indeterminacy. (Law, 2004, p. 5)

We therefore need to be wary of Western principles and assumptions in the methods we select, particularly the assumption that the method will clear a path to the reality we seek to understand without any negative impact on the research participants. To this end this section presents the fieldwork procedures and methodological guidelines I followed in the data collection phase.

Each ethnographic method was selected in order to draw me closer to each participant's reality in light of the purpose of the research and the research problem (see Section 1.5). Firstly, the methods were used to explore the history and current context of higher education in South Africa and to gain insight into the subjective experiences of academics in this context. Hence, the data comprised of literature elaborating on the South African higher education context as well as the research participants' experiences of this context. This was done through a review of the literature, document analysis, observation of both the context and the participants and interviews. Secondly, educational technology choices, practices and challenges were explored through the use of online course observations, interviews and a focus group. Because of the reflexive nature of this research and my position as an insider researcher, the data collection process involved conflicting expectations and wrong assumptions (elaborated in Section 4.5), which I also embraced as part of the data.

3.6.1 Participant observation

Participant observation is the basic identifying element of ethnographic data collection, guiding both the initial exploration of the social context and the inductive examination of its structure, history and culture (Fetterman, 2010; Myers, 1997, 1999). Although there are differences in opinion about exactly which research activities constitute ethnographic fieldwork, (DeWalt and DeWalt, 2011; Hammersley, 2006; Myers, 1999, 2013), I understand it as involving immersion in the culture under study through observing research participants, participating in their social activities, asking questions and recording what is seen and heard (Fetterman, 2010; Hammersley and Atkinson, 2007; Myers, 1999; Van Maanen, 1988). Hence, the process combines immersion in the social context and conversation with research participants to give

the researcher an insider view and experience in the life-worlds of the research participants (Myers, 2013). But even though there is participation, it is important to note that the aim is still observation for research purposes – therefore the participation is driven by an agenda (Madison, 2012), in this instance the agenda being to understand educational technology practices in a South African higher education institution by exploring the socio-political context within which they take place. In this observation/participation dialectic, “participation changes the anthropologist and leads him to new observation, whereupon new observation changes how he participates. But this dialectical spiral is governed in its motion by the starting point, which is observation” (Rabinow, 1977, pp. 79–80).

Both participation and observation are necessary activities even for insider researchers like myself, and have to be negotiated with the research participants (Hammersley and Atkinson, 2007). This negotiation between the researcher and the researched involves developing trust and rapport (Lareau and Shultz, 1996). It also involves being aware as the researcher that I am the only research instrument during the participant observation process, and that my actions and words will unavoidably “shape[] the contours of the results” (Lareau and Shultz, 1996, p. 4). Failing to reflect on these issues during the participant observation phase can result in my perpetuating the oppressive nature of the method, and imposing my prejudiced perception of the world as true for my research participants, as highlighted in Section 3.4.3.3 – reflecting on the politics of the gaze.

While participation in the field should ideally be over a long period of time, for various reasons this may sometimes be undesirable or impossible (Fetterman, 2010; Hammersley and Atkinson, 2007). Research done in one’s own culture (Fetterman, 2010), like in this study, may negate the need for the initial period of enculturation and for the use of cultural interpreters. Furthermore, limits in terms of time or resources as with contract or postgraduate research may mean using a select number of ethnographic techniques in the study and spending a limited amount of time in the field (Fetterman, 2010). Unfortunately, the centrality of observation in this process has led both ethnographers and readers of ethnographies to judge the “degree of participation” as pointing to the quality and validity of observations, when in fact “critical reflection on the nature of their participation and its suitability to the particular research circumstances” would be a more suitable guide (Davies, 2008, p. 84). As such, because I am an insider researcher who is part of the research context, I emphasise reflexivity in this thesis (see Sections 3.4.3 and 4.5).

Besides the shorter time in which most ethnographies now take place, they are also focused on “a particular work locale” and its operation rather than living with the research participants and spending most of each day with them (Hammersley, 2006, p. 4). This is true of this research, where my study focuses on structural constraints and academics’ resistance to these constraints in the university, and particularly on their use of educational technology. Considering how geographically and socially dispersed social agents are, even if they work in the same place, my observation of them can only take place part-time (Hammersley, 2006). Although observing their lives outside of the university would give rich insight into the generative mechanisms that have led to the way they view, experience and resist structural constraints in the university, it would be extremely difficult and well beyond the scope of this project.

Considering the above limits in ethnographic practice, there are a number of issues I need to keep in mind in order to ensure the validity of the application of the methodology in my research. Firstly, I have to recognise that observed behaviour is a product of mechanisms both inside and outside the university context – most of which I may not be aware of “because [I] do not have observational data about ... who they are and what they do elsewhere” (Hammersley, 2006, p. 5). Therefore, I have to recognise that there is a wider institutional and personal history which also has an impact on the experiences and events I observe (Hammersley, 2006). Secondly, the short time spent in the field could blind me to the effects of my presence as the researcher. This could lead me to believe that what I have observed is what usually happens and fail to recognise the changing and sometimes cyclical patterns of social life (Hammersley, 2006). I have attempted to overcome these shortcomings by using other data collection methods, namely interviews and observing other artefacts including participant’s online courses, online profiles and a variety of documents (national, institutional, departmental and from their courses). This has been coupled with an 18-month data collection period (from August 2015 to February 2017) where data was collected at regular intervals.

As part of the participant observation process, I observed research participants’ lectures. I also explored their courses on the institutional LMS and recorded the resources and activities they had included, and the way they responded to student discussions on the online forum. The observation process also involved exploring their other written work, including teaching portfolios, their profile on the institutional website and publications that were publicly available (i.e., news articles).

In Section 4.5 I reflect on how fieldwork actually unfolded in practice, and particularly the unique challenges I encountered as an insider researcher.

3.6.2 Interviews

An interview in qualitative research takes different forms depending on the methodology that foregrounds it. Its general purpose is to “attempt[] to understand the world from the subjects’ points of view, to unfold the meaning of their experiences, to uncover their lived world prior to scientific explanation” (Kvale and Brinkmann, 2009, p. 1). Hence during the interview process there is a recognition of the “subjective reality of the experiences” of the research participants (Pole and Morrison, 2003, p. 5). This ties in with the critical realist principle of seeking to excavate the multiple subjective perspectives of reality in order to attempt to infer what the true nature of that reality could be (see Section 2.4).

Ethnographic interviews should ideally be preceded by participant observation as they serve to complement this process (Madison, 2012; Spradley, 1979; Whyte, 1981). Getting to know the social context and cultural practices through participant observation enriches the interview process because it uncovers lines of questioning that the researcher would not have even thought to ask which can potentially illuminate the research phenomenon (Madison, 2012; Whyte, 1981). Hence, greater familiarity with the research context through participant observation can inspire the research questions (Madison, 2012). It also gives insight into interesting contradictions and power dynamics that the researcher is able to explore further in the interview process. In this sense then, the data generated during formal and informal interviews as well as focus groups may either complement or challenge the data collected and analysed during participant observation (Carspecken, 1996).

Critical ethnographic interviewing is a “partnership and dialogue” where meaning, experience and knowledge are constructed during the interaction between interviewer and interviewee (Kvale and Brinkmann, 2009; Madison, 2012, p. 28). The data collected during this knowledge-construction process is highly personal and subjective, and hence “reflects deeper truths than the need for verifiable facts and information,” including hopes, disappointments, memories, and polemics (Madison, 2012, p. 28). Because of the highly personal nature of critical ethnographic interviews, the researcher needs to be cognisant of her own baggage that may distort the meanings intended by the research participants. This is why member checking, where the recorded data is checked by the research participants for accuracy, is a crucial step to ensure the reliability of the interview data (Carspecken, 1996). The researcher should also

be reflexive about the answers that the research participants give to her questions because, together with other factors, “*what* is said is invariably contingent upon *who* it is being said to” (Pack, 2011, p. 62).

Interviewing research participants requires the researcher to have the courage to be deeply vulnerable, and be genuinely curious and sincerely interested in what the participant has chosen to share with her (Madison, 2012). The researcher’s vulnerability surfaces in a number of instances. These include, but are not limited to, asking questions which turn out to be more sensitive than originally anticipated, and the researcher needs to learn to graciously retreat (Rubin and Rubin, 2012) or diffuse the resultant emotionally-charged situation. It also includes discovering multiple truths about the same event from different people and learning to rather work with these sometimes conflicting perceptions, while acknowledging the researcher’s biases and lenses (Rubin and Rubin, 2012). Furthermore, allowing the research participants to drive the direction of the interview can be either unsettling or exciting, but allows the participants to be partners in the research process (Rubin and Rubin, 2012). Instances like the above led to frustrations and struggles on my part as the researcher because I had to put the needs of the research participants before mine and ensure that they were at ease – even when I was not (see Section 4.5 where I reflect on these struggles).

As a critical realist, the interview is also used as a space to “rehears[e] provisional analyses” (Smith and Elger, 2014, p. 130), to get feedback from the research participants as to the efficacy of the generative mechanisms that one has inferred. In fact, as highlighted in Section 3.4, the participants themselves during the interviews may initiate the exploration of particular generative mechanisms that they point to as having causal powers for the way they have experienced the research phenomenon.

In this study I had on average three in-depth interviews with each of the eight research participants. Most of them were carried out in their offices. However, on three occasions the research participants specifically requested for a different venue, hence one interview took place in my office, another in a coffee shop and yet another in the research participant’s home over lunch. The first interview was more structured and was seeking to gain insight into the participants’ experiences of the constraints of higher education and how they viewed their role in this context. The guiding questions used for this interview (although they varied slightly depending on the context of the research participants) are in Appendix B. Subsequent interviews were less structured and mostly focused on exploring their educational technology

choices and challenges, although the outbreak of the nationwide student protests in October 2015, April 2016 and September/October 2016 necessitated an exploration of these changes in the context as well (see Section 1.3). The interviews guided my initial observations of what they were doing with educational technology, and with time the observations were used to find gaps in my understanding of their experiences and explore these in the interviews.

3.6.3 Fieldnotes

Fieldnotes are the written record of what was seen and heard in the field during observations and interviews (DeWalt and DeWalt, 2011; Fetterman, 2010; Hammersley and Atkinson, 2007). Although most formal interviews are now usually recorded on an audio or video device, informal or impromptu interviews and conversations often result in the need for a written report as these are not usually digitally recorded (DeWalt and DeWalt, 2011; Hammersley and Atkinson, 2007). Although informal interviews can be considered part of the participant observation method, the researcher doesn't shelve observation during formal interviews, but continually reflects on the surroundings and the participants' responses. In effect, then, the interview process is another context within which participant observation takes place, and these observations and reflections on the context and conduct of the interview form part of the fieldnotes.

Fieldnotes can take several forms during an ethnographic study, from detailed notes on "behaviors, activities, and segments of dialogue between actors" (Cook, 2005, p. 132), to the reflections of the researcher on the observations and interviews. And although it is a fundamental process for ethnographic study, the recording of fieldnotes is a tacit skill that is often difficult for new researchers to figure out (Hammersley and Atkinson, 2007). They have to learn to be selective about what they record, and to use logging and organising methods that will ensure the reliability of their results (DeWalt and DeWalt, 2011; Hammersley and Atkinson, 2007). These decisions about when, where and how the fieldnotes will be recorded need to be made early in the research and done consistently.

In selecting what to record, Bernard (2006) recommends three types of fieldnotes: methodological, descriptive and analytic notes. Methodological notes are a record of how the methods have actually been applied in the field (Bernard, 2006). This can include new or different ways of applying the method, contradictions or struggles with using the method in that particular context, and the development of the researcher as a data collection instrument (Bernard, 2006; DeWalt and DeWalt, 2011). Descriptive notes are the thick descriptions of

what is seen and heard during observations and interviews (Bernard, 2006; Fetterman, 2010). The detailed notes “should include a description of the physical context, the people involved, as much of their behavior and nonverbal communication as possible, and in words that are as close as possible to the words used by the participants” (DeWalt and DeWalt, 2011, p. 165). Analytic notes include initial analysis or inference into the culture that is being studied (Bernard, 2006; DeWalt and DeWalt, 2011). These notes may include reflections, which are an intermediate analysis stage, summarising the evidence for a particular line of argument, and identifying gaps for further analysis (DeWalt and DeWalt, 2011; Hammersley and Atkinson, 2007).

In this study my fieldnotes were recorded in an A4 hardcover notebook or typed out and filed on my computer. Although I did not explicitly separate my methodological and analytical notes, I was keen throughout the research process to reflect on the potentially oppressive nature of the methods I selected as well as their efficacy in helping me excavate generative mechanisms. Furthermore, I used them to reflect on the data I had collected and how it could potentially change the direction of what I wanted to explore. Reading over these notes now, I realise that resistance is a theme that I grasped quite early on in the research, but somehow I did not realise its full import until much later during the data analysis phase.

I also kept detailed notes about the observations and interviews I had with participants. Because the formal interviews were audio recorded, my fieldnotes focused more on reflecting on the interview space, the emotions that pervaded this space, my perceptions of the participants’ responses and exploring why I perceived them in that way – thus reflecting on my own reflections. I also reflected on how this related back to my research purpose, as I was still going through various versions of the actual research questions at the time. I also reflected on contradictions between my perceptions and those of the research participants’ of the structural forces that constrained their use of educational technology.

My fieldnotes also necessarily focused on describing my conceptions of what I felt were developing themes, particularly in relation to power₁ (transformative agency) and power₂ (oppressive power) relations (see Sections 2.4.2 and 2.7.4). I was particularly interested in uncovering constraints as they emerged, and how these were resisted. Generative mechanisms and their causal powers were also initially explored in the fieldnotes, as well as the researcher’s developing understanding of the culture and its politics, before being presented back to the research participants for clarification and confirmation.

3.6.4 Document analysis

Documents (both online and offline) are a source of data that is developed with no intervention from the researcher and can potentially expose subjectivities and discourses that may bring to light “underlying beliefs, opinions, and attitudes about a phenomenon” (Bowen, 2009; Thorne, 2016, p. 91). Although they represent written records of events, they should be used cautiously, recognising that they may not be “precise, accurate, or complete,” which can possibly introduce elements of ‘fiction’ (Bowen, 2009, p. 33; Wolff, 2004). As “the preferred form for the representation of [institutional] reality” (Wolff, 2004, p. 284), they reflect an institution’s ideas and policies, thereby actively constructing and reproducing ‘organisational realities’ (Atkinson and Coffey, 2004; Bowen, 2009).

Despite these reservations, documents are a valuable source of data and are often used to complement other research methods (Bowen, 2009). This is particularly pertinent for ethnographic studies where there is now a gradual shift from studying almost exclusively “oral settings... [and] oral cultures” to settings that have been “documented by indigenous social actors” (Atkinson and Coffey, 2004, p. 78).

In selecting which documents to use, the researcher should be cognisant of the document’s intended audience and original purpose, the context within which it was developed, as well as what kind of data is fundamental for excavating the research phenomenon (Bell and Waters, 2014; Bowen, 2009). The researcher should be careful not to select only those documents which support her preconceived ideas (Bell and Waters, 2014).

Bowen (2009) highlights that the purpose of the document analysis in meeting the research goals should be made explicit. He divides these into five distinct functions: 1) to provide historical and contextual information; 2) to complement other research methods by guiding further research questions and observations; 3) to supplement the data collected using other research methods; 4) historical drafts of documents can help track change and development; and 5) to verify the results of other research methods (Bowen, 2009, pp. 29–31).

Table 3-1 below provides an outline of the documents used in this research as well as the purpose for employing them.

Table 3-1 Documents analysed and purpose of the analysis

Developed by	Document type	Purpose
Research participants	Online course, including: <ul style="list-style-type: none"> • Course documentation (i.e., course outline) • Course resources (i.e., files for download, websites, videos, audio, etc.) • Course activities (i.e., discussion forums, assignments, quizzes, questionnaires, etc.) 	<ul style="list-style-type: none"> • complement other methods (guide further questioning and observation) • supplement other methods (improve the depth of data from other methods) • verify results from other methods (confirm the statements made by the participants)
Research participants	Personal documents including: <ul style="list-style-type: none"> • teaching portfolio • other teaching-related documentation (e.g., assignments for teaching qualification, motivations for promotion and tenure, etc.) • email communication with me 	<ul style="list-style-type: none"> • complement other methods (guide further questioning and observation) • supplement other methods (improve the depth of data from other methods) • verify the results from other methods (confirm the statements made by the participants)
Research participants	Online profiles on: <ul style="list-style-type: none"> • institutional website • LinkedIn • Academia.edu • ResearchGate • other sites that the research participants have written for (e.g. media sites) 	<ul style="list-style-type: none"> • complement other methods (guide further questioning and observation) • supplement other methods (improve the depth of data from other methods) • provide contextual information about the extent of their online activities
Research participants	Published works including: <ul style="list-style-type: none"> • journal articles • books (book chapters) • conference presentations • news articles 	<ul style="list-style-type: none"> • complement other methods (guide further questioning and observation) • supplement other methods (improve the depth of data from other methods)
Institutional documents	A range of institutional documents including: <ul style="list-style-type: none"> • teaching and learning policies • research-related policies 	<ul style="list-style-type: none"> • provide historical and contextual information about the research site • complement other methods (guide further

	<ul style="list-style-type: none"> • documentation about tenure and promotion • documentation developed around transformation initiatives • institutional publications around teaching, learning and research • institutional email communication 	questioning and observation) <ul style="list-style-type: none"> • supplement other methods (improve the depth of data from other methods)
Public documents from government or media	News articles: <ul style="list-style-type: none"> • those focusing specifically on the student protests Communication from government and its representatives: <ul style="list-style-type: none"> • student protests • transformation of higher education 	<ul style="list-style-type: none"> • provide historical and contextual information about the research site • complement other methods (guide further questioning and observation)

The following section discusses how the data was analysed.

3.7 Data analysis

Data collected during an ethnographic study is often unstructured and substantial in size (Hammersley and Atkinson, 2007), making it crucial to use effective meaning-making processes as the researcher seeks to understand the culture under study. Unfortunately, data analysis has been labelled as the most mysterious of the mystical activities an ethnographer has to complete, with little guidance given besides waiting for the ‘creative imagination’ and the ‘theoretical muse’ to kick in (DeWalt and DeWalt, 2011; Hammersley and Atkinson, 2007, p. 162).

Ethnographic data analysis should ideally be seen as an iterative process that begins at the commencement of the research and ends once the writing of the ethnography is complete (DeWalt and DeWalt, 2011; Fetterman, 2010; Hammersley and Atkinson, 2007). It comprises different levels of analysis at different stages of the research which include informal analysis like the mental “ideas and hunches” of the ethnographer, and formal analytic notes which are eventually linked back to theoretical constructs (Hammersley and Atkinson, 2007, p. 158). This iterative process makes provision for the analysed data to feed back into further collection of data (Carspecken, 1996; Hammersley and Atkinson, 2007). The iterative analysis activities allow the research to become progressively funnel focused and even transform over time as the true nature of the research phenomenon emerges (Hammersley and Atkinson, 2007).

In critical ethnography, data analysis goes beyond just managing and manipulating the collected data, but involves using the data as a thinking material in order to make meaning of the culture under study (Carspecken, 1996; Hammersley and Atkinson, 2007). This thinking process involves reflecting on the data from several angles, as detailed in Sections 3.4.3 and

4.5. Observations, interviews and the writing of fieldnotes were all opportunities for reflection and were often prompted by contradictions I encountered in the field. Furthermore, immersing myself in the data over and over again helped me find patterns and build connections to the social context (Hammersley and Atkinson, 2007; Myers, 2013). This helped me go beyond the subjective interpretations of the participants and link these to the structural context (Harvey, 1990; Porter, 2002; Rees and Gatenby, 2014) while recognising that each research participant's experience and "selfhood is socially mediated but not socially determined" (Cruickshank, 2003, p. 1).

There are various critical realist data analysis procedures described in the literature, and these are outlined in Table 3-2 below. These processes are all aimed at causal explanation rather than just understanding and describing the research phenomenon (Dobson, 2012).

Table 3-2 Critical realist data analysis approaches

Author and Subject area of research	Critical-realist informed data analysis process
Bhaskar (2016) (explained in Price, 2016a) Foundational critical realist text	1) Resolution (using data collection to resolve the research problem into its component parts) 2) Redescription (redescribing the component parts using theory) 3) Retrodiction/Retroduction (finding the causal explanation for the components of the research phenomenon) 4) Elimination (eliminate theoretical alternatives with less causal efficacy to explain the phenomenon of interest) 5) Identification (testing the theory to establish it in the scientific community) 6) Correction (suggesting improvements to the tested theory)
Danermark et al. (2002) Foundational critical realist text	1) Description (of the data using everyday concepts and the interpretations of the research participants) 2) Analytical resolution (identifying the components that will be studied in the research)

	<p>3) Abduction/theoretical redescription</p> <p>4) Retroduction (attempting to draw out the causal mechanisms responsible for the existence of observable phenomenon)</p> <p>5) Comparison between different theories and abstractions</p> <p>6) Concretisation and contextualisation (examining how these causal mechanisms play out in real life)</p>
<p>Wynn & Williams (2012)</p> <p>Information Systems</p>	<p>1) Explication of events (identifying which events actually occurred)</p> <p>2) Explication of structure and context (redescribe structure and relationships from a theoretical perspective)</p> <p>3) Retroduction (identify mechanisms and their powers that may have had a causal effect on explicated events)</p> <p>4) Empirical corroboration (testing the causal efficacy of mechanisms in comparison to other alternatives)</p> <p>5) Triangulation and multimethods (multiple methods support causal analysis)</p>
<p>Dobson (2012)</p> <p>Information Systems</p>	<p>1) Abduction (new interpretation based on a conceptual framework or theory)</p> <p>2) Retroduction (transfactual reasoning that seeks to infer the reality that has made the phenomenon of interest possible)</p>
<p>Mingers, Mutch & Willcocks (2013)</p> <p>Information Systems</p>	<p>Combine abduction and retroduction as one process of inferring possible generative mechanisms and their causal powers</p>
<p>Fletcher (2017)</p> <p>Agricultural policy</p>	<p>1) Collect both extensive (trends and statistical data) and in-depth data</p> <p>2) Identify demi-regularities (these are semi-regular patterns of generative mechanism behaviour)</p> <p>3) Abduction (theoretical redescription)</p> <p>4) Retroduction (inferring the mechanisms that have causal efficacy on observed data)</p>
<p>Bygstad and Munkvold (2011)</p> <p>Information Systems</p>	<p>1) Description of events</p> <p>2) Identification of key components</p> <p>3) Theoretical re-description (abduction)</p> <p>4) Retroduction (identification of candidate mechanisms)</p> <p>5) Analysis of selected mechanisms and outcomes</p>

	6. Validation of explanatory power
Crinson (2001) Medical Health Sciences	1) Transcription (of audio/video data) 2) Indexing (coding) 3) Interpretation (conceptual themes are abstracted) 4) Theorisation (application of conceptual themes to data) 5) Retroduction (identifying necessary causal relationships and mechanisms)

Although most of the authors use different terminology, the data analysis process in critical realism seems to follow a similar trajectory. The researcher has to first of all describe the events taking place in the domain of the *empirical* and *actual* based on triangulation of data (see Section 2.4.1). This process is also linked to breaking down the complex data into component parts for analytical purposes (e.g. to extract themes). This first phase (which comprises steps one and two in most of the approaches in Table 3-2) recognises the existence of a stratified ontology and is only interested in describing what is taking place in the research context before moving on to a theoretical redescription (abduction) of the research phenomenon. With abduction, the themes are redescribed using a theoretical or conceptual framework in order to move beyond an everyday understanding of the data. Retroduction then allows the researcher to infer the possible generative mechanisms that have led to observable events by helping the researcher respond to the transcendental question: What conditions could have existed to bring about the observed events (Bhaskar, 2016; Danermark et al., 2002; Mingers, 2014)? As indicated in Table 3-2 above, some literature recommends testing the postulated generative mechanisms or theories using empirical data. Abduction (theoretical redescription) and retroduction (transfactual thinking) often take place simultaneously, and are separated here for purposes of clarifying their meaning (Bhaskar, 2016).

As such, critical realist data analysis brings to the fore two inference processes: abduction and retroduction, which allow for a conceptual contextualisation of the data as well as an excavation of generative mechanisms and their causal powers, respectively (Danermark et al., 2002; Wynn Jr and Williams, 2012). Abduction is the process of “redescription or recontextualisation” of the data (Bhaskar, 2016, p. 79) through the use of “conceptual frameworks and theories about structures and relations” (Danermark et al., 2002, p. 110). In effect, the researcher is attempting to find a new and different description and interpretation of the research phenomenon by

“plac[ing] them in new contexts of ideas”, and possibly comparing and integrating different theoretical interpretations (Danermark et al., 2002, p. 110). Critical ethnography adds a crucial dialectical step to this abductive process, where our “ideas are used to make sense of data, and data are used to change our ideas” (Hammersley and Atkinson, 2007, p. 159).

Retroduction takes this recontextualisation a step further by linking it back to the ontological realm. Retroduction attempts to answer the question: What prerequisite conditions (or mechanisms) have possibly generated the phenomenon under study (Bhaskar, 2016; Danermark et al., 2002; Mingers, 2014)? In effect then, the researcher is trying to work out “what would, if it were real, bring about, produce, cause or explain a phenomenon” (Bhaskar, 2016, p. 3). The source of generative mechanisms could be literature, theories, the researcher’s experiences, or they may even be suggested by the research participants during interviews. As a result, a number of competing or sometimes conflicting generative mechanisms may be inferred during the retroductive process (Mingers, 2014). This necessitates a process of either eliminating or supporting possible mechanisms (Mingers, 2014). Price suggests that a retroductive argument moves from an observation to various theories, and then selects the theory that provides “the simplest and most likely explanation” of the phenomenon (Price, 2016a, p. 110). She also emphasises the importance of recognising the retroductive explanations of research participants, a process which empowers them by balancing out the power-differential between the researcher and the research participants (Price, 2016a).

Abduction and retroduction are similar both in process and result, with even Bhaskar alluding to the fact that in practice “these two often shade into each other” (Bhaskar, 2016, p. 79). As a result, some IS researchers have neglected abduction altogether and rather focus only on retroduction (Mingers, 2014; Tsang, 2014; Wynn Jr and Williams, 2012). In this study I have chosen to view these two concepts as two sides of the same coin. While abduction involves using concepts and theories to explain what is happening in the research context, retroduction digs a little deeper to understand why this is so. Hence, as abduction reframes the research data, retroduction uses that same frame (theoretical or conceptual framework) to be explicit about the generative mechanisms that have causal efficacy on the data.

As such, I have to maintain a delicate balance between abduction, retroduction and critical ethnographic meaning-making. And essentially this also required a somewhat unconventional way of structuring the thesis chapters; I did not have a dedicated chapter for literature. The impetus for drawing out theoretical constructs, explanations and retroductive arguments,

should always be the desire to understand the research participants' culture from their point of view while seeking to emancipate them from oppressive powers. My insider status, the value orientations that this engenders, as well as the deeply personal and intimate nature of a critical ethnographic study made this balance even more crucial for this thesis. My data analysis process therefore aligned with Clegg's (2008) who elaborated it thus:

The data were analysed through a process of in-depth reading and treating each [research participant] as unique. The themes that emerged are not, therefore common categories so much as areas of concern and the spaces in which individual projects appeared to be being framed. (p. 333)

Once these individualised themes were drawn, they were retroducted in order to uncover the generative mechanisms in the structures that have led to their existence. Section 4.6 elaborates on how the data analysis process unfolded in practice, while in Chapter 5 the research participants' stories are told separately to demonstrate their uniqueness and in order to attempt to reflect the true nature of their experience of the research phenomenon.

3.8 Ethics and ethical dilemmas

There are a number of basic ethical considerations expected of any qualitative research involving human subjects, and which I have taken into consideration during this study. At the start of the research I was quite naïve about the extent of the ethical dilemmas that would present themselves during the research process. I reflect on these ethical dilemmas in this section in order to uncover the "unintended and overlooked consequences" that could contribute to a "critically problematic" research process (Ball, 2007, p. 113). Below I problematise the ethical clearance procedure and outline how some of these issues can be mitigated in an ethically-aware approach to critical ethnographic research.

3.8.1 Ethical clearance

Prior to collecting data involving human subjects, my institutional higher degrees guide posits that there *has* to be ethical clearance obtained from the institutional ethics committee to ensure a high ethical standard and responsible research practices. Appendix C has the ethical clearance documentation from the Ethics committee, Human Resources division (because the research participants were academic staff), Director of Student Affairs (for data collected from students) and Registrar's division (required for research involving both staff and students). In Appendix D there are participant information and consent form documents.

Ethical research is the goal of all critical research (Stahl, 2008). As elaborated by Madison (2012), critical ethnography dictates that the researcher's "primary responsibility is to those studied... [which] *supersedes* the goal of knowledge, completion of the project, and the obligation to funders or sponsors. If ever there is a conflict, the people studied *must come first*" (p. 129, italics in original). The researcher and the research process are considered risks which pose a threat to the institution's legal obligation to protect human subjects (Sieber and Tolich, 2013). Hence universities and other research organisations stringently regulate ethical clearance in order to prevent any damage to their reputation or legal costs from lawsuits (Macfarlane, 2009). Ethical clearance is therefore a first and necessary step towards attempting to minimise the oppressive nature of ethnographic research (see Section 3.4.3.1). It forces the researcher to engage with issues of participants' voice, needs, representation and positionality.

Once ethics approval has been obtained, it does not guarantee that the actual research will be conducted ethically (Sieber and Tolich, 2013). Even when the researcher is working from a point of integrity, the application process only encompasses a limited estimate of the kinds of ethical issues that may be encountered in the field, or what is known as *procedural ethics* (Guillemin and Gillam, 2004). What the researcher finds on the ground, the ethical issues and dilemmas that the researcher meets during the research, are termed *ethics in practice* (Guillemin and Gillam, 2004). Procedural ethics and ethics in practice are more often than not quite far removed from each other, with procedural ethics failing to address the pertinent ethical issues in practice and thereby failing to provide a reference point or guidance to the researcher in the everyday running of the research. The researcher often has to react on the spot to ethical dilemmas and make decisions that may affect the collection of data. As such, reflexivity and a dialogic negotiation process with the research participants is indispensable.

Reflexivity (see Sections 2.5 and 3.4.3 for its ontological and methodological foundations) can ensure not just a rigorous qualitative research study where the researcher's positionality, philosophy, methodology and method are scrutinised, but also an ethically-aware research study (Guillemin and Gillam, 2004). In this instance, our reflexivity is foregrounded by both our integrity and our values as critical researchers – the need to emancipate research participants from an oppressive system, and consequently the desire to ensure that our data collection methods do not exacerbate the oppression (see Section 3.4.3.1). Furthermore, our reflexivity-for-ethics is driven by the researcher's desire to give precedence to the research participants' needs – which will override our own needs if push comes to shove – and our desire to ensure that we are not exploiting them through the research process but that they are

benefiting in some definable way. Additionally, reflexivity-for-ethics gives the critical researcher an increasing awareness of “ethical questions and political considerations” (Davies, 2008, p. 53).

3.8.2 Informed consent

Informed consent is an ethical requirement for research studies involving humans, where each potential participant has “the right ...to give consent to participat[e] once they have been informed about the project and believe that they understand the project” (Smith, 2008, p. 131). This involves having conversations with individual participants where the potential risks and benefits of taking part in the study are elaborated, as well as the potential effects of publication of the results, anonymity, confidentiality and how the collected data will be secured by the researcher (Madison, 2012). The researcher is therefore tasked with clearly informing and helping the potential participant to understand the research. This, unfortunately, is not an unambiguous process. The researcher has to communicate the research such that it is ‘meaningful’ to the participants (Davies, 2008). In an ethnographic study where the research design unfolds during the earlier stages of the actual research, it may be difficult for the researcher to clearly define what the research is all about (Davies, 2008), and hence there is room to question how informed the participants were at the time they agreed to participate in the research. To mitigate this issue, the researcher will have to consider renegotiating consent with participants at a later stage in the research (Davies, 2008). This consent can either be oral or written and should ideally occur “intermittently throughout the study at key points of vulnerability or when gathering threatening or delicate information” (Madison, 2012, p. 129). Furthermore, the research purposes need to be made explicit – and reiterated often – to the research participants. As elaborated by Webster, Lewis and Brown (2014), the participants may have “their own agenda and goals for taking part in research” (p. 85) and it is therefore vital to make their contribution to the research goals explicit to avoid misconceptions and disappointments.

3.8.3 Confidentiality and anonymity

In terms of confidentiality and anonymity in qualitative research, the ground is rather slippery. Because of the highly descriptive and contextual nature of the ethnography, it is easier to promise anonymity than to deliver, making it possible to identify the context of the research and consequently the research participants (Bosk and De Vries, 2004; Librett and Perrone,

2010). Furthermore, there have been court cases where the legal protection of participant anonymity has been superseded by the requirements of the law (Small, Maher, & Kerr, 2014). Confidentiality is often based on the researcher's integrity, a quality that they need in order to gain the trust of the research participants (Librett and Perrone, 2010). However, Perrone describes random ethics committee audits where they requested her signed consent forms, research data (audio recordings and email correspondence) as well as, "pseudonyms the participants had chosen to their biographical information", thereby effectively breaking the researcher's promise of confidentiality (Librett and Perrone, 2010, p. 737).

In this study I have selected to use pseudonyms. While some of the research participants gave consent to have their real names used, others regularly sought confirmation that confidentiality would be maintained. As such, for purposes of uniformity, all the research participants have been given pseudonyms in this research study.

3.9 Summary

The purpose of this chapter was to map out the methodological considerations of this thesis. As such, I highlighted the foregrounding critical ethnographic principles (Section 3.3), and how critical realism can be a possible underlabourer for this methodology (Section 3.4). The two complement each other in their understanding of power, value judgements and reflexivity. Although the reflexivity theme is elaborated on in this chapter, it is carried forward to Chapter 4 where I reflect on how the methodology played out in practice, thereby enabling the emergence of the research problem.

This chapter also discusses the selection of research participants and how issues of sample size, contextuality and personal experience as a female academic have been taken into consideration during this process (Section 3.5). The data collection methods selected for this study have been guided by critical ethnographic principles and were selected based on their power to illuminate the socio-political context and culture of educational technology use embedded in this context (Section 3.6). The data analysis methods described in this chapter draw on critical realist principles of abduction and retroduction, and an attempt was made to balance these with critical ethnographic meaning-making (Section 3.7). Ethical issues that I had to take into consideration are foregrounded by the need to be reflexive and ethically aware throughout the research process (Section 3.8), guided by the research philosophy.

The next chapter reflects on the process of problem discovery and how the methods used in this study played out in practice. It highlights how the process of examining, understanding and then describing the social and cultural context of my research participants is a difficult and contentious one – a work that I have often done “in anguish” (Josselson, 1996, p. 70).

Chapter 4

How did the research problem emerge? (Problem Discovery)

“We ask for revelations from others, but we reveal little or nothing of ourselves; we make others vulnerable, but we ourselves remain invulnerable” (Behar, 2014, p. 273)

4.1 Pre-text

In the last two chapters I elaborated on the theoretical and methodological principles I followed in order to show how a critical realist ontology has the potential to underlabour a critical ethnographic epistemology. I showed how ontology is given pre-eminence while methodology helps us move closer to this intransitive reality. I also foregrounded self-knowledge and reflexivity as a fundamental tenet for the development of critical realism, an ethically-aware approach to critical ethnography, and hence my approach in this thesis.

In this chapter I begin to explicate the practical work done in the research by reflecting on my application of the critical ethnographic methodology and the conceptual development of my understanding of the social context and the research problem. I am seeking to demonstrate that, despite my positionality as an insider researcher, the selected methodology was suitable for meeting my research goals as set out in Section 1.5.1. These include uncovering the oppressive powers at play in the social context, the culture of resistance that has developed as a result and how these impact the educational technology practices of academic staff.

4.2 Introduction: Beginning to understand the research phenomenon

As highlighted in Section 1.1, educational technology has failed to transform higher education (Laurillard, 2008), and it seems that educational technologists are partly to blame in their failure to understand what academics are doing with educational technology and consequently the constraints they are experiencing. As a result, the support they offer academics falls short and doesn't equip academics with the tools and knowledge they need to overcome the structural constraints that hinder educational technology integration. In some cases, as highlighted in Section 1.1, educational technologists have labelled academics as barriers to educational technology integration. In an effort to move beyond this myopic and potentially marginalising

view displayed by educational technologists in general, I attempted to understand the research participants' experiences with educational technology as embedded in their socio-political context, and the constraints and resistance engendered by this association. I realised though that my understanding of these experiences would be jaded by my assumptions, values and beliefs, unless I could figure out a way to go beyond my accepted way of being and identify with their struggles and concerns in the South African higher education landscape (see Sections 3.4.3.2 and 3.4.3.3). Doing this would also mean that at some level I have found ways to be more open and more emancipated because of doing this research.

This chapter therefore reflects on the emergence of the research problem through the use of literature, reflexivity and data analysis. Emergence of the research problem in critical realist research has not been made explicit in the literature, mainly because of the ontological focus of most critical realist writings (a problem highlighted in Section 2.6.3). Hence, although critical ethnography is used to strengthen the cautious critical realist epistemology (see Sections 2.6.3 and 3.4), critical realist considerations cannot be totally neglected in the problem discovery phase. And since the nature of a research problem in critical realism is causal explanation (Dobson, 2012) and the aim is emancipation (Bhaskar, 2016), the emergence of the research problem was framed around these two concepts. This process of topic discovery was aided by reflecting on personal experiences and literature (see Sections 4.3 and 4.4), reflections on the application of ethnographic research methods (see Section 4.5) and the data analysis process (see Section 4.6). Besides fulfilling the ontological and methodological requirements of this research, Davies (2008) contends that “tracing the path of the ethnographer validates the theoretical conclusions” of the thesis (p. 239). As such, this chapter is intended to meet the requirements of validity. I also reflect on key themes for doing fieldwork as an insider and how to deal with making sense of the data. Hence I am contributing a view on doing critical ethnography by offering an explanation of how it plays out in the context of insider research.

4.3 Personal response to structural constraints

In this section, I attempt to relate my personal experience towards topic discovery. In Section 1.1.3 I briefly alluded to how my personal experiences as a female academic, and my work with both male and female academics, had prompted me to select female research participants. I was interested in exploring their experiences and perspectives of the structural constraints in South African higher education in comparison to my own, and how these could have impacted their educational technology practices – particularly because women are considered

marginalised in higher education and lagging behind their male counterparts in terms of technology use (see Section 1.1.3). The concepts developed below highlight how a structural force (pressure to embark on a PhD) and my agency (the different resistance strategies I employed) affected me personally as an academic. I discuss this to demonstrate how my self-understandings and perceptions had an impact on my understanding of my research participants' experiences.

4.3.1 Structural force: Pressure to do the PhD

Embarking on the doctoral journey was not an easy decision for me, mainly because of the deeply traumatic experiences I had gone through in previous attempts at postgraduate study, as well as the emotional contradictions resulting from my waning teacher identity. The setbacks and failures (which I will not recount here to protect the identity of the parties involved) which I had experienced in my previous postgraduate work had convinced me that I could not research, could not write, and would definitely never pursue a doctoral degree. I felt the system was unfair in favouring those who wrote well and seemed to enjoy the research process. Khanyi, one of my research participants, was also frustrated by how the South African higher education system seemed to favour those who were already fluent in its culture, while the majority of students struggled to fit in.

Additionally, the teaching identity I had developed through practice (teaching in higher education for over eight years) and study (completing a postgraduate diploma in higher education) was now not good enough, even though I felt that the institution communicated a different message. Essentially, I felt that my cultural capital, which had been centred around my role as a teacher (a role that excited and invigorated me) was slipping away, and with it the power to exercise my agency in helping the students I had taught⁵ and the academics I now supported in using educational technology.

Following Bhaskar's trajectory, I explored why there was a struggle within me between this identity and what was now expected of me, in order to find a way to yield to this demand without necessarily going against the beliefs I had about my academic role – hence, finding a way to conform under my own terms. I interrogated my beliefs about teaching and my role,

⁵ Extended Studies students who are from economically disadvantaged backgrounds and under-resourced schools, and often struggle to adjust to the dominant culture of South African higher education – particularly in historically white institutions like the site for this research study.

and where these beliefs had originated. I also questioned institutional structures that had given me the idea that teaching was important. At the time, I did not realise the import of this experience in helping me understand myself as well as the context, and how this would later shape my understanding of the contradictions encountered by the research participants in their experiences. This self-understanding helped me to relate my struggles and frustrations with the structural force (pressure to pursue a PhD in this instance) to the feelings and struggles possibly experienced by the research participants as they encountered various oppressive forces in their academic roles.

The institutional pressures to pursue a doctorate, and the intense personal struggle this engendered, brought to the fore several issues which later contributed to framing my understanding of the research data. The first issue that emerged was that my head of department at the time highlighted a sentiment echoed by Kempcke (2002, p. 529), that in order for lecturers to take our suggestions and innovations seriously, we need to “be seen as equals by faculty – as leaders in higher education, as scholars skilled in teaching, and as vital participants in the governance of their institutions.” Hence, a PhD was a big step in raising my value and the significance of my work in the eyes of the academics we support. At the risk of generalising, my experience had pointed to the fact that it was easier for some academics to view my role as that of a ‘technical’ expert who could help them resolve challenges with the technology they were using, and not an ‘educational’ expert who could potentially help them integrate technology into their teaching in pedagogically sound ways.

Despite issues around high attrition rates, low scholarly quality and lack of supervision expertise to match the growing numbers of postgraduate students in South Africa (Bitzer, 2011; Herman, 2011; Motshoane and McKenna, 2014), the demand for academics to pursue a doctoral degree has not lessened. This has mainly been driven by the need to produce more research for funding purposes, an issue that emerged in my reflections, and is discussed in the next subsection.

4.3.2 Institutional values around teaching versus research

The second issue that emerged from my reflections around my waning teacher identity and the unavoidable demand to pursue a PhD, centred around what I will term institutionalised hypocrisy. This is how the university had (maybe not intentionally) given me the impression over the years that teaching is important, but when push came to shove, subsidy-attracting published research and a doctoral degree seemed to carry the greater weight. What the

university espoused and even promoted (i.e. through distinguished recognitions like the teaching awards) did not seem to permeate to all relevant structures (e.g. academic promotions). This institutional hypocrisy is not unique to the institution where this research took place, however. Cummings and Shin (2014) highlight that well-established higher-education systems (Japan, Germany and the USA) tend to move towards finding “a balance between teaching and research” while emerging (or newly emerged) higher education systems (Brazil, Mexico, UK and Australia) lean towards a greater emphasis on research (p. 3). They cite global rankings and the knowledge society as the main catalysts for this strong research focus, even though global rankings focus on research and fail to “provide guidance on the quality of teaching” (Cummings and Shin, 2014; Marginson and van der Wende, 2007, p. 306). In South Africa, additionally, issues around funding of higher education, career trajectory, and meeting the social and economic needs of a developing country have contributed to the strong research focus, especially in research-intensive universities (Cummings and Shin, 2014; Winberg, 2006). This generative mechanism (the entity with causal power to bring about observable change, see Section 2.4) was one of the factors responsible for the strong institutional focus on research even though they sometimes espoused that teaching was important.

4.3.3 Impact of structural constraint: Internal conflict

The third issue that emerged from my reflections was the contradiction that had taken place because two forces collided – my (mis)understanding of my academic role and the expectations of my institution to pursue a PhD. This contradiction led me to the realisation “that every contradiction is a conflict of value as well as a conflict of interest; that inside every ‘need’ there is an affect, or ‘want’, on its way to becoming an ‘ought to be’ (and *vice versa*); that every class struggle is at the same time a struggle over values...” (Thompson, 1978, p. 171). Each side of the struggle has their own values which conflict with the other. It is unfortunate that the values are not negotiated, but often the values of the ‘master’ take precedence. Thompson also alludes to the existence of needs and wants, which quickly become ‘ought to be’s’, where each side of the struggle demands, in one way or another, that their values and the needs that flow from that is what *ought* to be done. Hence, my struggle with the expectation of the institution was in fact a power struggle because of a contradiction in my values and the institution’s values. At the time, I felt I was alone in my struggle because I did not have encounters with anyone else going through the same thing. The people around me seemed to be well on their way up

the academic ladder. It was only during my data collection that I was surprised that some of the research participants expressed similar struggles. It was inevitable that one of the forces would be stronger and would ultimately prevail (institution), even though there was resistance from the weaker power (me). This, to me, pointed to the existence of a master-slave relation where the master (institution) dictates the way things should be and the slave (me) is subservient to this power (power₁ relations from Sections 2.4.2 and 2.7.4).

The internal conflict resulting from external forces led to change. However, my submission to the requirements of the institution felt like losing a little bit of myself. The confidence I had in my teaching identity and my credibility as an academic developer had been chipped away and the years I had spent building it up and proving myself in this field did not feel like they counted for much if I wanted to grow as an academic professional.

4.3.4 Response to structural constraint: Submission with covert resistance

It took over six years for me to fully submit to the pressure to pursue a PhD, although this submission was accompanied by covert resistance. This resistance was not visible or audible, but was a reflection of the conflict going on in my mind. I did not have the cultural capital (Bourdieu, 1977) to carry out a full-on resistance against the pressure to pursue a PhD. Hence, my covert resistance centred around finding ways to own the PhD and the research process I was about to embark on. This covert resistance operated quietly in the back of my mind as I resisted topic suggestions from different potential supervisors and rather took time to settle on a topic that I deemed would be worth it for both my career and for the research participants. I felt I had to select a topic in this way because I needed internal motivation that would carry me through the difficult times of the PhD research process (Maxwell, 2013). I also felt that choosing a research topic in this way would complement what I was already doing at work, and would therefore serve to inform a research-based support strategy for the work I do with academics. And because I was relatively new to the field of educational technology when I embarked on this research in 2014 (just three years), this study would force me to explore the field's history, arguments and challenges, as well as new technological developments and approaches to teaching with technology. Hence, even though I had to submit to structural forces, I was able to reach a point where I felt that I owned the process and the resulting product of the PhD – that I would do it under my own terms.

In my attempt to explore the emerging research problem, this section has elaborated on my reflections around one particularly personal experience I had of a structural constraint, the

generative mechanism responsible for that constraint, its impact and my response to it. This understanding of my response to the undesirable structural constraint framed my understanding of the experiences of the research participants to the various structural constraints they highlighted during data collection. In the next section I draw the reader's attention to the literature that guided my understanding of the emerging research problem.

4.4 Identity and its relation to structural constraints in higher education

Linked to my reflections on the personal experience related in Section 4.3.2 above, I realised that my teaching identity had been responsible for my struggle with the institutional demand to shift towards a research identity. Hence, my identity had led me to experience the institutional expectation as a structural constraint. This expectation to pursue a PhD and have a research-based focus is not always experienced as a constraint, as highlighted by two of my research participants: Zara and Claire. A wide range of literature seemed to point to the same conclusion – the dichotomy between institutional requirements to pursue research and a PhD (with professional rewards) versus the urgent teaching role (with only the satisfaction of meeting one's values) and the centrality of academic identity in this struggle. I found that I not only identified with the tensions and contradictions highlighted by the different authors, but this literature gave me the language to frame the views and experiences of both my own and my research participants in terms of their relation to the structural context and to educational technology. The main issues with academic identity in higher education which helped me understand the data as well as my experiences are discussed in the subsections below.

4.4.1 Changes in higher education

Changes are taking place in the higher education landscape both locally and globally, and this consequently calls for a change in the way we view ourselves and our role as academics in this shifting context (Billot, 2010; Clarke et al., 2013). Some of these changes in the South African higher education context were discussed in Sections 1.2 and 1.3, and relate to lower funding for higher education, a growing student population without a corresponding increase in staff and resources, and an untransformed culture that has an oppressive effect on both academic staff and students (Krauss, 2015; Ndebele et al., 2013; Vandeyar, 2010). The frustration of students with the lack of transformation in South African higher education led to nationwide student protests in October 2015 and October 2016 which resulted in almost all the 26 universities nationwide shutting down for varied periods of time (from a few days to over a month) (Badat, 2015; Fomunyan, 2017). These protests were sometimes violent and resulted

in some universities suffering damages of over R100 million (Fomunyam, 2017) and the government agreeing to a zero percent fee increment (Badat, 2015). These changes are responsible for some of the constraints experienced by my research participants, as I expound in Chapter 5, and the tension some of them experience in shifting their view of their identity and role in this shifting context.

4.4.2 Economic demands

Lower government funding and rising costs have resulted in profit and performance-based systems in higher education which have led to a clash in institutional and academic value systems (Anderson, 2008; Billot, 2010; Clegg, 2008; Fortune, Ennals, Bhopti, Neilson, Darzins, & Bruce, 2016; McNaughton and Billot, 2016; Winter and O'Donohue, 2012). These have shifted the way academics are managed, leading to sometimes dire consequences. These negative consequences include: a muscular management style evidenced by bullying, aggression and combative operation; politicised institutional communication that is blind to the reality of being an academic given the particularities of the African context; the evocative but elusive concept of academic autonomy; morphing or extension of the academic role; and fragmentation of academic identities (Anderson, 2008; Harley, 2003; Harris, 2005; Kreber, 2010; McNaughton and Billot, 2016; Sutton, 2015). The economic needs of institutions have also resulted in a demand for a higher research, rather than teaching, focus (see Section 4.3.2). This begs the question: “Is a university a center for research or for teaching?” (Cummings and Shin, 2014, p. 1). This is in a system that has expanded exponentially in terms of number of students (hence higher teaching loads), which has an impact on both staff wellbeing and their workloads (McDonald, 2013). Some authors have even labelled higher education as ‘stress factories’ because of the high demand on academics’ time with lower pay than their counterparts in industry (Barkhuizen and Rothmann, 2008), although different countries and higher education systems value and experience the demands of the academic role differently (Shin and Jung, 2014).

4.4.3 Occupational stress

Researchers are not in agreement around whether or not there are differences in the way male and female academics experience these added demands and the occupational stress that results (Adekola, 2010; Blix, Cruise, Mitchell, & Blix, 1994; Lackritz, 2004; Watts and Robertson, 2011). However, what they do agree on is that male and female academics value different

aspects of their work, and hence *perceive* the occupational stress associated with those roles which they value, differently (Barkhuizen and Rothmann, 2008). Male academics suffer stress as a result of “workload, inadequate salaries and a lack of public recognition”, while women are more concerned about “job insecurity, isolation from colleagues, a lack of institutional recognition of worth and work politics” (Barkhuizen and Rothmann, 2008, p. 324; Cross and Carroll, 1990; Dua, 1994). And the higher proportion of males than females in academia could also compound the occupational stress that females experience because of “a lack of role models, less socialisation from women from their own rank [and] gender stereotypes” (Barkhuizen and Rothmann, 2008, p. 324; Blix et al., 1994).

In South African higher education, female academics report higher levels of exhaustion and stress-related physical ailments than their male counterparts likely resulting from “role conflicts and the absence of mentors” (Barkhuizen and Rothmann, 2008, p. 333; Hayes, 1986). Hence, the higher demands of higher education, coupled with managing multiple roles, can be responsible for occupational stress in female academics. As will be shown in Chapter 5, most of the constraining forces that were experienced as oppressive by the female academics in this study fell into one of the above categories: job insecurity, working in isolation from their colleagues, lack of institutional recognition of the worth of their work, work politics, and issues around a lack of role models and women in their own rank. As highlighted in Section 4.3.2, I struggled with some of these constraints in my journey towards starting a PhD, and felt isolated and devalued as a professional (lack of institutional recognition of my worth).

4.4.4 Response of higher education

Despite the high stress levels and exhaustion experienced by academic staff resulting from the shifts in their workload and identities (from teaching to research, while still performing a full teaching load), universities seem to be oblivious to these changes. Furthermore, the political and cultural issues affecting the wider socio-political community have invaded higher education (Delanty, 2008), and have contributed to the fragmentation and morphing of academic identities, yet higher education institutions (structures) seem oblivious to their power to shape the formation and perception of those identities (Henkel, 2005). Instead, they choose to communicate a gold-standard identity which is often far-removed from the reality of the majority of academics (Churchman and King, 2009), leading to feelings of inauthenticity, alienation, marginalisation, unbecoming and disenchantment (Archer, 2008; Sutton, 2015). Their desire to brand universities (the research site is known as a research-intensive university)

may be seen by faculty as simplifying its complexity by valuing only those activities that are congruent with its identity, and by regulating particularly the identities of those who value a different brand from what the university espouses (Wæraas and Solbakk, 2009). My role as an insider researcher can aggravate these tensions for my research participants, depending on whether they see me as representing the institution, or as being on their side.

4.4.5 Resistance strategies

By focusing on structural forces and the oppressive power they have over social agents, there is a danger of assuming that the agents (academics in this instance) supinely accept the dictates of power structures (Fleming and Spicer, 2008). This distorted picture of structures and their power assumes that “workers [are] subjectively colonized, stripped of any will-to-oppose” when in fact they actively resist oppressive powers through organised overt actions or more subtle subversions (Fleming and Spicer, 2008, p. 301; Scott, 1989). As such, in order to attempt to manage and mitigate the tensions and effects of these structural forces and higher education’s disregard of their role and power, academics have resorted to different types and levels of resistance, ranging from the subversive and subterranean to overt challenges (Anderson, 2008; Churchman and King, 2009). My argument in this thesis is that this culture of resistance has permeated different aspects of academics’ professional lives (see Chapter 5), including their use of educational technology (see Chapter 6).

Academics tend to take part in covert resistance, as opposed to open revolt (Anderson, 2008; Ball, 2003; Churchman and King, 2009; Clegg, 2008; Fleming and Spicer, 2008; Fredman and Doughney, 2012; Ryan, 2012; Vandeyar, 2010; Worthington and Hodgson, 2005). The reasons for this could be that 1) they see their academic role as a vocation that serves the community, and 2) despite new controls and demands from the government and their institutions, academics are still able to work relatively autonomously from management control, and rather regulate their performance in terms of teaching, research and other activities in order to meet these demands (Worthington and Hodgson, 2005). And as long as this autonomy and the academic values they are passionate about are not completely eroded, they are unlikely to openly revolt against institutional forces (Anderson, 2008; Worthington and Hodgson, 2005). In some instances, academics who have attempted to openly rebuke management decisions have met with disapproval from their colleagues because they ‘violated’ the academic protocol or they feel that management does not care about their contribution (Anderson, 2008).

The range of covert resistance strategies that academics engage in in order to mitigate the impact of structural forces on their academic identities include discursive resistance where they condemn management practices in private conversations with other academics; indifference and withdrawal from active participation in departmental activities; attempting to find another job elsewhere; different behaviour when under the ‘normative gaze’ from what they actually do in practice; academic writing (although this is quite an overt kind of resistance); refusing to complete certain activities; avoiding or ignoring requirements from management; minimal or strategic compliance when no resistance strategy is possible; and fabricating the representation of their practice in quality assurance documentation (Anderson, 2008; Ball, 2003; Ryan, 2012; Worthington and Hodgson, 2005). As will be discussed in Section 5.6, besides ‘refusal’, the participants in this study engaged in resistance strategies that were quite different in form – but not necessarily in purpose – to the ones listed above.

Fleming and Spicer (2008) caution against strictly contrasting “between the diabolic world of power and the liberating world of resistance” (p. 304). The two interact in quite complex ways, as those in power also resist some structures, while those who exercise resistance do so by mobilising power (Fleming and Spicer, 2008). In Section 2.7.4 I discussed critical realism’s different conceptions of power, where power₂ represented the master/slave power and power₁ was the transformatory capacity to resist master/slave forces. However, once power₁ relations are experienced by peers as power₂ relations (master/slave), then the power-resistance dynamic becomes even more complex. This is why Worthington and Hodgson (2005) caution against “celebrat[ing] covert forms of resistance to management control... as ‘heroic’ defiance against the degradation of work” (p. 107). Some of the covert resistance strategies, particularly those that involve evading managerial directives (e.g., refusal, avoiding, ignoring), do not make the requirement go away. In fact, this results in what Worthington and Hodgson term ‘peer exploitation’ where evading required duties means that someone else will be exploited to pick up the slack. Those most often exploited by their peers in this way are female academics, who report that they are treated by their male colleagues as ‘domestic labour’ when their labour is extracted and used for administrative and quality assurance requirements (Worthington and Hodgson, 2005).

It was difficult to divorce these resistance strategies from my own experiences as an academic. I found myself consistently viewing the research participants’ experiences, motives and actions through the literature on resistance in higher education as well as the lens of my subjectivity and understanding of the forces in the South African higher education context. The use of the

concepts discussed in this section, as well as the explanatory theory elaborated in Section 2.8.1, helped me to frame the structural constraints experienced by the research participants, understand the stress they experienced as a result of these constraints, and trace the resistance strategies they used to mitigate the effect of these constraints on their roles and academic identities. Hence, my use of the above concepts and theory helped me frame their subjective identities based on their experiences and their interpretation of the structural forces they had encountered, as will be elaborated in Chapter 5.

Below, I present Scott's culture of resistance, a theory which gave me the vocabulary to frame some of the resistance strategies of the research participants.

4.4.5.1 Scott's culture of resistance

James Scott, a political scientist and anthropologist⁶, depicts resistance by marginalised groups as usually taking on the form of subterranean and mundane acts of everyday resistance in order to counter the effects of the oppression they experience from superordinate classes (Scott, 1986, 1987, 1990). This everyday resistance through simple acts like "foot dragging, dissimulation, desertion, false compliance, pilfering, feigned ignorance, slander, arson, sabotage" (Scott, 1987, p. xvi) was a tool that various communities used for "working the system... to their minimum disadvantage" (Hobsbawm, 1973 in Scott, 1987, p. xv). They avoided outright political action like riots and marches for fear of physical harm or losing the few rights they had, and often because these were "nearly always crushed unceremoniously" with a few inconsequential concessions from the oppressors (Scott, 1986, p. 6). Hence, these poor communities focused rather on a lived resistance comprising of "reflective awareness and a rejection of hegemonic ideology" (Anderson, 2008, p. 254). These seemingly trivial and disorganised individual acts of insubordination and evasion added up and were largely responsible for the frustration of policies and plans of the superordinate oppressive class, even more so than riots and outright revolutions (Scott, 1986, 1987).

This everyday lived resistance entails a "continuous, informal, undeclared, disguised... autonomous resistance" (Scott, 1989, p. 4) by marginalised groups as they seek to "mitigate or deny claims made by superordinate classes" on what they feel is rightfully theirs (Scott, 1987, p. 32). They use covert resistance strategies like "passive noncompliance, subtle sabotage, evasion and deception," efforts which on the face of it may seem inconsequential, but when added up they can turn out to be more effective in the long run than defiant confrontations and

⁶ https://en.wikipedia.org/wiki/James_C._Scott

open revolts (Scott, 1987, p. 31). Although the quiet acts of resistance have no institutional visibility or social recognition and significance, these subterranean forms of resistance are often individualised and unplanned, and usually avoid direct confrontation with authority or elite norms (Scott, 1987).

In the university where this research took place, the subtle forms of resistance exhibited by academics had more or less similar characteristics to Scott's pattern of everyday lived resistance described above. Most of the research participants engaged in some form of resistance to the marginalising or oppressive structural forces they encountered. These resistive acts, which seem to have developed into recurring acts of resistance (hence my use of the phrase 'culture of resistance'), were carried out in order to manipulate the system to their minimum disadvantage (i.e., to mitigate the painful effects of the marginalising and oppressive structural forces). In most cases this resistance was born out of an ideological struggle, where their values, identity, dignity or resources were at stake as a result of the demands of superordinate structural forces. For someone like me who was on the outside looking in, most of these acts of resistance were not visible until they were articulated to me by the research participants.

In most instances where these patterns of resistance had developed, the academics were less interested in changing the 'structure' of the oppressive structures. Their focus was rather to mitigate their marginalised and oppressed positions through small, seemingly inconsequential and deceptively uncoordinated acts of resistance. Although they may seem inconsequential and uncoordinated, when these resistive acts are practiced widely, "they may have aggregate consequences out of all proportion to their banality when considered singly" (Scott, 1989, p. 5). Hence, although academics may be resisting structural forces for self-preservation just to survive or maintain their sanity, the sum of their uncoordinated but continuous acts may bring about an unexpected change in the structure or a collective benefit for others.

4.4.5.2 Scott's public and private transcript

In resorting to everyday forms of resistance, subordinate groups will usually avoid explicit rejection of public and discriminatory goals, choosing rather to feign compliance with these symbols of power while in public (Scott, 1987, 1990). This is where the public and private transcript come in.

The public transcript refers to interaction that takes place between subordinate and superordinate groups (Scott, 1990). This transcript "is unlikely to tell the whole story about power relations... [because] [i]t is in the interest of both parties to tacitly conspire in

misrepresentation” (Scott, 1990, p. 2). The powerful will hegemonistically dictate what the public transcript should be, although they are sometimes suspicious that the subordinate group are not fully complying with it but are only carrying out a performance for their benefit. The powerless, on the other hand, will feign allegiance to the public transcript when in the presence of the powerful because, as Scott argues, they have “a self-interest in conspiring to reinforce hegemonic appearances” as they seek to understand and evade the real intentions of the powerful (Scott, 1990, p. xii). Hence, both groups are aware of what the public transcript is – “the *self*-portrait of dominant elites as they would have themselves seen” (Scott, 1990, p. 18).

The private (or hidden) transcript, on the other hand, is the interaction that takes place ‘off-stage’ in the presence of those who are viewed as having a similar socio-political power (Scott, 1990). This transcript represents the true intentions of the powerful, but consequently also the true opinions of the powerless to the public transcript and its instigators. These hidden transcripts often “inflect, contradict, or confirm” the contents of the publicly-expressed transcript (Scott, 1990, p. 10) and are only expressed in restricted spaces with selected social actors. Although both groups are aware of the public transcripts, they are also aware that there is a private transcript on the ‘opposing’ side. Hence, in their interactions they are attempting to uncover what the other’s private transcript is so they can be better informed about their intentions.

In universities one ubiquitous example of the public transcript is elaborated by Churchman and King (2009), and is linked to the university’s practice of pursuing a particular image for themselves. They promulgate certain ‘gold-standard’ stories about academics which represent a very small minority who have ‘over-accomplished’ and reached the pinnacle of academia. To the rest of the academics whose stories are far-removed from these officially communicated standards, there are a range of negative effects. These include isolation, a lack of commitment and ownership in their academic roles, and inner conflict when values and morals are not met. Consequently, the public transcript does not result in the demise of the reality of academics’ stories, “but rather their manifestation in subversive forms” (Churchman and King, 2009, p. 515). As will be elaborated in Chapter 5, this subversive resistance is often hidden from the prying eyes of the superordinate structure, while displaying public deference or subordination.

In the next section I lay bare my self-reflective process during the research. This reflection has been a fundamental part of my application of both critical realist ontology and critical

ethnographic methodology. The process was fundamental in helping me understand the research problem as well as the data.

4.5 Fieldwork as an insider researcher

The question of the legitimacy and rigour of insider research has been a contentious one for years, particularly with ethnographic research (Aguilar, 1981; Hammersley and Atkinson, 2007; Mercer, 2007). Ethnography, including critical ethnography, has traditionally been done in areas far removed from the researcher in terms of space, culture, and sometimes even language (Hammersley and Atkinson, 2007). However, because of the salience of critical ethnography in not only understanding culture but also emancipation and transformation, it has gained popularity even in settings where the researcher is a member of the social context in some way (Coghlan and Brannick, 2014). This is popularly termed insider research – as opposed to outsider research – and is understood to mean “research by complete members of organizational systems and communities in and on their own organizations” (Brannick and Coghlan, 2007, p. 59). The researcher could be a member because of their employment status, race, gender, language, religious beliefs or background (Coghlan and Brannick, 2014; Voloder, 2016). But the central idea is that the researcher has an inside understanding of the culture and experiences of the research participants in the social context even before the start of the research. As an insider researcher myself, I have selected to be guided by a reflexive self-knowledge as a tool to problematise my impact in terms of “issues of power, voice, researcher and researched subjectivity” (Pillow, 2010, p. 274), “socio-historical location” (Johnson and Duberley, 2000, p. 178) and my philosophical understandings. Being an insider researcher does not mean I am “a better or worse researcher; it just makes me a different type of researcher” (Dwyer and Buckle, 2009, p. 56), and maybe even a little more vulnerable to the research process in some ways than an outsider.

In this section I reflect on how I applied ethnographic methods during this research, and particularly how this was either a constraining or enabling factor in light of my insider status. I engage in this process because, as indicated in Section 2.5 and 3.4.3, I motivate for the centrality of reflexivity for both the ontological and epistemological approach of this study. The self-reflective process helped me in the topic discovery phase to interrogate my assumptions about the data, particularly as they contradicted with the data from the research participants. Furthermore, this process allowed me to iteratively retroduct (see Sections 3.7 and 4.6) back to the domain of the real in my attempt to excavate the causal mechanisms responsible

for the observable actions and events. Hence, because of the centrality of reflexivity in helping me excavate the research phenomenon and its structural causes, I explicate it here for the reader for purposes of validity.

This section begins by reflecting on doing reflexivity, and the challenges I experienced with this process, followed by the application of methodological principles and key themes that emerged from my reflections in that phase of the research.

4.5.1 Doing self-reflexivity

The self-reflective process has been a challenge to me because it is a difficult, unsettling and painful process. It has been difficult because, although it is widely used in literature about research, there is a dearth of guidelines and a lack of examples of how to do self-reflection. This may be the result of “much muddled thinking about reflexivity... [because] when anthropologists talk about reflexivity, either they do not know what they are talking about or they are talking about something other than what they seem to be talking about” (Watson, 1987, p. 29). Thus, although I may be aware of what to reflect on, I initially struggled with the ‘steps’ – the reflexive thinking – to take to uncover my assumptions, prejudices and biases.

Self-reflection has been unsettling in the way it uncovers the underlying ‘self’ behind the written word, thereby potentially giving readers the ammunition to question the authority of the researcher. Watson (1987, p. 37) terms this the “vexation of an ethnography which takes reflexivity seriously.” The researcher’s authority needs to be established in order for the readers to accept the ethnography as a valid representation of the social contexts and its agents, and yet, at every turn, I as the researcher am allowing the readers to question this authority.

Self-reflection has been a painful process because at times it has revealed a myopic or biased view on my part, or challenged cherished presuppositions that I didn’t even know I had. It has also helped me develop new perspectives about academics, particularly in light of a better understanding of the constraints that oppress them. But most of all, the self-reflective process (together with the research process) has changed who I am as a person, the way that I see and experience the world, and my interpersonal interactions. And as such I feel liberated – more free – because of the way I did this research and I can therefore claim that to some degree I have fulfilled the agenda of critical research which is to seek emancipation – in this case self-emancipation.

I selected to follow a reflexive path similar to Bhaskar's, as highlighted in Sections 2.5 and 2.5.1, because I felt that it was congruent with my conflicting experiences and the value judgements I developed as a result. He embarked on a highly self-reflective path as a result of contradictions and cognitive dissonance in both his personal experiences and his observation of, and identification with, the underdog in society (see Section 2.5). These oppressive struggles, in his experience and that of others, prompted him to question not only himself but also the world around him that permitted the injustices he experienced and observed. In the following section I further unpack these principles.

4.5.2 Reflecting on methodology

The research methodology selected for this thesis – critical ethnography – was not originally designed to 'free' social agents, but rather explore new ways of mining their natural resources and exploiting them (see Section 3.4.3.1). This realisation was unnerving and distressing at first and lead me to wonder whether 'critical ethnography' was not coined as an oxymoronic buzzword to meet the requirements of political correctness, social justice and redressing the myriad of inequalities in our world today. Furthermore, the majority of issues that critical ethnography is meant to address in the South African context are as a result of the legacies of colonialism and apartheid. This made me question whether as a researcher I could really claim that a methodology that was originally designed to oppress social agents (see Section 3.4.3.1) could now be considered as a feasible option to bring about their (and my own) emancipation. And since this research is taking place within a country that is still reeling from the effects of colonialism and apartheid, it goes without saying that I have to consider the originally intended oppressive effects of this methodology. This does not necessarily mean that I have to feel incapacitated by the methodology and in turn view it as "an act of apology and grief for the shamefulness of what ethnography was in the past" (Behar, 2003, p. 15). Instead, I need to move beyond that by reflecting on how it can evolve into an approach that celebrates the rich and diverse cultures of my research participants, and the way their cultures intersect with mine as I attempt to conceptualise their perspective and culture through my own (see Section 3.3).

4.5.3 Prior knowledge

When I embarked on this research I already had prior knowledge of both the research context and the research participants. I had known each of them professionally for a varying number of years, and had offered them support – or interacted with them informally – in terms of their

teaching with technology activities. I therefore assumed I was aware of their level of engagement with educational technology – although this assumption was shattered as the research progressed. Most of them were engaged in other teaching with technology activities which I hadn't been aware of prior to the start of the research, mainly because they had worked independently (i.e., without requesting for support from our unit) in developing and implementing these activities. Hence, as I was reflecting on the selection of the research participants, I used my prior knowledge of their use (or lack thereof) of educational technology to select participants who fell into a wide spectrum of both the technologies used and the level of use. I hoped that this would help me uncover a range of structural constraints that academics encountered in their use of technology (see Section 3.5).

For each of the research participants (see Section 3.5.1), my prior knowledge extended beyond supporting them with their use of educational technology, to informal interactions during institutional committee meetings and student support work in various departmental structures. As such, I already had a pre-research image of the kind of people each of them were. For example, one female academic had a reputation for being demanding and stepping on toes, while I had often experienced another as soft-spoken, warm and friendly (withholding their names here for purposes of anonymity). These pre-research images were either shattered or solidified during the research. However, the research helped me realise two important things. The first was that a person's background context had a big impact on the kind of person they turned out to be, particularly those who were experiencing both subtle (and not so subtle) violence, and daily degradation of their dignity and status as lecturers both in the eyes of their colleagues and their students. So behind each difficult person was a painful struggle story that sometimes brought them to tears during our interviews. The second realisation was that my pre-research images of the participants meant that they too had built up an image of the kind of person I was – a fact which could either hinder or aid my research. This also meant that when they agreed to take part in this study, they had expectations about what I would do and what they would get out of this research, as was explicitly expressed by some of them (see Section 4.4.3 for an example). I therefore needed to sensitively negotiate the conflict between their expectations and my research activities, while staying true to the requirements of the study. This is an ethical dilemma.

4.5.4 Dual role and managing expectations

My dual role as both an academic developer working with educational technology and a researcher, was one of the main reasons why there was sometimes a conflict in expectations, as alluded to above. A case in point is the first interview I had with one participant, who sounded like she was taking part in this study so that she could have direct access to our office, i.e., use me as her personal technical assistant. I withhold her identity here as these reflections were for my development as a researcher and were not communicated with the research participant as they could be considered hurtful and may have affected her perception of the study. My reflections the day after our first interview indicate my struggle with this expectation:

Firstly, because of my position as an edtech academic developer, it seems (name withheld) assumes that my work is directly related to my PhD. This is true - or at least I have assumed that it was true until yesterday. The meeting I had yesterday made me realise that I need to set very clear boundaries about what I am doing for the research and what I am doing as part of my work. I am not willing to perform activities that could be allocated to the edtech assistants just because they are being done for my research participants. Is this really how I want to go about it though? If it is an ethnographic study, where do I draw the line? If I want to observe them and document as much of the process of teaching and use of technology as possible, then maybe it's okay for me to do some of these things for them - as long as they involve direct observation of the research participants. Is this really how I want to go about it? Actually I've decided I need to set some boundaries and learn to say no to some things - especially as they relate to expectations the research participant has as opposed to what I am willing to do. It is easy enough to make my expectations explicit - I think. But it may not be easy for the research participant to predict what they will expect from me. It will be good for me to find a standard way to handle these expectations and have a frank discussion with the research participants when these arise. (Reflections 18/09/2015)

I mentioned this encounter to my research supervisor a few weeks later, and commented on how it felt like the research participant was trying to make me her 'slave'. His response was: "*Then be her slave! That's data!*" And although in retrospect I realise that my supervisor's advice was based on his study and may not have been suitable for mine, and that he did not fully understand my immersiveness, I did follow his advice when my work schedule allowed it. However, sometimes I couldn't quell the internal emotional conflict that racked me each time I saw an email from her in my inbox or her name blinking on the screen of my ringing phone.

My frustration was aggravated a few weeks later by a colleague, when I mentioned to her that I had been to this research participant's class to assist her with technology. Her response was,

“Don’t let her use you, Nompilo! She’s very, very demanding!” These words came back to me over and over again whenever my frustration with her expectations mounted. As Morse (1998) argues: “It is not wise for an investigator to conduct a qualitative study in a setting where he or she is already employed and has a work role. The dual roles of investigator and employee are incompatible, and they may place the researcher in an untenable position” (quoted in Brannick and Coghlan, 2007, p. 59). And this was definitely what I considered an untenable situation and an example of how the research participants’ expectations can supersede what the researcher is seeking for. And as elaborated in Section 3.8, an ethically-aware study should put the needs of research participants first. But where does one draw the line?

The title of this section may lead the reader to assume that I effectively managed the expectations resulting from my dual role, which was not the case. Instead, I focused on two important issues to try and mitigate this issue. Firstly, I ensured that the needs of the research participants came first (see Section 3.8.1) and whenever I felt that the situation was uncomfortable or difficult for them, I would withdraw. They were giving up their time and sharing a part of their lives with me – the ethical thing to do as a critical researcher was to prioritise their needs and as much as was within my power, ensure that the research itself did not end up being an oppressive activity. Secondly, I also had to ensure that my research goals were met. In my investigation of the social context and the research participants’ technology integration, I had to ensure that their needs did not pull me away from what I hoped to explore, and had to at times be firm. An example of this is when I had to firmly resist a suggestion from one of the research participants (name withheld) who insisted that I ditch the other research participants I was working with and rather focus on her extensive use of educational technology in her courses as the only data for my study.

4.5.5 Access to institutional culture and language

One of the reasons that the ethnographer needs to be in the field for a long time is to learn the culture of the social agents (see Section 3.3). This also includes learning the local language – including the jargon used by the research participants – as well as the hierarchical structure of the social context and its key people. The researcher also has to negotiate both initial and subsequent access with gatekeepers and with the research participants. There has to be a time of enculturation when the researcher has to get to know the culture and gain the trust of the social actors before they can share certain kinds of data with her (Madison, 2012; Thomas, 1993; Whyte, 1981).

As an insider researcher, however, I had access to the research context even prior to my registering as a PhD student in 2014 (see Section 4.5.3). I was also already familiar with the hierarchical structures of the institution and its key participants. After a rather prolonged and difficult ethical clearance process, which took approximately five months to complete, I felt that each of the research participants readily accepted and trusted me with sometimes sensitive data about themselves. Some of the research participants were already sharing data with me which I later realised was important even from our first meeting when I was inviting them to take part in the research. Myers (1999) notes a similar experience where data that he had “considered ‘strange’ or unusual at the start was no longer so at the end” (p. 9).

Furthermore, I felt that I had an advantage over someone who comes in as an outside observer and is unfamiliar with the institutional structures and jargon. These sometimes become so implicit in the research participants’ way of life that they are difficult to articulate. An example would be how each time one of my research participants mentioned a name during an interview, I would almost always know who they were talking about. Even if I had not met that individual personally, I was aware of their position in the university, particularly in relation to the research participant. I also had to skip other clarification steps that an outsider researcher would have had to manoeuvre because I was familiar with the institution’s academic lingo and would know immediately what was meant when the research participant referred to, e.g.:

- “digs” (off-campus student accommodation);
- “RUconnected” (the university’s learning management system);
- “dawnie” (the first lecture period of the day at 07h45 and the struggle a number of students and some lecturers have in attending it);
- “Blade” (the country’s former Education Minister’s first name, and the animosity that accompanies the mention of his name depending on who is talking about him. He was the minister during the nationwide student protests in 2015 and 2016);
- “BSM” (the Black Student Movement, and the various activities they had engaged in to attempt to bring about awareness and transformation in the historically white university);
- and “concerned staff” (a group of academic staff at our institution who were sympathetic to, and actively promoted, the demands of protesting students).

4.5.6 Access to other (covert) unexpected data

As an insider researcher, it is not possible to restrict access to data to the official (planned) fieldwork only. It seemed that other data sprang up from unlikely places, and sometimes unexpectedly from the research participants themselves. A case in point is a role I had to fulfil as part of my work as an academic developer, to run a focus group evaluation session with a group of students. Although the lecturer should not be present during these course evaluation sessions so that students are free to respond to the evaluation questions, this research participant insisted that the feedback related only to the students' use of technology and therefore she would attend. About an hour before the session, she informed me that she had a class to attend to during the scheduled focus group session, and she expressed unease that I would start the focus group evaluation session without her. She proceeded to give me detailed instructions and guidelines about what I was allowed to ask about the students' use of technology in her class.

The evaluation session was going according to plan until about 10 minutes in when one student blurted out: "*It's a dictatorship!*" This statement was completely unrelated to the question I had asked or the discussion underway, and it caught both myself and the other students off-guard. He then went on to elaborate the class's frustrations with the way she had handled certain aspects of the course. After recovering from the initial shock of this revelation, most of the other students nodded in agreement and some added their disgruntled voices. They felt there was no other platform for them to talk about how they had felt violated and undermined by some of her actions in the course. When she walked in the students completely changed the subject. It was left up to me to raise their concerns with her.

After this session I nervously tried to broach the subject with her and she came down on me like a tonne of bricks. She was extremely upset about these 'insensitive' and 'ungrateful' students and recounted the trials she had to overcome in order to get them to where they were. Basically, she refused to acknowledge that there was a problem. As she ranted on and on in anger, it is difficult to explain the feeling that came over me. It was like my insides recoiled in bewilderment, anger and defeat. These students had informed me because they counted on me to do something – and I had failed them. And now I felt like I was under attack, as if the 'accusations' had originated from me. I did manage to stay calm and responded to her outburst by stating:

I understand why you did this – but they don't. I understand that you've made so many changes and have fought at departmental level for this course for so many years.

They've never been through this course before and they don't understand how things are so much better for them than for previous students. But please understand where they are coming from. Please understand that they have been violated by [xxx] and that's all they know. (Fieldnotes, 14/03/2016)

Thankfully, this seemed to calm her down somewhat, and she conceded that maybe things could have been done differently. And I was relieved when this did not seem to compromise our research relationship. After this session, however, I was perplexed as to how I, as an insider researcher, would handle this kind of information which I have access to only because of my position as an academic developer in the institution? In what ways can I ethically handle it without being accused of “drawing blood [or] undertaking an act of *denunciation*..., gossip, insult and slander” (Bourdieu, 1988, p. 2). The issue is that this data is acquired covertly (i.e., when the tape recorder is off). The research participant is unaware that all my contact with her actually adds to the depth of my data, particularly when covert data like this confirms or contradicts what I have observed or heard in both formal and informal research spaces.

During data analysis, I began to understand that the reality of fieldwork is that I could not ‘forget’ and ignore what students told me about the participant, and whether I liked it or not it was part of the data that I used to make sense of her context and perspectives. Furthermore, this encounter helped me understand her reaction to the intensely oppressive structural forces that she struggled with. Occupational stress (see Section 4.4.3) resulting from oppression and marginalisation in her department may have contributed to feelings of bitterness and frustration which were perpetuated onto her ‘less powerful’ students. In effect then, it seemed that oppression seemed to be breeding practices that also leaned towards oppression of others.

4.5.7 Making the familiar strange

As mentioned earlier, although I had not necessarily worked closely with all of them, I had known each of the research participants for a number of years before the start of the research. I had also worked in the research site for about nine years before registering as a PhD student in 2014. Hence as an insider researcher, I potentially ran the risk of missing crucial data which could give me insight into the culture, and particularly the politics, of the social context (Aguilar, 1981). My proximity, preunderstanding and experiences in the research context prior to the start of the study could mean that “too much [was] too familiar to be noticed or to arouse the curiosity essential to research” (Aguilar, 1981, p. 16). Events or behaviour which could raise red flags for an outsider who is unfamiliar with the context because of a “heuristic culture shock, [where worldview] contrast promotes both perception and curiosity” (Aguilar, 1981, p.

16), could seem like ‘normal’ behaviour to me. Insider researchers “live inside the culture, and tend to see it as simply a reflection of ‘how the world is’”. They are often not conscious of the fundamental presuppositions that shape their vision, many of which are distinctive to their own culture” (Hammersley and Atkinson, 2007, p. 9). As a result, the required “distance and objectivity” for rigour, reliability and validity is difficult to attain (Brannick and Coghlan, 2007, p. 60). This brings into question the legitimacy and rigour of ethnographic insider research, which has been a contentious issue for years (Aguilar, 1981; Hammersley and Atkinson, 2007; Mercer, 2007).

The assumption made in the above paragraph is based on the premise that outsider researchers potentially have an advantage over insider researchers, yet Davies (2008) warns that it is dangerous to assume (for both native and non-native researchers) “that belonging is either uncontested or unproblematic” (p. 42). As an insider researcher, I am working with academics who are diverse from me and each other in terms of history, culture, academic standing and academic tribe, a situation which can potentially make me feel like an outsider in certain institutional spaces. Furthermore, the kind of ethnographic research I am doing takes place in a bounded context, while the lives of the research participants extend beyond that context. Hence, what they experience outside the research context inevitably has an effect on what happens within – leading to behaviour that may seem strange and difficult to interpret or understand.

In order to sidestep the above limitations to insider research, I attempted to “exoticize the domestic” (Bourdieu, 1988, p. xii) by treating the research context as “anthropologically strange” (Hammersley and Atkinson, 2007, p. 9) in an effort to defamiliarise myself from the known culture and interrogate what I had previously accepted as the norm. I focused on more than just contradictions or activities that elicited an emotional response from me. I had to consciously make the decision to record all observed events, behaviours and my understanding of them from the start of the research. I would mentally slip on what I called my research lenses – my term for deliberately noting my surroundings, the words and actions of the people around me and reflecting on how this tied back to the research phenomenon – when I went in for an interview or during participant observation. I would note the layout of the furniture in the room, the size of the office, the items on the research participant’s desk, her physical appearance, where she chose to sit for the interview and any other non-verbal cues that were not captured by the audio recording. I would then reflect on my understanding of these aspects of the research, and why I understood them in the way that I did. At times I was able to follow up

with my understandings and give the research participants the opportunity to either confirm or disprove them. My constant worry was that I could potentially blow out of proportion genuinely mundane activities and miss those that had an import on the research.

While attempting to make the familiar strange, I also had to manage a delicate balance of expectations. I realised that as an academic who is researching academics, the readers of the thesis would also be academics. They would have their own ideas about the topic that I am exploring, and hence may be “reading between the lines, more or less consciously filling in the gaps in the analysis, or quite simply, ‘putting [themselves] in their [the research participants’] shoes’, ... transform[ing] the sense and the value of the intentionally censored report of the scientific investigation” (Bourdieu, 1988, p. 2). This was a crippling thought and I often felt like I did not have the writing ability to mitigate this, or the cultural capital to be respected for my representational choices. I was nervous that this could potentially irreparably harm my fragile scholar persona (Thomson and Kamler, 2013) just as it was starting to bloom.

4.5.8 When personality comes in the way

Although personality may be an issue that confronts all ethnographers – not just insider researchers – there is very little mention of it in the literature in relation to ethnographic research. There seems to be a general understanding that you get to the field, do your fieldwork, analyse it and write it up. And yet, I would contend that in some instances an extrovert, at least at the start of the research, may find it easier to connect with a range of people and build relationships. This is because extroverts are invigorated by social interactions, are confident in their ability to connect with people and are not easily phased by rejection, whereas introverts tend to be highly sensitive and naturally shy away from making the first move towards interaction (Cain, 2012).

I realised a few months into the research that most of my reflections would start with my lack of confidence in my ability to interact well with people. My vulnerability stemmed from the fact that although I was relatively confident in the research knowledge I had acquired, I felt I needed ample opportunity to practice the skills in a controlled setting until I was sure that I could interview, observe and record field notes in the ‘right’ way. My introverted personality was rearing its ugly head because I had a strong “disinclination to charge ahead” and knew that I needed a controlled practice environment in order to have enough time to “pause [and] process surprising or negative feedback [so I could] learn from it” (Cain, 2012, pp. 167, 166). And the social situations I had to endure while collecting the data made it even worse. I felt that with

every interview, every conversation, I was pushing the boundaries through my questions – always worried that I may offend, or say the wrong thing, or ask about something too personal or sensitive and make the other person uncomfortable. Every introverted cell in my body screamed at the prospect of this, and throughout the whole data collection process (although it got easier with time), I felt like I was a phony, intruding where I was not wanted, trying to accomplish something that I really didn't understand and using methods that never felt natural at all, but rather shook me to the core. And even though I knew that it was not the research participants' job to make me feel comfortable, I felt vulnerable and often struggled to handle the emotions that intruded into the interview. The three reflective journal entries below give a glimpse into some of the struggles which I felt were particular to me because of my introverted personality:

By the time I went in I had knots in my tummy and, because I'm still feeling really tired, I just felt I wasn't on top of my game. It makes it worse that it seems I always end up with my foot in my mouth every time I speak with her (at least that's what it seems like to me). I try to share what has happened in my life because she's always kind enough to ask me, and it always sounds so empty as if I am trying to impress her. (Reflections 08/09/2015)

Her warm welcoming smile and the warmth from the sun splashing onto her desk from the wide, high windows helps me to relax a little. My heart has been pounding, you see, because somehow I think that this research may change our relationship, that particularly because I already know her relatively well and respect her, I may be offensive in some way. I couldn't quite put a finger on the reason for my nervousness at first, but it soon became apparent that I really valued our interactions and was worried that my data collection methods, my findings or the way that I represent her story would somehow break this delicate connection. (Reflections 04/11/2015)

*I felt a little tension at the start (or maybe it was just hyper-sensitive me)... When I got to her office I was feeling very frustrated because I had just left a meeting (I actually left the meeting because it was time for this interview) where I had had a very heated discussion with a colleague about (XXX) – and confrontations like that always rattle me. So I went to see her in that state of mind - thinking to myself, oh s*** am I even ready for this interview? I don't even know if she'll be as receptive and open with me as she usually is? Will I be able to ask proper questions and lead in from her responses*

adequately in the frame of mind I'm in? I really didn't think so... I didn't have much opportunity to stress out about our session - although of course being me I found myself hyperventilating and trying to control my breathing ... as I walked to her office for the interview. (Reflections 26/02/2016)

Once the interviews got underway, however, I did relax somewhat. And my supervisor pointed out to me that my personality actually helps me listen well, and people trust me and open up to me as a result. I tried to keep this in mind whenever my inadequacies started to overwhelm me and focused less on ensuring that I followed the research method perfectly, and more on listening and understanding what the research participant shared with me. It also seemed that some of the research participants felt that they finally had a listening ear, and would vent their frustrations. My job, as highlighted earlier, would then be to ethically sift what they were sharing for the research or what they were confiding in me, what Williams (2010) termed 'guilty knowledge'. The critical step of member checking has helped me to mitigate this dilemma.

4.5.9 Misunderstanding the data

As a researcher with her own prejudices, attitudes and experiences in the social context, I ran the risk of understanding the data from my point of view only rather than digging deeper and seeing it from the research participants' point of view. One example of this is that as a black woman from a different country, I often felt that my interpretation and understanding of blackness was far removed from the experiences of black South Africans. This shortfall in my understanding surfaced as I was grappling to understand the sometimes furiously vehement responses to what I considered normal (but not necessarily pleasant) conversations or actions. A case in point is a story related by one of my research participants about her experience as a university student:

I can talk about the violence I experienced in res just you know as a student. The issue of being invited in certain social functions that you didn't even know the concept you know, being told that actually we've ordered pizza hey. All of us will have to cough up ten rands. And you're like but I don't have ten rands. And you know common room is full of students. And people are like, so you don't have ten rands, what do you mean? You know that kind of violence, that's what I mean you know. (Khanyi interview 09/12/2015)

When she spoke about this I at first thought to myself that this happens in any context where there are different levels of privilege. People will then make assumptions about the privilege of others based on their own. But when I interrogated how this research participant had been experiencing discrimination from her childhood in a country where the working class and middle class are superimposed along racial lines, I began to understand why she would consider an incident like the one related above as violent. As a foreigner who had come to South Africa in adulthood, I came to understand why it had caused her so much pain such that she could still recall the incident over a decade later.

Experiences like these during my data collection helped me realise, like Johnson-Bailey who was a black woman researching other black women, that shared characteristics like my blackness, gender and profession would not always mean “an immediate bond of sisterhood” (Merriam, Johnson-Bailey, Lee, Kee, Ntseane, & Muhamad, 2001, p. 406). My understanding sometimes had to be negotiated and shifted several times so that I could see their stories from their point of view and through their experiences, even if I did not agree with this view. Critical realism also helped me recognise that their experiences shaped their understanding of reality, and hence, it was inevitable that there would be multiple perspectives of the same reality (see Sections 2.4.1 and 2.4.3).

4.5.10 Reflecting on the politics of representation

Chapters 5 and 6 tell the educational technology stories of eight female academics working in a higher education institution in South Africa. The stories will highlight their struggle to cope under the weight of oppressive structural constraints, and particularly how they have assimilated a culture of resistance in order to manoeuvre and mitigate these constraints. Their resistance ultimately plays out in the educational technology space.

Carefully excavating what to include from their stories has been a difficult and messy process because of the sheer mass of ethnographic data I had collected as well as my inherent fear of missing the research participants’ intended meaning and hence misrepresenting their stories. As indicated in Section 3.4.3.4, representation of another’s culture is a political process because it may ignore complex aspects of the participants’ lives not available to the researcher; there is the danger of labelling commonalities rather than seeing differences; the meaning we ascribe to their stories is immortalised in our representation; and consequently this may have an impact on the way the research participants are viewed and treated. As an insider researcher there is

the added burden that my pre-existing relationships with the participants may be irreparably damaged as a result of my inherently politicised and personally biased (mis)representations.

As I contemplate interrogating the complex maze of sociotechnical issues that have an impact on lecturers' use of educational technology, I realise that it is not possible to fully represent this complexity. I have had to carefully select issues that the research participants indicated had a significant impact on their conception and practice of the academic role. I also honed in on those factors that most prominently support my exploration of the culture of resistance, the structural constraints that have led to its emergence, and examples of how this plays out in their use of educational technology.

Although this has been done in consultation with the research participants, there is always the danger that my insider status and their perception of my expertise and job role, may have swayed them to give positive acknowledgement to my interpretation of the data. I am hoping that their strong academic identities (cultural capital) and agency, and the openness with which most of them shared their stories with me, will mitigate this. But I am also cognisant that although what I present here is my particular subjective lens, it is also a relevant perspective (in its own right) of the social phenomena.

Furthermore, besides manoeuvring the complex methodological swamp highlighted in Chapter 3, I also have to accept that representation "is not an innocent practice" (Denzin and Lincoln, 2005, p. x) but is laden with political and ethical choices about what to select and what to leave out from the mass of data. I realise too that, even though I am an insider researcher and relatively familiar with the research participants' contexts, each person's experiences with, and perceptions of, educational technology are different from the next. There is no way that I can begin to understand, let alone interpret and weave a story, that can adequately express the depth and complexity of their experiences and the constraints they encounter on a daily basis. Despite being close to the data from before the start of this research, I have not walked a mile in their shoes and hence can only hope that my gaze and my representation is true to theirs. Critical realism allows me to accept that this is not such a bad thing as research does not give us the ultimate truth but serves to move us closer to the reality experienced by the research participants (see Section 2.4.3).

Additionally, most of my observations and interviews took place in the academic space – which is only one side of the research participants' multi-dimensional existence (see Section 3.4.3.3). An attempt to capture a full picture of the complexity of the socio-technical issues inherent in

technology integration is therefore, in this case, a futile exercise. Interviews, informal conversations, observations, and documentation could only offer me a brief glimpse into their lives. This realisation sometimes threatened to overwhelm me, as shown in the reflection below which I penned as I was analysing the data and struggling with how best to present their stories in order to paint a picture of their experiences of the research phenomenon and understand the research problem:

Feelings of anxiety and helplessness swamp over me as I try to figure out ukuthi vele ngizamani [what on earth am I trying to do]! I'm feeling like a little kid who's been dying to watch a play but doesn't have the money for the entrance fee. I circle the theatre until I find a tiny dusty window. Ngiyaxoxomela ukuthi ngifikele [I stand on my toes so I can reach] and see if I can catch a glimpse of the stage. I am close enough to hear some of the voices and I also catch a glimpse of the nether part of the stage – not good enough, but it will have to do. I see sections of the play that drift onto that part of the stage – but not much else. One of the actresses screams and the audience breaks out into laughter, and my frustration mounts because I have no idea what just happened. And then imagine having to relate that play to a friend. (Reflections 29/04/2017)

This made me realise that a smile, a raised eyebrow, a nervous laugh or a fleeting expression could be easily misinterpreted because I was not privy to my research participants' multi-dimensional lived experiences. I have, however, finally got to the point where the pressure of time and the need to complete this study has forced me to attempt to represent a moment in time – a brushstroke really – in the experiences of these academics, viewed as it is through my jaded lens and a 'small dusty window'. Hopefully these stories will be an acceptable representation (acceptable to the research participants) of the moment in time that they were kind enough to share with me, as well as a meaningful representation suitable to answer the research questions. This is the ethical agenda of critical research (see Section 3.8).

Throughout the research I have also kind of felt like Bourdieu (1988) who titled the first chapter of his narrative about French academia: *A 'Book for Burning'*? He recognised, as I do, the "contradiction which is inherent in divulging tribal secrets" (Bourdieu, 1988, p. 5) because we are trusted members of the academic tribe and yet we are, so to speak, 'airing the tribe's dirty laundry' to the outside world. Even though the data collection may take place in a relatively controlled environment (interviews, observations, documents, etc.), my insider researcher

status gives me access to ‘other data’ which would normally be hidden to an outsider (see Section 4.5.5). In some instances during the research process, this ‘other data’ provided deeper insights into the identities and struggles of the research participants. And at times, I was privy to information which, for ethical reasons, I could never use for this study. Although I resolved to leave this ‘unusable’ data out, it had a major influence in shaping my perceptions of the research participants. My other challenge was to structure the ethnographic accounts in such a way that I would not be viewed as an ‘informer’ who has feigned a supposed allegiance to the tribe and its high values (Bourdieu, 1988) and yet does not hesitate to objectify and label tribal secrets. I was almost constantly cognisant of the fact that the very same academics who would loudly “acclaim the work of objectification as ‘courageous’ or ‘lucid’ if it is applied to alien, hostile groups, will be likely to question the credentials of the special lucidity claimed by anyone who seeks to analyse his own group” (Bourdieu, 1988, p. 5).

Hence, as I attempt to represent the structural and cultural issues specific to the South African context, these tensions and contradictions are ever before me. I am cognisant of the requirement to fairly, ethically, and yet critically, represent my research participants and the complex sociotechnical maze they have to contend with, while reflecting on my positionality and its impact on the research process.

In this section I reflected on the challenges and benefits of insider fieldwork with reference to constantly reflecting on the oppressive effects of the methodology, not allowing prior knowledge to cloud my understanding of the data, mitigating the tensions of my dual research and employee role, easy access to the culture and language of the social context, sensitively and ethically handling covert data, exoticising the domestic, managing the emotional tensions resulting from my personality, the possibility of misunderstanding the data because of my prejudiced lenses and the politics inherent in representing the ‘other’. As mentioned earlier in this chapter, the self-reflective path I followed towards understanding my research participants’ experiences was similar to Roy Bhaskar’s trajectory (see Section 2.5). I elaborated in Chapters 2 and 3 on the importance of knowing myself before I attempt to understand the research phenomenon and others’ experiences of it. This is even more pertinent for an insider researcher who is laden with assumptions and beliefs about the context even prior to the start of the research. The self-reflective process is a way to make explicit these prejudices (not necessarily get rid of them) in order to improve the validity of the research.

4.6 Data analysis process

The focus of this chapter so far is on the process I followed in topic discovery and my attempts to understand the research phenomenon. So far, I have discussed my struggles with reflexivity, my personal experiences and responses to a particular structural constraint and how this shaped my understanding of the data from the research participants, and how literature provided me with the conceptual tools to frame this data. In light of the criticism against educational technologists like myself about our failure to understand academics' reality and struggles with educational technology integration, data analysis was a crucial step in helping me uncover the perspectives of the research participants. Data analysis comprised a major step in not only problem discovery, but in understanding the socio-political context from the research participants' point of view, and consequently their agency (resistance) and educational technology choices.

As discussed in Section 3.7, the data analysis process comprised critical ethnographic meaning-making as well as the abductive and retroductive processes of critical realism. These will be described in this section. I selected to use critical ethnographic meaning-making rather than the description and coding processes recommended by the different authors in Table 4-1. My decision was based on my desire to overcome a cautious critical realist epistemology (see Sections 2.4.3 and 3.4) through a critical ethnographic methodology that seeks not only to reflexively understand the research phenomenon from the research participants' point of view, but also to critique my understanding of that knowledge.

4.6.1 Meaning-making

From the start of the data collection process, I was involved in an iterative process of analysis which is meant to tease out initial themes for further exploration (Carspecken, 1996). During this process, I wrote out my reflections about each data collection moment (interview, participant observation or informal conversation). I then interrogated my understanding of that data by questioning why I understood it in the way that I did. These reflections were handwritten in an A4 hardcover notebook, and on Google Drive. The next step was to either transcribe the audio interview or read my participant observation notes in order to begin "to determine interaction patterns, their meanings, power relations, roles [and] interactive sequences," (Carspecken, 1996, p. 42). I transcribed each interview myself in order to immerse myself in the data soon after the interview. This analysis stage was aimed at "teas[ing] out themes, key issues, and areas that [require] further exploration in the proceeding stages"

(Hardcastle, Usher, & Holmes, 2006, p. 156). Each transcribed interview was then uploaded onto NVivo, a qualitative data analysis software. Appendix E shows a screenshot of one such interview transcript, as well as a screen shot of one analysis node (Technology).

Although as an insider researcher I could not physically withdraw from the research context, I eventually reached a point when I withdrew from the active collection of data in order to engage in formal analysis. As pointed out by Davies (2008), this involves not just physical but also intellectual distancing from the data collection processes. She cautions, however, that if the intellectual distance becomes too great then there is a “danger of producing theoretical structures that are irrelevant to the lived experiences of people on the ground and neither grounded in nor answerable to ethnographic data” (Davies, 2008, p. 231). I was able to engage in the second stage of critical ethnographic meaning-making which involved reading the data over and over again in order to use the data as a thinking material (see Section 3.7). In this process I was attempting to immerse myself in the data so deeply that I felt like I lived and breathed the data. My fieldnotes, interview transcripts, reflections, initial analysis and the literature I had reflected on were all read over and over again. I made notes and highlighted main points (see Appendix F for an example of this) and I came up with different categories and themes to try and understand the data. I constantly moved between the coded data in NVivo and the notes in my A4 hardcover book (which I carried with me everywhere – even to the beach!).

Critical realist principles were instrumental in helping me code the data in NVivo. These were derived from Rees and Gatenby (2014), who use principles from Elder-Vass (2010) and Spradley (1980). The first phase involves identifying the various entities which are part of the research context and their relation to each other (Easton, 2010; Elder-Vass, 2010; Rees and Gatenby, 2014). Although I used codes, I attempted to focus on the social structures that the research participants highlighted as pertinent to their context to avoid missing the bigger picture. Furthermore, because I did not start the research on a blank slate, I already had an idea of some of the structural constraints encountered by academics in their use of educational technology (see Section 4.3) and the challenges that I as an educational technologist could potentially face in excavating their experiences of these constraints (see Sections 1.1 and 1.5). Hence, during data analysis “I was already oriented to problematize” (Rees and Gatenby, 2014, p. 235) particular structures and their impact on educational technology practices, and as well as my ability to understand the research participants’ perspectives and experiences of them.

4.6.2 Abduction and retroduction

This phase involved using theory (Archer's morphogenetic/morphostatic cycle in Section 2.8) to frame the concepts that emerged during the meaning-making process. The concepts that emerged during that stage, as already mentioned in Section 4.3, were strongly foregrounded by my experiences of the structural constraints in higher education. Archer's cycle helped me frame the interplay between structure and agency using abstract theory, as will be discussed in Chapter 5. The theoretical redescription (abduction) also encompassed retroduction since Archer's cycle focuses on showing how structure has causal efficacy to bring about change for the agent, and agency can bring about change in the structure. Hence, the two processes – abduction and retroduction – occurred simultaneously and retrospectively, i.e., as a response to my experiences, reflections and the themes that emerged from the analysis of data.

4.7 Summary

The aim of this chapter was to elaborate on the emergence of the research problem and my ability to understand it, with reference to my self-understanding as an insider researcher. This was accomplished by first reflecting on my personal experiences of one particular structural constraint in the South African higher education context and its impact on my identity as an academic, as well as what I considered to be covert resistance on the inside (although it seemed I had fully submitted to the demands of this constraint on the outside). This personal experience shaped my understanding of research participants' covert resistance strategies as it led me to excavate hidden (or personal) actions that were not necessarily visible to the outside observer. The use of literature also had an impact on my understanding of structural forces, their impact on academics and how academics mitigate or resist them in different ways, and particularly the difference between male and female academics in their perceptions and experiences of the structural forces in higher education.

The chapter also makes a contribution in terms of doing critical ethnography as an insider researcher. This is done by not only reflecting on the themes that emerged during topic discovery, but by reflecting on the issues I had to mitigate during fieldwork. I also elaborate on the data analysis approach appropriate for a critical ethnographic approach underlaboured by a critical realist metatheory.

In the next chapter I begin tell the stories of the research participants and frame these using Archer's morphogenesis/morphostatic cycle.

Chapter 5

What resistance strategies have emerged in response to structural forces? (Research findings: culture of resistance)

“Mmmm [deep sigh]. I think perhaps the university would like it if we didn’t need to sleep.”
(Emma interview 17/09/2015)

5.1 Pre-text

The previous chapter presented my approach to problem discovery and a more elaborate articulation of the research problem. This process included using personal experience of the structural forces in higher education, reflecting on relevant literature that explains the research problem, reflecting on the challenges and benefits of doing fieldwork as an insider researcher, and a critical realist/ethnographic data analysis process. Besides highlighting how experience, reflexivity and literature framed my understanding of the research problem and the data, Chapter 4 was a demonstration of the reflexive path that sought to overcome one of the main issues highlighted in this thesis – the failure of educational technologists to understand the structural forces that constrain academics’ use of educational technology (see Sections 1.1 and 1.5). Chapter 4 was also a self-reflective chapter which served as a primer to my presentation of the data in this and the next chapter. It elaborated on how I started to excavate meaning from the data about both the participants and the context, and how being the main research instrument I had to constantly be reflexive. Without theory, my reflexivity could deteriorate into “a house of mirrors” (Baker, 1990, p. 235) where I become self-absorbed and disengaged from the reality I am attempting to uncover (Smith, 2011). Hence the choice and use of theory was a critical step in the research process that helped me bound my reflexivity and frame the research participants’ experiences of the socio-political context.

Although Chapter 4 focused on my processes of understanding the research data, it is critical to note that my presence as the ethnographer, in the field and in the presentation of the data, was “directed to helping [me] understand the ... people, not primarily exploring [my] responses

to them” (Davies, 2008, p. 241). As such, this chapter begins to draw on the research participants’ stories and my understanding of their experiences in the research context.

The following concepts drawn from Chapters 2, 3 and 4, will be used in this chapter to guide the presentation and understanding of the data:

- Reflexive self-knowledge foregrounds the presentation of the data, particularly because of my insider status.
- Critical realism views power in terms of two types of relations: power₁ which is the transformatory capacity or agency of an individual, and power₂ which is master-slave relations.
- The morphogenesis/morphostatic cycle provides a useful lens for the analytical separation of structures and the actions of social agents over time.
- The culture of resistance (power₁) often plays out on a daily basis to counter the effects of structural constraints.

The data in this chapter responds to the following research question and its associated goals. Note that Goal 1 was addressed in the previous chapter, and is included here because of the personal and value-laden nature of the data that I present, and hence my constant need to reflexively interrogate my understanding of it:

Research Question 1: *What structural constraints are female academics vulnerable to in the South African higher education context, and in what ways have they exercised their agency to counter the oppressive and marginalising effect of these constraints?*

- **Goal 1:** Interrogate my ability as an insider researcher to understand academics’ experiences of these structural forces and their resistance strategies.
- **Goal 2:** Uncover structural constraints that impede, oppress or marginalise academics.
- **Goal 3:** Uncover the resistance strategies academics have adopted to mitigate the effects of structural forces.

The presentation of the data in the next few chapters loosely follows the critical realist methodological recommendations of several authors (Bhaskar, 2016; Danermark et al., 2002; Wynn Jr and Williams, 2012). This involves a description of the phenomenon under study using “everyday concepts... [through] the interpretations of the persons involved and their way

of describing the current situation” (Danermark et al., 2002, p. 109). This is weaved together with an abduction (see Sections 3.7 and 4.6) of the themes that emerged from the study through the use of conceptual (see Section 4.4) and theoretical (see Section 2.8) understandings of the data, together with the retroducted (Sections 3.7 and 4.6) generative mechanisms that emerged from Section 4.4. In this regard, I have attempted to use the research participants’ words whenever possible together with my direct observations to describe their actions and educational technology choices. This description of the events recognises the stratified nature of ontology (Wynn Jr and Williams, 2012) by first explicating the experiences and events in the empirical and actual domains, with the aim of uncovering the real mechanisms leading to the emergence of these observable events from a theoretical or conceptual perspective.

5.2 Structuring the data presented in this chapter

The use of critical realism to underlabour a critical ethnographic approach has impacted the structuring of the presentation of the data in this chapter. Unfortunately, there are only a limited number of published texts that combine ethnography and critical realism in their research design, and hence in the presentation of the results (Barron, 2013; Davies, 2008; Porter, 1993; Rees and Gatenby, 2014). As such, I also had to rely on texts that offered guidance on presenting ethnographic data (Behar, 2003; Fetterman, 2010; Hammersley and Atkinson, 2007; Madison, 2012; Myers, 1997; Thomas, 1993; Van Maanen, 1988), as well as published texts that report on applied research using critical realism (with other research methods/approaches) (Allen et al., 2013; Boughey and Niven, 2012; Fletcher, 2017; Henfridsson and Bygstad, 2013; Njihia and Merali, 2013; Simeonova, 2017; Volkoff and Strong, 2013; Williams and Karahanna, 2013; Zachariadis et al., 2013). Unfortunately, particularly in information systems published works, a substantial portion of each article is taken up by describing and arguing for the efficacy of critical realism. It seems that despite its acceptance in a wide range of social and natural science fields (Vandenberghe, 2014), it is not yet as widely acceptable as other theories like interpretivism and critical theory. This also accounts for the need to allocate a chapter to the meta-theory in this thesis (Chapter 2).

The critical realist approach (as applied by the authors listed in the preceding paragraph) starts off by explicating the substantive (or other supporting) theory(ies) to be used in framing the generative mechanisms. This is usually followed by a description of the context of the thesis or the case studies as well as a literature review. The theoretical or conceptual concepts are then applied to the retroducted generative mechanisms. Other authors also test the efficacy of

the abducted theory or concepts to new cases. In smaller cases such as this research the deeply personal nature of the data means that the themes that emerge during data analysis are not “common categories so much as areas of [individual] concern” (Clegg, 2008, p. 333). Furthermore, because of the length of time I was able to stay in the field (18 months), it was possible to explore the nature of the generative mechanisms with the research participants.

Following on from these examples, this chapter will first present the research problem as it emerged from Chapter 4. The structural forces that have causal efficacy on the academic role of the research participants and their resistance response follows. The last section of the chapter presents a synthesis of these concepts (structural forces and resistance), and how they can be framed using a critical realist theory (Archer’s morphogenetic/morphostatic cycle, see Section 2.8). The chapter ends by presenting a resistance framework that will be used to frame the educational technology resistance strategies in Chapter 6.

5.3 The nature of the research problem

At the start of this thesis, the research problem centred around my ability as an educational technologist to reflexively understand the impact of the socio-political context on academics’ educational technology practices considering my positionality, assumptions and the hype in the field of educational technology (see Sections 1.1 and 1.5). In Chapter 4 I attempted to excavate the true nature of this research problem, and, as highlighted in Section 4.5.1, this was an unsettling and painful process. However, the process of reflecting on personal experience, literature, the research process and analysing the data helped me identify the following: 1) assumptions and actions on my part that could potentially impede my access to the data, i.e., understanding the research participants’ experiences from their point of view; 2) structural forces in the socio-political context that have a constraining, oppressive or marginalising effect on the work of academics (literature identifies some that seem to be experienced more keenly by female more than male academics); and 3) various resistance strategies that academics embark on in order to mitigate the effect of the structural forces.

The first part of the research problem (my ability to be reflexive) has already been explored extensively in most of Chapter 4. The second part – structural forces in the socio-political context – was briefly explored in the explication of the structure of higher education and the changes taking place in that landscape, as well as how universities seem oblivious to the effect of these changes as they place even greater demands on their academic staff (see Sections 4.4.1, 4.4.2 and 4.4.4). These changes result in occupational stress (see Section 4.4.3), but only

because of the way the structural forces are perceived. For female academics, research has shown that job insecurity, isolation from colleagues, work politics and a lack of institutional recognition of worth pose the greatest threat to academics' occupational stress levels. A key theme that emerges for each of the research participants is how they attempted to resist the constraining and marginalising structural forces in different ways. This is the focus of this study as these will be related (in Chapter 6) to their approach to educational technology use. The two main structural forces that will be explored in the next two sections is the teaching/research tension and the elevation of one dominant culture in higher education.

5.4 The teaching/research tension

The scramble to source funding for higher education institutions in the face of tough economic climates has been the main driving force behind the move towards a corporate, muscular approach to managing universities, and calls for the need for universities to be accountable to government and society (Barnett, 2013; Biggs and Tang, 2011; Teferra and Altbach, 2004). In order for universities to survive in this new corporate environment, they have had to elevate the research identity as the ideal for an academic, which has resulted in the teaching/research tension (see Section 4.4.2). In the analysis phase of the data, the teaching/research tension emerged as an overarching structural force which is perceived and experienced differently by the research participants as a result of the interaction of this force with other institutional and personal dynamics. I explore these differences below by discussing how the teaching/research tension has impacted the identity (how they view themselves as academics) of the research participants, but also why it has had this effect.

There are various factors highlighted in literature that make the teaching/research tension even more pronounced for female academics. Section 4.4.3, briefly alluded to the issues around gender stereotypes and balancing multiple roles (social and academic), the latter being responsible for the higher levels of exhaustion reported by female academics in South Africa. These aren't the only issues that female academics have to contend with. Universities have been classed as 'gender-blind' spaces where self-promotion, competition, bullying tactics and other "combative forms of operation" make it difficult for women to receive recognition for their academic work unless they are willing to play by the same rules (Anderson, 2008; Harley, 2003, p. 378). Additionally, female academics in particular, highlight that despite their considerable achievements in other areas (industry or research), there seems to be a sense "of never quite being able to meet the criteria" to becoming a respected academic (Clegg, 2008, p.

336). Ambiguous messages from the university about what is valued and shifting goal posts about what constitutes achievement in academia, add to the difficulty in reaching that goal (Clegg, 2008). This has an effect on female academics' career trajectory, productivity and their mentoring of younger female academics (Anderson, 2008; Clegg, 2008; Harley, 2003). These and other issues were alluded to by the research participants as contributing to the teaching/research tension.

The motivating factors for joining the academic profession were as diverse as the research participants, ranging from accepting the only available opportunity at the time, to making a conscious decision to join academia even though other career options were available. But what is consistent is the animated passion that each of the research participants exhibits when they talk about their teaching or their students, and the way they engage their students in class. Hence, no matter what pathway they followed to get into academia, how long they have been here, or the structural constraints that seem to frustrate their teaching efforts, teaching is still what excites those involved in this study most about their academic role. However, there is a tension similar to the one that I experienced (see Section 4.4.1) where the urgent and exigent demands of the teaching function have to somehow be balanced with the other aspects of the academic role, mainly research, but also community engagement, leadership and professional development, departmental dynamics, as well as the culture of the university which I described in Sections 1.2 and 1.3.

5.4.1 Emma: High teaching load

Emma is passionate about teaching, as evidenced by my observations of her face-to-face classes, supporting her use of technology for teaching, interviewing her and catching whiffs of discussions from her students about how awesome a teacher she is. She paints vivid, heart-warming brushstrokes during our interviews that reflect her emotional attachment to her role as a teacher. This passion was the driving force in her choice of career, and has been the reason she has 'hung around' when her career progression did not turn out as expected:

"...teaching was just fantastic for me. It was the best part of my life. I just love teaching those first years. And so that's what I wanted to do and that's why I hung around. ... I just thought teaching was the best thing." (Emma interview 17/09/2015)

Emma's department soon recognised her passion for teaching and inspiring her students, and she was assigned the role of the first-year course coordinator. This meant she was teaching almost every day for the whole year. There was very little time for her to pursue postgraduate

studies or engage in meaningful research and supervision because her departmental responsibility lay with the first years. As she relates: *“I just taught. I taught and taught and taught and taught”* (Emma interview 17/09/2015).

And teaching she did – for over 15 years she focused on her teaching with no time for research. Her reflections on this hint at regret, at wishing that she had known better and had followed her gut feeling rather than her head of department’s advice. Her expression of this regret aligns with Scott’s hidden transcript (see Section 4.4.5.2), where Emma expressed her true opinion of the marginalisation she had experienced, although at the time of the occurrence of the event she had complied with the public transcript:

“And my head of department encouraged me to teach some more and said you know [the institution] is very happy with that and you’re a good teacher... I said but you know I’m not doing much research. Is that ok? And she said yes yes of course. [The institution] understands people have different talents in different areas. And you’ll be rewarded and promoted on the basis of your teaching. And you know that’s just your particular gift. So that’s fine. And it turned out to be not true. ...I realised it quite late when I noticed people that I’d taught rising up through the ranks rapidly and passed me because I wasn’t doing as much research.” (Emma interview 17/09/2015)

Over the years she realised that although the university espoused their value of the importance of teaching in various forms (i.e., her head of department, as well as university teaching awards), it wasn’t until Emma decided it was *“time to change my tune and I did my PhD and I started publishing a lot”* (Emma interview 17/09/2015) that things started to change for her. *“It’s amazing how differently I’m viewed... at [the institution] to how I was”* (Emma interview 17/09/2015), a view which to her signals an important aspect that new academics may not realise: *“I don’t think [the institution] values teaching as much as it thinks it does”* (Emma interview 17/09/2015). She sums up her experience during those earlier years thus: *“I never felt like a professional when [HoD] was around”* (Emma interview 17/09/2015).

Emma highlights several factors that contributes to the teaching/research tension. Firstly, she has an emotional attachment to her teaching role. For her, it is not just a job but a deeply personal and fulfilling exercise. Secondly, it seems her department took advantage of her passion for teaching by increasing her teaching load such that she had no time for supervision, research or postgraduate studies. Thirdly, Emma expresses regret that, although at the back of her mind she was aware of the university’s requirements in terms of research, she followed her head of department’s advice that she would be rewarded based on her teaching. This last point reflects how ambiguous messages (Clegg, 2008) about the university’s requirements can be

communicated by its representatives. Although it is difficult to know why her head of department engaged in behaviour that could be perceived as underhanded and deliberately marginalising, it does point to the corporatisation of higher education where females (like Emma's head of department) have to engage in muscular, combative tactics like competition and bullying in order to survive and thrive in higher education (Anderson, 2008; Harley, 2003). In a higher education environment where the professoriate is still dominated by male academics, the lack of female role models and mentors has been highlighted as a particular challenge for female academics (see Section 4.4.3). It is personally heartbreaking for me when some of these potential female mentors are the ones who seem to be perpetuating oppression on other female academics.

5.4.2 Allison: No support for teaching-related research

Allison's experience of the teaching/research tension differs somewhat from Emma's above, but in both instances the tension results from departmental dynamics and the struggle to find the time to research. Allison has a passion for students and helping them succeed and learn to manoeuvre their way through a professional discipline that is generally considered difficult by students. This is evidenced by how she engages students around sensitive and pertinent issues in her class and challenges them to think differently in line with the discipline's knowledge structures. Despite her confidence in teaching now, Allison started out her teaching career with what she terms a "*woefully inadequate*" but common teaching philosophy: trying "*to teach as I would have liked to have been taught*" (Allison's teaching portfolio, 2015, p. 29). She considers herself to have been "*a difficult student to teach*" and as a teacher herself, she set out to be interesting and engaging while emulating "*the odd teacher on occasion [who] had managed to reach me*" (Allison's teaching portfolio, 2015, p. 29).

Because of her dissatisfaction with her teaching approach, Allison completed a two-year postgraduate diploma in higher education (PGDHE) offered by the staff development unit in the institution. This helped her to interrogate her teaching philosophy and find one that was congruent with the kind of teacher she was, and the kind of student she wanted to develop, as well as the learning engendered by her discipline's knowledge structures. She has adopted a developmental approach where she attempts to nudge students away from surface and strategic approaches which have only the exam goal in mind. She seeks, instead, "*creative ways to encourage my students to develop their critical thinking skills*"; encourages "*practice and reflection*" to help students learn the language of the discipline; and challenges them to move

beyond their intuitive perceptions of the discipline, influenced as they are by their “*different backgrounds, ...experiences... worldviews, and their own conceptions of [the discipline] to be more aligned with logic and reasoning, and with each other*” (Allison’s teaching portfolio, 2015, p. 31, 44).

During the two years of taking part in the PGDHE, Allison’s department was supportive in terms of time commitments for the course and the new ideas she presented to them around teaching and learning. Despite the fact that she is in a department that seemed to be supportive of her teaching development work and the new ideas this has engendered, she has however, experienced some tension with the kind of research she was involved in at the start of my data collection in 2015. She had a strong desire to marry her research activities with her teaching, but, surprisingly for her, this was not as welcomed as she would have expected it to be:

“During the PGDHE, I felt encouraged to do the PGDHE. But then at the end of it when I said well look at all this lovely research I’ve done in teaching and learning, you had the response as, well that counts for teaching and learning. It doesn’t count for research. ...I have 2 papers that I’ve presented at conferences from the PGDHE and I’m still in the process of writing them up, well shall we say putting them into publishable form. They’re almost there. But to find the time and then it’s quite discouraging when you know you hear people say even if you do publish them, then they count for teaching and learning, ...not for research.” (Allison interview 22/09/2015)

This points to mixed messages from the department, where she is encouraged to commit two years to participating in staff development courses, and yet any research she does in that area is not recognised by her department as counting towards research. Furthermore, there seems to be the mistaken understanding in her department that it is “*easier to publish in teaching and learning than in your field, which is rubbish, I think, because it’s easier for me to publish in my field*” (Allison interview 22/09/2015). Allison believes that because the field of teaching and learning is relatively new to her, it takes longer to produce papers in that field.

Although disciplinary research is the most valued of her academic activities, “*to try and find the time for research is very very difficult*” (Allison interview 22/09/2015) because of the more urgent and immediate demands of the teaching role. Allison is also the community engagement representative in her department, and has to coordinate weekly activities in the community. And as highlighted in Section 3.5.1, she is also involved in preparing students in her department for an annual international competition. All these other activities feed into her teaching in one way or another, which is why she feels that the university “*could do more to acknowledge the*

amount of time and the amount of effort that goes into teaching and learning...” (Allison interview 22/09/2015).

Allison’s experience of the teaching/research tension centres around her department’s failure to recognise any research related to teaching and learning, particularly in light of their support of her teaching development. She views this as mixed messages from a department that has otherwise been supportive of her other activities. For Allison, it also points to the fact that the university communicates that teaching is valued (i.e., the support she got for pursuing the staff development qualification), but even the *research* she does in that area is not recognised. This too relates to the ambiguous messages communicated by the university through its various structures about what they value (Clegg, 2008).

5.4.3 Other experiences: The teaching/research tension

A few of the other research participants have also experienced the teaching/research tension in similar ways to Emma and Allison.

As already highlighted in Section 5.4, each of the research participants has an emotional attachment to their academic role where for them, it is not just a job but an opportunity to impact the lives of the students. However, when it comes to the research function, most of the participants lament the process. For example, Thandi speaks animatedly about her teaching and engagement with students and the challenges and victories in that space. But when it comes to research, she acknowledges that it is a crucial part of developing as a teacher and staying current in the field, but also laments that the research writing process feels like “*shitting bricks*” (Thandi interview 04/11/2015) because it’s so difficult. Stella, on the other hand, has chosen to push research to the bottom of her list of things to do and basically focus on what she is passionate about – teaching and community engagement. She has a heavy administrative load and will engage only in research that feeds directly into her teaching, community engagement or supervision activities.

Similar to Emma’s experience, a lack of departmental support also features quite strongly for some of the research participants as contributing to the teaching/research tension in terms of work overload as well as what manifests as deliberately marginalising behaviour. Alexa’s academic practice is strongly geared towards research, and her main struggle is that support for her research in the department is less than ideal. Although her department does allocate time for research for each academic staff member, “*most often that is threatened or taken away and*

if one uses it there's a sort of peer sense of it being unfair" (Alexa interview 08/09/2015). So again there are 'ambiguous messages' from the department who espouse their support for research, but actively undermine the activities of those who take advantage of the department's provision. Alexa also experienced what she perceived to be deliberately marginalising behaviour from her department which added to the teaching/research tension. She recounts how, during her PhD studies her workload trebled as she was allocated extra supervision, extra course coordination and extra teaching because colleagues were on sabbatical or were unwell. All the extra work seemed to be piled on her and she wonders *"if that is issues about the glass ceiling or academic women being nasty to other academic women.... the load just increases. The better you do, the more you cope, the more you get"* (Alexa interview 08/09/2015). And similar to Emma's experience, it seemed that academic women were reproducing oppression and failing to fulfil the mentoring and nurturing role (see Section 4.4.3) needed by younger academics such as Alexa.

My report of the research participants' experiences in terms of the teaching/research tension would not be complete without highlighting that although most of them experienced some aspects of it as negative – as related above – two of them alluded to its positive effect on their practice. Claire has a calm confidence in her role as an academic. She has been involved in the promotions committee over many years, which has enabled her to engage deeply with the academic role requirements and understand the different weighting between *"research and teaching, or teaching and research, depending on the [academic] level"* and even *"kind of agree with it"* without lamenting the overwhelming weight that these role expectations place on an academic (Claire interview 10/09/2015). Her only gripe about the teaching/research tension is not based on external forces (e.g., departmental or institutional dynamics). Rather, she regrets that her career trajectory has meant she has had to lessen the amount of time she is able to teach first year students (which she is passionate about) because of the extension of her research responsibilities at the institutional and national level.

5.4.4 Why the teaching/research tension is experienced negatively

The narratives above illustrate the teaching/research tension experienced by academics in higher education. As highlighted in Section 4.4.2, emerging university systems (like the ones in Africa) are strongly moving towards a research focus, which has had an effect on the teaching function (Cummings and Shin, 2014). Universities and their various structures will tend to espouse teaching as important, yet their policies and communication will point to

disciplinary-specific research as carrying the greater weight (also highlighted in Section 4.4.2). And yet, the female academics in this study display a passionate, emotional attachment to their teaching role, and a struggle to marry this with institutional research requirements. The pressure to grow in their careers forces them to make a trade-off between *valued* research activities and *urgent* teaching demands. Furthermore, the pressure of departmental dynamics and the perception of deliberately marginalising behaviour by colleagues and managers increases the pressure that academics feel in an environment where there are few female role models and female mentors (see Section 4.4.3) for young female academics to emulate.

In line with critical ethnographic principles, the above narratives have sought to present the research participants' perspectives and experiences of the teaching/research tension (see Section 3.7). However, it is not possible to completely divorce my perspectives and positionality from the meaning-making process that I engaged with or the data that I selected to present (see Sections 3.4.3 and 4.5). As elaborated in Chapter 4, I engaged in a reflexive understanding of the participants' experiences, a process which included reflecting on my personal experiences of structural forces, reflecting on literature and application of methodology, as well as the data analysis process. My reflexive engagement drew me to the teaching/learning tension (see Section 4.3) as a result of the pressure to pursue a PhD.

The literature pointed me to this same tension, but also to how male and female academics experience it in different ways (see Section 4.4.3). Male academics reported experiencing occupational stress because of a high workload, low salaries and a lack of public recognition. Interestingly, in this thesis the participants hardly mentioned remuneration, with two participants mentioning that they were not academics for the money but because they enjoyed teaching. The participants also did not refer to public recognition in their discussion about the teaching/learning role. However, they did often refer to the high workload, and particularly how that made it difficult for them to meet other requirements of the academic role. The research quoted in Section 4.4.3 asserts that women experience occupational stress because of isolation from colleagues, work politics, job insecurity and a lack of institutional recognition of their worth. This thesis seems to corroborate these results, although job security did not feature in the perspectives expressed by the participants. This could be related to the relatively stable nature of academic jobs in South African higher education. Most academic staff have traditionally been hired on permanent contracts where they are on probation for the first three years (Altbach and Pacheco, 2012), although this trend is shifting to fixed-term contracts because of economic challenges (Strydom, 2011). The interaction of the other three factors –

isolation from colleagues, work politics and a lack of institutional recognition of their worth – seems to be a strong indicator of the negative experiences of the teaching/research function. Figure 5-1 below presents a diagrammatic representation of the factors that have causal efficacy on the teaching/research tension for the research participants in this study.

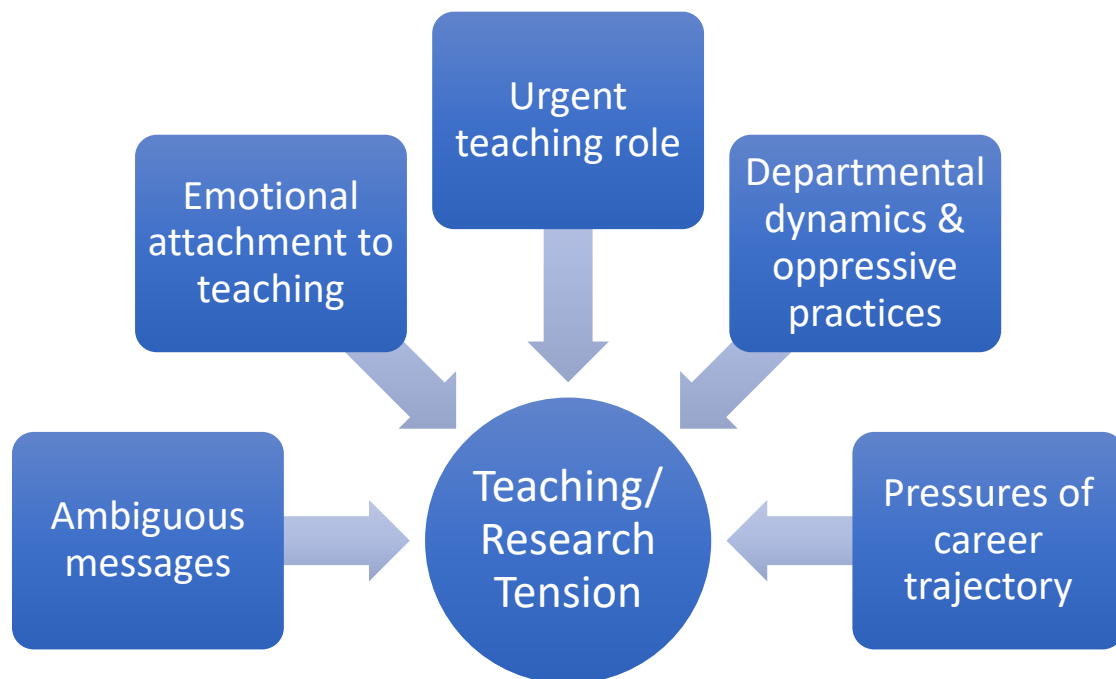


Figure 5-1: Factors that have causal efficacy on the teaching/research tension

The next section will discuss the second issue that was highlighted as a deep-seated and significant structural force on the academic role.

5.5 Elevating one dominant culture

The excavation of structural forces that impact the academic role of the research participants in this study revealed a range of forces that they have to contend with in the South African higher education context. Hence, I had to make the decision about which structural forces exhibited a greater impact on their role than others and could therefore be included in the results of this study. The first one – the teaching/research tension discussed in Section 5.4 – was an obvious one that featured in the research literature (see Section 4.4.2) and was experienced by all the participants either negatively (six participants) or positively (two participants). And yet the structural force discussed in this section seemed to negatively affect fewer participants (only two participants specifically referred to the university culture as oppressive to their practice), but upon reading and reflecting on the data I had collected, I realised that this structural force had a wider impact than just the obvious. Hence, I decided to include it as a

major structural force that impacts the academic role of the research participants, particularly because they work in the South African context.

Section 1.2 and 1.3 paint a woeful picture of the state of higher education in Africa in general and South Africa in particular. One of the issues highlighted in those sections about the state of higher education is the historical racial segregation of universities in South Africa. Historically white universities (such as the research context for this study) were originally built for the mostly white elite (formerly colonial) population. Hence, the culture and teaching – particularly in these historically white institutions – still favours these students despite the opening up of access to the majority of black students.

My understanding of this conflict between the different cultures in the higher education space was woefully jaded. In Section 4.5.9 I reflect on my status as a black foreigner who moved to South Africa in adulthood, and how I grappled to understand the frustration expressed by black academics and students with the systems in higher education. I found myself often puzzled by reactions to what some of them termed ‘racism’, ‘discrimination’ or ‘oppression’ (see Section 4.5.9). Furthermore, as a foreigner who has worked and lived in South Africa since 2003, I have found that my ‘blackness’ is actually transcended by my immigrant status. I sometimes feel that I am not seen as just a black woman – but rather a black *foreign* woman. Rather than giving examples from my personal experience (which are painful to recount and record), I will illustrate this point using literature.

Crush and colleagues report from survey data “that South Africa exhibits levels of intolerance and hostility to outsiders unlike virtually anything seen in other parts of the world” (Crush, McDonald, Williams, Lefko-Everett, Dorey, Taylor, & la Sablonniere, 2008, p. 1). Indicators are that there seems to be “greater prejudice against migrants from Africa, and a preference for immigrants from Europe and North America” (Maharaj, 2010, p. 368). Hence my experience of the culture of higher education potentially differs somewhat from that of South Africans because of the added layer of xenophobic attitudes and discriminatory behaviour because of my nationality. I briefly allude to my black foreign status not as a sob story to draw the reader’s sympathy, but rather to illustrate why I experienced the culture of higher education differently and particularly why my perception of oppression in this space may have differed from the research participants’.

In this section I present the experience of three of the research participants on the culture of higher education and tie these in with literature. Although only two participants specifically

mentioned their struggle with the elevation of one dominant culture in higher education, all the research participants experienced the student protests – which were a response of the students to their frustration with the untransformed culture of the university (see Sections 1.3 and 4.4.2). In the university where this research took place, one of the outcomes of the first nationwide student protests in October 2015 was widespread discussion and deliberation around issues of transformation of the curriculum and the culture of the institution. Hence, although academics may not have engaged with these issues or experienced them personally prior to the student protests, these have been tabled in special committees as well as faculty and departmental meetings across the institution. As such, by the time I wrapped up the data collection phase, each of the research participants had engaged with issues around the culture and curriculum of higher education in different spaces.

5.5.1 Khanyi: Legitimising the people and culture of the university

Khanyi is an academic whose background represents the struggles faced by the majority of black students in historically white institutions (see Section 1.3). As a student, she experienced first hand the oppressive culture of higher education in a historically white institution where there were academics who failed (or refused) to acknowledge the culture of the majority of black students. As such, her academic role and relation to her profession is strongly linked to the social conditions which shaped her during her growing up years.

Khanyi was born and raised in an area of South Africa which, 23 years after independence, is still keenly impacted by the legacy of apartheid. Segregatory politics, not just the remnants of apartheid, are still perpetuating the persistently high levels of poverty, where female-headed households (like the one she grew up in) generally earn less and survive on less per month than other parts of the country (Westaway, 2012). The school education system in this area still resembles the “racially divided and discriminatory” one inherited from the apartheid government, and the “political symbolism of equity and redress” is failing to effect any practical change in the schools (Lemon, 2004, p. 269). Hence, while Khanyi was destined to confirm that “working class kids get working class jobs” (Willis, 1977 book title), she grabbed hold of the educational opportunities afforded her in order to break free from the cycle of oppression and poverty of a working class life. She relates how, although as a lecturer she is now familiar with this culture, she still experiences oppressive practices from both staff and students who are at home in this dominant higher education culture.

She relates an incident where she had a colleague inform her in a staff meeting that “*I’m not gonna be told by someone on a contract how to [do this]*” (Khanyi interview 09/12/2015), effectively shutting her up and in the same breath showing her he does not value or appreciate her opinion. For Khanyi, this remark perpetuated the perception that she is not valued by institutional structures despite her track record in both research and teaching. This lack of respect for her opinion and appreciation of her valuable contribution is also manifested in class where she feels that some students seem to be expecting “*a particular kind of person that is supposed to be teaching them*” (Khanyi interview 24/02/2016). They sometimes respond to what she is teaching by challenging her views and “*trying to prove what you’re saying... is incorrect because Google says that*” (Khanyi interview 24/02/2016). Or they express their disrespect for her accent by “*basically saying sorry mam actually this is not... how it’s pronounced. It is pronounced like this*” (Khanyi interview 09/12/2015).

These brief accounts highlight that Khanyi is caught up in a situation where some colleagues and some students judge her worth as an academic by her employment conditions (contract at that time), as well as the way she looks and speaks (her accent). She laments how white students “*feel at home*” as both students and staff, while she has had to struggle with “*the culture of the university that seeks to legitimise a certain kind of a person that belongs in this university*” (Khanyi interview 09/12/2015), even if this legitimisation is not a deliberate effort by the university or its members.

The higher education culture in formerly white institutions lacks an embrative approach to cultures that are different from its own. While, as Khanyi highlights, some people will thrive in the system, both as students and later as academic staff, others will always struggle and eventually learn to conform to this culture if they want to progress in their academic careers. I have to be quick to point out, however, that as a black academic in the same institution, both Thandi (one of the research participants) and I have not experienced this level of oppression in our respective departments. Thandi recounts how she has heard about it happening to others, but that it’s not something she has personally experienced in her department.

Khanyi’s experiences point to several factors that have contributed to her perception of a dominant culture in higher education that seeks to ignore or discredit other cultures. Firstly, she experienced racial segregation in a schooling system that had been crippled by apartheid legacies (see Section 1.3). In a country that “consistently ranks as one of the most unequal... in the world” in terms of income, health, housing and particularly education (McKeever, 2017,

p. 114), Khanyi had to contend with an education system (high school) that did not adequately prepare her for higher education (Clark and Worger, 2016; McKeever, 2017), and particularly in terms of symbolic access – the failure of students to access the culture of higher education (see Section 1.3).

Secondly, Khanyi relates how some of her lecturers refused to acknowledge the existence of other cultures different from their own in the classroom. Khanyi relates how the examples these academics used to illustrate concepts in their lectures were common knowledge and intuitive for those who shared the dominant culture, but she struggled to understand the examples as they referred to objects, people or activities that she was unfamiliar with. It seems these lecturers were either oblivious of the existence of different cultures (Krauss, 2015), or they were attempting to “‘blend’ their subordinate culture students into white mainstream culture” through deculturation or stripping them of their cultural identities (Kress, 2011, p. 7). While this points to an elevation of one culture as superordinate (Scott, 1990), it can also result in teachers who have gone through this ‘deculturising’ system also perpetuating the same “psychological and cultural violence...on their marginalized students” that they experienced as students (Kress, 2011, p. 7).

And lastly, Khanyi laments the direct challenges from both staff and students because she felt that she did not meet their preconceived ideas about the kind of person who should be an academic. In her research on the formation of identities of black academics in a formerly white Afrikaans university in South Africa, Vandeyar (2010) recounts similar experiences to Khanyi’s. She relates an experience of one black academic who was appointed in order to meet the government’s transformation quotas. This academic experienced “[n]umerous attempts ...to discredit him, to taint his credibility and to question his competence” (p. 928). Another academic in Vandeyar’s (2010) research relates how:

It seemed that the institution had been geared to ‘break her down’ physically, emotionally, mentally and psychologically and she begins to question her self-identity and to question whether fifteen years after democracy the pigmentation of one’s skin still matters? Is she in any way ‘sub-human’ she ponders? How is it possible that in a democratic country at the level of the academe one can be made to feel so humiliated and dehumanised as if you are worth less than a grain of salt? (p. 921)

Khanyi’s experience is therefore not unique, but is perpetuated in other institutions where those who are part of the majority population in the country (blacks) have to endure the perception that their culture is subordinate to the culture of the institution in historically white universities.

5.5.2 Thandi: Authentic self

This seems to have been Thandi's experience who, although she did not experience any oppressive practices from either colleagues or students, the perception of how her culture is viewed within the dominant culture of South African higher education, made it difficult for her to reveal her thoughts in certain spaces. During, and soon after the student protests (see Section 1.3), she found herself struggling to be her authentic self whenever discussions around transformation and the state of higher education came up. For example, she relates how she debated with herself about whether to bring in the issue of "*higher education privileging white middle class students*" (Thandi interview 25/08/2016). "*Mmmm mmmm, do I say this?*" is the question she would often play in her mind, and she held back because her home institution does not feel like a safe space for her to be her real self. She feels she somehow has to play the part she has signed up for because she is worried about 'proximity' and the fact that "*I sit on another committee with you... One day you might have to review something of mine*" (Thandi interview 25/08/2016).

This tension and the pressure to hold back her thoughts and feelings about debates around the transformation of South African higher education reveal that the dominant culture still exerts pressure on black academics to continue to conform to the culture, even in spaces where discussions about transforming this culture are taking place. While black academics are keen to contribute to the transformation of South African higher education, their cultural capital (or lack thereof) may hinder them from doing so. Furthermore, they are not keen to violate the academic protocol by openly challenging their colleagues and oppressive structures for fear of being ostracised (Anderson, 2008).

5.5.3 Zara: Challenging Western pedagogy

Zara has experienced the elevation of the dominant culture in a slightly different way from Khanyi and Thandi. She teaches in a department where they prepare students to work in service-based professions and hence, she feels that the curriculum should have a stronger focus on getting the students to understand the people in the communities in which they will work. However, despite her driving passion to change her students' mindset about their relation to the community and its rich cultural heritage, she sees "*a complete disconnect*" (Zara interview 26/08/2015) between the kind of training her students get and the work that they should be doing once they complete their degrees. Hence, she is always striving to push her students to see that their role involves working within the community so that they can, in a way, experience

the “*lived reality*” (Zara interview 26/08/2015) of the community they are trying to assist, rather than trying to help them from a distance. Her approach is driven by her frustration not only with the way the students’ training is generally approached in her department, but also by “*power dynamics*” (Zara interview 26/08/2015) and low literacy levels in the community and about the community. The university curriculum, and hence the beliefs of the students, negates “*the beliefs and practices which are cultural, which we just don’t bring into our systems of teaching and learning because we just push [the] Western concept*” (Zara interview 26/08/2015). Zara attempts, in her work with students, to expose them to these cultural understandings which have a significant impact on the assistance that students can give, and the positive changes they can make, in the lives of the communities in which they will practice.

Zara’s narrative highlights an issue with the elevation of the Western culture in terms of the curriculum. This curriculum sometimes misses the mark when it comes to the professional skills that students will need in order to perform work after completion of their degrees. In effect then, this points to a dichotomy where there is elevation of one curriculum that corresponds to what she terms the ‘Western concept’ or the dominant culture – a culture which does not always meet the needs of the community that it should be serving. The skills and knowledge that Zara is able to impart to her students go beyond just disciplinary knowledge, but how this integrates with building relationships with community members, social hierarchy and power dynamics, respect for cultural knowledge and how it could be complemented by disciplinary knowledge, and an appreciation of the social inequalities perpetuated by the colonialist and apartheid legacies.

The diagram below (Figure 5-2) summarises the above issues raised by these three academics around the elevation of one dominant culture in higher education:

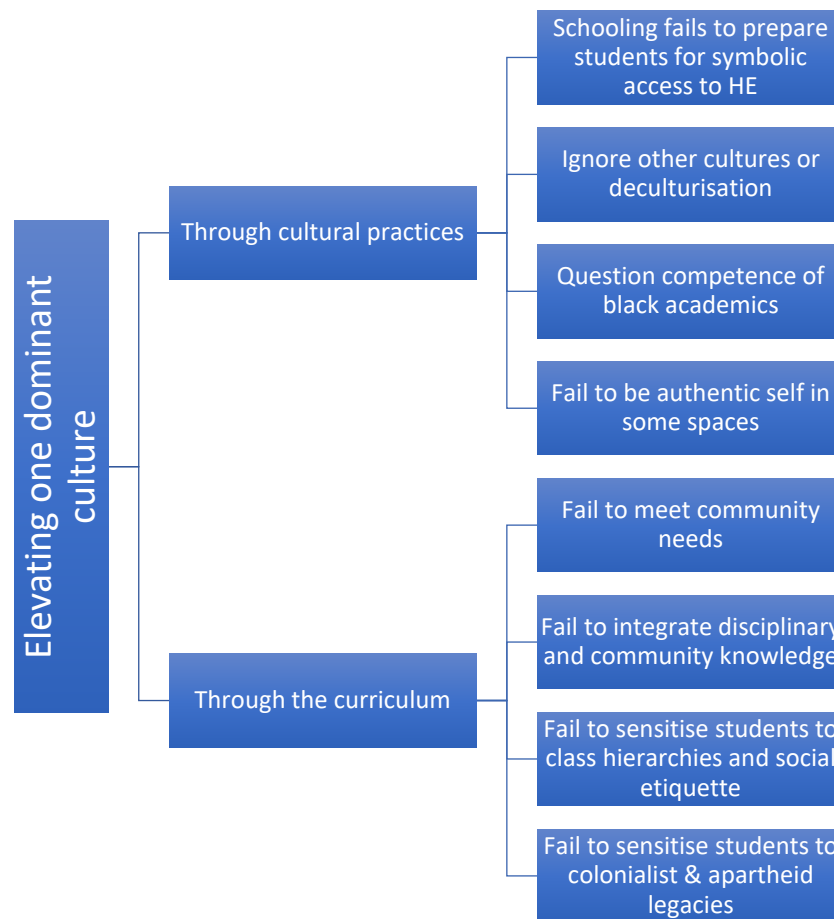


Figure 5-2: Factors that influence the elevation of one dominant culture in South African higher education

The last two sections (5.4 and 5.5) have responded to the first part of the research problem highlighted in Sections 1.5 and 5.3 – excavating the structural forces that have had an impact on the research participants’ academic role. According to the critical realist philosophy, the identification of these structural forces does not preclude the existence of other forces, and particularly how they interact and have causal efficacy on the performance of the academic role (observable events and actions). However, abduction and retroduction (see Sections 3.7 and 4.6) allow me to infer those structural forces that have the greatest import on the research phenomenon with an understanding that my inferences are fallible.

The next section identifies the different resistance strategies which emerged from this study, and how the research participants utilised them in order to mitigate the effects of the structural forces on their academic role. This will then lead into what has been the most exciting part of the research for me – mapping these research strategies to the way the research participants choose and use educational technology (Chapter 6).

5.6 Resistance to structural forces

In Section 4.4.5 I discussed various resistance strategies exhibited by academics, and why they prefer covert, to overt, resistance. These strategies develop into a culture of resistance as they are practiced on a daily basis (Scott, 1987) and become part of the identity of the individual (Clegg, 2008). Resistance (which is transformatory capacity or power₁ relations in critical realism) is always in response to master/slave power₂ relations. But it is important to note that the relationship between these two concepts is quite complex, and, as discussed in Section 4.4.5, the oppressed can easily perpetuate oppression through peer exploitation.

Academics have always been known to take “a vociferous and contrarian stance on the issues of the day” with their “clown to the crown”⁷ approach that acts as a moral compass of society and is “at the cutting edge of societal change” (Staff Reporter, 2008 n.p.). This is because they are “[t]rained in analytical thinking and inured to critique”, a responsibility which forms the basis of what and how they resist (Anderson, 2008, p. 252). And even now, academics continue to challenge a range of national structures and societal issues using different media. In fact, two of the research participants – Khanyi and Allison – have published in popular media about critical thorny issues affecting South African higher education. In this study, however, it seems that the structural forces affecting the research participants at a personal level were handled quite differently. Each of the participants selected to engage in a quiet, mostly non-confrontational, everyday kind of resistance. The resistance strategies they employed are displayed in Figure 5-3 below. They will be unpacked in more detail in the sections that follow.

⁷ Shakespearean analogy

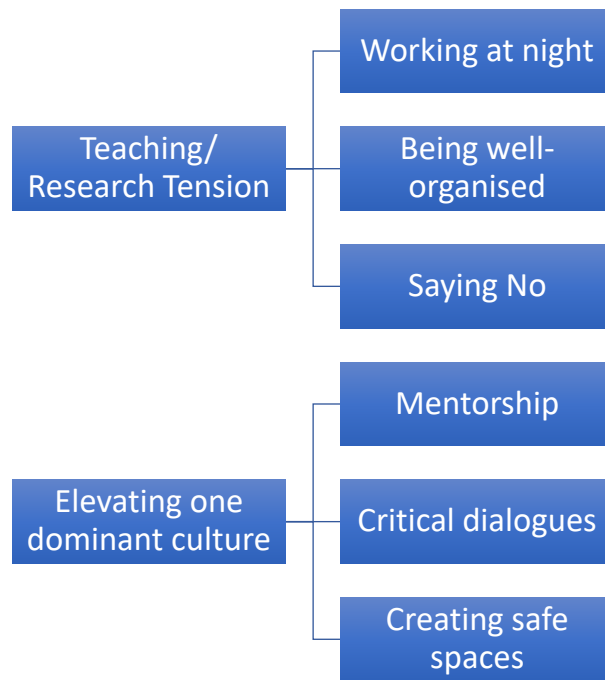


Figure 5-3: Summary of resistance strategies

This section and the next present the research participants’ resistance strategies as they sought to mitigate the effects of the identified structural forces. The chapter will then end by relating this resistance to Archer’s morphogenetic/morphostatic cycle. Because of the inductive nature of the study (see Section 2.8), a theory that relates to the excavated data and its themes was identified after the data had been analysed – hence the retrospective application of the theory.

5.6.1 Resisting the teaching/research tension

5.6.1.1 *Working at night*

The urgent and exigent requirements of the teaching role and fulfilment of other academic requirements has meant that some of the research participants have to carve out a different space and time particularly for research activities. Below I briefly present how this strategy was employed by Emma.

When Emma decided to pursue her PhD, she had to do it after working hours. She recounts how, during her PhD, she would get home and would be so tired that if she sat down before a caffeine fix she would fall asleep on the kitchen table. So she would make herself a cup of tea, down it, then make another one before sitting down and sipping the second cup slowly. When the caffeine started kicking in, she would pull out her laptop and get to work on her thesis until at least midnight or later. Although this was an excruciatingly exhausting process for her, it was her way of quietly resisting the system (see Section 4.4.5) that had marginalised her for

over a decade (see Section 5.4.1). She didn't stop her nocturnal strategy once her PhD was done, but recounts how this has been responsible for her growing publication record and the accompanying respect she has received from the institution. She preferred this clandestine resistance against marginalising powers in order to tackle the weightier (i.e., research) part of her academic role, rather than compromising the limited time that she has with her students.

This nocturnal resistance has left Emma feeling worn out. The excitement and passion that animates her when she speaks about her students is quickly extinguished when she shifts gear:

“Mmmm [deep sigh]. I think perhaps the university would like it if we didn't need to sleep... I've just got so much else to do you know Nompilo. I'm just exhausted. I was editing a paper till after midnight last night and you know hooo [deep sigh] I'm just exhausted. I feel like every year I get to the end of the year and I think, I don't know how I actually managed that.” (Emma interview 17/09/2015)

In terms of the teaching/research tension, Archer's morphogenetic/morphostatic cycle views the structural force as taking place in T^1 (see Section 2.8). Emma's approach to resistance does not involve open confrontation or challenge, instead she opts for an approach that quietly overthrows the forces that have held her back for a long time from progressing in her field. Rather than compromising the time that she has with her students, Emma has opted for an extended working day that negates the possibility of a social life. This resistance strategy (taking place at T^2 - T^3), is not unique to Emma however, as Khanyi, Thandi and Zara indicated that they often have to complete particularly research activities during the night, as the day is packed with student-related and administrative duties. This *working-at-night* strategy has resulted in structural elaboration or genesis (see Section 2.8.1) where these research participants have been able to meet their research goals. In Emma's instance, completion of her PhD, her growing list of research publications and recent promotion are all a testament to the power of her quiet and independently executed nocturnal resistance. As a result of her newly acquired cultural capital in the form of her research and promotion, she has also been involved in setting up and running research seminars in her department in an attempt to support both postgraduate students and younger academics in building up their research and publication portfolios. She has therefore realised her power₁ potential (transformatory agency) where she not only emancipates herself, but actively advocates for the emancipation of others who are oppressed but are not able to exercise their transformatory capacity to overthrow marginalising forces.

5.6.1.2 *Being well-organised*

The teaching/research tension and the other activities required of an academic (committee work, leadership, professional development and community engagement) can probably be better handled if the academic follows an ordered and well-organised approach.

Alexa has, over the years, developed a simple strategy to resist the demands of the department in order to ensure that her academic role and research trajectory are not compromised by the amount of work she is required to do. Firstly, Alexa works efficiently to ensure that she clears her desk of anything that may hinder her focus on research. Of all my research participants, Alexa has consistently sent responses to my emails faster than any of the others. Within minutes of sending through a request or a suggestion to her, her response is in my mail box unless it is her research day, or unless she is teaching. When I sent through the final script of the data I had gathered from her for her approval, she returned it to me within less than half an hour, which is interesting because one of the other participants took months to respond to my email. As she indicated in one of her interviews, this was actually the approach she takes with postgraduate students that she is supervising or assessing. She ensures that within a maximum of two days she has returned feedback on writing so that the student is not held up waiting for a response from her.

Alexa's structural force at T^1 (see Section 2.8) was the high workload demanded by the teaching/research tension and the other accompanying duties of the academic role (see Section 5.4.3). Her resistance strategy at T^2 - T^3 of the morphogenetic cycle involved being well-organised and efficient in order to clear her desk quickly. Her goal was to engage in research activities without worrying about any outstanding academic role commitments. The result at T^4 was also structural elaboration as her students received feedback faster and she was able to get on with a highly productive research trajectory.

5.6.1.3 *Saying 'No' (refusal)*

Refusal is probably the only one of the resistance strategies that is similar to the strategies pointed out in Section 4.4.5. The *refusal* strategy seems quite common with a number of research participants mentioning that they have had to directly refuse some directives or suggestions from management and colleagues in order to avoid extra work that should ideally be shared between colleagues (rather than lumped on one person – the 'domestic labour' phenomenon in Section 4.4.5). They have also exercised the *refusal* strategy when what has been requested of them does not fit in with their values or will draw them away from what they want to accomplish (usually from research).

Alexa relates one such incident which helped her avoid a work overload from her department. Just before she took sabbatical, she was requested to take on an involved piece of work that would be completed during her sabbatical. Because she did not see the urgency of this work and needed the time to complete her research goals for the sabbatical, she just said no. Despite increasing pressure from her department, her refusal to yield under intense pressure won her that battle and she got her full sabbatical. Claire also relates how, in her department, they sometimes work collaboratively on different projects. However, she has had to say no to some requests to take part in projects because she felt they were not aligned with her goals or her skillset.

In Section 4.4.5 I discussed how refusal could possibly mean that the required labour would then be allocated to someone else – thereby resulting in the resistance strategy (power₁) becoming an oppressive force on someone else (power₂). In the two stories highlighted above, this was not the case. Instead, Alexa had to complete the work when she returned from sabbatical, while Claire's colleagues had to find someone else to provide the skills they needed on their research team. In Claire's case, this did not result in any oppressive force at T²-T³ (see Section 2.8) but instead, it was an opportunity for someone else to engage in research thereby positively impacting their career trajectory.

5.6.2 Resisting the elevation of one dominant culture

5.6.2.1 Mentorship

As discussed in Section 5.5, the second structural force that some academics have experienced as oppressive for both staff and students is the elevation of a single culture while deculturalising the rest of the university population. The intense contradiction and conflict Khanyi experienced between the university culture and her home culture placed her in a unique position to help those who were going through the same experiences that she had had. Her resistance strategy therefore focuses on mentoring students who come mostly from historically marginalised backgrounds and struggle with symbolic access (fitting into the culture of the university) (see Sections 1.2, 1.3 and 5.5.1).

By her own admission, most of the students who come to her door are not even in her classes or her department. But because of her open interaction with them in other spaces, they seek her out as a mentor to help them manage the oppressive culture of a formerly white university. Hence, she sees her academic role as that of 'mentoring', 'teaching' and "*produc[ing]*"

knowledge that is relevant to the social conditions that I come from” (Khanyi interview 09/12/2015).

Her mentoring role is built around validating students’ experiences:

“So my role is to actually say you are normal. ...And also your experiences I can relate to your experiences ...not just I can relate to your experiences but we can recognise your experience and also they are part of what knowledge is, rather than kind of parking your experiences and who you are by the [entrance to the university], and then you come into the university and become a different person in order for you to progress.” (Khanyi interview 09/12/2015)

The structural force that Khanyi experienced at T¹ is the legitimisation of one culture as dominant over others (see Section 5.5.1). Because of her experience in this dominant culture, she has found herself resisting its power by empowering others (students). At T²-T³ she exercises a mentoring resistance strategy where her transformatory capacity (power₁) validates students’ experiences and cultures in an environment where they feel alienated and belittled. She is uniquely placed to mentor students into the culture of the university because of her experience in two contradictory cultures.

5.6.2.2 Critical dialogues

Engaging students in critical dialogues that challenge the dominant ways of thinking in higher education seems to be a resistance strategy that is used widely by the research participants to mitigate the effects of the elevation of one dominant higher education culture.

Khanyi does this in her lectures by giving examples that “*bridge the divide*” (Khanyi interview 09/12/2015) and speak to the experiences of different students. In this regard, she often uses examples from popular culture and trending topics that she has gleaned from social media. She asserts that her students – whether they come from Johannesburg, New York or Centani (a rural area in South Africa) – are well-informed and interested in these trending topics. She also finds other ways of marrying different cultures in her classroom by referring in her examples to TV shows from local (Khumbul’ Ekhaya [a South African reality TV show, translated: remember home]) and international (The OC [an American TV series]) sources. In these instances different students’ experiences are elevated and validated, and their knowledge is related to that of the discipline.

During the student protests, Allison had the challenge of opening up spaces for dialogue about issues around transformation of higher education. Her challenge was the racial mix of students in her class, and hence the different opinions about the protests from the students. Her approach

involved framing the issues around the culture, transformation and funding of higher education within the context of her lectures. This gave her access to her students' views and she can "*hear what they base their views on*" (Allison interview 22/08/2016). It also allowed her to challenge their thinking by taking a contrarian stand.

Claire also found a way to use the protest context to have critical dialogues with students. As a department they had strategised about how they would handle the protestors disrupting their classes. And because the lecturers for the particular targeted classes were young and inexperienced, she made sure she was in the class in order to help the young lecturers navigate the thin line between "*opening up negotiations [while] keeping well away from anything that can be seen as disruption*" (Claire interview 22/08/2016). The protestors did show up as expected, but maybe because of the reception they got, they agreed to ask the students questions around rape culture (which was what that particular protest was about – see Section 1.3 for a background on the student protests). Unfortunately, most of the class "*objected seriously and said no you've had three days shutdown or whatever... now we're in class, we want to learn, get out!*" (Claire interview 22/08/2016). The exchange between the protestors and the students got heated, and eventually Claire managed to negotiate with the class that the protestors be allowed to address them for five minutes (rather than the 15 minutes they were asking for) and the class agreed.

She expresses regret that she was not the teacher for that particular class at the time because she felt it would be a great opportunity to "*fan the flames*" and draw lessons from the discipline around the protest issues (Claire interview 22/08/2016). She objected to the way some lecturers would want to carry on with normal lectures and try to pretend it was business as usual, rather than engaging the students in dialogue around protest issues. The interview excerpt below relates particularly to the protest around rape culture which took place in April 2016:

"I know that some of my male colleagues felt quite threatened and felt quite angry about the way that the protest went. I mean even some of those who would describe themselves as feminists were extremely upset when protestors came in for example and started rubbing things off the board you know as they were writing them, which was just rude. I mean I found it mildly funny but you know I'm writing as fast as, you kind of rubbing it off and there's your class sitting there desperately trying to write things down before the protestors arrive with their blackboard duster, you know. It's something like something out of Monty Python really. But they were really really angry you know, that's my intellectual property and you're destroying it you know." (Claire interview 22/08/2016)

In drawing on her past experience, Claire was able to offer support to younger colleagues, engage both the students and protestors in dialogue, and see the humour behind some protest actions which were upsetting to some lecturers.

In each of the above scenarios, the legitimisation of one dominant culture was already an issue in higher education prior to October 2015 (first nationwide student protests), but some of my research participants reported engaging with this issue after they were made aware of it as a result of the student protests. Hence, although the structural force was the legitimisation of one dominant culture, most academics taking part in my study were unaware how big of an issue this was and hence, did not engage with it. But after the student protests in October 2015 and again in April 2016, it seemed that they became aware of this T¹ structural force (the dominant culture of South African higher education). I will venture to assume that their unawareness of the gravity of this for students was because they already belonged to the dominant culture prior to entering the university as academics, and hence it did not feel foreign or alienating for them. So in this instance there had to be a different force (student protests) to raise the awareness of some of the research participants to the existence of the first structural force.

What is encouraging is how they took up the challenge and opened up spaces for critical dialogues with students. They did not shy away from what could have been volatile and unpleasant conversations. Anderson (2008) suggests that academics are intrinsically motivated by, and passionately identify with, their academic work – the same passion I refer to at the start of Section 5.4. This passion gave them the courage to have difficult conversations in order to avoid the erosion of the teaching role they cherish.

5.6.2.3 Enabling safe spaces

Once the groundwork for challenging the dominant culture of higher education had been laid in the form of student protests, there were some unintended consequences that resulted. One thing that came out strongly from the data that resulted from the student protests, was an uncertainty among some academic staff about what they could talk about, and with whom. Two of the research participants were able to have those difficult, but necessary, conversations – about the state of higher education, transformation issues and challenges facing their students – by finding spaces where they felt safe enough to engage and speak their minds.

Soon after the first student protests, Stella found that the departmental space was one of the few places that the academics in her department felt safe to express their opinion about the changes taking place in higher education. They were brought together by the same interest

around how their pure science curriculum could align with the transformation agenda. “*We all kind of break for tea and... it is literally discussing [the discipline] in a big way or discussing the events at the university... It’s a very, very good space to be... the whole time now we were talking about transformation, about contextualising our [disciplinary] teaching*” (Stella interview 11/11/2015). Her department had decided to embrace the demands of the protesting students and begin exploring ways that their curriculum could take into consideration indigenous knowledge and be presented and facilitated in a more socially inclusive way. Hence for Stella, the tea room developed into a safe and supportive space where like-minded colleagues were able to be open about their teaching, challenge ideas and accept criticism.

Thandi, on the other hand, is in an academic role where she interacts extensively with colleagues inside and outside the institution. During these interactions she has noticed a disparity in the way she facilitates discussions, particularly after the first student protests when transformation conversations were taking place in most academic spaces. For colleagues who are from outside the institution (all black), she found it easier to have these difficult conversations than with colleagues within the institution (racially heterogeneous group, see Section 5.5.2). As she puts it, “*it’s all a truth that we all know in the room*” (Thandi interview 25/08/2016). In fact, when she raises these sometimes painful issues, someone in the group will inadvertently express how they have experienced it, a situation which sometimes leads to emotional outbursts because of the pain of oppression they have experienced as a result. Hence, Thandi finds that her safe space is with colleagues from outside the institution who have gone through the experiences she speaks about. And she feels at home in these spaces because she doesn’t have “*to rein it in*” but is “*more bolder in that we go there and still be able to bring it back*” (Thandi interview 25/08/2016). She feels, in these spaces, that she can be her authentic self and peel off the mask while helping her colleagues to interrogate their painful experiences in an untransformed higher education landscape and draw out valuable lessons.

Both Stella and Thandi found safe spaces where they could air their opinion about the changes taking place in South African higher education without fear of reprisal from colleagues. Stella found this space in her department because they were all concerned about transforming their science curriculum and making it relevant for the African context. Thandi’s space was with colleagues from outside the institution who also understood the dominant culture challenges that the students had experienced and were fighting about because they had experienced them too. Hence, for both these research participants, they avoided going against academic protocol (see Section 4.4.5) in openly challenging structural forces, but rather participated in private

transcripts (see Section 4.4.5.2) where they felt safe to share their true feelings about the structural forces.

5.7 Resistance framework

In this chapter I have presented data that demonstrates not only the structural forces that have a marginalising and oppressive impact on academics and their role in higher education, but also the culture of resistance that they have developed in order to mitigate the sometimes painful effects of structure. These structural forces are experienced differently by different academics. The main structural forces highlighted in this chapter are the teaching/research tension and the elevation of one dominant culture. Table 5-1 below summarises the key findings from this chapter.

Table 5-1 Structural forces, impact and resistance strategies

Structural force	Factors influencing its perpetuation	Resistance strategies employed by participants
The teaching/research tension	<ul style="list-style-type: none"> -Ambiguous messages -Emotional attachment to teaching -Urgent teaching role -Departmental dynamics & oppressive practices -Pressures of career trajectory 	<ul style="list-style-type: none"> -Working late into the night -Being well-organised -Saying no
Elevating one dominant culture <i>1) Through cultural practices</i>	<ul style="list-style-type: none"> -Schooling fails to prepare students for symbolic access to higher education -Academics ignore other cultures or deculturation -Question competence of black academics -Fail to be authentic self in some spaces 	<ul style="list-style-type: none"> -Mentorship -Critical dialogues -Creating safe spaces
Elevating one dominant culture <i>2) Through the curriculum</i>	<ul style="list-style-type: none"> -Fail to meet the needs of the community -Fail to integrate disciplinary and community knowledge -Fail to sensitise students to class hierarchies and social etiquette -Fail to sensitise students to colonialist and apartheid legacies 	

While the structural forces, the factors impacting their perpetuation and the resistance strategies employed by the research participants have been presented above as they emerged during the research study, I used theory retrospectively (see Section 1.7) to frame the emergence of the resistance strategies using Archer's morphogenetic/morphostatic cycle (see Section 2.8). This section shows how the culture of resistance taking place in the $T^2 - T^3$ level is ultimately a consequence of the structural conditioning resulting from forces in T^1 , and has an impact on the social elaboration/reproduction level (T^4). It also presents the resistance framework used to conceptualise the resistance strategies employed by the research participants.

The first level of the resistance framework in this research context is the existence of oppressive and marginalising forces at T^1 . These forces are mostly historical in nature, emerging from the legacy of colonialism and apartheid. The first two columns in Table 5-1 elaborate on these structural forces and the factors that engender their perpetuation. The forces not only pre-date the resistive actions of the research participants, but also condition the range of actions they can engage with and how they interact with the social context (T^1). In effect, this means agents will only exercise resistance if oppression or marginalisation takes place first – without structural forces, there is no need for resistance. Time has an effect at this first level of the framework. Between T^1 and T^2 , there is a time period when structural forces exercise their power over social agents as they become members of the particular structure. Since structure and its powers predate the social agents, this time period represents the time-period when social agents feel the effects of oppression or marginalisation, but have not yet taken any action or form of resistance against these forces. This time-period varies for each social agent and each context and structural force, with one research participant taking over a decade (see Section 5.4.1), while the urgency of the contextual situation dictates that other resistance strategies take place as soon as the structural force exerts pressure on social agents (as with student protests).

Secondly, the culture of resistance often emerges not only from the oppression or marginalisation by structural forces, but particularly because it conflicts with one's personal ideology. Hence, each of the academics in this research study were driven into resistance 'mode' by a need to protect one's authenticity, one's values, one's identity – and ultimately one's sanity – from the impact of structural forces. The structural forces (power₂ relations) are seeking to absent something that the academics hold dear, something which ultimately defines who they are or who they are striving to be. Because there isn't always a shared understanding

among academics of fundamental values, or the mode in which they should be enacted, most of the participants' resistance plans and strategies have been individualistic (self-help). And even in instances where the goal is collective emancipation, the participants start from a deeply personal and individualistic value system in order to carry out resistance strategies.

The third level is the resistive actions (power₁ relations) taken by academics to mitigate the effects of oppressive and marginalising forces (agency exercised between T² and T³). As has already been highlighted, I focus in this research on the arsenal of resistance strategies that the research participants carry out in the background, mostly out of sight of the authorities enacting or perpetuating the oppressive practices. In some cases, however, they have had to resort to openly challenging those forces (see Section 5.6.1.3). These resistance actions are usually perpetuated over a period of time. For the participants to have an effective resistance approach, it has to be a strategy, a long-term approach, a way of life – hence my use of the term *culture* of resistance. Once-off acts of quiet resistance may not have the same impact on structural forces and the life of the social agent as an active, lived, everyday kind of resistance.

And lastly, in the process of engaging in this culture of resistance, the data indicates that there is usually a shift in identity – but always in line with the values that the research participant holds dear (social conditioning or elaboration at T⁴). As highlighted in the second level of this resistance framework above (also see Section 4.4.4), there is a tension between the requirements of structural institutions and social agents' values and identities. In this instance, structural forces dictate the 'public' identity that has been set out as the ideal for its members. The structural forces therefore constrain through various mechanisms the kind of identity that an academic should have. In contrast to these forces, academics' resistance strategies (mostly private transcript) help them construct the kind of identity that, on the surface, will appear to conform to the public transcript of the institution, but aligns with their values (see Section 4.4.5.2). Figure 5-4 below gives a diagrammatic representation of this resistance framework.

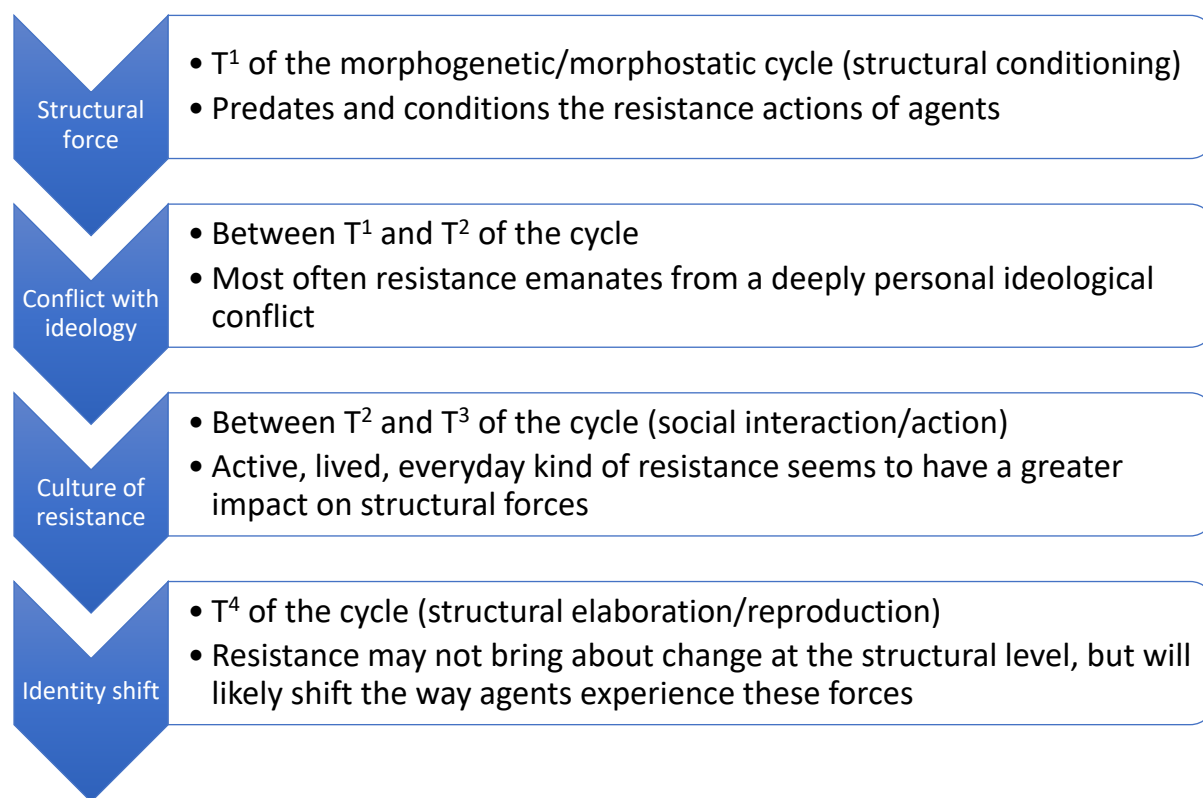


Figure 5-4: Resistance framework

The resistance framework in Figure 5-4 will be utilised in Section 6.5 to frame the resistance strategies in educational technology use.

5.8 Summary

Two main structural forces were presented in this chapter, the teaching/research tension and the elevation of one dominant culture, which were experienced by the research participants in different ways. As presented in Table 5-1, various factors impacted the perpetuation of these structural forces in the academic role of the research participants. The table also presented a summary of the resistance strategies employed to mitigate the impact of the structural forces. Table 5-1 presented the themes as they emerged from the research. However, because of the need for theoretical constructs to explain data, and the lack of such in the educational technology field (see Section 1.1), in Section 5.7 I attempted to map the themes from this chapter (and summarised in Table 5-1) to Archer's morphogenetic/morphostatic cycle. This was done in order to present a framework that could possibly represent the emergence of the culture of resistance for the research participants in this study. This resistance framework will be utilised to demonstrate that the participants' use of educational technology follows similar

resistance patterns to their other academic roles, even though the actual strategy employed may be different.

Chapter 6

What is the significance of resistance on educational technology integration? (Educational technology and resistance)

“I’ve got ...a deep complicated relationship with technology.”
(Khanyi interview 09/12/2015)

6.1 Pre-text

The previous chapter presented the structural constraints that engender power₂ relations on academics, thereby acting to marginalise and oppress their efforts to fulfil their academic roles. The main forces which were highlighted in the previous chapter were the teaching/research tension and the elevation of one dominant culture in South African higher education (see Sections 5.4 and 5.5). In light of this, academics have engaged in a range of covert resistance strategies (see Section 5.6) including:

- Working extra hours
- Being well-organised
- Saying no to extra duties
- Mentoring students who are alienated by the dominant culture
- Having critical classroom dialogues with students
- Finding safe spaces to ‘be authentic’.

Table 5-1 provided a visual representation of the structural forces, factors that influence their perpetuation and the resistance strategies that the research participants in this study employed in order to mitigate the effects of those structural forces.

As elaborated in Section 4.3 (see also Sections 3.4.3, 4.5.10 and 5.4.4), I engaged in a self-reflexive journey that helped me to subjectively excavate which structural forces were pertinent to this thesis as informed by my personal experiences, the literature and the experiences of the research participants. Hence, although there were other oppressive structural forces that the academics had to contend with, I allowed the above (personal and participants experiences,

and literature) to highlight those issues and themes that seemed to have the greatest import on the resistance strategies that the research participants had chosen to engage in. This approach is in line with critical realist ontology which views reality as stratified, social agents as having multiple perspectives of that reality, while the role of the research is to find the most plausible explanation of reality based on these multiple perspectives (including my own) and the observation of events and activities (see Sections 2.4.1, 3.7 and 4.6.2). Critical ethnography adds further depth, insisting that our value judgements should help us decide which is the most likely explanation for the phenomenon we are investigating, based on the data we have uncovered (see Section 3.4.2). The resistance strategies employed by the research participants (see Section 4.4.3) were focused on mitigating the effects of structural forces mostly at a personal level, although where students were involved, the resistance by academics (participants) tended to occur on their behalf as well (this did not seem to be highlighted much in the literature). In the same vein, these same resistance strategies impacted the research participants' educational technology choices and practices (Sections 6.4 and 6.5).

In Section 1.1 I highlighted a number of criticisms about educational technology research. The three which are addressed in this study are the failure of researchers in the field to rely on theory to frame and interrogate their practice, failing to situate the study of educational technology within its socio-political context, as well as the lack of understanding by educational technologists like myself of the reality of academics' technology integration practices and challenges (see Sections 1.1, 1.1.3 and 1.5). In order to respond to the first criticism, I have attempted to undergird the research process through the use of critical realist philosophy (see Chapter 2), and frame the research results through the use of theory (see Section 2.8). In this chapter I attempt to respond to the second part of this criticism by seeking to understand the structural constraints in educational technology integration. In doing this, I will respond to Research Question 2 and its associated research goals – which also serves to connect Chapters 5 and 6:

Research Question 2: *How does this culture of resistance permeate their integration of educational technology?*

- **Goal 4:** Uncover the structural forces that have an impact on academics' integration of educational technology
- **Goal 5:** Understand the resistance response to these forces in their use of educational technology

Furthermore, as a direct response to the need to better understand academics' use of educational technology, I highlighted my frustration with the technical skills training workshops we offered them, which I felt did not help them address the constraints of structural forces (see Section 1.1.1 and 1.1.2). Hence, the second part of this chapter will seek to respond to the data I have excavated in this thesis, thus addressing the following research question and goal:

Research Question 3: *How should educational technology support be conceptualised differently in order to be appropriately sensitive to structural constraints and the culture of resistance of academics as they integrate educational technology in a South African university?*

- **Goal 6:** Reflect on how oppressive structural forces and the culture of resistance can be incorporated into educational technology support.

Hence, this chapter carries on the argument and conclusions I made in Chapter 5, namely that there are structural constraints in the South African higher education sector which have an oppressive and marginalising effect on academic staff. In response, academics have developed a quiet, everyday form of resistance which seeks to daily mitigate the effects of these structural forces, without necessarily seeking for the overthrow of these oppressive structures. In this chapter I specifically argue that the research participants' integration of educational technology is shaped by this culture of quiet resistance that they have adopted in other areas of their academic work.

In this context of oppression and resistance, we as educational technologists firstly fail to offer academics the kind of support that will help them mitigate the forces that hinder their work with educational technology, and secondly support their preferred resistance strategies (see Section 1.1, 1.1.2 and 1.5).

To align with the inductive nature of this study, I present in the sections that follow, literature on resistance to technology, which I sought out retrospectively to confirm, conceptualise, or interpret findings, and how this view differs from my findings in this thesis so far (Section 6.2). This is followed by a summary of the resistance principles from Section 5.6, and particularly how the same resistance strategies are employed in the research participants' educational technology integration practices.

6.2 Resistance *to* versus resistance *with*

In this section I show how resistance has traditionally been framed in educational technology literature by focussing on how and why teachers resist new technologies. As indicated in

Section 1.7, the use of literature in this thesis was done retrospectively as a response to themes that emerged during data collection. Hence, literature's view (teachers are resistant to technology) is contrasted and compared with the results of this thesis (teachers use technology to support their resistance to structural forces). This 'upside down' view of resistance *with* educational technology (technology *complements* resistance), rather than the more common resistance *to* educational technology (resistance *conflicts with* technology) is particularly pertinent in the African context with its unique colonial history whose legacies are still alive and well in higher education today (see Section 1.2). I label these as the complementary and conflictive perspectives of resistance and technology.

6.2.1 Resistance in information technology literature (conflictive perspective)

Prior research into the history of technology and technological change in organisations has provided valuable insights into the different ways social agents react to and interact with new IT systems (Bauer, 1995; Edgerton, 2008; Lapointe and Rivard, 2005). These accounts have traditionally focused on resistance to technology as a key challenge in the implementation of new IT systems (Kim and Kankanhalli, 2009; Lapointe and Rivard, 2005). Hence, their resistance is viewed as a hindrance to progress and innovation (Bauer, 1995; Edgerton, 2008). Users' resistance of new IT systems is attributed to their desire to maintain the status quo, psychological commitment to the existing system, perceiving the IT implementation goals of management as oppressive and a range of other external and intrinsic barriers (Kim and Kankanhalli, 2009; Polites and Karahanna, 2012; Selander and Henfridsson, 2012). The resistance strategies can range from passive (e.g. cynicism, workaround activities) to aggressive forms (e.g. various forms of protests and sabotage) (Ferneley and Sobreperez, 2006; Lapointe and Rivard, 2005; Selander and Henfridsson, 2012).

The issue with the majority of studies that discuss resistance to new IT systems is that researchers view it as a negative aspect, a challenge that hinders the successful implementation of the new system. While "philosophical thinking give[s] resistance a moral dignity... and aura of 'heroism'" the situation is quite different in the IT discipline where "[t]he managerial and technocratic discourse stipulates resistance as a structural or a personal deficit. Resistance is irrational, morally bad, or at best understandable but futile ... it serves mainly to blame those who resist" (Bauer, 1995, pp. 1, 2), as well as recommending strategies to overcome user resistance. This makes the assumption that new IT systems are superior to what was there before and failing to realise that resistance is actually a requirement in the technology

innovation space: “In choosing one technology, society was necessarily resisting *many* ‘old’ and ‘new’ alternative technologies” (Edgerton, 2008, p. 9). This thesis challenges this perspective in literature.

6.2.2 Resistance in educational technology literature (conflictive perspective)

Following in the footsteps of the wider IT discipline, research in the field of educational technology seems to have a strong focus on resistance to technology by both staff and students (Blin and Munro, 2008; Cummings, 1995; Griffiths and Goddard, 2015; Howard, 2013; Yilmaz and Kılıçoğlu, 2013). In order to account for the disparity in the way academics use educational technology, the central argument is that constraints and barriers result in academics resisting its implementation in different ways (Bingimlas, 2009; Blin and Munro, 2008; Cummings, 1995; Griffiths and Goddard, 2015; Hammonds et al., 2013; Howard, 2013; Mueller et al., 2008; Schoepp, 2005; Touray et al., 2013; Yilmaz and Kılıçoğlu, 2013). The resistance strategies employed in educational technology contexts are not as widespread as they are in other IT disciplines, consisting mostly of passive forms of resistance. Low-level usage that duplicates the face-to-face transmission mode of teaching and uses the learning management system to distribute notes and other resources is the major resistance strategy employed by academics (Blin and Munro, 2008; Gregory and Lodge, 2015; Reid, 2014). Besides low-level usage, some academics have ignored educational technology altogether and do not use it in their classes at all (O’Hanlon, 2009; Reid, 2014).

There are a number of reasons that have been put forward in the literature to try and explain why academics passively resist educational technology:

- Academics have a high workload in other academic roles and their institutions fail to allocate time for training and planning or to adequately reward educational technology initiatives (Gregory and Lodge, 2015; Reid, 2014) (similar to the teaching/research tension in Section 5.4.1).
- Academics’ knowledge of advanced learning management system tools as well as how to select which tools to use in their teaching, is less than ideal (Blin and Munro, 2008; Reid, 2014; Schneckenberg, 2009).
- Academics are used to working autonomously and may resist any attempts to make the use of educational technology a compulsory institutional requirement (O’Hanlon, 2009).

- There is also a lack of consultation with academics about the purchasing of new educational technologies, and consequently, these technologies are usually controlled from outside academic departments (Reid, 2014).
- Academics can also exhibit resistance to the position of power that the system implementers adopt as they help the academics integrate a new eLearning system (Griffiths and Goddard, 2015).
- Breakdowns and unexpected outcomes of educational technology innovations have also been cited as another major barrier that leads to resistance (Hannon, 2009; Howard, 2013; Westberry, McNaughton, Gaeta, & Billot, 2012; Zemsky and Massy, 2004).

The issues highlighted above as having a causal power on the emergence of resistance to educational technology in the Western world are not necessarily all technological or mechanical in nature. This highlights the social nature of educational technology integration and how existing structural forces can impact its use. In Section 6.4, however, I highlight that some of the above issues were experienced by the research participants in this study but this did not result in them avoiding technology, but rather using technology as a tool to resist structural forces in the social context. This begs the question: could the same results that I have, be interpreted differently? As highlighted in Sections 3.4.3.4 and 4.5.10, critical ethnography involves representing others' culture through my own; my assumptions, positionality and reflexivity. As such, another researcher could potentially understand and interpret the data differently (see Section 3.3).

6.2.3 Resistance in African educational technology literature

In the African context, researchers also tend to focus on resistance to educational technology by academics, and the different barriers responsible for this resistance. However, the barriers that lead to resistance are mostly unique to the African context because of the legacies of colonialism (Sections 1.2 and 1.3). These African researchers highlight the apathy and avoidance of academics to educational technology (their passive resistance strategy) as stemming from the following structural forces:

- Poor infrastructure in terms of lack of proper facilities to house computers, high cost of hardware and software usually sourced from first world countries, low bandwidth and erratic internet access and erratic power supply (Abubakar, 2011; Anis, 2011; Ifinedo, 2007; Musyoka, Otieno, & Stern, 2012; Namisiko, Munialo, & Nyongesa, 2014;

Nyerere, Gravenir, & Mse, 2012; Oroma, Wanga, & Ngumbuke, 2012; Tella, 2007; Unwin et al., 2010; Weber, 2010b; Wright, Dhanarajan, & Reju, 2009; Yegon et al., 2014).

- Lack of policies at institutional and national level to guide implementation of educational technologies (Anis, 2011; Cross and Adam, 2007; Makokha and Mutisya, 2016; Sife et al., 2007; Tella, 2007; Yegon et al., 2014).
- Time constraints to explore and learn how to use educational technology (Anis, 2011; Kinuthia and Dagada, 2008; Makokha and Mutisya, 2016; Tella, 2007).
- Lack of technology support and skills (Abubakar, 2011; Bharuthram and Kies, 2013; Ekundayo and Ekundayo, 2009; Kwofie and Henten, 2011; Makokha and Mutisya, 2016; Mallinson and Krull, 2013; Mbatha et al., 2011; Namisiko et al., 2014; Oroma et al., 2012; Sife et al., 2007; Ssekakubo et al., 2011; Unwin et al., 2010; Weber, 2010b; William, Elzie, Sebuwufu, Kiguli, & Bazeyo, 2013).
- Negative attitudes towards technology (Ekundayo and Ekundayo, 2009; Ifinedo, 2007; Kenan and Pislaru, 2012; Kwofie and Henten, 2011; Sife et al., 2007; Tassiopoulos, 2010; Tella, 2007; Wright et al., 2009).
- Environmental issues which lead to faster depreciation of computers. These include untarred roads and dry areas resulting in dust accumulating in computers and high temperatures (coupled with poor or non-existent cooling systems) resulting in faster depreciation of computers (Oroma et al., 2012).
- Western technology that fails to acknowledge the African culture and approaches to teaching and learning in the local context (Edmundson, 2007; Vesisenaho, 2010; Wright et al., 2009).

Most of these (unlike the previous list of barriers in the Western world) are mechanical or technological in nature, or directly linked to the technology in some way, e.g. environmental issues, negative attitudes towards technology and lack of technology support. Although the existence of these barriers may be tied in with Africa's colonial legacy, and reflect the crisis of developing nations that are still reeling from the exploitation of their natural resources (Section 1.2), most research does not engage with the social aspects of technology integration, i.e., the socio-political context. In this context, it is vital to excavate how Africa's unique colonial history has had an impact on the way academics integrate educational technology, and particularly how this integration is a form of resistance to the structural forces. This was one of the issues that I sought to address in this study (see Section 1.5).

6.2.4 Reflecting on my evolving understanding of resistance (from conflictive to complementary perspective)

Considering the proliferation of studies in both the wider IT field and in educational technology that focus on resistance and finding ways to overcome it, I was initially convinced of the efficacy of following the same route (see Section 1.1.2). Hence, at the start of this research, I was interested in finding out why there was a disparity in the level of use of educational technology by academic staff (conflictive perspective) (see Section 1.1.2). My concern was particularly with those academic staff who had attended our training workshops or other educational technology events and who did not seem to change their practice in any way after these events. This view is quite similar to observations by other researchers in the field about the educational technology skills training workshops (Blin and Munro, 2008; Reid, 2014; Schneckenberg, 2009), but it also reflects my own uninformed ignorance and untested assumptions at the start of the research. Because most studies in the field were focusing on barriers, technology acceptance and resistance to technology (conflictive perspective), I felt that this was a viable approach towards understanding this disparity. My aim was to find ways to help academics overcome these barriers and improve their use of educational technology in pedagogically sound ways. However, upon deeper inquiry and critiquing my own assumptions through employing the critical ethnography principles in Chapter 3, as well as reflecting on the data and the structural constraints that academics had to contend with in their academic role, I realised that this perspective and approach did not do justice to the complex and messy context of educational technology integration. It seemed to me that if I pursued this line of research, then my research results would fail to bring about any change in educational technology integration practices. In effect, the research results would not move me any closer to the reality that the academics were experiencing with educational technology, and particularly in the peculiarly constrained South African context. For this reason I followed an inductive approach in order to avoid imposing my pre-research assumptions onto the social situation.

As mentioned in Section 1.1.2, a field will regard certain popular topics as relevant, sometimes to the exclusion of all else. Researchers then become pre-occupied only with those conjecturally relevant areas of study, and actually miss the mark when it comes to understanding the lived experience of the culture under study. These relevant topics shape what is noticed by future researchers, and, particularly in educational technology, those un-told or ‘irrelevant’ topics are counted as hypothetical or at best inconsequential (Bigum and Rowan, 2015; Bromley, 1997).

Contrary to findings of the research studies highlighted earlier in this section, that academics resist new technologies and we therefore need to find innovative ways to get them to use these technologies for teaching (conflictive perspective), I found that actually their use of educational technology aligned closely with their approach to resisting structural forces in their academic role (complementary perspective). For someone on the outside looking in, it could seem like there was no, or very little, pedagogical soundness in how the technologies were used. An example is one of the research participants who had three items on her learning management system course site, and by her own admission did not like technology at all. These items were actually folders containing her PowerPoint slides for the course. She would contact our educational technology support unit a few weeks before the exams to request for assistance in uploading these slides onto the learning management system.

But with further questioning and conversation with this particular research participant, I found that the affordances of the learning management system that she was aware of contrasted with deeply held beliefs and values about teaching and learning: the kind of teacher she was and the kind of learning and engagement she wanted to engender in her class. The site therefore held no use for her except as a way to ensure that her students were able to access her PowerPoint slides. Instead, she used a technology in her classroom which supported her learning outcomes and extended what she was already doing with her students in the classroom. In fact, her use of the technology was done in such a way as to challenge stereotypes and the culture of the university (see Section 6.4.1).

In a situation like this – a course site containing just a couple of resources with no visible student engagement – it would be easy for an educational technology support person like myself to conclude that there were obvious barriers to technology use which needed to be addressed and overcome. This understanding would be further cemented by her own admission that she just didn't like technology and therefore did not use it for teaching. This points to an important point about the crucial role of in-depth qualitative research in helping the researcher uncover the true nature of the particular phenomenon under study from the research participants' point of view.

My conceptualisation of the kind of support that this academic needs would pan out very differently depending on which perspective I had assimilated in terms of her use (or non-use) of educational technology (Section 6.5). I could have viewed her in the first instance as one who *resists* educational technology and needs to be encouraged to overcome her fear or

apprehension with new technologies. Instead, in the second instance through doing the research the way I did, I was able to perceive that she selected technologies that resonated with her identity and helped her *resist* various structural forces that invaded the classroom context. Hence, the kind of support I would offer her would sustain and reinforce her culture of resistance while remaining true to her values and identity (Section 6.6.6.2).

Educational technology adds a layer of oppression in an already constrained African context which has the potential to aggravate the marginalisation academics (or their students) are already experiencing. I will show in Section 6.4 below how these added constraints play out, but more importantly, how the same culture of resistance which the research participants exercise in their other academic roles actually permeates to their integration of educational technology. Furthermore, the rather simplistic technical training offered by our institution stands in sharp contrast to the complex mix of processes involved in the selection and integration of educational technology, and the forces that strive to hinder this process. Hence, this chapter will also propose various aspects to consider when thinking about educational technology support which seeks to be responsive to both the culture and the values of African higher education and the academics who are actively involved in integrating diverse educational technologies.

6.2.5 Structural forces impacting educational technology practices

Section 6.2 highlighted structural forces (barriers and constraints) that have an impact on educational technology integration as outlined in extant literature. As discussed in that section, academics resist the use of technology as a result of these structural forces. Most of the forces highlighted are technical in nature (particularly in the African context) (Sections 6.2.2 and 6.2.3), but the rest include socio-political issues like power, workload, desire to work autonomously and lack of consultation about technology purchases (Section 6.2.2). There may also be unexpected social outcomes even though the technology may work as expected, leading to resistance to further technological innovations in teaching (Hannon, 2009; Howard, 2013; Westberry et al., 2012; Zemsky and Massy, 2004) (Section 6.2.2). In the African context, a further issue is adopting Western-developed technologies that do not take into consideration the culture of the African context within which they are integrated (Section 6.2.3). As I reflected in Section 6.2.4, this combination of resistance and the barriers that lead to resistive acts by academics had an impact on the way I had initially planned to approach this thesis.

In light of the above, this section elaborates on the structural constraints that academics have indicated as having an impact on their educational technology practices. These will be closely related to the constraints they experience in their other academic roles as highlighted in Sections 5.4 and 5.5.

The two structural constraints from Sections 5.4 and 5.5 are the teaching/research tension and the elevation of one dominant culture. In this section, the structural forces encountered by academics which relate to their educational technology practices are similar: 1) teaching/student support tension and 2) untransformed university culture. While the first structural force does not relate specifically to research, the teaching component results in tensions when the research participants attempt to balance this with supporting their students to use technology for learning. The second structural force relates to the same one highlighted by the research participants in Section 5.5 – struggling to mitigate the effects of an untransformed higher education culture. The two structural forces will not be discussed separately from the structural forces (as I did in Chapter 5) but will be integrated in the next section's discussion. This is because the focus of this thesis is to highlight *how* the structural forces were resisted.

6.3 Enabling safe and responsive learning spaces

The resistance strategy that seems to undergird the educational technology integration strategies of the academics taking part in this study is the desire to enable safe learning spaces for the students. Each of the stories below highlights a sensitivity to the institution's colonial history, and a need to ensure that technology does not aggravate its negative impact. This reflects a desire to be responsive to the marginalisation and oppression that still plagues the majority of students. Furthermore, these academics' technology integration practices seem to be driven by a value system engendered by their resistance to the marginalising and oppressive forces elaborated on in Chapter 5. This will be elaborated on in Section 6.5, after presentation of the data in this section.

6.3.1 Challenging the dominant culture

The opening up of access to South African higher education has led to an increase in the diversity of students in the system (see Section 1.2.1). However, this diversity has not necessarily been accompanied by a change in the culture of higher education to cater for the needs of the different students. Instead, some departments have exhibited institutionalised

stereotypes, which are the conventional assumptions and behaviours that have pervaded specific departments or whole institutions, as a likely consequence of structural conditioning (T¹). These stereotypes can result in oppressive behaviours being perpetuated by particular groups of people on others, with no recourse or reproof from the institution. The excerpts in this section highlight how some institutionalised behaviours, i.e., oppressive assumptions about students' technological abilities, can result in 'permitted injustices' (see Section 2.3.2), and how individual academics have had to exercise their agency to resist them through the use of educational technology.

Stella is one such academic, who during our interviews repeatedly expressed deep concern for the lack of support given to students who are expected to use the university's educational technology resources from the start of their first year.

“What I do feel very sorry for is students who arrive here and even when I say go to [the learning management system] the students have never touched a computer. And I don't know how to get around that.” (Stella interview 11/11/2015)

Her concern is driven by her active involvement in community engagement work in the local high schools. These spaces, as highlighted in Section 1.2, are still reeling from the negative effects of colonialism and apartheid. Although she is from a white, middle-class background, her weekly engagement with the students in these schools opened her eyes to the reality of the plight of students who struggle with no teachers and no equipment or resources for the subjects in her field. Her deep concern has driven her to align with those who are oppressed by the system, and hence Stella took it upon herself to not only air her grievance with the system in a private space (like the interview I had with her), but to challenge it in different forums and call for change (public communication of a private transcript, see Section 4.4.5.2). She was able to contest institutional traditions at the committee level, and fervently motivated for some kind of basic learning management system training for students during orientation week, before the start of lectures. She was understandably elated when this training was included at the start of 2017 and her students were exposed to the learning management system and its basic functions even before the start of lectures.

Stella resisted structural forces in the form of institutional traditions and assumptions about student knowledge by openly challenging them and bringing about change. In a situation where T¹ structural conditioning (see Section 2.8) was a constraining force on students' ability to use the institutional learning management system, Stella exercised her agency at T² to T³ in her

interaction with the structural forces thereby bringing about structural elaboration in T⁴. It seems that most instances of resistance in this study are the quiet, everyday kind of acts originally directed at mitigating the effects of structural forces on the individual self. However, examples like Stella's (as well as Khanyi in Section 5.4.4), indicate a concern with students as the driving force behind a more direct and combative form of resistance to structural forces. In effect, the culture of resistance breaks out of the boundaries of 'quietly going about your business' because it is no longer for oneself, but for the oppressed who do not have the transformatory capacity (power₁) to overthrow structural forces on their own.

On a similar note, Allison is meticulous in how she lays out her course on the university's learning management system. She is conscious of the stereotypes around the technological abilities of students, and strives to ensure that the students do not have the same challenges she faced when she was in their shoes. She relates how, when she was a student, the available system for sharing resources was difficult to access as she had to remember a rather complex network string path in order to successfully access it.

"That was difficult you know to then... go into run and forward slash. ...and to find that was always difficult you know. It was sort of in the network somewhere so the interface was very difficult to manoeuvre you know. ... if you got that wrong then it would just say sorry we don't know what you're talking about and very often it would be down and it just wouldn't come up and so it was very difficult to manoeuvre. ...you kind of get to the point of thinking well what's the point you know. As a student you think well I can't find the resources. I'll just do without them..." (Allison interview 24/02/2016)

Another academic who resists structural forces by challenging cultural perceptions is Khanyi. She kicked off our discussion about educational technology with the admission that she has a *"deep complicated relationship with technology"* (Khanyi interview 09/12/2015). This, to me, signalled a tension between what she perceived as the university's expectations and her actual use of educational technology. Furthermore, she feels strongly that technology *"depersonalises the learning space"* (Khanyi interview 09/12/2015) thereby individualising what should be *"a social space before it is an academic space"* (Khanyi interview 24/06/2016). In fact, she felt that she was not using technology at all, until further probing in the interview when she admitted to using videos during her lectures. Interestingly, her view of what technology for teaching is centred around the use of the learning management system, not videos.

Khanyi's use of videos in her teaching has been driven by her value system, her desire to engage students in the classroom and challenge them to think differently about the way they

have been socialised into seeing the world and others. In one of her first lectures, she kicks off the discussions with an [Always commercial](#)⁸ titled #LikeAGirl which challenges gender stereotypes:

“And my first video is always the nice video of the Always advert whereby they all talk some sort of lots of shitty things but anyway. ... It talks about how basically we are socialised into certain stereotypes about gender... I’ll show them in class and then just after the video and say so what are your thoughts about that video and then most of them they’ll start laughing. ... They love that advert. And then now you say so what do you think. And they start laughing kwakwakwakwakwakwa and then once you turn on the academic mode they’re like ohhhhhh you know. So it kind of it’s always a nice picture whereby they don’t take it seriously at first but once you start deconstructing the advert and they see how it relates to their own lives they’re like ahhh. And then you ask them again so what do you think about the advert. You let them watch the advert again and they’re like yahhhhh, you know so yah that’s how I use it.” (Khanyi interview 09/12/2015)

Khanyi’s selection and use of videos in her classroom is driven by the need to challenge cultural perceptions while developing a different breed of students. She views these students firstly, as future leaders who need to be not only aware of, but also sensitive to, the political and cultural issues affecting the majority of the country’s population. Secondly, her videos (and the discussions that ensue) are selected and designed to model critical thinking and hence develop critical thinkers who are not afraid to speak out about the injustices and inequities still inherent in post-apartheid South Africa. This is all done in the vibrant and engaging atmosphere that she maintains in her classroom: *“I’m all about passion. I’m all about emotions. I’m all about let’s change things”* (Khanyi interview 09/12/2015).

As a young black academic, Khanyi’s quiet form of resistance has spilled over into her selection and use of educational technology. Although she admits to being very uncomfortable with technology, the use of videos in her classroom seems to have helped her meet her teaching values: challenging students to think differently about their world and giving them a voice to speak out for the oppressed. Consequently, Khanyi has created a safe learning space where students learn to speak out without fear of criticism, while also being responsive to the structural forces that are still constraining both higher education and the society at large in post-colonial and post-apartheid South Africa. Although it is difficult to trace the structural elaboration (T⁴) effect of Khanyi’s resistance approach in her use of videos at T² to T³ (social

⁸ URL for commercial: <https://www.youtube.com/watch?v=XjJQBjWYDTs>

interaction/action), the effects of developing critical thinkers may bring about change at the structural level at a later stage.

6.3.2 Sensitivity in critical classroom dialogues

As mentioned in Section 5.6, one of the negative impacts of the student protests was that some academics often found themselves in the untenable position of not knowing when to speak, what to say, whom to trust and which side to take. The verbal attacks and other violent attempts to silence different voices, made it difficult for them to speak their minds unless they were in the company of those they deemed as trusted colleagues – which signals the existence of a public and a private transcript (see Section 4.4.3.2). The public transcript is reflected in the interactions that take place in the public domain: the voices that are heard and the stories that are told. Those whose opinion does not align with these dominant voices have to resort to finding safe spaces where they can communicate the private transcript – their true opinions about the public transcript and its proponents. This status quo made it difficult to emulate or transfer classroom conversations to the online space where they could be easily shared on social media (a common occurrence, particularly in tense and volatile protest situations). In their desire to use technology for critical dialogues, the following academics faced a similar challenge – how they could make the online space feel safe enough for students to engage in critical classroom dialogues.

Claire integrated a technological aspect into her teaching that had a far greater impact than she had originally envisaged. As part of her first year course, she was looking for different ways to move away from the one-way street of online learning that seemed to have been the norm over the years. Claire wanted to shift away from developing all the resources when she felt students could bring in a richer set of resources that spoke to who they are and their understanding of the world. In the last three years (2014 to 2016) she has got the students involved in what she terms the “*knowledge making project*”. Claire started off with what she calls “*low stakes*” work, where she made the student generated content optional. For the weekly tutorials students had the option to hand in either the regular essay-type response, or a video in response to the tutorial question. The tutorial is a weekly requirement but does not contribute to the students’ final marks. The number of videos started out small in the first year, but have increasingly grown in number with more students opting for the video tutorial.

The videos turned out to be “*valuable in terms of just bringing in more voices*” particularly in the classroom. Although she started off by playing the videos at the end of a lesson in order to

bring in a different point of view on the topic under discussion, she realised that their value went beyond that. As a white, middle-class South African female, there were some sensitive topics that were difficult for her to kick-start because she was worried about the way they would be perceived when coming from her. The same went for particular examples from communities, racial groups or countries that were different from her own – particularly if these were perceived as negatively reflecting on the peoples from those particular sectors. In these instances, what she calls ‘mini-movies’ turned out to be a valuable tool for introducing sensitive scenarios and examples as viewed through the eyes of students who had experienced them. Some of these videos include showing the plight of unemployment through the eyes of street beggars, the price increases of particular goods at the local supermarket, the effect of high inflation on a neighbouring country and many others. Critical dialogues have taken place in her classroom as a result of these movies, and have allowed her to draw in more students into classroom dialogues, students who would not normally speak out in a large lecture theatre with an audience of hundreds of students.

Hence, the structural force that had a power₂ relation on Claire in the T¹ structural conditioning was her racial and historical context. She felt that this constrained the kinds of conversations she could have with her students and sought to bring in more voices in the teaching space. This was liberating for Claire as it allowed her to broach sensitive subjects which would have been difficult to raise in her class as a white middle-class woman. Furthermore, because of the large class size (several hundreds), only a few voices had the courage to speak out in class, making it difficult for her to draw in different voices and opinions. Her social interaction in T² entailed encouraging students to develop mini-movies. These had an impact on T⁴ by changing the class dynamics, bringing in more voices and most importantly, allowing her to have the critical but sensitive conversations that she wanted to bring into her class.

In Thandi’s postgraduate course, she had managed to maintain a safe in-class space for critical dialogues. But the students requested that their contact sessions be recorded and made available for those who would not be able to attend some sessions. Because of the critical and reflective nature of those classroom dialogues, her students would sometimes request that the recording be paused. As Thandi elaborates:

“There would be times though because that’s the thing with that module is that when you’ve got people in a safe space they can then talk about stuff that they wouldn’t want repeated outside of yah. So they’d be times where you hear people say you need to press stop and so I press stop and then we have that discussion and then we can resume

again. So if you weren't there you'd missed out on that part of the conversation but if you were there you would have been privy to that. So it's not like kukhulunywa ngabany' abantu [talking about other people] it's just yah. So all I did was just use my phone yah. I just used my phone press record." (Thandi interview 01/03/2016)

Because her students were aware that there was a recording taking place, and they were conscious that it would be posted on the course page on the learning management system, they were wary about speaking about certain things on record. It seemed to them that the online space did not feel as safe as the face-to-face session where they were free to speak about sensitive issues. The learning management system's security features did not allay their fears even though it was a closed course accessible only to the members of the class and system administrators (who had overall site access). Thandi complied with her students' requests to turn the recording on and off because she did not want to lose what she had built with her students – carving out a safe space where students could be their authentic selves, and hence responsive to the needs of her students who could not have those kinds of critical conversations anywhere else. Through this process, Thandi managed a critical balance. Firstly, she responded to the need to create safe spaces where students could 'be authentic', and this within a structural context where power² relations engendered an absence: suspicion and mistrust (see Sections 2.4.2, 2.7.3 and 2.7.4). Secondly, she allowed the students to dictate how and when the recording would happen, thereby giving them agency to determine what conversations ended up on the online site. This was critical in helping her maintain the safe space for critical dialogues.

The fragility of the feeling of safety in this online space can be easily shattered, particularly when power dynamics come into play. In Thandi's instance, she complied with students' requests to switch the recording on and off depending on how comfortable they were with sharing what was recorded on the online platform. In Alexa's case, however, the situation was a little different. Alexa strived to set up a safe online space for her students to interact beyond the classroom. Her burden was that students in her classroom engaged, as in Thandi's instance, in critical and reflective conversations, and Alexa wanted to ensure that these conversations would continue even outside the physical classroom space.

She laboured for a while over her choice of platform because she "*would not allow anything to be vulnerable to searchableness or even the perception of being vulnerable for students... If you're wanting people to be vulnerable it must be a safe space*" (Alexa interview 23/02/2016). Although there were suggestions from different people for her to use various social media

platforms, her desire to re-create the sheltered and safe classroom vibe led her to doubt their security even with the use of private closed groups. Furthermore, she worried about using a platform that was outside of the university's protective walls, i.e., where her students would use non-institutional login details.

Despite her hard work to find and set up an acceptably secure platform, only a handful of students used the site sparingly and guardedly, and just one student used it quite extensively. During the rape culture protests in April 2016, the normally guarded online interactions stopped completely. Although this did not affect the classroom dialogues, the online interactions stopped because of the

“...fear of it being reproduced somewhere else.... So it just sort of shut down. So I think it, a lot of the online stuff doesn't feel like safe spaces, which is a huge problem with [the course she teaches]. So people are just not gonna disclose if it's gonna be revealed anywhere.” (Alexa interview 29/08/2016)

Furthermore, Alexa reflects that her involvement with the concerned staff (a group of academics who were actively seeking different ways to support student protestors) could have also been responsible for the shutdown of the online interactions:

“[I was] on the concerned academics lists and I had, I had a space on the website where I put stuff up and said I'm not forcing you, I'm just informing you of what's going on you know. But there was enough stuff for us not to be neutral people and for them to worry about where this is gonna go. Do you see what I mean?” (Alexa interview 29/08/2016)

Although Alexa had attempted to create a safe online space for her students where she could extend the critical and reflexive classroom discussions, it seemed that student protests and her affiliations with the concerned academics contributed to shutting down those interactions. From her reflections above, it seems her introduction of her other role in the concerned staff group introduced power dynamics which were detrimental to students' trust in the online space. Hence, creating safe spaces to help students engage in critical conversations is not easy, and the fragility of these spaces can be easily ruptured. While Alexa is attempting to exercise her power¹ relations to help students mitigate the negative effects of structural forces, her resistance activities in other spaces can potentially serve to silence the very voices she is trying to open up.

The resistance strategies employed by the research participants in this section were all deeply concerned about creating safe and responsive spaces where their students could be empowered to resist various structural forces. In Stella's example, the structural force she was out to

mitigate was the assumption by the institution about students' technical abilities and hence failing to provide them with training on how to use the learning management system. Her resistance strategy, although carried out over a long period of time, was not quiet or subterranean, but entailed challenging this perception in public forums like committee meetings. Her resistance strategy paid off when this training was included in the orientation programme for 2017. Khanyi, on the other hand, sought to mitigate oppressive cultural perceptions and stereotypes in her classroom through the use of videos, while opening up to the students to a different way of thinking about, and being a member of, a South African society. Claire sought to overcome the restrictions of her race and historicity by including more student voices and opening up spaces for critical and sensitive conversations through student-generated content. And the last two, Thandi and Alexa, already had safe classroom spaces where their students felt free to engage in critical and reflective dialogues. However, moving these conversations online was a risky and fragile operation. In Thandi's case, she complied with students wishes to include only what they were happy for her to include. Alexa's example shows that this space is extremely fragile, and in her attempt to resist structural forces in one domain, she inadvertently changed the dynamics of the online space.

The two sections above (6.3 and 6.4) have presented what may seem like a random set of resistance strategies. Therefore, in the next section I use the four levels of the resistance framework presented in Section 5.7 to frame these resistance strategies, and show how they are congruent with how the research participants resist structural forces in their academic role, as presented in Chapter 5.

6.4 Resistance framework in educational technology integration

In Section 5.7 I presented a framework for the resistance strategies employed by the research participants in their academic role. The purpose of this exercise was two-fold. Firstly, it would strengthen my argument that the same approach to resistance in the academic role permeates the participants' use of educational technology (complementary perspective). Hence, although the resistance strategies could vary when comparing the academic role and the integration of educational technology, I argue in this section that the *principle* behind each strategy is the same. Secondly, because the resistance strategies employed by the research participants are so varied, the levels of the framework would be used to guide my recommendations for issues to consider when developing an educational technology support programme (see Section 6.6).

This section continues from the last sections in responding to **Research Question 2: *How does this culture of resistance permeate their integration of educational technology?*** It does this by showing how the four levels of the framework (see Figure 5-4) drawn from the research participants' culture of resistance in the wider academic sphere, as well as from theory, can be mapped to their approach to educational technology integration. The four levels of the framework presented in Section 5.7 which will be discussed are presented in Figure 6-1 (derived from Figure 5-4):

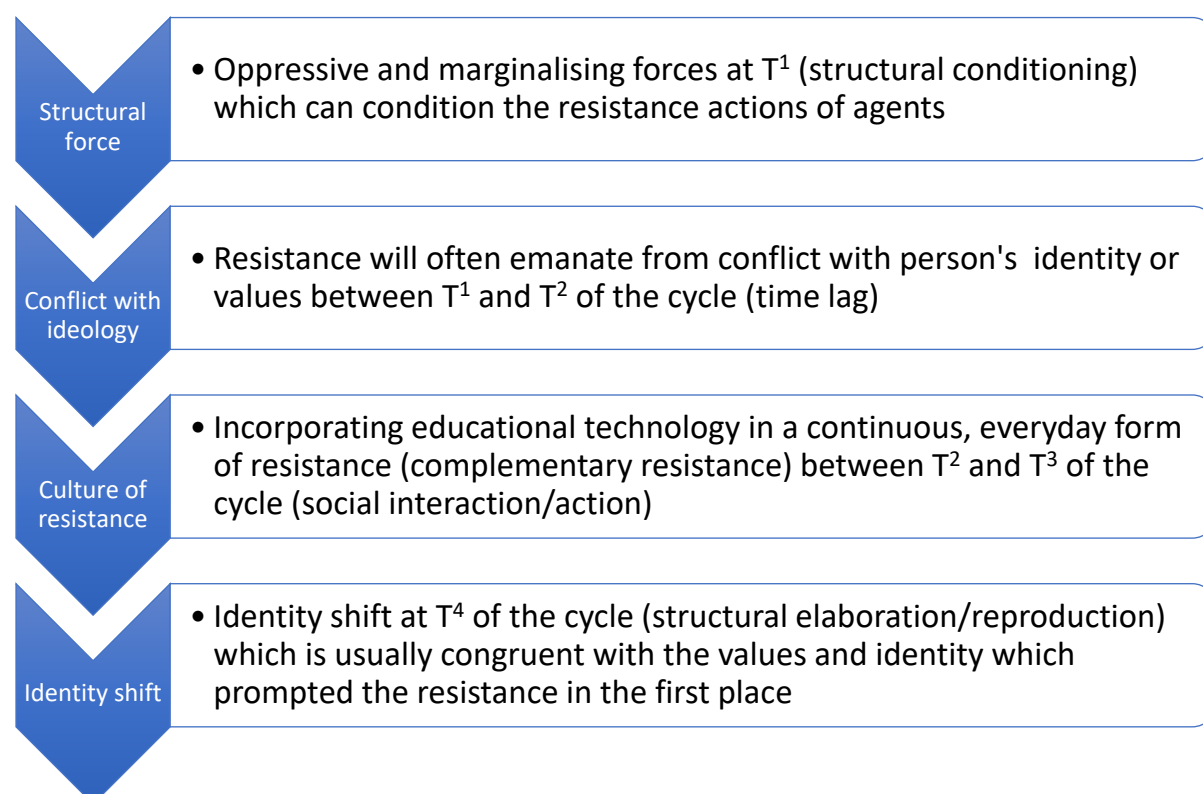


Figure 6-1: Resistance framework in educational technology

Each of these will be discussed in turn below.

6.4.1 Level 1: Structural forces with a potentially oppressive or marginalising impact

The specific resistance approaches adopted by the participants in Sections 6.3 and 6.4 to integrate educational technology emerged from, in the first instance, historical structural forces which pre-dated their resistance actions. This aligns with the first building block in the culture of resistance, the existence of oppressive and marginalising forces at T¹ (Sections 2.8 and 5.7). In each instance the structural forces were historical in nature. For instance, the institution had

never (at least not in recorded history) considered learning management system training for new students. It seemed that there were institutionalised stereotypical assumptions about students' access to and ability to use technology of any kind by the time they come to university. These structural forces served to condition or bound the range of resistive actions that the research participants could potentially engage in. In this instance, the academic could only request for assistance from already existing departments in the institution, which limited the possibilities for institution-wide student IT training. There is also, in each story as in the previous chapter, a time-period when the academics bear the marginalising effects of the structural forces before they decide to take action.

6.4.2 Level 2: Conflict with values and identity

In the context of seeking to protect one's identity and values from the marginalising effects of structural forces, the culture of resistance develops. In the case of the academics in this study, they seemed to engage in a deeply reflexive process where they interrogated their reaction to the various structural forces, and mapped out a plan of action that would get them to their goal. A case in point is the academic who was worried about the perceived oppressive effect of her race and profession on the kinds of conversations she could have with her students. Although she did not experience this as personally oppressive, she felt that because she bore the looks and culture of the dominant culture, some of her interactions with her students could potentially be viewed as oppressive. Hence, she mapped out a plan of resistance where she would seek to mitigate the effects of her racial and economic standing in order to be able to have those critical but sensitive dialogues that she wanted her students to engage with.

6.4.3 Level 3: Educational technology and resistance strategies (complementary perspective)

A range of resistance strategies play out in the educational technology space (see Section 6.4). As has been highlighted, most of these have been designed to create safe spaces where students can interact while also being responsive to the transformation demands of South African higher education. This is what makes the resistance strategies in educational technology integration slightly different from the ones I discussed in Chapter 5. In Chapter 5, the strategies were either employed for self-help (individualised) although most of them had, over time, a collective effect (helping others to also overcome the same structural forces). However, where educational technology is concerned, it seems most resistance practices in this space deal specifically with concerns around the marginalising or oppressive effect of structural forces on

students (rather than the academics). As a result, most of the resistance strategies have an audience (the students and in some instances, departmental colleagues), which places the academics in an even more precarious position in terms of the possibility of failure. This is why small resistance moves (i.e., when one of the research participant posted what she regarded as informative announcements) could result in larger failures than expected (when all her students' online interactions were shutdown). The benefits of successful resistance strategies are also on a larger scale and impact a greater collective, as with the research participant who used videos to challenge the culture and stereotypes in both society and the university.

6.4.4 Level 4: Identity shifts which mitigate impact of structural forces

In most instances the effect of the interaction of structural forces with agents' resistance over time resulted in a negotiated identity. Although the private/public transcript (Section 4.4.5.1) was not as pronounced in educational technology integration practices as it was in their other academic roles, there were still slight shifts in their identities (Section 4.4). For example, the use of student-generated mini-moves allowed Clair to gain a deeper insight into students' understandings and sometimes deeply personal struggles with the practical application of disciplinary knowledge. It also gave her the confidence to delve into issues that she would not have dared venture into before playing the mini-movies during her lecture periods. And since the students viewed the knowledge and its application as originating from their peers, they assimilated it differently and engaged in lively (although sometimes very sensitive) dialogues and debates.

In this section I have attempted to link the four levels of the resistance framework to the educational technology integration practices of academics in one South African institution. These resistance strategies play out on an everyday basis and help academics mitigate the oppressive and marginalising effects of structural forces on both their, and their students', identities and values. In the next section I interrogate the educational technology support currently offered by our unit, and propose a different way of conceptualising it which is responsive to the resistance principles highlighted above.

6.5 Educational technology support: What is the way forward?

The original impetus for embarking on this study was my dissatisfaction with the technical skills training that we offered academics (see Section 1.1.1). This training did not seem to change their perceptions or practices in terms of teaching. Instead, informal data and

interactions with academics seemed to point to the use of educational technology to support what they were already doing in the offline space. The technology was seen as more efficient in handling particular administrative tasks (i.e., handing in assignments) or tracking student progress, than manual ‘human-mediated’ systems. I was concerned that the kind of training we offered seemed to engender and perpetuate these practices, rather than challenge academics to think and do differently – to be critically reflexive about their educational technology integration practices. The traditional mode of delivering our training “where faculty attends two-to-three-day seminars on pedagogical and technical aspects of eLearning, have shown major flaws in efficiency” (Schneckenberg, 2009, p. 413). Instead, I needed to find a way to support academics’ educational technology practices by facilitating training that was “more closely tailored to the specific needs of staff...” (King and Boyatt, 2015, p. 1278).

My findings revealed that our view as educational technologists of academics’ educational technology practices – and hence their training needs – was flawed (Section 1.1). Because I understand that technology is embedded into a dynamic socio-political context (Friesen, 2009), I sought to explore their educational technology practice by understanding the socio-political context within which it is embedded. As such, Chapter 5 elaborated on this socio-political context and the resistance strategies that academics employ to mitigate its effects on the academic role. In Sections 6.4 and 6.5, the resistance strategies are employed in the participants’ use of educational technology and four levels of the resistance framework are extracted from this practice. Hence, up to this point in the chapter I have focused on the theoretical contribution of this thesis. This section will elaborate on the practical contribution, how the support and training offered to academics in the socio-political context could be informed by these resistance strategies.

6.5.1 Approach to educational technology support

Our educational technology unit has approached its support function in a number of ways. One of the most effective methods (from personal experience and the experiences of the research participants), is encouraging and assisting staff developers in our unit to integrate educational technology into their teaching in pedagogically sound ways. The courses they run for academic staff open up a conducive space to expose academics to various technologies for teaching as students in our courses. This approach has worked to a point, but is limited by the lack of engagement and dialogue in those courses around the impact of educational technology in the classroom space.

Secondly, our unit runs institution-wide technical workshops to introduce academics to particular technologies for teaching and learning. The most popular is the institutional learning management system, where we run an introductory three-day workshop at the start of the year to familiarise new academic staff on this technology. There have also been a range of other technical skills workshops which are run on request from departments or faculties. These workshops have been effective in getting academics to start using the learning management system, but have failed in changing conceptions and practices. They have also not been effective in helping the academics mitigate the structural forces that impede on their use of educational technology, given the South African higher education context.

A third support strategy we have used is presentations from people who are actively using a particular educational technology. This has been done in the confines of a seminar or conference-type setup where an academic will showcase their use of a particular technology for teaching, together with the challenges and achievements in terms of teaching and learning goals. These showcase presentations have been effective because they demonstrate to academics a contextualised approach to integrating educational technology that considers the barriers and enablements of the South African higher education context. Two of the research participants in this study highlighted this approach as their motivation for trying out new and innovative technologies in their teaching.

There are other support strategies, including face-to-face support, telephonic and online support. Although these are mostly technical in nature, I have found the face-to-face interactions effective in changing perceptions and suggesting new directions with educational technology.

Considering the resistance principles in Section 6.5, how then should educational technology support be conceptualised differently in order to be responsive to the uniquely South African structural forces and the resistance strategies employed by academics?

6.5.2 Way forward: Conceptualising educational technology support differently

“...it’s like therapy hey. Cause you sort of need to say this to somebody but you can’t say it to anyone.” (Alexa interview 08/09/2015)

One of the main contributions of this thesis has been to challenge the common understanding of educational technology integration which has permeated both this institution and the literature. In literature, educational technology and other IT systems are commonly viewed

from the point of view of resistance to adoption (conflictive perspective) (Blin and Munro, 2008; Cummings, 1995; Griffiths and Goddard, 2015; Howard, 2013; Mishra, Koehler, & Kereluik, 2009; Webster, 2017b). Users are often labelled as risk-averse and lagging behind because of a range of issues, from beliefs about technology to skills, support, etc (conflictive perspective). Although there is value in understanding the resistance of users to integrating educational technology, the idea that technology is actually utilised as a *resistance tool* is under-researched (complementary perspective). Hence, this thesis' contribution is that the technology integration practices are undergirded by a culture of resistance that emerges from the resistance strategies employed in other aspects of an academic's role. This resistance is perpetuated as a result of oppressive and marginalising structural forces in higher education institutions. Four levels of the resistance framework were proposed and expanded in Sections 6.5, and these will be used to guide the aspects that need to be considered in current educational technology support strategies. These strategies should ideally be implemented in conjunction with other valuable technology integration processes found in the literature (Conole, 2014; Koehler and Mishra, 2009; Salmon, 2013).

6.5.2.1 *Dialogue spaces*

As the opening quote in Section 6.6.2 shows, what is lacking for most academics is a space to dialogue about the constraints they experience in their academic role. The comment is from one of the research participants who was expressing her appreciation for the interview space and our other interactions over the course of this research, a common reaction by academics who participate in research studies carried out by fellow academics (Clegg, 2008; Vandeyar, 2010; Williams, 2010). This participant felt that these spaces had been therapeutic for her and allowed her to do what most academics aren't able to do – speak about their academic struggles. Hence, the first approach in moving educational technology support forward would be to create safe and trusted spaces for academics to honestly reflect about their educational technology challenges. These challenges could stem from the historical legacies of higher education, or the untransformed but volatile higher education context.

During a faculty-requested training workshop which took place after I had collected my data and was involved in the analysis stage, I was able to test out the efficacy of this approach in excavating the struggles that academics experience by asking a few simple questions. The timing of the workshop allowed me to test the ideas I was developing around a transformed approach to educational technology support. Normally, the workshop would have focused just on the technical aspects of the software package. But I started off the workshop by asking the

workshop participants why they had requested this workshop, and specifically why each of them felt they should be there. Although I did ask these questions, I assumed I knew what their answers were going to be. Contrary to my expectations, the respondents' answers were not straightforward at all, as they spoke about deeply troubling aspects of their work that they hoped would be addressed in this workshop and using this technology. Unfortunately, because these were not my research participants, I can't include their insightful responses in this thesis. But suffice it to say, the discussion helped me understand that my assumptions about their request for this workshop were far removed from their reality – assumptions which were based on the email request they had sent to me. But an open dialogue allowed them to express their struggles with various structural forces. I was also able to point them to other possible approaches and technologies which would better address their struggles.

6.5.2.2 Mapping resistance strategies to technology integration

As this research has shown, the resistance strategies employed in the academic role were usually transferred to the educational technology space. Furthermore, I have also shown that the need to resist structural forces stems from the violation of a deeply personal value system that is a critical element of a person's identity. The resistance strategies employed by the research participants are deeply personal and may not necessarily reflect the approach of all academics. Hence, an effective support strategy would seek to excavate the resistance strategies that academics are already engaged with, then map these to possible educational technology integration practices.

In Section 6.1, I referred to an incident with a research participant who did not consider herself a technology user. However, she later admitted to using videos in her classroom. What I did not include in that narrative is that I stumbled upon her use of videos in class as I was attempting to find a way to encourage her to use technology. Below is an excerpt from our interview on 09/12/2015 which demonstrates the claims I am offering in this section:

Nompilo: *...I'm actually enjoying the conversation and I'm thinking to myself I like your view of the way you want your students to be when they're in the class. You don't want them to be busy...*

Khanyi: *Taking notes*

Nompilo: *the whole time. You want them to be engaged and so on. And next year we'll talk about some ways that you can actually use technology to get students engaged*

Khanyi: *To engage. Ok I'd love that!*

Nompilo: *Because you can find stuff like the YouTube clips or whatever or journal articles or topical news that you get them to read before they come to class. And then that space...*

Khanyi: *Is for discussion*

Nompilo: *Then is just for discussion...*

Khanyi: *Yah*

Nompilo: *...on how they experienced that, what they think about that, so then what next. So if you're in that position what would you do and that kind of thing.*

Khanyi: *But this is what I do. No I do use lots of videos like YouTube videos in my class.*

Nompilo: *There we go! [almost jumping out of my chair in excitement]*

Khanyi: *No I use, hayi [no] shame, I use. And my first video is always the nice video of the Always advert whereby they all talk some sort of lots of shitty things but anyway.*

Nompilo: *I need to see that video! [I'm sure you can see the smile on my face right now]*

Khanyi: *No you must it's a 3 minutes video, it's a very nice video. It talks about how basically we are socialised into certain stereotypes... And then that's when I talk about the issues of social reproduction ... So it becomes the whole thing from that particular video and then we just blow it up to understand difference.*

Nompilo: *So you're already doing what I'm talking about!*

Khanyi: *Yah no no no, I do that. No no no I do use it. I find it very useful...*

The import of this interview excerpt did not occur to me until later as I was writing this chapter of the thesis. I realised then that the conversation I had had with Khanyi up to that point had helped me understand her values, her approach to teaching, the constraints that impeded her academic role and her resistance strategy. Hence, I recommended an approach to technology use that I felt was congruent with the resistance strategy she was already employing in her teaching role. Interestingly, she admitted to already using all of the things that I mentioned (although this interview excerpt highlights just the one). This demonstrates the importance of mapping educational technologies to the resistance strategies that the academics are already

engaged with. Academics will likely be more open to them (as in the example) because these support their deeply held value systems.

6.5.2.3 Reflexivity

Encouraging academics to be reflexive about their assumptions around educational technology is another conceptual approach to educational technology support. In an untransformed South African higher education context, the un-interrogated assumptions of academics about both the technology and students' ability to use it could have a marginalising effect on the students and impede learning. Uncovering and challenging their assumptions can contribute positively to transformation dialogues currently taking place in the institution.

In a different faculty workshop from the one I refer to in Section 6.6.2.1, I tested the efficacy of this approach in helping academics reflect and interrogate their assumptions about their students' relation to technology. For both these workshops I wrote out my reflections afterwards in order to keep a record of the process as well as reflect on my understanding. The workshop was on the use of a video recording application that allowed the presenter to record the screen, voice and add video. After gathering feedback on why the participants wanted this workshop, I asked them a question that took them by surprise. The question was: *What assumptions are you making about your students when you include this particular technology in your teaching?* I got some confused looks and frowns, but no response, and had to break down the question even further. I had to be specific and question them on their assumptions about the technological tools they assumed the students had in order to be able to access these video recordings, as well as the skills they needed. An interesting discussion ensued and I had to point them back to the protests that had just occurred and how these should have sensitised us to the marginalising culture of higher education. I also pointed out that if we were not reflective about our assumptions, then the technologies we use would just serve to perpetuate the oppression that students were fighting against. The technologies we implemented would only be accessible to those who had the resources, while the underprivileged would be left without access. Before the end of that discussion, the members of the faculty decided to purchase earphones that they could loan out to students who used university labs to access the videos.

This exercise helped me to not only test the efficacy of this approach in helping academics reflect on their educational technology integration practices, but also opened the academics' eyes to un-interrogated assumptions about their students and technology.

6.5.2.4 *Engagement in staff development courses*

As mentioned in Section 6.6.1, our department's staff development courses provided a good launch-pad for academics to start using educational technology. As they were exposed to it as students, they were able to conceptualise the different ways they could use it in their own courses. However, it seemed this space lacked a deeper engagement with educational technologies, particularly as they related to the different teaching processes covered in our staff development courses. Hence, a possible approach to extend the way our department models pedagogically sound ways of integrating educational technology would be to explore through dialogue the impact of educational technology on the particular module they will be studying at the time. In Appendix G I have included suggested questions for discussion in this teaching context. These questions are designed for a live classroom session and are meant to excavate structural constraints while challenging perceptions and practices with educational technology.

6.6 Summary

This chapter presented the conflictive perspective of resistance and technology that permeates both the IT and educational technology literature and practice – that academics are resistant to educational technology. Even in the African context with its unique colonial past and socio-political context, research in the field has a strong focus on painting resistance and technology as having a conflictive relationship, where different types of barriers are responsible for the level of resistance to educational technology. Although I embarked on this research study with the same conflictive perspective in terms of the technology/resistance relationship, my emerging understanding has shifted to a complementary perspective. In this perspective, the technology/resistance relationship is viewed as complementary, that is, academics use educational technology to complement the resistance strategies they are already employing in their academic role. Because of the social nature of educational technology and the fact that it is integrated into an already-existing socio-political context, the structural forces they encounter in their wider academic role, and hence the resistance approach, are similar to those they employ in their use of educational technology. Despite multiple evidence that academics actively resist the use of educational technology, this research has shown that their resistance approach can utilise technology in order to mitigate the structural forces that have had a marginalising effect on them or their students. Hence my view of the technology/resistance relationship as complementary rather than conflictive.

The major structural forces encountered by the research participants were the teaching tension and encountering the dominant culture of higher education. They mitigated these forces

through educational technology use by focusing on enabling safe and responsive spaces for learning in two ways: 1) challenging the dominant culture of higher education (responsiveness to transformation) and 2) sensitivity in critical classroom dialogues (safe space). A four-level resistance framework was drawn from their culture of resistance in both the academic role and educational technology practices. This chapter also suggested a possible approach to educational technology support that is sensitive to structural forces and the resistance strategies that academics engage in.

Chapter 7

What does this research contribute to the field of educational technology? (Conclusion and Recommendations)

“It takes just as much effort to answer a useless question as a useful one. The quest for useful information about technology has to begin, then, with thought about just what are the right questions.” (Ehrmann, 1995, p. 20)

“The answers to these questions should underscore – despite our culture’s disinclination – the fundamentally social nature of the technology in question, a prerequisite to any meaningful effort to determine its role in our lives.” (Bromley, 1998, p. 27)

7.1 Introduction

Research into educational technology choices and practices has traditionally focused on technology and practice and hence failed to recognise the impact of the complex socio-political context on this process. In light of the apartheid and colonial legacies of South African higher education and the structural forces that academics have to contend with in this context, this study sought to situate educational technology research within the messy structural context into which it is integrated. This supports the notion that any meaningful understanding of technology has to be undergirded by an understanding of its social nature (Bromley, 1998), which in turn guides the kinds of questions that are asked and avoided (see Ehrmann, 1995). As this study has shown, structural forces in the socio-political context of South African higher education are resisted by female academics using various covert strategies. This has developed into a culture of resistance that permeates their educational technology choices and practices.

In this chapter, I present a summary of the thesis by highlighting the main themes and argument that emerged during the study. I sought to answer what I hope will be considered useful questions for the complex South African context. I also present the major research findings as they relate to the research questions, followed by the key research contributions of this study. These two sections will motivate for the deeply personal value of the questions asked and the resulting answers, and how these have changed not only my thinking but also my practice. The last two sections will highlight the limitations of the thesis and recommendations for future

research in order to carry forward what I believe is a critical and timely study for South African higher education.

7.2 Summary of the thesis

In this thesis, I argued for the efficacy of embedding the study and understanding of educational technology choices and practices by focusing on the context within which this integration takes place. This stemmed from the growing concern expressed in literature about three critical issues for educational technology research (see Section 1.1). Firstly, the field has been accused of theory/practice inconsistencies where there is a failure to interrogate practice through the lens of abstract theory and concepts. Situating educational technology within its context allowed me to use social theories (critical realism and critical ethnography), which supports the tenet that the integration of educational technology is a social endeavour (Friesen, 2009; Gunn and Steel, 2012; Kerr, 1989; Kirkwood and Price, 2014; Selwyn, 2014). Secondly, there have also been criticisms against the non-contextualised nature of educational technology research. This is particularly pertinent for the South African higher education landscape where the majority of the indigenous population are still reeling from apartheid and colonial legacies, while the technologies that are used in most higher education institutions are developed in the Western world (where the countries responsible for colonialism are located). In effect then, the integration of these Western technologies in the African context has the potential to perpetuate colonial legacies and fail to consider the culture of indigenous people. Thirdly, educational technologists who support academics in their use of educational technology have been accused of failing to understand academics' experiences with educational technology. As such, the support that they give fails to assist academics to manoeuvre the socio-political context into which educational technology is integrated.

Critical realism was adopted as the meta-theory of choice for this study because of its layered ontology which views reality as independent of our knowledge of it. Hence, different social agents will have diverse experiences and perspectives of this one reality (see Section 2.4). The work of research is then to move closer to uncovering this intransitive reality by using the multiple perspectives (including my own) presented in the research to uncover the obdurate nature of the research phenomenon. Hence, our knowledge of this reality is fallible (critical realist epistemology) and can change depending on our inference of it from the research data (see Section 2.4.3). Critical ethnography can potentially strengthen the unsure and seemingly cautious nature of critical realist epistemology (see Section 2.6.3). The methodology's strong

emphasis on critique and reflection, as well as value judgements in making inferences about the data, has the potential to elucidate the emancipatory potential of critical realism (see Section 3.4).

Critical realism also emphasises that excavating our conception of the world should precede any attempts to change it (see Section 2.7.3). In effect, the meta-theory is arguing that knowledge is the key to emancipation, because only as we understand the social context and the structural forces that it employs, can we attempt to bring about change. Because of our prior knowledge, this process of emancipation includes a reflexive process which has been under-emphasised in critical realist research (see Section 2.5). In this study I used both Bhaskar's reflexive process that led to the development of critical realism (see Section 2.5) as well as critical ethnographic principles (see Section 3.4) to reflect on my positionality, the methodology and my understanding of the data (see Sections 3.4.3 and 4.5).

I also use dialectical critical realism concepts (transformatory capacity of agents, historical totality) as well as critical ethnographic epistemology to respond to critiques of the meta-theory (see Section 2.6). One of the major criticisms of critical realism is the lack of clarity on what the 'critical' prefix means. As part of the process of motivating for the emancipatory potential of critical realism (and hence its suitability to underlabour a critical research), I discuss the meaning of this 'critical' prefix, and particularly how it aligns with the accepted understandings of what comprises critical research (see Section 2.7).

Because of the oppressive roots of the ethnographic methodology (see Section 3.4.3.1), I motivate for an ethically-aware approach to the use of data collection methods. This includes reflexively considering the potentially oppressive nature of the data collection methods as well as being aware – during data collection – of political considerations that may impact the research process. How contradictions are handled in the research process also aids (or thwarts) an ethical approach to critical ethnographic research. An example of this is discussed in Section 4.5.6 where my access to covert data as an insider researcher painted a contradictory picture about the research participant.

The topic discovery process (Chapter 4) was made possible by comparing my personal experiences, collected data, literature and my reflections. In this chapter I argue that my understanding of the emerging research problem is influenced by my experiences – which could potentially cloud my attempts to excavate the reality of educational technology integration. And yet, literature and theory helped to frame my understandings and avoid using

only my understandings to uncover the research phenomenon. In fact, at times my experiences were contrary to the research participants' and I had to rely on literature and theory to help me conceptualise their experiences.

In Chapter 5 I use literature to motivate for the way I have chosen to structure the presentation of the data. My understanding of the social context within which educational technology is embedded starts off with an elaboration of the structural forces that the research participants have to contend with in their academic role. I selected the two main structural forces which affected the majority of participants, and from their perspective, seemed to have the greatest impact on their academic role. These structural forces are the teaching/research tension and the elevation of one dominant culture in higher education. The research participants exhibited a range of mostly covert resistance strategies to mitigate the effects of these structural forces. Four principles of resistance are presented in line with the resistance strategies employed by the participants, the approach to reflexivity that I employed in this study, as well as the theory selected for this research – Archer's morphogenetic/morphostatic approach (see Section 2.8).

The thesis culminates in Chapter 6 by linking the resistance principles drawn from the data in Chapter 5 to the resistance employed by the research participants in their educational technology practices. The chapter first outlines the traditional view of resistance in educational technology where academics are viewed as apathetic or resistant to new technologies (conflictive perspective). The focus of most of these studies is to remove the barriers that have led to this resistance to technology. In order to avoid this approach, I selected to follow inductive reasoning predominantly, where my use of the literature and application of theory was done retrospectively in response to data and experience. The resistance strategies that the research participants have selected to use in their educational technology practices are focused on enabling safe and responsive learning environments, where both the dominant culture of higher education and the teaching tension are mitigated in different covert ways. As such, this research study takes a contrarian view on resistance and technology. Rather than viewing academics as resistant to new technologies (conflictive perspective), the research data pointed to the use of educational technology to resist structural forces (complementary perspective).

Just like critical realism, this study takes on an underlabouring work for research in this field by telling new stories and pointing to alternative ways of understanding the data. In line with this understanding of resistance (complementary perspective), the research recommends a resistance-aware approach to educational technology support. This approach is built around

enabling safe spaces for academics to dialogue and be reflexive about the structural forces they have to contend with as well as mapping their resistance strategies to educational technology integration practices.

The next section gives an overview of the major research findings as they link to the research questions.

7.3 Major research findings – how the research questions were answered

In order to highlight the main research findings from this study, I will structure them according to the research questions from Chapter 1.

Research Question 1: *What structural constraints are female academics vulnerable to in the South African higher education context, and in what ways have they exercised their agency to counter the oppressive and marginalising effect of these constraints?*

In attempting to uncover structural constraints that have an oppressive or marginalising effect on the work of the research participants, I first reflected on my ability to excavate this knowledge (Sections 3.4.3 and 4.5). By following a reflexive trajectory similar to Bhaskar's, I was able to reflect on the process of data collection and analysis, and how the data collection process itself could potentially add another oppressive layer for the research participants (Section 3.4.3). Furthermore, I reflected on my positionality in the institution and how this had both positive and negative effects on my understanding of the research phenomenon (Section 4.5). And lastly, I was able to demonstrate how drawing on theory and literature helped me go beyond an inward-looking reflexivity, and helped me frame the research participants' understandings and experiences of the research phenomenon (Section 4.4).

The South African higher education context presents a range of structural constraints that academics have to contend with, most of which are linked to the legacies of apartheid and colonialism. As indicated in the research, although these constraints have been socially determined sometime in the past, they pre-date the resistance activities of academics and condition the type and extent of possible actions. The research participants in this study had to contend with a range of structural constraints, which I bundled up as two major oppressive forces: the teaching/research tension (Section 5.4) and the elevation of one dominant culture (Section 5.5). These structural constraints resulted in an ideological struggle where the identities and values of social agents were (or appeared to be) under threat.

A culture of resistance was seen as emerging as a result of the academics' interaction with these structural forces. This resistance is a quiet, lived existence which is not really aimed at overthrowing structural forces, but rather manipulating them for minimum disadvantage and disruption (Section 4.4.5). While most of the strategies are focused on self-help in order to mitigate the immediate effects of oppressive or marginalising forces, they mostly seem to have resulted in collective benefit in the long run. As the academics were empowered by their success, they took on an advocacy role, where they mentored or defended less powerful 'others' caught in the same oppressive situations they had had to fight (Chapter 5). This chapter also developed resistance principles which were used to frame the response to Research Question 2 below.

Research Question 2: *How does this culture of resistance permeate their integration of educational technology?*

The results of this study show that, in spite of a wide disparity in terms of technical skills, attitudes towards educational technology, and the range of technologies used for teaching, there seems to be a pervasive culture of resistance that, in most cases, mimics the resistance strategies adopted in the research participants' other academic roles. As elaborated in Section 7.4.4, this view of the culture of resistance challenges the current widespread perspective about the relation between resistance and technology. Although academics may resist new technologies (Blin and Munro, 2008; Cummings, 1995; Griffiths and Goddard, 2015; Howard, 2013; Ifinedo, 2007; Kenan and Pislaru, 2012; Yilmaz and Kılıçoğlu, 2013), the results of this study indicate that as educational technologists, we should rather be supporting *how* they are already conceptualising their use of technology as this is usually a form of resistance to structural forces in itself (Chapter 6). Answering this question also highlights the disconnect between what educational technology research says about integration and acceptance of technology for teaching and what happens on the ground, thus confirming the problem issues highlighted in Section 1.5.

Research Question 3: *How should educational technology support be conceptualised differently in order to be appropriately sensitive to structural constraints and the culture of resistance of academics as they integrate educational technology in a South African university?*

As a result of the disparity in the understanding of educational technologists and the reality of academics, educational technology support has traditionally focused more on the technology (technical skills) than the education (aligning technology to learning outcomes) (see Sections

1.1.2 and 1.5). This support is conceptualised around helping academics overcome their resistance to technology. Once we as educational technologists have a better understanding of the oppressive and marginalising structural forces and their effects, as well as the culture of resistance they engender, we should be better placed to design responsive training that is sensitive to these in the current South African climate. This support should be geared towards supporting the resistance strategies that academics are already engaged with in their wider academic role. The support involves helping academics create safe and responsive spaces: safe for student interaction and engagement and responsive to the untransformed and oppressive culture of higher education. The concepts around which a possible support strategy could be developed are outlined in Section 7.4.5.

Research Question 4: *Is critical realism a suitable ontological underlabourer to not only explicate the socio-political context, but also uncover oppressive structural constraints and academics' resistance in the integration of educational technology?*

In Chapter 2 and Section 3.4, I motivate for the efficacy of critical realism to underlabour a critical ethnographic study. Particular concepts that emerged as pertinent for a better understanding of the socio-political context (despite my assumptions and positionality as an insider researcher) include: 1) a stratified view of ontology where multiple perspectives help the researcher excavate the true nature of the research phenomenon (Section 2.4.1); 2) the oppressive nature of power₂ relations (master-slave power) and their impact on the actions of social agents (Chapter 5 and Sections 2.4.2, 2.7.4 3.4.1 and 7.4.1.2); 3) how power₁ relations (transformatory capacity) enable social agents to mitigate the effects of power₂ relations; and 4) the centrality of reflexivity in aiding my critique not only of oppressive powers in the socio-political context (Sections 5.4 and 5.5), but also knowledge claims from the field (Section 1.1, 1.1.2 and 6.3) and my perceptions of the data (Sections 3.4.3.3, 4.2 and 4.5). An elaboration of the response to this question is in Section 7.4.1.

This section has highlighted the major research findings as they relate to the research questions. A number of methodological and practical contributions emerged from this process. These are discussed in the next section.

7.4 Key research contributions

Given how the research questions were answered (Section 7.3), this thesis offers the following research contributions as they relate to the goals of this thesis.

7.4.1 Elevating theory over practice

As highlighted in Section 1.1, the field of educational technology has been criticised for decades for its failure to reflect on and interrogate its practice using theory. Specifically, there is an almost endemic failure to conform to basic research requirements by elevating practice over theory, narrowly focused single cases and a failing to locate the research in a particular context. In direct response to this highlighted weakness in the field, this thesis has been designed to articulate a philosophical and methodological approach appropriate for helping researchers in educational technology to interrogate their practice using theory. Critical realism, the philosophical approach selected for this study, has salient concepts which have the potential to help researchers overhaul their thinking and approach to educational technology integration, particularly given the African context. Its focus on knowledge for emancipation, elevating different perspectives of the same reality, and its different conceptions of power can help us as researchers excavate a different kind of reality from what we, and the literature we read, have always assumed was there. In essence, critical realism focuses on the human being and her reality, and the philosophy provides us with tools and guidance on how to excavate that reality towards a path of emancipation.

In an attempt to address the field's theory deficiency, I have embedded critical realist considerations in the different stages of the research process, although the use of critical ethnography was more prevalent in some chapters. Figure 7-1 below provides a visual elaboration of how critical realism and critical ethnography informed the various aspects of this research and chapters.

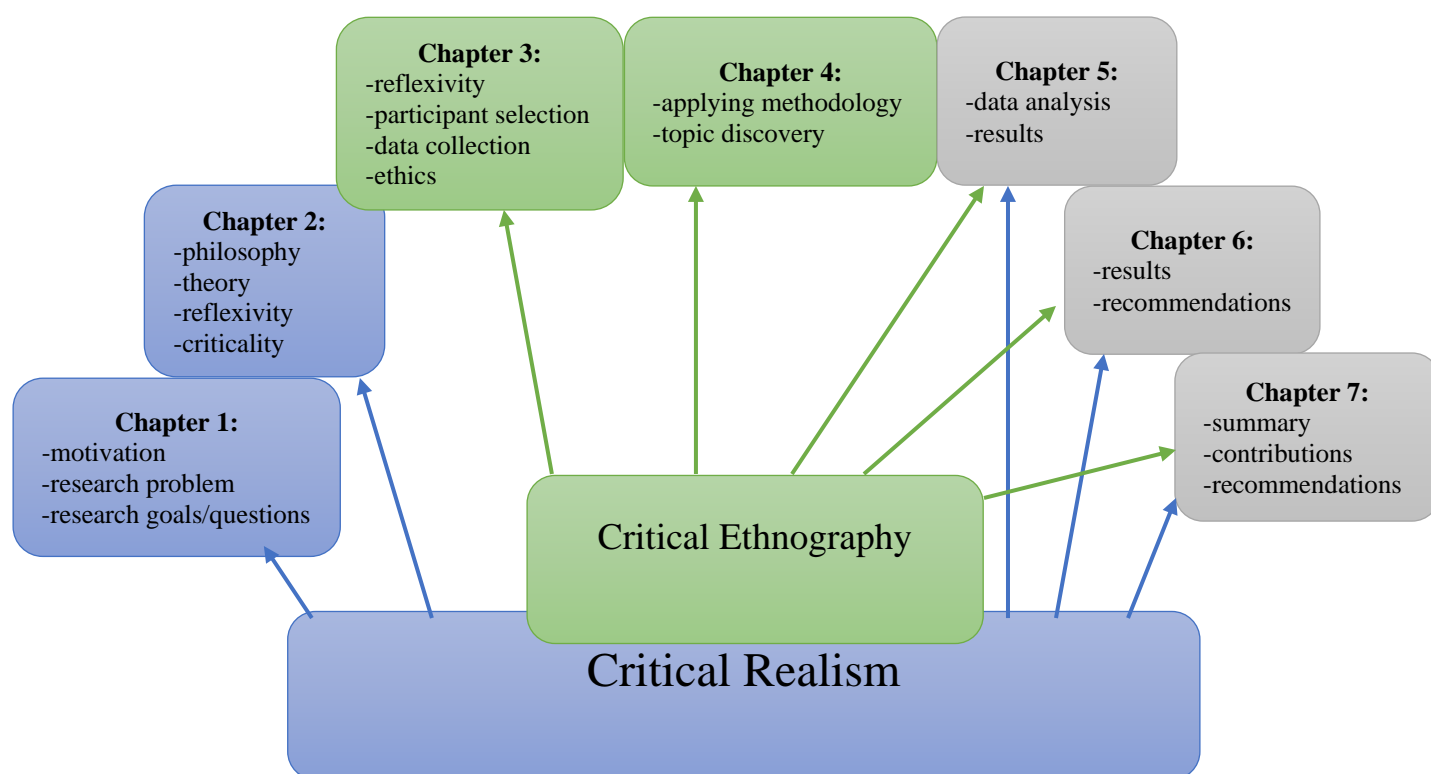


Figure 7-1: Critical realism as underlabourer for the research process

As indicated in Figure 7-1, Chapters 1 and 2 have predominantly used critical realism, with Chapter 1 focusing on elaborating the motivation for the thesis and Chapter 2 explicating on critical realist philosophy. Chapters 3 and 4 are predominantly aligned with critical ethnography, although critical realism does emerge briefly in some sections. In presenting the data and summary of the research (Chapters 5, 6 and 7), both critical realism and critical ethnography complement each other in helping me frame the argument and present data to support it.

The guiding problem of the research (Section 1.5) emanates firstly from the claim that educational technology research suffers from theory/practice deficiencies and secondly that the critical realist philosophy is lacking in terms of applicable research demonstrating how the philosophy undergirds the research process. Hence, the main contribution of this study was to demonstrate the application of critical realist philosophy while addressing the theory/practice divide in the discipline's research practices.

In my attempt to address these two issues, I highlight below how critical realism and critical ethnography can complement each other (Section 7.4.1.1), allowing me as the researcher to take an emphatic ontological stand supplemented by a critical epistemology (Goal 7 in Section 1.5.2). Hence, I will be able to not only critique my own practice and positionality (Goal 1 in

Section 1.5.2), but to also use the multiple perceptions of reality from the research participants to better understand the reality of educational technology integration. This is followed by an explication of my understanding of what ‘critical’ in critical realism means (Section 7.4.1.2). The use of critical realism to underlabour a critical research study that seeks to uncover oppressive structures (Goals 2 and 4 in Section 1.5.2) should ideally be preceded by an explication of the philosophy’s ‘critical’ nature (Section 2.7 and Goal 7 in Section 1.5.2), particularly because of the lack of agreement on how critical realism aligns with emancipatory research (Klein, 2004; Vandenberghe, 2014). This addresses the theory/practice divide in the field by giving a nuanced explanation of the theory before applying it to practice. This section rounds up the theory/practice argument by showing how reflexivity was central in the development of critical realism (Section 7.4.1.3). Therefore, my application of the theory to practice needs to reflexively consider its suitability to the context and, particularly because this is a critical research study, its possibly oppressive nature on the research participants (Goal 7 in Section 1.5.2).

7.4.1.1 Critical realism and critical ethnography

Although critical realism has a strong ontology, with most of Bhaskar’s (and other’s) writings elaborating on its view of reality, it has been strongly criticised for having a weak, under-developed or cautious epistemology. This means the meta-theory’s practical implications for methodology, the research process and the results have received very little attention. One of the contributions of this thesis was to demonstrate how critical realism can be employed using a critical ethnographic methodology.

While critical realism’s conceptions of power can extend critical ethnography’s attempt to conceptualise power relations, critical ethnography emphasises *what* we can know about those power structures, namely hidden and overt oppressive and marginalising practices (Section 2.7.4). This allows the researcher to not only focus on structures and their constraining or enabling powers (critical realism), but to purposely search for marginalising and oppressive tendencies in the exercise and conception of these powers – whether or not they have been experienced as such by the research participants. In fact, any contradictions between the research participants’ conceptions of these powers and the researcher’s analysis of their oppressive effect is pertinent to understanding false and hegemonic ideas.

Secondly, critical realism suggests that there are multiple perceptions of one reality (Sections 2.4.1 and 2.4.3). However, in terms of critical realism’s attempt to judge the ‘valuableness’ of

particular socially constructed perceptions and knowledge claims, it is sometimes unclear which perception is closer to the reality that the researcher is seeking to understand. Critical ethnography strengthens this by asserting that our value judgements are fundamental in helping us select which knowledge claims represent reality (Section 3.4.2). Hence, different researchers may have different conclusions on the same research data because of disparate value judgements and perspectives. However, this is not a problem for a critical epistemology as it emphasises the personal nature of both the research process and the conclusions drawn from the thesis (Section 3.3).

7.4.1.2 The 'critical' in critical realism

The research offered clarity for the meaning of the word 'critical' in critical realism (Section 2.7). This has been a contested aspect of the meta-theory for decades, with most concluding that the critical prefix points to its approach in critiquing other meta-theories – but not necessarily oppression and the possibilities of emancipation. This contradicts the original reason why Bhaskar developed the meta-theory in the first place – his deep concern for the way the theories available during his time did not adequately address the lived experience of the 'underdog' who was oppressed by capitalist agendas and permitted injustices (Section 2.5).

Hence, although the critical prefix does point to the meta-theory's ability to find the Achilles heel in other philosophies (Section 2.7.1), there are other ways in which it can be considered 'critical' in an emancipatory sense. Critical realism is also critical because:

- Our knowledge claims (epistemology) are fallibilist – that means the knowledge claims themselves, why they exist and their effect on our understanding of reality, are all open to critique (Section 2.4.3). This is ideal for educational technologists whose knowledge of the reality of educational technology integration is sometimes far removed from the experiences of academics. Critical realism allows us to critique this knowledge (Section 2.7.2) while moving closer to academics' reality, which implies that knowing better is liberating and emancipatory.
- As epistemology brings us closer to reality, this reality is open to change and transformation (Section 2.7.3). In other words, critical realism espouses that the basic building block of emancipation is knowledge of oppressive structural forces and how they are experienced. Knowledge of this reality helps us to imagine a different life, a different world, which means that through knowledge, change becomes a possible reality. As we understand the way these marginalising forces operate and condition the

actions of social agents (emergence), we are able to critique their operation and the ideologies and false beliefs they have engendered in the social agents.

- Critical realism's dialectic adds a new aspect to the emancipatory potential of critical realism: different conceptions of power (Section 2.4.2). The meta-theory has two main conceptions of power (Section 2.7.4). There are the power₂ relations, the master-slave type of relations that structural forces and the superordinates impose on subordinate groups. These power₂ relations are often experienced as oppressive or marginalising – although sometimes ideology may keep that aspect hidden from the subordinate groups. Hence, although there may be oppression, it may not be experienced as such. Secondly, there are power₁ relations, which represent the transformatory capacity of agents to challenge oppressive forces. Dialectical critical realism emphasises the collective effect of this transformatory capacity, that is, social agents exercise power₁ relations not just for their benefit, but at times in order to emancipate those who are powerless to free themselves from oppressive power₂ relations.

7.4.1.3 The primacy of reflexivity and self-knowledge in critical realism

Although the development of critical realism was foregrounded by self-knowledge and reflection on the part of its originator (Section 2.5), these basic aspects have not been emphasised as a foundational element of critical realist epistemology. In this study I attempt to draw in self-reflexivity as a fundamental part of critical realist epistemology, particularly because of my position as an insider researcher (Goal 1 in Section 1.5.2). This self-reflexivity is undergirded by critical ethnography (Section 3.4.3) in attempting to critique both my positionality and the impact it has on the research process. My reflexive path follows a similar one to Bhaskar's (see Section 4.3):

- 1) There were contradictions and tensions resulting from oppressive structural forces. In my case, this was the pressure to pursue a PhD (Section 4.3.1).
- 2) These led to an identity crisis where what I felt was a strong teaching identity was not recognised by the institution as important (Sections 4.3.2 and 4.3.3).
- 3) I questioned and challenged myself and the world for the existence of this disconnect by reading relevant literature (Sections 4.3.2 and 4.3.3). My understanding of this disconnect was a major influencing factor in how I understood the research participants' experiences of the structural force (Section 4.2).

- 4) The structural force was resisted in covert ways (Section 4.3.4). Bhaskar elaborates that this step could actually entail ignoring the structural force or accepting it and living with it (Section 2.5) (Bhaskar and Hartwig, 2010).

In order to resist the structural forces constraining their academic role, the research participants also followed a similar reflexive path to the above where there were structural forces, leading to identity incongruence, questioning and then resistance (Section 6.5).

Reflexivity is also instrumental in assisting the researcher to interrogate their assumptions about theory and its application to practice – hence addressing the theory/practice divide. In this study I attempted to do this by reflecting on my application of critical ethnography with its oppressive roots (Section 3.4.3.1) as well as reflexively addressing critiques of critical realism in practice (Sections 2.6 and 2.7).

The three sub-sections above have elaborated on this thesis' key contributions in terms of addressing theory/practice inconsistencies. This has included using critical realism to underlabour a critical ethnography, defining the 'critical' in critical realism and motivating for the primacy of reflexivity in applying theory to practice. The next sections highlight the other key contributions to this research.

7.4.2 Understanding the social context of educational technology integration

This thesis sought to address an additional criticism of educational technology research highlighted in Section 1.1 – an overwhelming focus on the technology and its affordances, rather than the context within which it is embedded (Goals 2 and 4 in Section 1.5.2). This approach assumes the neutrality of technology without considering that the often oppressive socio-political dynamics already in existence prior to the integration of educational technology are aggravated by its introduction (Section 1.1). Hence, the integration of educational technology further complicates power dynamics, marginalises the already socially disadvantaged and widens the gap between the haves (and technically skilled) and the have-nots (and technically unskilled).

In the African context, with its legacies of colonialism still crippling development and poverty-alleviation efforts on the continent, contextualising the integration of educational technology is even more pertinent. This is because the majority of educational technologies used in African higher education are developed in the Western world, in male-dominated team environments (Amory, 2012; Bromley, 1998). Their baggage and assumptions about teaching and learning

are “given durable form” in the technology (Bromley, 1998, p. 23), promoting what Amory (2012) terms “conveyor-belt driven instructional ideologies” (p. 51). These masculine hegemonies and Western agendas fail to consider issues of transformation, emancipation, social justice and equality (Amory, 2012), which are central to the development and true freedom of African peoples.

This research’s contribution was therefore to demonstrate one possible critical realist-based route that educational technologists could take in order to excavate perspectives of the social context: namely through social realism’s morphogenetic/morphostatic cycle (Section 2.8). This cycle helps researchers to analytically separate the actions of academics from the structural forces that pre-date and hence condition these actions. Furthermore, it interrogates how structures have causal power to determine social agents’ actions, while agents themselves exercise their agency to counter the effects of structure, thereby bringing about change at the structural level (hence the cycle). This view is valuable for educational technologists who have been accused of failing to understand the reality of academics’ technology integration practices. It gives primacy to academics’ experiences and perceptions of structural forces and their approach to mitigating its effects (Section 6.5).

7.4.3 Bridging the gap between academics and educational technologists

Educational technologists like myself have been accused of being over-engaged with technology, animatedly hailing new technologies and generally being out of touch with the realities faced by academics who are actively involved in integrating technology into their teaching (Section 1.1). Our elitist mindset has desensitised us to the constraints engendered by technology integration and the social relations, needs and values it impacts. As a result, the kind of support we offer academics does not meet the needs and challenges they encounter in the context within which technology is integrated (Goals 1 and 6 in Section 1.5.2). This research contributes by pulling back the curtain for myself firstly, and secondly my fellow educational technologists, and bringing to light the contextual issues that are not usually and adequately considered as having any import on a technology integration exercise. The significance of this is that the planning of support initiatives can then address the structural constraints that academics perceive as marginalising or oppressive – even though perception and experience of these constraints varies between research participants.

7.4.4 Different conception of resistance (complementary perspective)

Resistance in IT circles has tended to focus on how and why users resist new technologies (conflictive perspective, see Section 6.2). This thesis contributes to these discussions by taking a rather contrarian view of the relation between technology integration and agents' resistance. What emerged from the data is that structural forces impede the work of academics, who then resist these structural forces in various ways (Section 5.6). This resistance strategy takes the form of a quiet, lived resistance that they engage in on a daily basis – hence the idea of a culture of resistance (Sections 4.4.5 and 5.6). This culture of resistance permeates different aspects of their academic role. My contrarian view is that rather than exploring the way academics resist new technologies, the data indicated that the use of educational technology itself is integrated into the resistance strategy, a tool they use in order to resist marginalising and oppressive structural forces (either personal or perpetuated on their students). Hence, this thesis showed how, instead of being viewed as resistant to technology, the research participants were actually resisting with technology (complementary perspective, see Section 6.2).

Through this study, four levels in the resistance framework were construed in order to frame the resistance strategies employed by academic staff. These are:

- Oppressive and marginalising structural forces, such as the teaching/research tension and the elevation of one dominant culture in South African higher education, have a causal efficacy on resistance.
- However, resistance seems more likely if the structural forces are in conflict with a person's values and identity.
- Most resistance strategies appeared to take place out of sight of structural forces in terms of a continuous, everyday passive form of resistance.
- The interaction of structural forces and resistive agency often leads to an identity shift which appears to be congruent with the values and identity which prompted the resistance in the first place (see Section 4.4 for an elaboration of identity and its relation to structural forces).

Sections 5.7 and 6.5 elaborate on these principles.

7.4.5 Conceptualising educational technology support

This research also contributed a different way of conceptualising educational technology support in the South African context (Section 6.6.2; Goal 6 in Section 1.5.2). This approach is

sensitive to the structural constraints that the research participants experience as oppressive and marginalising and also sensitive to their resistance strategies. The support strategy is built around the following:

- Creating safe and trusted spaces for academics to honestly reflect about their educational technology challenges (Section 6.6.2.1);
- Mapping resistance strategies to educational technology integration possibilities (Section 6.6.2.2);
- Encouraging reflexivity by interrogating our assumptions and actions about educational technology (Section 6.6.2.3);
- Engaging academics and exploring the impact of educational technology during staff development courses (Section 6.6.2.4);
- Presentations from colleagues actively using technology (Section 6.6.2.5).

7.5 Limitations of the study

This study was conducted in one type of institution in South Africa, a country which is still struggling to redress the disparity in terms of resources, staffing and transformation in its different universities. Hence, although the results from this thesis are valuable in helping academics, and particularly staff developers, reconceptualise their understanding of the approach to, and motivation for, using educational technology, these results will not necessarily be generalizable across institutions because of the different impacts and severity of structural constraints. This aligns with the contextualisation of knowledge in critical realist research where research results may “be significant only to specific... geo-historical contexts” (Adamides, Papachristos, & Pomonis, 2012, p. 906). It is pertinent to point back to Section 3.5 and the discussion on generalisation. The generalisation adopted in this thesis was not aimed at selecting a representative population, but rather generalising from empirical concepts to theory (Lee and Baskerville, 2003). This allows for the development of conceptual and theoretical concepts from empirical data, and in turn can be used to improve theory or test new cases (Curtis et al., 2000; Miles et al., 2014)

Although the study drew on a small sample in order to allow for an in-depth exploration, the narratives presented here represent only a snapshot in the existence of these academics. Their lived experience encompasses a range of other contexts and groupings, with multiple identities in each of these contexts. As a result, the way they experience and perceive the structural

constraints in the research context is not always clear or ‘excavatable’ as it may fall outside of the boundaries of the institution. Furthermore, there are other structural constraints in these external spaces (external to the research context) which exert a conditioning power on their behaviour within the research context.

Critical ethnography emphasises the positionality and subjectivity of the researcher and how her assumptions and subjectivity are embedded in both the research process and the final written product (Section 3.3). As such, my experiences as a female academic in South African higher education motivated my selection of female participants for this study. This has implications in terms of how the highlighted structural constraints are perceived and experienced by male academics as well as the resistance strategies they select.

A reading of this thesis may lead some to believe that it is a feminist research. However, I believe that it does not meet the requirements of feminist research. The reflexive path I follow in this study, as well as the fact that all of the research participants are female, could lead the research to be misconstrued as feminist. However, feminist research goes beyond just a study of women to also focus on gender inequality and how the social, theoretical and methodological aspects are in any way oppressive to women specifically (Brisolara, 2014; Kourany et al., 1998). As such, feminist research is inherently activist (Brisolara, 2014). While I agree that my research is a study of women, I argue that it is not feminist because my focus is not the nature or consequences of gender inequity. Instead, as highlighted in Section 1.1.3, my interest in selecting women was driven by what I felt were stereotypical misconceptions of gender inequity in technology use, and in this particular instance, educational technology.

The research questions which guided this study came out of deeply personal and professional goals. As such, there were inherent assumptions in the initial framing of these questions which were not necessarily evident to the researcher at the start of the research. While I utilised inductive reasoning and reflexivity to avoid influences of what Wall, Stahl and Salam (2015) term unconscious hegemonic assumptions, it was not possible to completely ignore what I am already aware of from literature and from my experience. And, as Wall et. al (2015) contend, these unconscious hegemonies proceed from dominating ideologies which I may not necessarily be aware of. The inductive-reflexive approach was an attempt to mitigate this and reduce the bias in the final interpretation of the research findings. However, with qualitative research, the researcher’s subjectivity is a part of the research, as I mention throughout the thesis.

7.6 Recommendations for future research

This thesis uncovered a range of resistance strategies that academics employ to counter the oppressive and marginalising effects of structural forces. Considering that this was a small, in-depth study focusing on the experiences of eight female academics, the conclusions made in this thesis could be strengthened (or refuted) by including a wider pool of both institutions and individuals. This could mean focusing on male academics in the same institution to compare the variation in terms of experiences of similar structural constraints. It could also be inter-institutional and focus on the variation in constraints and their impact on educational technology choices and practices in different universities in South Africa.

The legacies of colonialism and apartheid have had a varying impact on different higher education institutions in the country. Hence an understanding of specific constraints and resistance strategies in other institutions would allow educational technologists to tightly contextualise their support strategies in order to meet the specific needs of the academics in their institutions. Furthermore, other factors (technical resources, skilled staff, etc.) impact the conceptualisation and realisation of different educational technology support strategies. These could be explored and recommendations made that are specific to the particular contextual constraints of the institutions.

Social theories (rather than strictly technological theories) are increasingly coming to the fore in the study of technology and its relation to society in Information Systems. This is because researchers in the field realise the need to understand society in order to understand its interaction with technology. This study considered one such theory – critical realism – and its efficacy for a critical approach to understanding technology and its context. A recommendation would be to extend the use of social theories beyond those which are currently popularly employed in Information Systems and educational technology research in order to explore (hopefully) better explanations of the phenomenon uncovered.

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Appendices

Appendix A: Feedback from initial exploratory survey

Feedback from Course 1 (1st term 2013)

This page is to inform the research being undertaken by my colleague, Nompilo Tshuma, to do with the use of ICTs in staff development. It will also be used for me to rethink my use of aspects of the technology available to us at Rhodes. Please provide as much detail as possible.

5	In this course, opportunities for formative feedback have been created throughout the process of engagement on the course - or at least, this was my intention. There were the weekly submissions of your argument and the formative and summative submission of your assignment. What was your experience of this?	
#	Response	
1	On writing the assignment, I found the formative submissions I made to be very useful. It is difficult to keep up with readings and submissions at times, but I found these submissions to be a very useful starting point on each of the topics in the assignment.	
1	I think this is a useful tool for feedback as it is time effective, given busy schedules of course participants. However, I found it difficult to use especially in the beginning. I would have wanted to go through this step by step.	
1	I found it very difficult to form thoughts around the questions that were set and felt pressure to write in a way that is particular to the education discourse that is new to me. However, when I did write, I was encouraged and provoked by your responses.	
1	While I found the concept of this tool very useful and the feedback from these submissions very valuable, I found that time was a very constraining factor in making these weekly submissions. As such I personally preferred making hand-written notes and reflexions during my reading preparation, during the actual teaching and learning session and directly after the session. I then used these notes to help me when developing my assignment.	

6	When you have had technical challenges with RUconnected, where did you look for assistance:		
Response	Average	Total	
Dina	<div><div></div></div> 57%	4	
Educational Technology folk	<div><div></div></div> 14%	1	
Classmates	<div><div></div></div> 29%	2	

7

What aspects/ functions of RUconnected have you found helpful that you may use in your own teaching?		
Response	Average	Total
Uploading of resources (such as links to texts and website)	<div><div></div></div> 13%	4
Uploading of your presentation files (such as powerpoint slides)	<div><div></div></div> 10%	3
Forums for you distributing information to students	<div><div></div></div> 13%	4
Forums for your students to post information and have discussions	<div><div></div></div> 3%	1
Structuring your course (such as through topics or weekly blocks)	<div><div></div></div> 13%	4
Having students upload formative tasks or drafts (such as this courses' weekly submission of arguments)	<div><div></div></div> 3%	1
Having students upload their summative assignments	<div><div></div></div> 3%	1
Visual/ aesthetic aspects, such as use of images	<div><div></div></div> 10%	3
Collecting student feedback for evaluation purposes	<div><div></div></div> 6%	2
Creating opportunities for student reflections on their learning	<div><div></div></div> 10%	3
Administrative aspects - such as having them indicate availability (such as in this course, choosing days to meet/ present)	<div><div></div></div> 3%	1
Having students use Turnitin	<div><div></div></div> 6%	2
Your use of Turnitin to check issues of plagiarism in your students' work	<div><div></div></div> 6%	2

8	Use this space to comment on aspects of above, if you would like to....	
#	Response	
1	One problem with uploading readings onto RUConnected is that at times the full reference for the reading is not obvious. There were a couple of readings online that I had to find alternative sources for in order to reference them fully in the assignment.	

9	One of the 'bigger' questions, relating to Nompilo's research, is - do you think the technology has enabled/ constrained your own professional development as a teacher?	
#	Response	
1	I believe it has enabled it. It is wonderful to have a resource for the course structure and readings that can be accessed anywhere.	
1	I think it has overall enabled my development.	
1	<p>It has certainly enabled me to engage with my students on a personal level that i would not be able to do physically. When students respond to posts on RuConnected and I respond, that response says 'i value your question/ comment/ question and you are important' in a way that my personal engagement may not give me space to do in a 45 minute lecture or tutorial.</p> <p>This gives me a way to 'extend myself' beyond the time that the timetable tells me I have with my students and, as a person who enjoys the student contact, this has become an invaluable, encouraging and affirming way of engaging as a teacher.</p>	
1	Technology has certainly enabled my professional development as a teacher. Technology has allowed me to manage the course and encourage students learning (in terms of getting important course information to students, facilitating online discussions, uploading useful complementary material, creating forums for questions and answers etc).	

Feedback from Course 2 (3rd term 2013)

3

Reflections on your use of RUconnected

This page is to inform the research being undertaken by my colleague, Nompilo Tshuma, to do with the use of ICTs in staff development. It will also be used for me to rethink my use of aspects of the technology available to us at Rhodes. Please provide as much detail as possible.













#	Response
1	(I think that this question isn't written properly... do you want me to say what ICTs I use in my teaching?) Otherwise I don't understand what this box is for... If so, I use ICTs across all my teaching. Because of my discipline I may not be representative of what everyone else uses. I use: - laptops / lecture venue computer - webcams - robots (Sony Aibo, Lego Wedo,...) - mobile phones
1	RUconnected is both a blessing and a curse. The system is overly convoluted and needs to reduce clutter. It does however allow one to go beyond the lecture space and interact with students in a more informal manner.

4

When you have had technical challenges with RUconnected, where did you look for assistance:

Response	Average	Total
Educational Technology folk	<div><div></div></div> 50%	1
Departmental colleagues/ support	<div><div></div></div> 50%	1

- 5 What aspects/ functions of RUconnected (experienced either in this course or the whole of the PG Dip HE) have you found helpful that you may use in your own teaching?

Response	Average	Total
Uploading of resources (such as links to texts and website)	 10%	2
Uploading of your presentation files (such as powerpoint slides)	 10%	2
Forums for you distributing information to students	 10%	2
Forums for your students to post information and have discussions	 5%	1
Structuring your course (such as through topics or weekly blocks)	 10%	2
Having students upload formative tasks or drafts (such as this courses' weekly submission of arguments)	 5%	1
Having students upload their summative assignments	 10%	2
Visual/ aesthetic aspects, such as use of images	 10%	2
Collecting student feedback for evaluation purposes	 10%	2
Administering tests (such as the dummy test)	 5%	1
Having students use Turnitin	 10%	2
Your use of Turnitin to check issues of plagiarism in your students' work	 5%	1

- 6 Use this space to comment on aspects of above, and/or to write about your experience of having a skype participant and recording made available of the sessions.

#	Response
1	I'm not sure how succesful skype was in this class. My reasons for this are: - At the beginning there were problems with connections - Although subsequent classes didn't suffer the same connectivity issues, the skype part wasn't integrated very well. We couldn't see what he was doing, he couldn't see what we were doing. What we have found succesful before when teaching remotely between RU and University of Namibia is to use two projectors (one for slides, one for remote participants) and to distribute slides using Google Drive. When PPT is done on google drive then the slide changes done on the master computer (in this case that would be Dina's computer) would be reflected in the remote location. So then the remote location gets access to the same resources, and can see what we're doing at the same time. I also think that an external microphone and better speakers would be useful if this was going to happen more often. The recorded lectures were useful, although there were some problems hearing everyone in the recording. I would make the same suggestion as above (external microphone) if you were going to do this more often.
1	This is 2013 after all, we may not have (commonplace) flying cars but the telepresence expands the horizons of the class.

- 7 One of the 'bigger' questions, relating to Nompilo's research, is - do you think the technology has enabled/ constrained **your own professional development as a teacher**?

#	Response
1	I think in my field, technology has enabled my own professional development as a teacher.
1	It has enabled my development.



Feedback from Course 3 (4th term 2013)

This page is to inform the research being undertaken by my colleague, Nompilo Tshuma, to do with the use of ICTs in staff development. It will also be used for me to rethink my use of aspects of the technology available to us at Rhodes. Please provide as much detail as possible.

6	In this course, opportunities for formative feedback have been created throughout the process of engagement on the course - or at least, this was my intention. There were the weekly submissions of your argument and the formative and summative submission of your assignment. What was your experience of this?
#	Response
1	Honestly, I had not used this interactive space adequately.
1	Again, I haven't engaged as well as I should have with the weekly submissions - in fact, I haven't used the journal space yet.
1	I have not found myself making use of this - and I feel pretty bad about this. I think that one of the reasons for this is that what I am reading is so new, and my ideas about it feel rather un-formed, and so I don't tend to use the journal yet. This might also be related to time pressure, as I hardly have time to breath half the time, and so putting aside time to write on Ruconnected tends to fall to the bottom of the "to-do" list. I would like to change this though.
1	I have enjoyed the interactions in the seminars which have been informative. Most of my learning I feel has been done on my own, in reading and reflecting on my courses, and in writing the assignment. I have been hesitant to submit sections of the assignment (or journal) to Sue because I don't yet have a sense of the course as a whole (cf my comments in para 4 above), and so have not done so, but will submit the final draft only at the end of the course.
1	My enemy was time. I wished to engage as much as I could but time could not allow me.
1	N/A as there were no weekly submissions
1	I didn't make use of this.
1	There has been a lot of opportunity for feedback. I found meeting with Sue very useful for planning my assignment. I have probably not utilized the journal and forums for feedback enough but I don't really like open forums. I would rather talk face to face. Some of the weekly tasks or assignments were not discussed in the meetings which I found a bit frustrating because I had tried to think and about the topics and prepare stuff. But there was opportunity to chat about the weekly tasks online after the meetings that I have not participated in.





7

When you have had technical challenges with RUconnected, where did you look for assistance:
















Response	Average	Total
Educational Technology folk	 11%	1
Classmates	 11%	1

ru.ac.za/mod/questionnaire/report.php?instance=1688&sid=1736&action=vall

Questionnaire Report

Departmental colleagues/ support	 33%	3
Another: I haven't used RUConnected in my teaching	 11%	1
Another: Sue	 22%	2
Another: Lecturers in my department	 11%	1

8

What aspects/ functions of RUconnected have you found helpful that you may use in your own teaching?		
Response	Average	Total
Uploading of resources (such as links to texts and website)	 11%	6
Uploading of your presentation files (such as powerpoint slides)	 11%	6
Forums for you distributing information to students	 11%	6
Forums for your students to post information and have discussions	 11%	6
Structuring your course (such as through topics or weekly blocks)	 7%	4
Having students upload formative tasks or drafts (such as this courses\' weekly submission of arguments)	 5%	3
Having students upload their summative assignments	 4%	2
Visual/ aesthetic aspects, such as use of images	 7%	4
Collecting student feedback for evaluation purposes	 7%	4
Creating opportunities for student reflections on their learning	 7%	4
Administering tests (such as the dummy test)	 4%	2
Administrative aspects - such as having them indicate availability (such as in this course, choosing days to meet/ present)	 2%	1
Having students use Turnitin	 5%	3
Your use of Turnitin to check issues of plagiarism in your students\' work	 5%	3
Another function/aspect: I have not used RUConnected in my teaching	 2%	1

9

Use this space to comment on aspects of above, if you would like to....	
#	Response
1	N/A
1	I wanted to put my Entomology 201 course onto RUConnected, but did not do this in time, before the course. So instead, I just emailed my class the lectures beforehand, and used email for all other communication with them, which worked just fine.
1	I feel that I am not using RU connected to its maximum and would like more short courses on it.
1	I am not very good at using RUconecetd. I should try imporne that.

10

One of the 'bigger' questions, relating to Nompilo's research, is - do you think the technology has enabled/ constrained your own professional development as a teacher?

#	Response
1	Definitely it is enabling. A wonderful resource to get involved in, considering I am very new to this environment. I will definitely use it in the near future.
1	I haven't used RUConnected for teaching, but I do believe that using technology (powerpoint and emails) has helped my development as a teacher because it saves time in the lecture room, allowing more discussion around the topics if the students have the information before the lecture.
1	I am unclear if this question relates to my own use of Ruconnected outside of the Assessors course, or if I should constrain my answer to just my experience of the assessors course as a learner? As a teacher I have found it incredibly useful as I can communicate with my students directly, and have been able to share resources and ideas with them in a shared space. As a learner, interestingly, I have found that RuConnected has allowed my teacher and classmates to contact me very directly, and sometimes there are almost too many ideas floating around (including from other participants) and I get lost in the online 'space'. This has been quite

<http://ru.ac.za/mod/questionnaire/report.php?instance=1688&sid=1736&action=wall>

Questionnaire Report

	(including from other participants), and I get lost in the online space. This has been quite insightful for me - being on the receiving end of RUConnected!
1	RU Connected has aided my professional development. I had not used it much, but am now encouraged to do so more. Also, it has been good to use it as a 'student' participant in a course, which gives one a sense of how it is for students (when we as lecturers are driving the process of use of technology).
1	Enabled. However, I prefer to use facebook, dropbox and other cloud computing sources for some of my courses
1	It has enabled my professional development.
1	I think that RU Connected is a wonderful educational tool that could be utilized more
1	enabled
1	I have not engaged with the technology enough to comment on this question.

Summary from course facilitator:

While many of the group are very new to using ICTs in education (particularly RUconnected), they recognised them as enabling , a wonderful resource and educational tool , incredibly useful, particularly as a communication tool and space for sharing resources and ideas. One of the lecturers, who is clearly more aware of the use of ICTs in education, found working with RUconnected enabling but did express a preference for using other modes such as Facebook, Dropbox and other cloud computing sources.

While it was felt by many of the participants that they could and would like to utilize ICTs more, a couple of participants highlighted the insights gained particularly from the point of

view of experiencing them as a learner – one participant articulating the feeling of getting ‘lost in space’ with so many communications floating around ! It was felt that the experience with ICTS has supported professional development, not only exposing lecturers to the ways in which they can be used but also to give them a sense of what it is like to be a student using the system.

Feedback on Course 3 (4th term 2013)






Reflections on your use of RUconnected

The following questions deal specifically with your use of technology during this course. Please provide as much detail as possible to assist us in rethinking the technological aspects of this course.

- 8 In this course, the readings and resources gave you the opportunity to engage with the course. What was your experience of accessing and engaging with the resources on RUconnected?

#	Response
1	I have been using RUconnected since 2011, it is user friendly. Although this year i have not been using it. Reason been that i thought my work would look unique
1	Resources are easily accesssible and well organised. RU allows you to access resources where ever you are with easiness
1	Initially I was getting lost sometimes looking for my courses. Now I am used and I find it very invaluable.
1	ru connected is easy to use, documents are easily downloadable . no problem so far
1	Material are accessable through RUconnected. the RUconnected is easy to use and you can easily access learning material.
1	RUconnected is very useful as resource. It is user-friendly. Even some of us who are from the old school are able to utilise it.
1	I had difficulty to login

- 9 When you have had technical challenges with RUconnected, where did you look for assistance?

Response	Average	Total
Lynn or Jo-Anne	 50%	5
Edtech at Rhodes	 20%	2
PG Dip classmates	 10%	1
Other: Self	 10%	1
Other: i have not yet had technical problem	 10%	1

10

What aspects/functions of a learning management system like RUconnected have you found helpful that you may use in your own teaching?		
Response	Average	Total
Uploading of resources	<div><div></div></div> 16%	6
Uploading of presentation slides	<div><div></div></div> 11%	4
Forums for distributing information to students	<div><div></div></div> 8%	3
Forums for your students to post information and have discussions	<div><div></div></div> 11%	4
Structuring your course by topics or weeks	<div><div></div></div> 11%	4
Having students submit formative drafts	<div><div></div></div> 11%	4
Having students submit formative assignments	<div><div></div></div> 8%	3
Collecting student feedback for evaluation	<div><div></div></div> 13%	5
Creating opportunities for student reflections on their learning	<div><div></div></div> 11%	4
Another aspect/function we dont have such a system at UNIVEN	<div><div></div></div> 3%	1

11

Please elaborate on any of the above if you wish.	
#	Response
1	If students can submit their formative drafts is easy to guide them through.
1	Uploading of resources make it easy for students to make their own assesment of the amount of work involved with the module and this is very important.
1	It is very helpfull.
2	N/A
1	Students can give feedback without fear of victimization.
1	We do not have such a system at UNIVEN.

12	Do you think the technology has enabled/constrained you own professional development as a teacher? Please elaborate.	
#	Response	
1	It simplifies our communication with facilitators. Our facilitators upload important materials for our development	
1	technology has enabled my professional development as a teacher because considering that teaching is all about making learners access knowledge, technology has become a very important tool in facilitating learning	
1	Since we are not using it in our institution, I will share with colleagues he impotance of having one. We will start with one open source at departmental level.	
1	the ru conected technology has enbale me in my own professional development. Although there is no e-learning at the University of Venda, one can start thinking of creating a e-mail specifically for students to access the learning materials and discussion forums.	
1	Technology makes our life easy because you are able to provide students with more learning material. give student feedback on their assessment task. You are able to prepare presentation and assessment.	
1	It has enabled my own professional development in that I can now use aspects of it to benefit my students.	
1	It has enable me to access the course material and retriive comments for my assignments	

Appendix B: First interview guiding questions

In order to start building a picture of your academic identity, this first interview is designed to help me understand why you do what you do.

- 1) According to your understanding of the University's requirements, what do you understand the role of an academic to be? What are your views of these requirements?
- 2) Could you elaborate on the committees and other university activities you are involved in that are outside of your department. What prompted you to get involved in these with the teaching and research load that you already have?
- 3) How long have you been an academic at Rhodes and elsewhere? Why did you choose this career path (or did it choose you)? And how have you developed over these years?
- 4) Have you taken part in any CHERTL course(s)? If so, what was your experience – including the challenges and/or benefits?
- 5) What kind of support do you receive from your department or your colleagues for your research, teaching and/or community engagement activities?
- 6) I know that each day is different, but could you describe your typical work day from morning until evening?
- 7) Could you elaborate on your current teaching and supervisory loads, and the approach you take to engage and support both undergraduate and postgraduate students?
- 8) In what ways have you used technology in your teaching and/or supervision? And what has been your experience of using it?
- 9) Which areas do you use most often in your department (i.e., office, tea room, teaching venues)?

Appendix C: Ethical clearance documentation

Ethical clearance from the institutional ethical standards committee



RHODES UNIVERSITY
Where leaders learn

Rhodes University Ethical Standards Committee, Rhodes University, P O Box 94, Grahamstown, 6140
Tel: +27 46 603 7366 • Fax: +27 46 603 8934 • Email: ethics-committee@ru.ac.za

07-Aug-2015

Dear Mrs Nompilo Tshuma

Ethics Clearance: A critical realist exploration of educational technology integration practices and identity constructions of academic staff at a South African university

Principal Investigator: Mrs Nompilo Tshuma

This letter confirms that a research proposal with tracking number: RU-HSD-15-03-0001 and title: **A critical realist exploration of educational technology integration practices and identity constructions of academic staff at a South African university** was given ethics clearance by the Rhodes University Ethical Standards Committee.

Please ensure that the ethical standards committee is notified should any substantive change(s) be made, for whatever reason, during the research process. This includes changes in investigators. Please also ensure that a brief report is submitted to the ethics committee on completion of the research. The purpose of this report is to indicate whether or not the research was conducted successfully, if any aspects could not be completed, or if any problems arose that the ethical standards committee should be aware of. If a thesis or dissertation arising from this research is submitted to the library's electronic theses and dissertations (ETD) repository, please notify the committee of the date of submission and/or any reference or cataloguing number allocated.

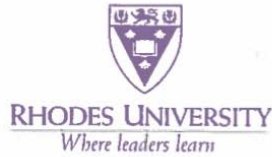
Yours Sincerely,

Professor M. Goebel: Chairperson RUEEC.

Note:

1. This clearance is valid from the date on this letter to the time of completion of data collection.
2. The ethics committee cannot grant retrospective ethics clearance.
3. Progress reports should be submitted annually unless otherwise specified.

Ethical clearance from the Human Resources division (required for research involving staff)



Human Resources Division
Administration Building, Grahamstown, 6139, South Africa
PO Box 94, Grahamstown, 6140,
South Africa
t: +27 (0) 46 603 8113
f: +27 (0) 46 603 8046
e: hr@ru.ac.za
www.ru.ac.za

21st of September 2015

Ms N Tshuma
CHERTL
Rhodes University

Request to conduct research with Rhodes University Staff and/or Students

Dear Nompilo

This letter is to confirm that your request to conduct research on *"critical realist exploration of educational technology integration practices and identity constructions of academic staff at a South African university"* topic has been approved by the Ethics Committee. In my capacity as HR Director, I do not have any objection should you wish to follow a coordinated approach by surveying and/or interviewing staff or students.

Should you require further information please do not hesitate to contact me.

Yours sincerely

Loshni Govender
Director: HR

Ethical clearance from the Registrar (required for research involving staff and students)

From: **Adri Saayman** a.saayman@ru.ac.za 
Subject: FW: Ethical approval for PhD research
Date: 25 August 2015 at 10:25 AM
To: n.tshuma@ru.ac.za

AS

Good morning

Please see below approval from Dr Fourie.

Kind regards

Ms Adri Saayman

Administrative Assistant
Student Bureau
Rhodes University
Grahamstown
Tel: 046 603 8276
Fax: 046 603 8300

IMPORTANT: Please insert your student number in the subject line to ensure that you receive a timeous response.

From: Dr Stephen Fourie [<mailto:S.Fourie@ru.ac.za>]
Sent: 25 August 2015 10:25 AM
To: 'Adri Saayman'
Subject: RE: Ethical approval for PhD research

Approved from my side.

Dr Stephen Fourie
REGISTRAR



From: Adri Saayman [<mailto:a.saayman@ru.ac.za>]
Sent: 25 August 2015 10:22
To: s.fourie@ru.ac.za
Subject: FW: Ethical approval for PhD research

Good morning

Please see below and attached for your consideration.

Kind regards

(continued on next page...)

Ms Adri Saayman

Administrative Assistant
Student Bureau
Rhodes University
Grahamstown
Tel: 046 603 8276
Fax: 046 603 8300

IMPORTANT: Please insert your student number in the subject line to ensure that you receive a timeous response.

From: Nompilo Tshuma [<mailto:n.tshuma@ru.ac.za>]
Sent: 25 August 2015 10:08 AM
To: registrar@ru.ac.za
Subject: Ethical approval for PhD research

I have just received ethical clearance from the Rhodes Ethical Standards Committee for my PhD research (see attached). I have been informed that I also require ethical clearance from the Registrar. Could you give me more information about the procedure I need to follow in order to apply for this.

Thank you and kind regards

Nompilo Tshuma
Lecturer – Educational Technology
Centre for Higher Education Research, Teaching and Learning (CHERTL)
Rhodes University

Ethical clearance from the Director of Student Affairs (required for research involving students)

From: **Colleen Vassiliou** c.vassiliou@ru.ac.za
Subject: RE: Ethical approval for PhD research
Date: 02 September 2015 at 10:11 AM
To: Nompilo Tshuma n.tshuma@ru.ac.za



Noted and approved

Warm regards
Colleen



Dr Colleen Vassiliou
Director of Student Affairs
Division of Student Affairs
t: +27 (0) 46 603 8181 f: +27 (0) 46 622 9514
PO Box 94, Grahamstown, 6140, South Africa
www.ru.ac.za/studentaffairs

From: Nompilo Tshuma [<mailto:n.tshuma@ru.ac.za>]
Sent: 02 September 2015 09:48
To: 'Colleen Vassiliou'
Subject: RE: Ethical approval for PhD research

Hi Colleen

Please find attached my research design and proposal. The University's Ethics Standards Committee advised that since I will be using data from courses and student evaluations, I need to get ethical clearance from your office as well.

Regards

Nompilo

From: Colleen Vassiliou [<mailto:c.vassiliou@ru.ac.za>]
Sent: 28 August 2015 05:09 PM
To: 'Nompilo Tshuma'
Subject: RE: Ethical approval for PhD research

Afternoon Nompilo,
The DSA only need to be notified if your sample group is students.
If so, please attach a proposal.

Warm regards
Colleen



Dr Colleen Vassiliou
Director of Student Affairs
Division of Student Affairs
t: +27 (0) 46 603 8181 f: +27 (0) 46 622 9514

(continued on next page...)

PO Box 94, Grahamstown, 6140, South Africa
www.ru.ac.za/studentaffairs

From: Delvene Gelderbloem [<mailto:D.Gelderbloem@ru.ac.za>]
Sent: 25 August 2015 15:05
To: c.vassiliou@ru.ac.za
Subject: FW: Ethical approval for PhD research

From: Nompilo Tshuma [<mailto:n.tshuma@ru.ac.za>]
Sent: 25 August 2015 10:04
To: studentaffairs@ru.ac.za
Subject: Ethical approval for PhD research

I have just received ethical clearance from the Rhodes Ethical Standards Committee for my PhD research (see attached). I have been informed that I also require ethical clearance from the Director of Student Affairs. Could you give me more information about the procedure I need to follow in order to apply for this.

Thank you and kind regards

Nompilo Tshuma
Lecturer – Educational Technology
Centre for Higher Education Research, Teaching and Learning (CHERTL)
Rhodes University

Participant Information for Academic Staff Research

Participants

About the Project:

Nompilo Tshuma at Rhodes University is working on her PhD research, which attempts to understand the relationship between lecturers' academic identities and the way they integrate educational technology in their courses. The research process is outlined in the attached research protocol. In summary, Mrs Tshuma would like to find out the following information from you:

- What motivated you to start using educational technology in your teaching?
- What processes and educational technology choices have you made in your current courses and why?
- How do you view yourself as an academic (academic identity), and what factors have influenced that view?

What is involved?

The project will run over the next two years. Your time commitment will be at least monthly pre-scheduled interviews during two teaching semesters. The researcher will also request to observe your face-to-face teaching and online courses, as well as course documentation, student evaluations, publications, your teaching portfolio, as well as your assignments, reflections and discussions in CHERTL courses.

Benefits to you:

Taking part in this research study will give you a better understanding of your students' experiences and interactions with your online course, helping you to make informed decisions about the resources and activities you include in your online course pages. The interviews will help you critically reflect on your online teaching choices, which will not only benefit your students, but possibly transform your curriculum. Furthermore, by assisting in understanding how lecturers use technology for teaching, you will contribute towards recommendations that

will feed into CHERTL courses and workshops on educational technology, making the transition easier for new lecturers.

Risks of the Project:

There are a number of personal risks and burdens to you if you decide to take part in this research. However, the researcher will ensure that these are mitigated as far as possible.

- The research will run over two teaching semesters in order to observe and document two iterations of your online courses. The time commitment for the monthly interviews could be a burden to you.
- Because of the length of time and the in-depth nature of this study, it is possible that sensitive or negative data may be revealed in interviews, observations or documentation. You will have access to all this data and will approve, remove or change it before it can be included in the thesis, reports or publications.
- This research takes place in a small institution, and although the researcher will strive to maintain confidentiality, it may sometimes be possible to identify your department or course in reports or publications. As such, the researcher will get your approval before such documentation goes public. Also, an independent academic (a member of the departmental ethics committee) will review these reports or publications.

Consent Form for Academic Staff Research Participants

Research Project Title: A critical realist exploration of educational technology integration practices and identity constructions of academic staff at a South African university

Researcher: Nompilo Tshuma, Centre for Higher Education Research, Teaching and Learning

I _____ have been given written information about this research and have discussed the research project with Mrs Nompilo Tshuma, who is conducting this research as part of a PhD degree supervised by Dr Kirstin Krauss at Rhodes University.

I have been advised of the potential risks and burdens associated with this research, which include the following:

- The length of time for the research is a maximum of two years. It is anticipated that the data collection process will run over two iterations of my courses, which may take almost two years if the courses run just once a year.
- Sensitive or negative data may come to light during data collection. In such instances, I understand that the researcher will provide me with the opportunity to review and approve this data (from interviews, documents or observations) for inclusion in the research data.
- Although every measure will be taken to maintain the confidentiality of the research participants, it may be possible to identify them in research reports or other written documentation. In such cases Mrs Tshuma will ask me to review and, if required, amend such reports or documentation before they are made public.

I have also had an opportunity to ask Mrs Tshuma any questions I may have about the research and my participation.

I understand that my participation in this research is voluntary. I am free to refuse to participate in any part of the research and I am free to withdraw from the research at any time.

If I have any enquiries about the research, I can contact the researcher Mrs Tshuma on 046 603 7096/078 698 7197 or email n.tshuma@ru.ac.za, and the supervisor Dr Krauss on 046 603 8380 or email k.krauss@ru.ac.za. If I have any concerns or complaints regarding the way the research is or has been conducted, I can contact the University's Ethics Committee on 046 603 8055 or email ethics-committee@ru.ac.za.

By signing below I am indicating my consent for the following (*please tick*):

- ☐ To be interviewed by the researcher at least once a month over the course of two teaching semesters. I understand that there will be two one-hour long interviews at the start and end of the research, and monthly interviews of 30 minutes long during two of my teaching cycles. The teaching cycle depends on the length of my teaching block for my courses (term or semester).
- ☐ To make available to the researcher course outlines and other course documentation relevant to the use of educational technology.
- ☐ For the researcher to observe at least two of my face-to-face lectures in each course.
- ☐ For the researcher to document the types and number of resources and activities I have used on my online course page, including at least a weekly documentation of the course logs for each of these resources and activities. I understand that this incorporates RUconnected and any other online platform I am using for teaching purposes.
- ☐ To make available course evaluation data, particularly as it relates to the use of educational technology.
- ☐ To make available my teaching portfolio.
- ☐ For the researcher to access my assignments, reflections and discussions in CHERTL courses.

I understand that the data collected from my participation will be used primarily for a PhD thesis, and will also be used in summary form for journal publications, and I consent for it to be used in that manner.

Signature

Date

Consent Form for Student Research Participants

Research Project Title: A critical realist exploration of educational technology integration practices and identity constructions of academic staff at a South African university

Researcher: Nompilo Tshuma, Centre for Higher Education Research, Teaching and Learning

I _____, with student number _____ am a current student in _____. I have been given information about this research project by Mrs Nompilo Tshuma, who is conducting this research as part of a PhD degree supervised by Dr Kirstin Krauss at Rhodes University.

I have also had an opportunity to ask Mrs Tshuma any questions I may have about the research and my participation.

I understand that my participation in this research is voluntary. I am free to refuse to participate in any part of the research and I am free to withdraw from the research at any time.

If I have any enquiries about the research, I can contact the researcher Mrs Tshuma on 046 603 7096/078 698 7197 or email n.tshuma@ru.ac.za, and the supervisor Dr Krauss on 046 603 8380 or email k.krauss@ru.ac.za. If I have any concerns or complaints regarding the way the research is or has been conducted, I can contact the University's Ethics Committee on 046 603 8055 or email ethics-committee@ru.ac.za.

By signing below I am indicating my consent for the following (*please tick*):

- ☐ For my course evaluation data to be used for this research
- ☐ For my forum discussions and assignments to be used for this research. I understand that my lecturer will be able to review and approve all such data before it can be included in the research.
- ☐ For my course access logs to be used in this research, which includes access details for resources and activities in the online course

☐ For at least two face-to-face lectures to be observed by the researcher.

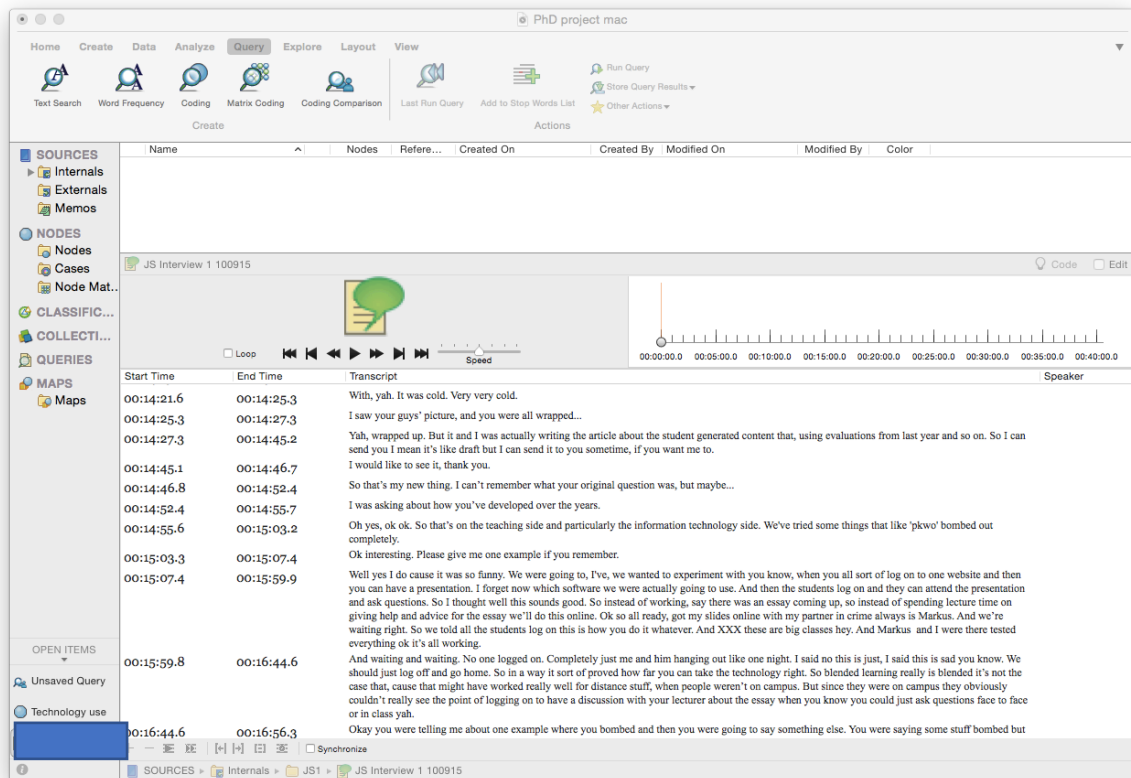
I understand that the data collected from my participation will be used primarily for a PhD thesis, and will also be used in summary form for journal publications, and I consent for it to be used in that manner.

Signature

Date

Appendix E: NVivo screenshots (Interview transcript and one analysis node)

Screenshot of interview transcript



Screenshot of analysis node (Technology)

The screenshot displays the 'PhD project mac' application window. The top menu bar includes 'Home', 'Create', 'Data', 'Analyze', 'Query' (selected), 'Explore', 'Layout', and 'View'. Below the menu is a toolbar with icons for 'Text Search', 'Word Frequency', 'Coding', 'Matrix Coding', 'Coding Comparison', 'Last Run Query', 'Add to Stop Words List', 'Run Query', 'Store Query Results', and 'Other Actions'. The left sidebar contains a tree view with categories: SOURCES (Internals, Externals, Memos), NODES (Nodes, Cases, Node Mat...), CLASSIFIC..., COLLECTI..., QUERIES, and MAPS. The main workspace shows a table with columns: Name, Nodes, Refere..., Created On, Created By, Modified On, Modified By, and Color. Below the table, a search bar contains 'Technology use'. The 'Reference' tab is active, displaying a list of references with their coverage percentages and associated text snippets. The references are:

- Reference 3: 1.27% coverage**
It's up to them. It's really up to them sometimes it's just there right on that platform and sometimes it is an uploading. Yah so whatever works whatever works. It is very interesting the people who had the easiest time with doing their assignment are the ones who either did the reflective journal or the blog every week.
- Reference 4: 1.03% coverage**
So the other thing the forums I definitely only ever use it to say hey remember these are the readings, and remember this if yah, so it was just, I didn't really expect anybody to speak back to me so if you go on the forums you'll just see me me me me me. That was it.
- Reference 5: 2.29% coverage**
that's my technology use. I'm trying to think what else do I do. I upload videos, no I don't upload videos I lie. I link videos and this is one thing I've never checked. So in a slide I will embed is a favourite video there're 3 sessions that have videos that I can think of and so I will embed the link on the slide and then you can play coz it will play off my machine but at least the url is there so then the person can in that sense so they will have to follow the url to go to I guess to open another page to go yah so, yah. I keep meaning to play around with prezi. I had started a couple of years ago.
- Reference 6: 0.71% coverage**
Yes. And it's not as easy as powerpoint and I find powerpoint quite limiting well that's the other thing I use powerpoint, every session will have uploaded with powerpoint. Yah.
- Reference 7: 1.53% coverage**
And where you zoom and where I, I really did I think I even went to a prezi 101 kind of thing you guys must have offered I don't know how many years and it was great for but I

The bottom status bar shows 'NODES > Nodes > Technology use'.

Appendix F: Notetaking (complemented NVivo coding)

17/05/17

- using RUC as a resource dump
- audio recordings - first failed attempt, dictated by participants when to ^{record} ~~play~~ / ^{stop} ~~pause~~
- can't get pple to do weekly journals - uses blog instead (5-minute blog)
- intimidated / overwhelmed by what DB is doing or can get them to do which she can't
- slight technical glitch with blog so that it didn't show.
- not engaging on forums - used as announcement platform
- also video link embedded on slides
- would prefer prez! but no time to play around with it. - powerpoint is limiting
- contextual changes encouraged her to change structure of course - which I think changed the participants' thinking & engagement.
- empowering staff to engage in curriculum conversations in their dpts.
- crashed computer 2 weeks before teaching - everything on RUC. - laptop is her office
- relies heavily on RUC & has to consider national people who want everything printed because of bandwidth issues.
- no interest in learning new technologies.
- especially starting from zero
- guilty about not doing some edtech stuff herself & requesting for assistance
- feels she asks for less & less assistance each year & her questions are more sophisticated
- invested a lot in edtech assistants & felt she didn't feel like getting to know new ones.

- deep ^{fast convenient} complicated relationship with technology
- facilitates instant comms with students but class rep does that thru Facebook.
- assuming I don't view powerpoint as a technology
- RUC is the standard tech she uses
- tech individualises & depersonalises the learning space.
- problem with tech being the 'end & be it all for the students'
- tech misses out on the emotion, passion & dynamics of classroom interaction & building critical thinkers
- ∴ conservative when it comes to tech.
- happy with students using youtube to understand concepts she's teaching but they can't ask questions there & have to come & engage with her in class.
- bodily presence & historicity is the human aspect missing in tech.
- tech challenges during a presentation so can't use powerpoint & IT takes time to respond - need for functional infrastructure
- uses youtube videos
- hates wikipedia - she'd cut it & wants students to put effort into learning even online
- tech just to facilitate but not total reliance
- ~~she~~ students challenge what she's teaching

Appendix G: Questions for engagement in staff development courses

Questions for discussion

1. What is the purpose/intended consequence of this use of technology?
2. Whose needs are being met by this technology use?
3. What assumptions are being made about students?
4. Are there students who will potentially be excluded from the learning process as an unintended consequence of using this technology?