A First and Second Order Cybernetic Analysis of Barriers Facing Sexuality Education in Secondary Schools

by

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Declaration

I, Eben Haeser Swanepoel, declare that the Doctoral research thesis (article option) that I herewith submit for the Doctoral qualification in Psychology of Education at the University of the Free State is my independent work, and that I have not previously submitted it for a qualification at another institution of higher education.

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Resilience is Key!

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List of Acronyms and Abbreviations

AIDS	Acquired immune deficiency syndrome
CAPS	Curriculum and Assessment Policy Statements
CSE	Comprehensive sexuality education
HIV	Human immunodeficiency virus
LO	Life Orientation
SE	Sexuality education
STD	Sexually transmitted disease

Glossary

Term	Definition
Cybernetics	The study of how information is communicated and steered among systems through the processes of feedback, adaption and circularity (Becvar & Becvar, 2012; Heylighen & Joslyn, 2001).
First Order Cybernetics	The objective observed positioning of humans toward a system. Reality is seen as a passive construct that can be observed and described (Becvar & Becvar, 2012; Heylighen & Joslyn, 2001).
Second Order Cybernetics	Reality is seen as a contextual and co-created product of subjective experiences. From a Second Order Cybernetics perspective there can be multiple realities where the observer becomes part of the co-construction and shaping of a system (Heylighen & Joslyn, 2001).
Entropy	A state of systemic disorder and decline of functioning when a system allows too much, or little, information (Becvar & Becvar, 2012).
Negentropy	The state a system attains when relevant information is received into the system to allow for change, while rejecting information which is not beneficial to its overall integrity (Becvar & Becvar, 2012).
Morphostasis	The state in which a system can be described as having attained structural stability, equilibrium and optimal adaption (Becvar & Becvar, 2012).
Morphogenisis	The process of systemic change and adaption (Becvar & Becvar, 2012).
Feedback	The process of providing a system with information and the subsequent behavioral change of a system. Negative feedback implies that no change to a system takes place, whereas positive feedback denotes change to the system (Becvar & Becvar, 2012).

Thesis Abstract

In light of the growing concern regarding HIV and AIDS, teenage pregnancies, gender violence and suicides among adolescents of alternative sexualities, South African education has become increasingly critical in establishing spaces of inclusivity and promoting acceptance and social justice for inclusivity. Sexuality education was implemented as a subcomponent of the subject Life Orientation, mandatory to all secondary-school learners, as a core initiative to address issues of sexuality and culture that remain rife within South African society. However, the ideal change at societal level has not been realised, with gender inequality and sexuality barriers to social justice remaining prevalent. Research within the area of sexuality education has gained considerable momentum at both national and global levels, exploring the challenges associated with crossing multicultural fissures in bridging the gap between the theoretical ideals of socially just sexuality education and the practical implications thereof within society. This study aims to investigate, from a multicultural contextual approach, how schools implement sexuality education, and the subsequent challenges faced during the teaching thereof. While a wide scope of research explores individual challenges within the system (such as teacher bias, parental objections and textbook restrictions), a systemic perspective is needed to explore the wider suprasystem of South African contexts in order to better comprehend how micro-level challenges arise specific to the place, space and cultures of schools.

Responding thereto, this thesis approaches sexuality education from a systemic perspective based on First and Second Order Cybernetics. The initial part of the study encompasses a grounded theoretical approach to gain perspective on the dominant components that inform systemic structure within which sexuality education manifests (specifically drawing on school-level,

community-level and national-level systemic influences). A prominent feedback process that was found to stagnate socially just education, in the form of 'silence', emerged, which is further explored within the manner that sexuality education stagnates to adapting national benchmark standards of social justice and inclusivity. After establishing the basis of the desktop reviews, the study empirically analyses, through semi-structured interviews, the views and perspectives of Life Orientation teachers and school management as a means to contextualise the challenges schools face as individual systems and the manner in which they respond to these challenges at wider systemic level. Results point to the way place, space and culture are core mediators of how sexuality education manifests within schools.

In conclusion to this thesis, I reflect on my own experiences to the barriers and boundaries to sexuality education that I have experienced during my own teaching career. Through this process of self-reflection, I convey how my pedagogical approach to sexuality education and multicultural teachings have been shaped and adapted within the various systems and subsequent contexts I worked within. Finally, I draw on recommendations which include the need for teachers to engage collaboratively across subject and disciplinary boundaries as a means to promote sexuality education, while also promoting the ongoing need for reflexivity to form the basis of shaping one's teacher identity, and adaptability of one's pedagogical methods to best align with the needs of the school system.

Keywords: cybernetics, sexuality education, systems analysis, silence, cultural diversity, reflective practice, multiculturalism

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1. General Orientation

This thesis comprises of five interrelated publishable articles thematically linked to produce a body of work related to the requirements of a Doctoral degree. The primary underpinning and rationale of this study is to better understand how sexuality education manifests at practical levels within different contexts in South Africa. A wide body of literature will be underscored primarily from a First Order Cybernetic perspective to establish an objective view of how literature underpins sexuality education and the systemic nature thereof. For this reason, the primary two articles are theoretical in nature. The aim further to explore the specific contextual underpinning of sexuality education is found through the remaining three articles, using a Second Order Cybernetic perspective. As sexuality education is strongly linked to Life Orientation and takes strong momentum in secondary schools, the thesis will primarily draw on secondary school based research, however for deeper clarification primary level schools will also be drawn on.

Thus, the title of the thesis embodies these two perspectives as they relate to the barriers and boundaries found within secondary schools related to sexuality education:

Title: A First and Second Order Cybernetic Analysis of Barriers Facing Sexuality Education in Secondary Schools

The five articles which will thematically construct this thesis are:

1. Exploring Sexuality Education Within South African School Ecologies: A First Order Cybernetic Perspective

2. Exploring 'Silence' as Negative Feedback to Sexuality Education: A First Order Cybernetic Perspective

3. Investigating How School Ecologies Mediate Sexuality Education: A Cybernetic Analysis Within the Free State Province, South Africa

4. Investigating Sexuality Education in the Free State Province: A Matter of Space, Place and Culture

5. A Reflective Cybernetic Study on the Experiences of a Gay Male Teacher in the Free State Province

2. Background to the Study

The post-apartheid landscape has brought the need for South Africa to adhere to national benchmark stipulations of inclusivity and social justice. Schools are salient spaces of cultural plurality, reflecting broader national societal dynamics and as such are characteristic of the cultural diversity found within the macrosystem of Southern Africa (Meier & Hartell, 2009). However, implementing culturally diverse teachings aligned with these benchmarks of social justice and inclusivity have been met with various barriers opposed to successful transformation toward a socially just society (Weeks, 2012). One such area, specifically within the subject Life Orientation

(LO), is sexuality education (SE), which has gained momentum in research in recent years as a problematic component within Life Orientation, and the manner in which it is taught. Subsequently, this ideally influences learners to internalise meaningful information which promotes societal change and healthy lifestyle choices.

Sexuality education has been implemented in South Africa as a core initiative to curb risky behaviours associated with gender-based violence, and combating sexually transmitted diseases (STDs), teenage pregnancies, and unsafe sexual practices (Shefer & Ngabaza, 2015; Shefer, Kruger, Macleod, Vincent & Baxen, 2015). In practice, however, these ideals have not led to the desired societal change as gender violence and unsafe sexual practices are still ongoing within South African society (Epstein & Morell, 2012). This is further problematised in that contradictory norms of different cultures remain rife, challenging the type of content that is taught in schools as to relevance and applicability across cultural fissures (Alexander, 2016; Beyers, 2013).

In my master's research I explored how sexuality education has been met with resistance within school contexts (Swanepoel & Beyers, 2015; Swanepoel, Beyers & De Wet, 2017). Specifically, the work drew on the way Life Orientation teachers draw on reactive information, which is often biased in nature when teaching sexuality. The study was primarily focussed on the way individual teachers mediate sexuality education within the classroom. Sexuality education, however, does not occur within a vacuum, and as such I framed my subsequent research within a systemic perspective to explore how systems uphold sexuality education. The primary motivation of this study stemmed from the notion that schools are uniquely positioned within a specific context and culture, thus leading me to question how schools uphold unified democratic ideals aligned with national standards while simultaneously remaining individual entities each with their own unique school climates and cultures (Meier & Hartell, 2009).

3. Structure of theThesis

This thesis is structured in the format of five publishable articles. The content of each article is thematically linked through content in theoretical frameworks. The first two articles are primarily theoretical articles which form the basis of the study. The subsequent articles (3 and 4) are empirical and form the data component of the thesis. The final article is a self-reflective article in which I both discuss literature and position myself as a primary component in the analysis of my experiences related to sexuality education within the Free State province.

4. Frameworks Used Within theStudy

The study is primarily rooted in a systemic perspective based on the framework of cybernetics. This framework is relevant in exploring the wider system within which sexuality education manifests within the contexts of schools, rejecting the notion of causal effect and instead investigating how school systems uphold structural integrity through the different dynamic characteristic of each individual school.

The first two articles make use of First Order Cybernetics as well as Grounded theory as a means to generate information, and which forms the basis of the study. The aim of First Order Cybernetics is to gain a descriptive perspective on the patterns among components of a system, and to investigate what components uphold systemic integrity (Becvar & Becvar, 2012). This perspective provides an overview of the boundaries which are formed through the interactional patterns among the components, and aims to investigate the way in which systems adapt to outside perturbations or remain closed to incoming information. Furthermore, First Order Cybernetics allows for the researcher to observe systems as an outsider, allowing for observed components to construct an

objective reality and 'truth' of the observed phenomenon, based on the information presented and the observed patterns among components of the system itself (Baron, 2007). With the focus on observing openness and closedness of boundaries, schools that are too open to incoming information will subsequently lead to the system losing individual integrity, where a system which is, in turn, too closed in boundaries will stagnate within a given context and reject new information in totality from changing the systemic structure in line with social justice and transformation. This framework will become especially critical in establishing how schools as multicultural systems form patterns of interaction related to the implementation of sexuality education, while subsequently grounding the study for further analysis from a Second Order Cybernetic perspective to provide a stronger contextual view of how schools individually uphold structural integrity when faced with challenges associated with implementing sexuality topics. It must be noted that Cybernetics is a form of systems theory; it is not a theoretical paradigm in its own right but rather a theoretical model to guide other methods of enquiry and theoretical frameworks (Becvar & Becvar, 2012). It is thus viable to use cybernetics as a model to guide the basis of the initial studies in this thesis through Grounded theory. Cybernetics is further distinguished from Bronfenbrenner's Ecological Systems theory (Bronfenbrenner, 1992) in that less focus is placed on the different contextual systems in which growth and development takes place, and thus focussing more on negative and positive feedback processes, boundaries forming different systems, and the patterns of interactions formed among different systems upholding systemic integrity or otherwise leading to systemic dysfunction (entropy).

In order to generate data, the first two articles are desktop reviews of existing literature pertaining to sexuality education. I generated the content of the articles by exploring South African literature until the generated data reflected a comprehensive description of the barriers and boundaries

sexuality education and schools face within the wider national suprasystem. The use of both a systemic perspective and Grounded theory to generate data for the primary analysis in this thesis is of value as Grounded theory allows for the generating of data which are descriptive in nature (characteristic of First Order Cybernetics) as a means to explore how school systems and systems as a whole uphold systemic structure within a given context (Stillman, 2006; Laszlo & Krippner, 1998). This further allowed for the data to emerge and answer the posed research questions inductively, which enabled me to gain a stronger and more objective view of the way sexuality education is currently situated within South Africa and, specifically, the Free State province.

By exploring systems as an observer, the researcher also needs to account for the way personal motives and values influence the research process. Subsequently, while First Order Cybernetics focusses on the 'what' of systemic structures, it also minimises the influence of the researcher in viewing systemic structure, while Second Order Cybernetics allows for the researcher to gain a more subjective perspective on the system dynamics (Becvar & Becvar, 2012), in turn influencing the system and being influenced by it. The researcher thus becomes immersed in the study and co-constructs the reality along with participants (Reinertsen, 2014). This allows for the research process to include a 'why' perspective of the phenomenon under investigation, while also allowing for the researcher to reflect critically on how subjective observations influence the process of data reporting. This becomes critical in Article 5, where the study is primarily framed from my own perspective, experiences and beliefs, and, in turn, strengthens the need to disseminate the data in a critical manner.

5. Article Summaries

Article 1 of this thesis comprises of a desktop review of South African-based literature encompassing the scope of sexuality education. The article is titled: *Exploring sexuality education within South African school ecologies: A First Order Cybernetic perspective*. The article is primarily framed through a First Order Cybernetic perspective and Grounded theory to analyse and explore what components are prominent within the systemic perspective of the educational system, specifically to the system within which sexuality education manifests and is taught throughout the school.

The primary question that grounded this article is: What are the interactional patterns (during sexuality education) at systemic level which promote systemic change and adaptability (morphogenesis) and/or stagnation and stability (morphostasis) of school systems within wider ecological dynamics? Stemming from the primary question, the following sub-questions were formulated: (1) What are the patterns of interaction (during sexuality education) at system levels leading to a school system's state of entropy? and (2) What are the prominent feedback processes to sexuality education maintaining a school system's state of entropy?

The review found three distinct levels within which sexuality education manifests. On a broad supra-systemic and primary level, the overarching boundary relates to the national benchmark standards set forth by national policies such as the National Education Policy Act (No. 27 of 1996) and the South African Bill of Rights. Such national-level benchmarks stipulate the standards of inclusivity and non-discriminatory practices aligned with the South African Constitution. These ideals of social justice and transformation are drawn into the school ecological system by means of the Curriculum and Assessment Policy Statements (CAPS).

The review of literature within Article 1 further established that the community within which the specific school is contextualised becomes a core mediator as to how sexuality education manifests within the classroom practice and school system. Urban and rural contexts are specifically discussed within this article as a second level to systemic boundaries to sexuality education, as these contexts both mediate how open or closed school boundaries are to incoming information. Ideally, boundaries to systems should have a balance between being open and closed to be receptive enough to integrate new information while still upholding systemic integrity as a whole. In other instances it may be that boundaries allow too much information or reject necessary information, which would allow for dynamic systemic change to take place. Schools with too open boundaries to social change and information tend to lose systemic integrity, while systems with too closed boundaries are often unyielding to social change and form rigid standards. The community further has a direct impact on how educators approach sexuality education, as parental expectations and community norms often restrict the space educators have in the teaching of such emotive topics.

At the third level (school-level boundaries), the most prominent challenge relates to educator bias and expectations. The first article specifically draws on how sexuality is a cultural concept and thus difficult to facilitate within classroom practices where a myriad cultures of learners are situated. In order to make sense of such ambiguity, teachers draw on personal information to make sense of the content, thus facilitating information which may not be applicable to all learner backgrounds. The article further reflects on textbook restrictions and the manner in which educators may completely silence the topic within the classroom or teach from informative sources that are stereotyped in content.

The conclusion of Article 1 frames and grounds the content basis of Article 2, concluding that the concept of ‘silence’ plays an integral role in the form of negative feedback influencing the

implementation of sexuality education. It was found that silence is a dominant process that influences school systems to stagnate at national-level benchmarks, specifically as to how this form of feedback manifests across different school systems within South Africa, thus forming a prominent pattern of dysfunction.

Negative feedback, as is the central theme of 'silence' of Article 2, is a means of upholding a system's status quo, and thus does not allow new information into the system as a means to change systemic structure (Becvar & Becvar, 2012). The second article, titled *Exploring 'silence' as negative feedback to sexuality education: A First Order Cybernetic perspective*, frames how silence influences school ecologies as a prominent feedback process during sexuality education. The desktop review responds to two questions:

1. What are the prominent feedback processes maintaining a school system's state of entropy as related to sexuality education?
2. What influence does silence have, in the form of negative feedback processes, on the manner in which sexuality education manifests within the South African context?

Article 2 is framed through a First Order Cybernetic perspective and the use of Grounded theory to approach the research questions. The research reported on draws on the way schools tend to desexualise learners and position them as passive agents in need of being taught about topics such as abstinence and sexually transmitted diseases. However, it is formulated that learners are more knowledgeable about sexuality than adults give them credit for. As such, it is to the disadvantage of learners when schools become spaces of silence and do not approach topics such as intimacy and sexual orientation. While the article speaks to the discomfort of educators in approaching sexuality topics, the silence thereon roots school systems in negative feedback, in turn closing off

boundaries which would allow for more meaningful discussions to emerge within the classroom context.

Article 3, *Investigating how school ecologies mediate sexuality education: A cybernetic analysis within the Free State province, South Africa*, is the first empirical article of this thesis. The article aims to investigate, by using qualitative research methods and interviews, the following core research question: How do schools mediate sexuality education in Free State provincial schools to accommodate contextual challenges?

The research reported on within Article 3 is drawn from the narratives of ten Life Orientation teachers and managerial staff from five different schools in the Free State province. The purposively sampled participants took part in semi-structured interviews. Data were analysed through the use of both First and Second Order Cybernetic frameworks. It was found that gender and race are core challenges educators face during the teaching of sexuality, while the contextual nature of the schools within specific communities further challenges and mediates sexuality education. The matter of space and place became prominent within this report, and, as such, are aligned with the following article's focus. It was established through participant narratives and prior experiences of teaching outside the Free State that South African provinces are contextually situated within different cultural ecologies. The results further indicate that teachers and school management face various boundaries due to cultural influences, specifically in the Free State, which subsequently influences how they approach sexuality education. An interesting finding further suggests that not all boundaries to sexuality education are closed, with some school systems finding a more dynamic and open-boundaried way of adapting to the ongoing multicultural changes posed at broader systemic levels.

Article 4, *Investigating sexuality education in the Free State province: A matter of space, place and culture*, investigates through qualitative semi-structured interviews the manner in which space, place and culture mediate sexuality education. This empirical article comprises of interviews with stakeholders within the school system working with sexuality education, specifically school managerial personnel and teachers, with a final sample of 12 participants from six schools within the Free State province. The research, framed through a First and Second Order Cybernetic perspective, is guided through the research question: How do schools, from a systemic level, mediate sexuality education in relation to space, place and culture? The data show that schools mediate sexuality education in relation to the physical geographical place in which they are located. Further findings report on the way the socio-political spaces of schools further mediate how sexuality education manifests within the system.

The fifth and final article, *A reflective cybernetic study on the experiences of a gay male teacher in the Free State province*, reflects on my own experiences within the system of sexuality education and the schools where I have taught. The research in this article is primarily rooted in a Second Order Cybernetic perspective, while also drawing on First Order Cybernetics and literature as a means to sustain the arguments raised within the report. The main focus, however, is to reflect on the way my own pedagogy has been shaped and adapted through various challenges that I have observed and experienced during my teaching career. Core questions underlying this article included:

1. How do I feel about being a gay male teacher?
2. Why did it make me feel this way?
3. How can I use my experiences in my teaching career?
4. How can I apply these experiences to my studies?
5. How has this changed the way I think?

Through these questions I reflect critically on my roles, challenges and growth through my teaching career. This article reflects the manner in which my personal and professional persona as a gay male educator initially had a significant influence on how I approached my teaching pedagogy. I further reflect on how my personal and professional personas coincided harmonically with my teaching, and critically reflect as to how I experience teaching in the present as opposed to my onset years of education.

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ARTICLE 1:
Exploring Sexuality Education Within South African School Ecologies: A First Order CyberneticPerspective

Abstract: Cultural diversity and socially just education have been of forefront focus within South African research. Within the complexity of the concept of 'culture' lies the equally complex meaning of 'sexuality', and the cultural-based ambiguity thereof, as it relates to societal and community-based traditions and practices. While a wide scope of literature establishes various barriers to the teaching of sexuality at secondary schooling level, a systemic and context-specific framework thereof is in deficit. With the need to bridge theory and practice of teaching culturally sensitive messages during sexuality education, this article aims to establish common patterns of South African-based research focussing on closed boundaries to sexuality education. By examining secondary schools as an organisational subsystem within the national suprasystem, I explore, from a First Order Cybernetic perspective, how positive and negative feedback patterns account for school responses to sexuality education. Emerging patterns of interaction among literature established that negative feedback in the form of silence maintains sexuality-education entropy, with various closed boundaries such as educator bias and community-level culture and demographics which maintain school-systems entropy and morphostasis. To analyse culturally specific contexts of school systems, recommendations are made pointing to the need for a Second Order Cybernetic perspective. It is further recommended that more contextual studies are conducted responding to the individual barriers and boundaries of schools in South Africa.

Keywords: cybernetics; sexuality education; sexuality; cultural diversity; systems

1.1 Introduction

A paradigmatic shift in school systems and sexuality education (SE) has been brought on by desegregation, social reform post-1994 and the subsequent heterogeneity of cultural backgrounds characteristic of South African learner populations (Meier & Hartell, 2009). While the shift necessitates pedagogical flexibility on part of educators to accommodate various cultural groups (Swanepoel & Beyers, 2015), there is also a need to align teachings to the national educational system's benchmarks of social justice and inclusivity (Department of Basic Education, 2011). In response thereto, South African education's component of sexuality education, together with areas such as gender and religion, is encompassed within the core subject Life Orientation (LO), which has been made mandatory for all learners at secondary schooling level. It is accordingly that cultural diversity must be accommodated at individual and community levels while simultaneously upholding a "unified democratic educational system" (Meier & Hartell, 2009: p. 180). This shift has led to situating cultural research within a systemic perspective (Weeks, 2012) which accounts for the interactional patterns between various stakeholders such as parents, teachers and the wider community, as opposed to merely focussing on isolated incidences of individual culture and subsequent causal-effect interaction (Becvar & Becvar, 2012).

In practice, however, cultural diversity and socially just education have been met with various challenges (Weeks, 2012). Specifically, sexuality education has been of forefront focus within South African research and multicultural educational teachings (cf. Beyers & Hay, 2011; Francis, 2012; Francis & Msibi, 2014; Swanepoel, 2015), and has formed cornerstone interest regarding the need to establish common ground between theory and practice at national democratic levels. As norms and beliefs about sexual behaviour are directly rooted within cultural contexts, the challenge

of providing uniform messages of what is acceptable and appropriate becomes increasingly complex for sexuality-education programmes to be accommodated within a unified framework (Beyers, 2013). Ideally, schools should dynamically adapt to the environmental and cultural context within which they are situated (Lomofsky & Lazarus, 2001; Weeks, 2012), thus allowing for information to cross the school boundary as a means to enhance systemic change (open system) (Becvar & Becvar, 2012). However, this becomes increasingly difficult with the need to accommodate learners' individual cultural contexts while simultaneously upholding school culture, rules and traditions (DePalma & Francis, 2014). This is further challenged by individual schools being situated within a wider suprasystem of national education systems and policy with external expectations impeding full individual-school autonomy. In cases where a system does not allow for new information to be transferred into the system boundary, the system is said to be 'closed' (Becvar & Becvar, 2012).

DePalma and Francis (2014) refer to the need for the reflective practice of educators, challenging normative cultural expectations and traditions, and the further need to form an intricate awareness of the dynamic and interactive nature of not only individual culture but also that of the dynamic nature of the schooling culture itself. Teachers, however, are merely one of the numerous stakeholders implicated through such reflective practice, especially when the system widens to encompass parents, learners, management and community members as part of the wider school ecology (Francis, 2012; Steyn, 2009). As such, it is important to create a climate of openness to sexuality education within schools by establishing a dialogue between stakeholders to break the silence surrounding the topic. To transform school cultures that are misaligned with the ideals of inclusivity and social justice accordingly, teachers and learners alike (as core subcomponents of the wider system) must admit to possessing limited knowledge and establish a climate of openness

and interaction during sexuality discussions and learning (Francis, 2012; Swanepoel & Beyers, 2015; Macleod, Moodley & Young, 2015). The continuous closedness of a school system to sexuality teachings and the subsequent inability to adapt to environmental needs lead to a socially unjust schooling climate (entropy). It is, in turn, ideal to situate sexuality education within open and adaptable boundaries, while maintaining individual-school culture and wider suprasystem stability, thus accommodating a state of negentropy, a state of systemic alignment of school culture and ideals of social justice and inclusivity (Becvar & Becvar, 2012).

1.2 Research Problem andQuestions

Research on sexuality education has mainly focussed on isolated components hindering socially just education at schooling levels in South Africa. There has been a further lack of accounting for the socio-cultural context within which topics related to sexuality, such as HIV and AIDS, are taught (Davids, 2014). This gap in knowledge necessitates the need to align research with the systemic nature of schools and cultural contexts thereof, and in turn to explore how the interaction between individual components (such as the curriculum, teachers, parents, and school managers) form and maintain dysfunctional patterns of sexuality teaching (attaining a state of equifinality) and in turn rippling through to national (suprasystem) level. This desktop review of literature addresses the primary question, What are the interactional patterns (during sexuality education) at systemic level which promotes systemic change and adaptability (morphogenesis) and/or stagnation and stability (morphostasis) of school systems within wider ecological dynamics? To answer this question, two related secondary questions are posed: (1) What are the patterns of interaction (during sexuality education) at system levels leading to a school system's state of

entropy? and (2) What are the prominent feedback processes to sexuality education maintaining a school system's state of entropy?

1.3 Theoretical Framework

This paper is primarily rooted within systemic frameworks, more specifically First Order Cybernetics (Becvar & Becvar, 2012). Furthermore, Grounded theory is utilised as a means to generate theoretical perspectives on the questions raised. Literature points toward a strong connection between the use of Grounded theory and systemic-analysis methods as a means to generate sustainable theory to problems at organisational levels such as schools (Stillman, 2006; Linden, 2006). The use of Grounded theory allows for theory to emerge (from a broad nonspecific statement or question) through the analysis and guidance of data, subsequently exploring related patterns interacting among the components of the system (Linden, 2006). Grounded theory, in turn, is a research method used to generate theory that describes how systems maintain their goal-directed structure (Stillman, 2006; Laszlo & Krippner, 1998).

A systemic perspective rejects the notion of causal relationships and provides a basis from which a system is explored as being composed of dynamically interacting processes and parts which interact toward a common purpose. For this study, the researcher does not attempt to explore why sexuality education is socially just or unjust, but rather to establish what processes maintain a school system's approach to sexuality education. Furthermore, First Order Cybernetics situates the researcher as an external observer describing phenomena by focussing on present behavioural patterns mediated by rules which form boundaries. Systemic descriptions are further rooted in present-day feedback processes as opposed to past causal perspectives (Becvar & Becvar, 2012).

First Order Cybernetics provides a descriptive view of the organisation of a system, leaving subjective and deeper interactional patterns out of the analysis, as opposed to Second Order Cybernetics, which immerses the researcher in the research process at self-reflective levels. The use of a First Order Cybernetic perspective is valuable in framing this study, in conjunction with Grounded theory, as both restrict personal judgement and preconceptions during the analysis and reporting of data (Linden, 2006). Figure 1.1 which I created reflects the patterns of interaction between the basic components of First Order Cybernetics.

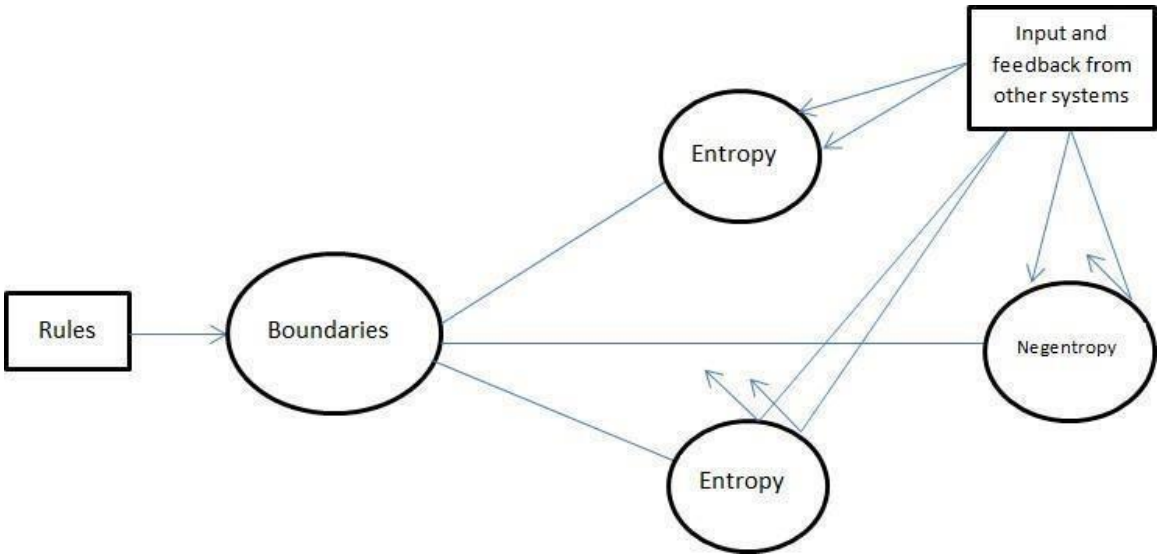

Figure 1.1: Representation of First Order Cybernetics used within this study

(Source: Author, 2017)

Systems are fundamentally governed by rules of interaction within the system. Rules form boundaries which differentiate a system from a bigger system (suprasystem) while remaining an interactive part of the larger system itself. The boundaries of a system are characterised by openness (allowing information to enter the system) and closedness (rejecting information) (Becvar & Becvar, 2012). A large degree of closedness or openness to new information leads to a state of entropy and systemic disorder, while a balanced degree establishes negentropy and maximum

system order. Accordingly, this study describes systems within systems and the interactive patterns of rules and boundaries that establish functional or dysfunctional structures which underlie sexuality education.

1.4 Methodology

In order to address the research questions, sources (books, journals, and theses) related to sexuality education within the South African context were analysed, synthesised and discussed. Due to the vast array of literature on sexuality and culture (Francis, 2012), it was not feasible to saturate sources for literature-review purposes, but rather to utilise a snowballing method of literature searches initiated by the researcher, commencing with known authors within the field, until a viable framework was constructed from which to induce a systemic theory. This inductive methodology was further sustained using Grounded theory within the construction of the desktop review itself and the emergence of patterns among literature used to construct theory related to sexuality education from a cybernetic perspective (Linden, 2006). All sources used within the discussion are related by the central themes and keywords of sexuality education. Subsequently, the main keywords which informed the search for literature included sexuality, culture and education. Only sources focussing on South African-based research were used and had to fulfil the criterion of being peer-reviewed to ensure a measure of validity within the desktop review. Where applicable, international research is used to underscore the importance of sexuality and education and to situate the current study within a global perspective. The main search for literature was conducted through google scholar to place the parameters for the majority of literature to be within the 2010 – 2017 timeframe. Only literature from theses, dissertations, journals, policy documents or curriculum documents were included in the study.

1.5 Identified Boundaries to Sexuality Education

1.5.1 National-level boundaries

The National Education Policy Act (No. 27 of 1996) provides the guidelines and rules at national level for fair and equitable education within South Africa. It stipulates that every person is prohibited from being discriminated against on any grounds whatsoever by an educational institution. Further rulings provide freedom of choice, opinion and religion of each person within educational institutions. The act further allows for common cultural groups and religions to establish educational institutions, as far as no racial discrimination takes place. The Bill of Rights of the South African Constitution (1996) notes that individuals have the right to express their own culture and may not be prohibited to exercise their beliefs, as long as no other provision of the Bill of Rights provides restriction thereto. Specifically, no discrimination may take place due to gender, culture, or sexual orientation. These rules are echoed by the Curriculum and Assessment Policy Statements (CAPS) (Department of Basic Education, 2011), stating that the aims of the South African curriculum provide opportunities for lifelong learning to learners regardless of socio-economic background, gender and race. The Curriculum and Assessment Policy Statements further highlight the basic principles on which it resides, such as promoting social transformation, inclusivity, and restoring past inequalities.

While these rules create the boundaries at supra-systemic level for socially just education, the realisation thereof at subsystem-level teachings are inconsistent (Davids, 2014). Rooth (2005) provides an overview of boundaries at subsystem level which prohibit schools from adapting to national policies. The study by Rooth (2005) encompassed 45 schools within Limpopo and 49 schools within the Western Cape and utilized an array of methods such as interviews and

questionnaires in an effort to investigate, specifically in Life Orientation, the gap between policy and practice. These closed boundaries are then reiterated in research by Rooth (2005) as well as Swanepoel and Beyers (2015), who focus on the gap between policy and curriculum, and what is ultimately being taught during sexuality education. In both studies it was found that there is ambiguity pertaining to the content related to the topics, such as sexuality, and how these topics pertain in essence to social justice and citizenship education. There is a further gap between what is expected to be taught at curriculum and policy level, and the content ultimately brought across within the classroom itself. While community- and school-level boundaries are discussed as two separate sections, it is noteworthy that both systems are constantly in interaction with one another and, in turn, situated in and interactive with the national suprasystem. Each system dynamically receives and provides feedback; however, patterns of rejecting or accepting feedback establish the constant interplay among each.

1.5.2 Community-level boundaries

Through the analysis of literature, a mediating subsystem identified between the suprasystem at national level and the school system is community structure and culture. Schools are situated within the context of communities (Chabilall, 2012); accordingly, a reciprocal flow of information among the systems will mediate the manner in which schools approach various areas of teaching. The term ‘culture’ is itself ambiguously defined, with variant rules and boundaries (Swanepoel & Beyers, 2015); however, it is generally understood as rules and patterns of behaviour and practices such as religion, traditions, norms and beliefs governing groups of individuals which are socialised through previous generations (Mofolo, 2010). The rules underlying cultural norms and expectations form community-level boundaries. However, such boundaries may be closed to receiving new

information (Swanepoel, 2015) and, as such, form stagnant and rigid systems retaining structural morphogenesis, thus being unadaptable to constitutional expectations of social justice and reform. Examples of such rules are the gender dichotomies of masculinity and femininity still rooted in certain communities (Kendall, 2011), and, subsequently, what roles are expected of men and women within society. Furthermore, patriarchal cultures are still prevalent in some African societies, in which male dominance subjects women to submissive and unequal gender roles. This however, according to Kelly (2017) is still rife internationally as well, with institutions, such as schools, continuously enforcing the normative perceptions of gender dichotomies, and in turn privileging men and subordinating females. Mofolo (2010) draws on this cultural rule as a reason behind the high prevalence of HIV and AIDS due to the cultural belief that men must not wear condoms during intercourse, as well as the ongoing practice of female genital mutilation within certain communities. Such rules form boundaries which are inflexible to changing societal norms, rejecting positive feedback in allowing systemic change to adapt to national policies. It is once again important to note the contextual importance within which these rules and boundaries are specified. In the instance above relating to South African based attitudes to condom usage, international literature shows a different perspective. Gillmore, Chen, Haas, Kopak and Robillard (2011) for example found that, in their national longitudinal study on condom usage, that men, specifically African American males, are more prone to use condoms. Reece, Herbenick, Schick, Sanders, Dodge and Fortenberry (2010) also found, within their American based study, that condom usage was highest among black individuals, and also higher among adolescents than among adults, once again reflecting the context specific nature within which sexuality education manifests.

Through the literature search, a dominant discourse regarding urban and rural contexts inductively emerged using Grounded theory. Rural contexts are found to often be situated in discourses characterised by impoverishment and as lacking in resources. Rigid and unyielding norms and traditions are often associated with rural contexts, and, as such, pose restrictive space within which sexuality education can be presented (Butler & Astbury, 2008; Khau 2012). Davids (2014) and Helleve, Flisher, Onya, Mũkoma and Klepp (2009) reflect that awareness of issues related to sexuality, specifically HIV and AIDS, is rooted in the structure of the community. It is evident that the community within which schools are situated has a direct impact on the way the school will approach culturally sensitive topics such as sexuality. While urban settings are further boundaried by physical space and resources (Gardiner, 2008), there are hegemonic norms imposed through the perception that prevailing white-dominant and urbanised schools provide the rules of what are acceptable teachings at national level. Such a perception decontextualizes sexuality education from the community and raises the question as to how teaching models can be utilised, allowing for positive feedback to establish change to accommodate national policy rules, while still upholding closed boundaries to information, which decontextualizes teachings from the community culture. It is accordingly that Davids (2014) points to the need for more socio-cultural research within education to be undertaken, specifically within the area of sexuality education.

Mapetla-Nogela (2014) draws on the need for a multi-stakeholder approach during sexuality education and highlights the critical role of the community and context within the shaping of socially just programmes. Vested within the community as direct stakeholders linking schools with the community are parental expectations toward the teaching of sexuality. Khau's (2012) findings reflect this in that participants accounted for the difficulty of teaching within rural areas where traditions and beliefs about sexuality are largely influenced by religious and parental expectations.

Mapetla-Nogela (2014) and Naidoo (2006) argue that parental expectations play a critical mediating role within all communities, and that teachers often shy away from comprehensive sexuality education (CSE) in order to evade conflict with the wider community and parents themselves. Nambambi and Mufune (2011) and Beyers (2013) further postulate that sexual discourses at home are often filled with silence and embarrassment, while Davids (2014) reflects on the anxiety parents hold regarding what sexuality education must entail. Parents believe that teaching about sexuality will promote sexual activity among learners, hindering the process of comprehensive sexuality education and regulating teachings to revert to the promoting of abstinence-only-based teachings. Rooth (2005) and Bhana (2012) refer to the power parents hold in regulating what must be taught during sexuality education, especially through the direct linkage of the school to the community through the school governing body.

It becomes evident that community-level input holds a pivotal role during the regulation of sexuality education within schools (Helleve et al., 2009). It must, however. be noted that schools with too open boundaries to community input as well as schools which are too closed to it tend toward a state of entropy and structural disorder. The interactional pattern established thus far describes the manner in which the community-level boundaries are closed to national-level input, and, as such, communities lean toward a state of entropy which holds structural entropy at school level. Systems must accordingly establish patterns of structural balance between community-level input and individual-school culture to adapt dynamically to national-level stipulations while remaining faithful to community-situated norms and values.

1.5.3 School-level boundaries

The final system identified within the national suprasystem is the school itself. The previous sections established that the school system is situated within communities, which are in turn situated within the national framework of expected rules governing social justice and inclusivity. However, interaction within community boundaries mitigates the ideals of the national framework and in turn creates a growing gap between what needs to be taught and what is ultimately taught within classroom practice. Through the analysis of literature, this desktop review further established patterns of interaction within schools which further lead to closed boundaries prohibiting national ideals. The expectation that classroom practises should mirror learner reality (Department of Basic Education, 2011) produces certain challenges in addressing cultural- and sexuality-relevant messages, especially with the multicultural classes characteristic of South African school populations (Meier & Hartell, 2009; Muchenje & Heeralal, 2014).

A primary challenge which emerged within the school system is at teacher level. Gardiner (2008) established that the educator is the direct link between the community and the school. The coursework framework with which teacher induction is framed at university is often biased toward a westernised discourse, and in turn underlies rules and boundaries which are not translatable to rural contexts. This, in turn, creates rules and teaching methodologies which are inflexible within the rules and expectations of the wider community, causing the system to reject feedback at learner and community levels. Another linkage establishing direct interactional patterns between school and community is the numerous cultural backgrounds that are characteristic of South African learner populations. Learners are confronted with various sexuality messages at home, which challenge the limited knowledge of teachers to actively accommodate diversity within the

classroom through teachings underlined by a uniform framework of what knowledge should be taught.

Beyers (2013) and Kasonde (2013) draw on educator responses to accommodating cultural diversity during sexuality education. To maintain a sense of logic from the ambiguity, the educator draws from personal – and often biased and normative – messages which are not necessarily applicable to past learning of learners, leading to the automatic rejection of positive feedback on their part. Francis (2012) elaborates that teachers are often hesitant to challenge the norm and shy away from sensitive topics during sexuality education, such as comprehensive sexuality education and sexuality diversity, rather adopting a safe transfer of information based on abstinence and heteronormativity. This is especially true during the teaching of sensitive topics such as sexual orientation, where educators often silence the topics around diverse sexual orientations which uphold heterosexist patterns of beliefs and values (Francis, 2012; Morrell, 2003).

Reddy (2010) notes that the post-apartheid context provides a basis for sexuality and sexual orientations to freely emerge and in which identities can be produced; however, research still points to the restrictive norms and heteronormative rules with which sexuality and sexual orientations are perceived, often inflexible to environmental change and input (Appalsamy, 2015). It becomes evident that patterns of socially unjust sexuality education underlie decontextualized messages within culturally diverse contexts. Such decontextualized messages further enforce patterns of rules which form closed boundaries to environmental input. An example thereof is found in the patterns of interaction between textbooks and the educator. Textbooks that contain sexuality messages often enforce stereotypes and normalised judgements which umbrella majority views and expectations, often constructing masculine privilege as a norm for heterosexuality (Gacoin, 2010; Wilmot, 2011). This is further extended on by the work of Gacoin (2010) and Potgieter and Reygan (2012), in the

analysis of textbook related discourses related to sexuality education, who found that textbooks produce stagnant normative rules regarding non-normative sexual orientations (such as homosexuality), and in some cases are covered superficially or not at all.

Figure 1.2 represents the above-discussed systems as three separate boundaries at national, community, and school levels.

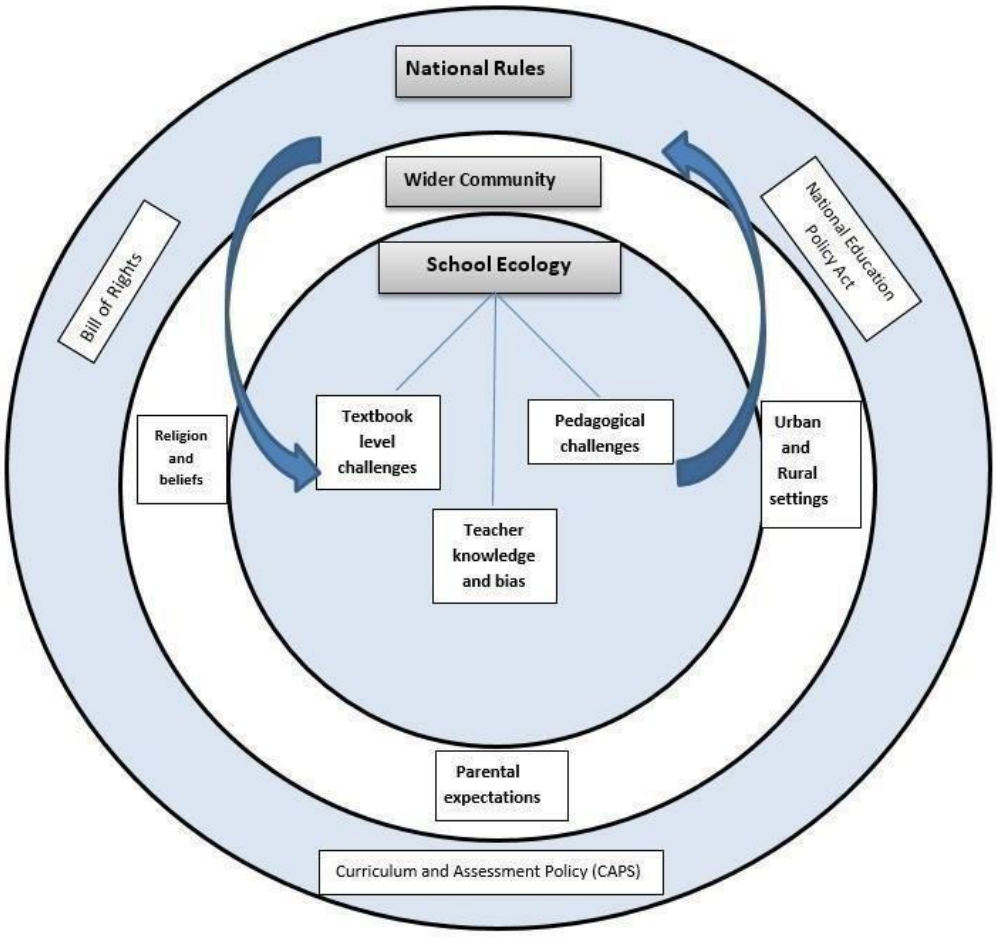

Figure 1.2: Systemic patterns of interaction during sexuality education at national-, community-, and school-based levels

(Source: Author, 2017)

1.6 'Silence' as fundamental negative feedback process maintaining system entropy

Although there is a constant interplay among the three systems (national, community and school), there are clearly identified boundaries which separate them. Figure 1.2 depicts the suprasystem as underlined by the rules established through the Bill of Rights, the National Education Policy Act, and the Curriculum and Assessment Policy Statements. The interactive patterns established at community level, however, produce rigidly closed boundaries which are often inflexible to suprasystem input, specifically due to the interaction between the factors of religion, parents, and whether the school is situated within a rural or urban setting. Within the school system, the interactive patterns of teachers, teacher pedagogy, and textbooks produce socially unjust patterns of sexuality education; however, it becomes evident that the school systems often have too open boundaries to community feedback, which leads to sexuality-education entropy. Each system discussed and represented within Figure 1.2 affects the other components of the system and responds to inputs continuously.

First Order Cybernetics refers to positive and negative feedback processes. Instead of denoting value judgements, these processes refer to the impact of information on a system and the system's subsequent response thereto (Becvar & Becvar, 2012). Positive feedback refers to input which produces change within a system, while negative feedback refers to the system remaining stable and unchanged.

A prominent negative feedback process regulating sexuality education within South African literature and retaining the status quo is the prevailing 'silence' shrouding the topic (DePalma & Atkinson, 2006; DePalma & Francis, 2014; Morrel, 2003). Bhana's (2012) research establishes

sexual silence and denial as a dysfunctional pattern of teachings within schools, often left unchallenged on part of school management. Bhana, Morell, Epstein and Moletsane (2006) found that the silence surrounding sexuality issues such as HIV and AIDS are often defensive mechanisms utilised by communities to lessen responsibility and retain conceptions of immunity to the problem. Furthermore, Msibi (2012) responds not only to the silence of teachers during teachings of sexual diversity, but specifically on the way silence in response to sexism and homophobia maintains consent of such behavioural patterns. Silence is further established through the inconsistent and often non-existent discourses within the material teachers use during sexuality education (Potgieter & Reygan, 2012), which affirms the educators' position in avoiding the topic or filling content with personal and biased knowledge.

The need for reflective practice and open discourse becomes focal to establishing social transformation (Aldridge, Fraser & Sebela, 2004; Francis, 2012). Prevailing silence and a lack of information in communities and schools maintain boundaries which are unyielding to change and stagnate teachings within problematic patterns of socially unjust practices promoting sexism, homophobia and gender-based-violence norms and beliefs (Butler, Alpaslan, Strümpher & Astbury, 2003; Swanepoel & Beyers, 2015).

1.7 Conclusion and Recommendations

With this desktop review of South African-based research, I sought to explore prominent feedback processes and systemic interactional patterns influencing socially just sexuality education. By framing the study through a First Order Cybernetic perspective in conjunction with Grounded theory, three distinct systems were identified (national, community, and school level) which

continuously respond to and receive input from one another. Grounded theory allowed for the literature search to inductively shed light on prominent subsystems to the overarching national suprasystem interacting with how sexuality education is implemented at a contextual level, while First Order Cybernetics provided the chance to objectively analyse the interactional patters among these components. The identified subsystems were explored and described in terms of the interactive patterns upholding socially unjust teachings. Through emerging patterns of interaction, a distinct interaction between the community and schools was identified, which provides insight into how schools with too open boundaries (thus being too receptive to incoming information and in turn losing the cultural identity of the school), especially in rural contexts, often tend towards entropy and socially unjust sexuality education misaligned with curriculum- and policy-level stipulations of equality and inclusivity. Although the current literature review yielded the beforementioned, a more contextual approach through a Second Order Cybernetic perspective is needed to identify more individual-school-system challenges and to investigate how different schools respond to the various feedback processes.

Furthermore, silence was identified as a critical mediator which sustains system structure and, as a result, morphostasis; underlying school systems thus need to adapt, otherwise system structure will lean toward entropy and in turn dysfunction. In order to sustain a functional structure at systemic level which upholds community culture and norms, schools need to establish a balance between open and closed boundaries as a means to retain individual-school culture while simultaneously upholding wider systemic balances within community and national rules.

This study further responded to the scant research of systemic perspectives on sexuality education, and, as such, moves away from prevalent perspectives focussed on mere cause and effect. While First Order Cybernetics allows for a more objective view of how school systems interact at different

systemic levels within the South African suprasystem, there is need for future studies to investigate the socio-cultural contexts of specific schools and gain an in-depth perspective on challenges faced at individual-school levels. As such, it is recommended that future research extends on theory by adopting a more subjective discourse using Second Order Cybernetics, which will bid a more contextual view regarding how sexuality education manifests at individual-school level.

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ARTICLE 2:
Exploring 'Silence' as Negative Feedback to Sexuality Education: A First Order Cybernetic Perspective

Abstract: Current educational research has placed sexuality education as imperative to restoring past gender disparities and establishing a socially just society. A systemic analysis of South African research is needed to contextualise how sexuality education is sustained, especially within dysfunctional systems manifesting in consequences such as corrective rape and sexual misconduct in schools. Through Article 1, 'silence' was identified as imperative to sustaining system dysfunction during sexuality education. This article responds to the need for a systemic framework of analysis, placing South African literature as a point of departure. Literature was systematically collected, and, using Grounded theory and First Order Cybernetics, the research question emerged as: What influence does silence have, in the form of cybernetic feedback processes, on the manner in which sexuality education manifests within the South African context? The perspective of youthful innocence and nostalgia was found to align closely with silence surrounding sexuality in the classroom. Recommendations include the need for an in-depth analysis of these components within a systemic framework from the vantage point of Second Order Cybernetics to better understand the way silence creates prominent socially just boundaries to sexuality education at contextual school levels.

Keywords: sexuality education; cybernetics; silence; systems analysis, innocence

2.1 Introduction

The introduction of comprehensive sexuality education (CSE) in South African schools has shown to be effective in curbing the risk of contracting HIV and AIDS as learners adopt a more empowered stance in making healthy sexuality decisions (Khau, 2012). Furthermore, the post-apartheid landscape has been transformed to align with pedagogies grounded on the values of cultural inclusivity, sexual diversity, and gender disparities (Department of Basic Education, 2011; Msibi, 2012). South African schools have become key spaces for implementing programmes aligned with these ideals of social justice, with various policy initiatives implemented as a means to reduce gender violence, the spread of sexually transmitted diseases (STDs), unwanted pregnancies and unsafe sexual practices (Shefer & Ngabaza, 2015; Shefer, Kruger, Macleod, Vincent & Baxen, 2015). However, in practice, the ideals established have not led to the envisioned social change; instead, there have been various challenges hindering successful implementation at curriculum and pedagogical level (Beyers, 2013; Gacoin, 2010; Weeks, 2012). While a democratic framework which advocates principles of equality and desegregation is in place, practice and policy remain misaligned and the ongoing strife toward practical change at societal level remains an ideal to be reached across cultural boundaries (Meier & Hartell, 2009).

Research related to the boundaries impeding socially just sexuality education (SE) has gained momentum in recent years. Key areas identified in literature point to the influence of teacher bias in promoting heterosexist attitudes and maintaining stringent cultural norms, or an unwillingness to speak about sex and sexuality due to embarrassment or fear of challenging the status quo (Francis, 2012). Teachers are core mediators in changing school culture (Msibi, 2014), and in turn play an equally mediating role in promoting dysfunctional climates of school cultures unyielding

to social change. Boundaries at textbook-level implementation further advocate heteronormative attitudes and are often exclusive of sexuality diversity (Wilmot, 2011; Potgieter & Reygan, 2012). The communities within which schools are situated also perpetuate pedagogies misaligned with social justice (refer to Article 1 of this thesis). Community-constructed expectations and norms place pressure on schools to conform to and sustain the culture of traditions, instead of permitting adaptability and dynamic change to broader national reforms (DePalma & Francis, 2014). Another challenge is the manner in which cultural plurality, and the subsequent myriad worldviews and traditions, may be contradicting with overarching expectations of a universal curriculum and policy regarding sexuality education.

In considering the growing body of research within the area of sexuality education, it becomes evident that the gap between current theory and practice of comprehensive sexuality education is maintained through various levels of a school's system, as opposed to being isolated to individual influences. With much research (sources) focussing on the perspective of Life Orientation (LO) teachers and barriers to successful sexuality teaching, the need to examine a wider scope of the system is needed, as pointed out through the work of Bhana (2014) and Rooth (2005) in their examination of school managerial responses to the teaching of sex and sexuality within South African schools. Life Orientation forms merely one of the interventions in promoting gender equality and sexual-health-related skills and knowledge (Shefer et al., 2015).

The summative nature of different componential stakeholders within school systems (e.g. teachers, learners, parents and school management) requires contextually tailored interventions and pedagogies that maintain functional sexuality education. This, however, becomes increasingly difficult as educators need to accommodate the contextual needs of individual learners (such as culture, age and race) while simultaneously upholding democratic standards and expectations (such

as community and cultural norms, national policies and the curriculum standards of social justice) (DePalma & Francis, 2014; Meier & Hartell, 2009). It is accordingly that a context-specific system-analysis framework is explored as to how socially unjust sexuality education manifests and is maintained within South Africa. This article responds to this need by analysing literature through a cybernetic perspective, and further extends on previous research which indicates that 'silence' is a dominant process maintaining dysfunction within the teaching of sexual diversity and inclusivity (Bhana, 2014; Bhana, Morrell, Epstein & Moletsane, 2006; DePalma & Atkinson, 2006; DePalma & Francis, 2014; Morrel, 2003).

2.2 Research Problem andQuestion

The aim of this research report is twofold. It is my aim to apply a systemic method of evaluating how silence constrains school cultures from adapting to policy changes at national level and expected democratic standards. In framing South African literature at systemic level, it became evident that research has largely focussed on: isolated incidences (e.g. sexual misconduct) (Coetzee, 2012; Prinsloo, 2006); the unwillingness of teachers to broach the topic of sexuality (Kasonde, 2013; Thaver & Leao, 2012), as well as Life Orientation textbooks silencing topics such as homosexuality (Wilmot & Naidoo, 2014) and the ineffective use of resource materials in the classroom (Brown, 2013) hindering socially just sexuality education. The need for a context-specific framework was discussed in the introduction of this article; however, observing the system is not sufficient as a means to understand the processes that underlie system dysfunction, and, as such, observing feedback processes that perpetuate stagnation or inhibit adaption is also critical before attempting systemic change.

This review of literature serves to respond to and refine the question posed in Article 1 of this thesis: What are the prominent feedback processes maintaining a school system's state of entropy as related to sexuality education? The emergence of silence as feedback process informed this article, and, as such, the question posed to establish primary literature searches is: What influence does silence have, in the form of cybernetic feedback processes, on the manner in which sexuality education manifests within the South African context? However, in using a Grounded-theory approach in analysing the question, new concepts can emerge (such as the concept of nostalgia and innocence which emerged during the comparison of literature), which can lead to new, relevant information which will be incorporated into the discussion. Furthermore, I do no not enter the analysis of literature on the assumption that negative or positive feedback occurs, as this will become apparent through the literature review to follow.

2.3 Theoretical Framework

As a means to observe the system within which sexuality education functions, I adopt a First Order Cybernetic perspective. From this perspective, the 'I' that informs the observation is being excluded from the system itself, and instead of asking 'why', the focus is on 'what' (Becvar & Becvar, 2012). Thus, the patterns that underlie sexuality education being dysfunctional or functional are investigated, with specific focus on identifying prominent components of the system as a whole. While the full scope of the system's responses to alterations can only be understood from the vantage point of 'why' certain components act as they do, it is of importance to note that this report does not aim to investigate the inner workings of systems at Second Order Level, and is thus descriptive in nature (Glanville, 2002). This report forms part of an ongoing study which will require in-depth interviews and analysis of policies with identified components discussed through

the literature. First Order Cybernetics views systems as self-regulating entities which, through feedback processes, adapt or stagnate within a specific context. A system that receives continuous negative feedback does not exhibit change, while positive feedback initiates change that requires adaption and accommodation within the system's self-regulation to attain order (Becvar & Becvar, 2012). Boundaries of systems can also be described, where excessively closed or open boundaries lead to entropy and systemic dysfunction. 'Silence', as a prominent feedback process which emerged in Article 1, is thus investigated as feedback that either maintains sexuality education or allows for adaption within the context of the school itself (Becvar & Becvar, 2012), being described through a systemic view that emerges spontaneously during the literature search. A Grounded-theory approach is thus utilised to establish patterns at componential level (Linden, 2006) to explore how schools retain their structure and organisation in relation to how sexuality education is contextualised and taught (Stillman, 2006; Laszlo & Krippner, 1998). While much debate surrounds the initial analysis of literature as a means to not contaminate data analysis during the use of Grounded theory and to eliminate preconceptions (El Hussein, Kennedy & Oliver, 2017), I utilise this theory as a means to compare literature and exact patterns in research which bid the basis for refining the posed research questions (Hallberg, 2006).

2.4 Methodology

Through a literature analysis, a broader view of research on the topic of socially unjust sexuality education within South Africa will shed valuable insight as to how schools interact and respond to influences at broader systemic level to either maintain, or dynamically adapt to, constitutional ideals (South African Bill of Rights, 1996) and socio-educational reform policies (e.g. the National Education Policy Act, 1996). Secondly, using a cybernetic perspective, it became possible to

identify how ‘silence’ maintains the status quo, and to analyse how positive feedback can be incorporated as a means to create dynamic boundaries which simultaneously interact with and adapt to community expectations and democratic social benchmarks in a reciprocal manner. Accordingly, this article will provide a systemic analysis of literature based on the themes and keywords of Silence, Sexuality, and Cultural Diversity. The sources drawn on within this report all accounted for a measure of internal validity and reliability by fulfilling the criterion of being peer-reviewed and accredited, either through journal-screening processes and book publications, or at institutional level in the case of theses and dissertations. All the literature analysed was further based on research conducted within South Africa, or specifically refers to South African research from a global perspective. To this end, only literature from theses, dissertations, article publications and policy documents were included in the study, with the majority of literature being within the parameters of the timeframe 2010 – 2017. As such, starting with the keywords mentioned, the researcher initiated a search for literature which fulfilled this criteria. After reading through the literature as a whole, I placed the literature to be used in themed groups as a means to understand how the concept of Silence is underscored and argued within the broader system of works pertaining to sexuality education in South Africa.

2.5 Conceptualisation of ‘Silence’

During the review of literature related to silence, various conceptualisations thereof emerged as related to sexuality and education. This article draws extensively from perspectives that conceptualise silence as the non-existence of sexuality education, and the manner in which schools remain evasive toward the topic, thus permeating content that may cause embarrassment, fear or discomfort on part of educators (DePalma & Atkinson, 2006; Shefer et al., 2015). This article

further draws on the work of Morell (2003) and Petros, Airhihenbuwa, Simbayi, Ramlagan and Brown (2006) regarding the stigmas and taboos surrounding HIV and AIDS, as well as communities restricting adolescents from speaking out and thus silencing accountability and repercussions of victimised learners (DePalma & Francis, 2014; Masehela & Pillay, 2014). Literature draws extensively on silence as the absence and withholding of information from stakeholders who are accountable for sexuality education at systemic level (specifically identified as teachers, school management and parents), while also examining the manner in which textbooks and topics related to sexuality are interwoven with misguided information, or in some cases not touched on at all even when supported by policy or textbooks (Bhana, 2015; Potgieter & Reygan, 2012).

The topic of silence emerged from my previous work (in Article 1 of this thesis) on analysing South African literature to establish a systemic model of sexuality education. Through using Grounded theory, the topic of silence emerged as a dominant theme, and the exploration thereof within this article is thus part of an ongoing need to establish and explore emerging processes that underlie sexuality education from a First Order Cybernetic perspective. While Article 1 positioned silence as a negative feedback process within sexuality education, this article uses the basis of the previous research as a preliminary review in order to further explore the concept of silence as a means to investigate what patterns of interaction to socially just education emerge through a comparison of literature.

2.6 Protecting the Youth: Saving Face or Retaining Innocence?

The underlying theme of 'innocence' emerged during the literature search and forms a prominent component of retaining silence and, in turn, negative feedback in school systems. This section of this article addresses the question that is of ongoing debate within the teaching of sex and sexuality in schools (Chaka, 2017; Kasonde, 2013; Smith & Harrison, 2013): When should learners be taught about sexuality and what content is appropriate at which age?

It can be argued that retaining innocence through "desexualizing" learners, adults aim to either protect their youth, or do so to evade instilling any temptation that may lead to learners engaging in sexual activities. In their research, conducted on teacher perspectives and sex education, Francis and DePalma (2014) draw on the narratives of educators who assume that knowledge is stagnant and predetermined. This assumption of traditional knowledge positions learners as passive recipients of information, which aligns with the idea that 'children should be seen and not heard'. It is further drawn upon how educators most often engage in closed-boundaries discourses which protect the innocence of learners, deconstructing them as passive agents within society, assuming that they are not active agents in shaping their own identities (González, 2005). It is with this misconception that educators construct narratives around their past conceptions of abstinence, and in such a sense schools are viewed as spaces of innocence (Bhana, 2014). The resistance children showed to speak about HIV and AIDS in Bhana's (2006) research reflects the struggle learners face in presenting themselves as the ideal and innocent children adults construct them to be. Adolescents are further challenged through the tension created between traditional norms and expectations, and modern-age influences.

This is contradictory to the current information age, where children have access to information via networking and the internet, apart from what teachers teach. The ideal of 'the innocent child' is, however, an unrealistic construction, and is often still vested in past conceptions that the youth do not engage in sexual activities. DePalma and Atkinson (2016), for example, point out that children start silencing the topic of sexuality once they become exposed to adult expectations and the taboo of childhood sexuality. Adult perceptions of them being knowers of sexuality knowledge further amplifies power relations, restricting learner agency, perpetuating gender norms and heteronormative stereotypes that privilege men (Shefer & Macleod, 2015). Nyarko, Adentwi, Asumeng and Ahulu (2014) for example found, in their Ghana based study on parental attitudes about sexuality education, that 58% (of which N=100) of the respondents felt that primary school learners are too young to be taught about sexuality and sex in school. Giroux (2016) encapsulates this well in stating that the youth is seen as in need of protection and deprived and 'outside' of societal dictation and are not in a position to exercise autonomy or self-will. This leaves adolescents vulnerable to harassment and sexual victimisation (Bhana, 2015; Kambarami, 2006; Petersen, Bhana & McKay, 2005) and produces a cycle where the innocence of children is taken for granted instead of promoting a safe space of inclusivity and equality. As such, the need for positive feedback is restricted, leading to traditional values of sexism, heteronormativity and sexual abuse to continuously manifest within schools and communities (Meinck, Cluver, Boyes & Loening-Voysey, 2016; Nichols, 2016).

Reflecting on children's narratives on condom usage, for example, Bhana (2006) posits that learners are more knowledgeable in the realm of sex than adults assume. This idealisation of children as innocent and vulnerable subjects in need of protection in turn shapes the notion of schools as safe sexual spaces (Shefer et al., 2015).

The dichotomy of positioning learners as 'knowers' of sexuality as opposed to being purely innocent places learners into two categories with little consideration of racial backgrounds, age and culture. On the one hand, teachers who draw from the assumption that learners are passive and innocent sexual subjects lead to teacher pedagogies which are stagnant and traditional. On the other hand, viewing learners as active sexual subjects aligns with more dynamic teaching methods which respond to societal change (Francis, 2011). Acknowledging the voice of the learners as co-experts in the process of constructing knowledge proves a valuable strategy in the teaching of HIV and AIDS while further creating an open space where positive feedback processes are initiated through discussion in how they negotiate and construct their sexual identities (Mitchell, Walsh & Larkin, 2004). It is evident that the perception of learners as innocent leads to power relations that enforce patriarchy and dominance, with sexual abuse and misconduct being silenced within communities and schools (Masehela & Pillay, 2014).

2.7 The Gap between Tradition and Modern Pedagogical Sex Education

The report by the Centre for Applied Legal Studies of 2014, as drawn from Chaka (2017), draws on silence as a fundamental component which mediates accountability of sexual misconduct and dysfunction within schools. The classroom is a mirrored environment of society (Department of Basic Education, 2011), and, as such, dysfunctional practices and teachings create closed boundaries which do not allow for positive change to be instilled. It is accordingly that the Centre for Applied Legal Studies further states:

> Schools are a reflection of what society is. It is not merely about schools being dysfunctional; it is about society being dysfunctional. We must address the issues in society in order to address the issues in school.

There is a direct linkage between society and schools (see, for example, the systems analysis of Article 1 of this thesis), and, as such, the flow of communication between the two components of the wider system can either be open or closed to change. Masehela and Pillay (2014) and Jewkes, Penn-Kekana and Rose-Junius (2005) further elaborate on how sexual misconduct and abuse stem from the historical silence that forbids the topic from breaching the community system, leaving schools and perpetrators unaccountable and, in turn, the system unable to accommodate positive change. Many communities are rigidly rooted in traditions and cultural norms that reject notions of westernised perspectives, further leaving the system in a state of entropy (Butler & Astbury, 2008). DePalma and Francis (2014: p. 2) draw on the work of Moletsane (2011), who poses the question: "Can we really remember and retrieve our past traditional and cultural practices? Should we? And what should we do with what we remember?" For this reason, surpassing the mere boundaries of South Africa alone, international viability is given to the importance of culture and backgrounds as a means to enhance multicultural education and to establish social justice. This becomes increasingly important when understood from the basis of enhancing social justice, however must be seen as an ongoing process. These notions of cultural historical values and norms and deeply imbedded in institutions, and for that reason ongoing reflection must inform the process to critically establish liberation and transcend silence (Banks and Banks, 2010).

This question, posed in the previous paragraph, reiterates the problematic nature of teachers teaching from their own perspectives and in accordance with what worked in the past, mistakenly assuming it would work in the present (Swanepoel & Beyers, 2015). DePalma and Francis (2014) further underpin silence as rooted in the socio-historical roots of South Africa. Racial inequalities saw silencing of black individuals during apartheid, and gender disparities of men silencing women and forcing obedience. An example of this is illustrated by Masehela and Pillay (2014) in that

women in African cultures are forbidden to speak about sexual violence, leaving many learners at risk of being continuously abused. It is further drawn on how communities silence such issues, reverting to traditional methods of accounting for sexual abuse. Examples thereof include sexual assault of girls and the inability to speak out due to patriarchal norms (Prinsloo, 2006), the corrective rape of lesbians (Msibi, 2009), teachers who force themselves on learners (Msibi & Mchunu, 2013), or exploiting impoverished learners for sexual favours in change for money (Masehela & Pillay, 2014). Of further interest is the nature in which alternative sexuality identity educators are in an ethical dilemma to be role models, however are silenced in their pedagogical approach related to sexuality education topics. While the previous discussion focussed on explicit forms of sexual misconduct and silence surrounding sexuality, Russell (2010) found that there is a complex paradox in the role of educators, specifically for queer educators encountering the moral dilemma to lead openly and publicly without being seen as a further threat to learner innocence (Russell, 2010).

The socio-historical view of silence across generations is further noted through the silence that permeates initiation of young boys as a means to becoming what is culturally constructed as ‘men’ (DePalma & Francis, 2014). This highlights the intersection between teaching healthy sexual attitudes within contexts where indigenous-knowledge systems are contradictory to westernised discourses and curriculum and assessment policies.

It becomes increasingly important for a multi-stakeholder approach in aligning classroom practices with the cultural background of learners. Mapetla-Nogela (2014) advocates a multi-stakeholder approach in which parents become active agents within the process of teaching sexuality in schools. Such a systemic approach draws on knowledge from various experts, such as the teachers and the

community, and creates a linkage for positive feedback among different parts of the wide school ecology.

It is with the apartheid backdrop that South Africa is amplifying negative feedback, with past inequalities, norms and traditions continuously being practiced and maintained. Such nostalgia manifests in the classroom and wider society, enforcing further patriarchy where many cultures believe order should be restored (Centre for Applied Legal Studies, 2014; Moffett, 2006; Morell, 2003). It is with this rigid, unadapting nature of tradition, put forth by DePalma and Francis (2014), that the dysfunctional cycle of sexual misconduct remains unyielding to social justice, transformative practices and overall constitutional and democratic values of inclusivity. Furthermore, this leads to the ongoing gap between policy and practice in instilling learners with knowledge that is dynamic to societal norms and standards at larger scale (Beyers, 2013).

2.8 A Systemic View of Silence and Negative Feedback

The primary research question which guides this article is posed: What influence does silence have, in the form of negative feedback processes, on the manner in which sexuality education manifests within the South African context? School systems rooted in silence permeate spaces where topics of importance are not discussed or addressed in meaningful ways. Bhana (2007), for example, draws on the manner in which teachers often evade speaking about sex and would rather adapt teachings to speak about HIV and AIDS instead of using language that causes discomfort or shame. There is also a moral component which most often prohibits educators from implementing socially just and open sexual education (DePalma & Francis, 2014; Helleve, Flisher, Onya, Mũkoma & Klepp, 2009). However, Bhana (2014) emphasises the role of school management in managing

school climates to become inclusive and safe spaces within which sexuality can be taught. This necessities that silence on part of stakeholders (such as teachers, school principals and governing bodies) addresses the issues of discrimination and moves beyond the denial of the problem at hand, being the teaching of sexuality education beyond the mere boundaries of emphasising sexual diseases. However, it also becomes increasingly important to address the content that teachers implement through textbooks, which often further silences topics such as alternative sexualities (Potgieter & Reygan, 2012; Wilmot & Naidoo, 2013). It is thus important to reflect pedagogies where content aligns with critical thinking to be instilled, and the need for addressing content at levels that not only advocate knowledge but also mindfulness of cultural differences within the teaching of sexuality and culture as a whole. It is with such instances of change that positive feedback can instil systemic adaption and open boundaries within school systems to allow for schools and communities to engage in meaningful sexuality education and uphold democratic values of respect and inclusivity advocated at national level.

Silence ultimately safeguards teachers from discomfort but maintains negative feedback within sexuality education in maintaining socially unjust spaces. Such silence further amplifies sexual misconduct in schools and shrouds abuse and unsafe practices within school systems. It becomes apparent that in guarding sexuality-related topics as taboo, classroom practices and schools maintain a culture of sexism and closed boundaries which prohibits alignment with national standards of social justice and inclusivity. Schools rooted in a culture of silence surrounding sexuality further widen the gap between what learners should know to become active and responsible citizens, positioning children as passive agents within classroom practice (Bhana, 2015).

In exploring silence through this article, it becomes evident how negative feedback in the form thereof prohibits schools to adapt to national benchmark standards of respect and social justice. Silence as a feedback process that maintains dysfunctional sexuality education thus contributes to the gap between what learners need to know and ultimately what is being taught in practice (Beyers, 2013; Chaka, 2017). This report further highlights the way silence contributes to issues such as sexual abuse and misconduct to manifest and be maintained, often with no consequences or accountability on part of teachers or school management (Masehela, & Pillay, 2014). However, the difficulty arises to align these ideals within school climates which will still adhere to community expectations and at extended systemic view, be open in boundaries for national South African policy to be implemented.

2.9 Conclusion, Recommendations and Limitations

The aim of this literature analysis was to investigate, through South African-based literature, the manner in which schools are implicated through silence during the process of sexuality education. Silence, which was identified as a prominent feedback process leading to dysfunctional pedagogies, was found to implicate the school system as a whole and is often actuated by external systems such as communities and national benchmark expectations of social justice. This report is based on ongoing research which explores how schools adapt and mediate influences from communities and national standards in order to maintain dysfunctional or functional sexuality education. The primary limit of this study is reflected through the researcher being an outside stakeholder, as First Order Cybernetics entails an objective perspective in understanding the ‘what’ of the phenomenon under study. For this reason, Second Order Cybernetics will position the research within a contextual ‘why’ approach and investigate the identified system of silence from a critical, in-depth

perspective. This will further lend validity to the contextual manner and challenges that schools experience and, in turn, shed light on how best to break the silence without schools entering a state of systemic disorder and losing contextual culture and dynamics. The need to bridge the gap between theory and practical teaching is apparent through the use of cybernetics, where a theoretical perspective is gained which will lead further investigation at a practical level and, in turn, transform the manner in which theoretical ideals are implemented during the teaching of sex and sexuality at contextual level.

A prominent limitation to this study is that the accumulated data, through desktop reviews, are not sufficient in generating a viable theory. It must be noted that, although Grounded theory formed the basis framework of this study, more data accumulation will be needed for themes to emerge as a means to generate a viable theory. As such, there is the need to place this study within an empirically based data-collection method in order to gain a deeper understanding about how silence mediates sexuality education. Further studies are recommended for this reason as a method to generating a valid theory.

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ARTICLE 3:
Investigating How School Ecologies Mediate Sexuality Education: A Cybernetic Analysis Within the Free State Province, South Africa

Abstract: Sexuality education has become cornerstone to curbing risky adolescent behaviour as a means to decrease the spread of unsafe sexual practices and preventing the spread of HIV and AIDS. While the implementation thereof has shown effectiveness in practice, the desired change at community level remains a challenge, especially in relation to multicultural norms and disparities with which educators are faced in different school contexts in Southern Africa. This paper raises the question: How do schools mediate sexuality education in Free State provincial schools to accommodate contextual challenges? In order to investigate how schools mediate uniform national- and curriculum-based benchmarks, 10 participants from five schools within the Free State province were purposefully sampled. Data from semi-structured interviews with participants were coded and themed, with this paper specifically reflecting on the theme of school and community boundaries underlying sexuality education to be implemented at comprehensive levels. Through a First and Second Order Cybernetic perspective it was found that further challenges of gender and race are among the barriers prohibiting positive feedback within school structures, as well as the need to allow communities and parents to become stakeholders in tailoring sexuality education to be relevant to expected national standards as well as contextual and relevant cultural and traditional values.

Keywords: cybernetics; sexuality education; social justice; systems

3.1 Introduction

The shift from apartheid to democracy has seen South Africa adopt one of the most inclusive and progressive constitutions globally (Epstein & Morell, 2012). Constitutional reform has thus seen policies of uniting previously marginalised groups (such as related to race and gender) and places focal inclusive perspective on the way respect and dignity intertwine within South African society (The Bill of Rights, 1996). Globalisation has further led to the need for knowledge that can continuously adapt to the changing needs of society in South Africa (Alexander, 2016; Jonck & Swanepoel, 2015), as opposed to mere static knowledge which does not align diversity and indigenous knowledge with westernised customs and norms. However, it is within this paradigm toward social justice and accommodating cultural differences that specific impediments arise in practically implementing meaningful change, regardless of the inclusive boundaries of social justice and inclusivity set forth by South African constitutional benchmarks (Meier & Hartell, 2009).

One of the focus areas of implementing inclusivity of race, gender and sexuality is the reflective nature of classroom practice in mirroring societal practices (Department of Basic Education, 2011; Msibi, 2012). The paradigm shift towards social justice in post-apartheid South Africa has seen a dynamic change in policies that accommodate inclusive racial- and sexuality-based pedagogies, with schools becoming key role players in establishing change aligned with socially just standards of respect for diversity and acceptance (Shefer & Ngabaza, 2015; Shefer, Kruger, Macleod, Vincent & Baxen, 2015). Socially just education within the myriad cultural differences that face South Africa is clearly reflected in the following extract:

> The central feature which distinguishes South Africa from other countries in terms of education provision, is the extent to which racially entrenched attitudes and the institutionalisation of discriminatory practices led to extreme disparities in the delivery of education, a reflection of the fragmentation and inequality that characterised society as a whole (Donohue & Bornman, 2014, p. 2).

It becomes evident that inequalities remain rife within South African society, clearly illustrated through continuing racial, sexuality, and gender violence perpetuated within South African communities, regardless of constitutional policy advocating harmony and acceptance of diversity (Engelbrecht, 2006; Epstein & Morell, 2012). This calls on the need to enhance classroom practices which reflect harmonic societal values and respect for cultural diversity. Specifically drawn to the sensitive topics of sexuality and race, South Africa is continuously affected by what is being taught and by multicultural contradictory norms of what is culturally acceptable (Beyers, 2011; Wight et al., 2006), especially when considering the multicultural composition characteristic of the country's population and often contradictory values held within multicultural compositions (Chick, 2002; Francis, 2011; Meier & Hartell, 2009).

It becomes clear that educational spaces are faced with the challenge of not merely teaching knowledge, but are also scrutinised in terms of what knowledge is applicable to specific cultures. This becomes evident when sexuality education (SE) comes into practice and is cornerstone to curbing risks associated with unhealthy sexuality practices among adolescents (Khau, 2012). Cultural plurality and globalisation have thus led to an increasing difficulty in delivering sexuality education that is socially just and relevant to all learners (Stromquist & Monkman, 2014).

Life Orientation (LO) was implemented as a core programme to establish learning spaces where social justice is advocated. One of its core pillars is based on life skills which resonate through learners' attitudes towards healthy sex and sexuality choices, the decrease of HIV and AIDS transmission and gender violence, and, ultimately, the transformation toward the constitutional

goal of gender and sexuality justice (Shefer & Macleod, 2015). However, literature emphasises that the practical ideals are not fully realised within Life Orientation, and that societal systems remain dysfunctional in areas of sexuality, thus questioning the effectiveness of Life Orientation as currently taught (Jacobs, 2011; Rooth, 2005). The questions that become evident from this situation are: Is it, and to what extent, only the Life Orientation teacher faced with instilling socially just sexuality education? and: How does the Life Orientation teacher mediate sexuality education within the classroom, but also in such a way as to mirror societal systems and boundaries?

Life Orientation teachings form the key subject area to implementing sexuality education, but it is important to bear in mind that school systems reside in different areas (geographically), and, as such, are faced with different norms and values which influence school culture and ultimately what content is taught (DePalma & Francis, 2014). As such, managerial research has also been conducted as to how sexuality education is implemented at practical level (Bhana, 2014), as well as community-based research indicating the reciprocate role thereof within how content of sexuality and gender is mediated both in the classroom and outside society (Adimora & Schoenbach, 2005; Kaufman, Clark, Manzini & May, 2004). While there is a framework unifying the democratic standards of education within South Africa, different schools will ultimately realise practical teachings within a more individual-culture-specific manner, leading to the manner in which schools are situated within culture-specific contexts (Soudien, 2004; Meier & Hartell, 2009). It is evident that a systemic approach to sexuality is needed as a means to investigate the growing gap of what is being taught and why it is being taught, as well as to investigate the plurality of stakeholders within school systems (teachers, community, and school management, for example) (Beyers, 2011; Rooth, 2009; Van Wyk, 2004).

3.2 Research Problem andQuestion

With the myriad cultural-specific contexts in South Africa, investigating pedagogies dealing with cultural plurality becomes increasingly important (Weeks, 2011). However, while literature predominantly focusses on isolated components of sexuality education (such as teachers or learners), the need for a systems perspective becomes increasingly evident. The primary aim of this article is to investigate sexuality education within a socio-cultural systemic perspective, and thus to gain deeper insight as to how schools in specific contexts adapt to national benchmarks of inclusivity within their respective contexts. Secondly, this article examines the question: How do schools mediate sexuality education in Free State provincial schools to accommodate contextual challenges? This is explored through a multi-stakeholder perspective as to how schools at individual level mediate sexuality education within the boundary of the school itself as situated not only within South Africa but in specific areas of the Free State province, both urban and rural. This article subsequently explores both urban and rural spaces as specific geographical mediators, specifically focussing on how teachings within a specific area may not be applicable or relevant to that of another area.

3.3 Theoretical Framework: First and Second Order Cybernetics

This study is framed through a systemic perspective based on First and Second Order Cybernetics. Primarily, First Order Cybernetics views systems in terms of the interactional patterns among components within a system, and further establishes the researcher as an observer viewing these patterns and relations within boundaries, which can either be open or closed to input from other systems, and in turn adapt or reject input and output from other systemic levels (Becvar & Becvar,

2012). The aim of First Order Cybernetics is to describe a system (Glanville, 2002). At Second Order Cybernetic level, the researcher in conjunction with participants become a part of the system and in turn part of the 'why' in constructing reasoning as to why the system behaves as it does (Becvar & Becvar, 2012). This framework proves valuable in understanding how schools, as boundaried systems, function within other systems, such as community- and national-level standards and expectations within the national boundaries of inclusivity and social justice set forth by the South African Constitution. Becvar and Becvar (2012) further stipulate that the observer (in a First Order Cybernetic perspective) focusses on the feedback processes, either positive or negative, that in turn either cause systemic change (positive feedback) or cause systems to remain stable throughout input (negative feedback). It is accordingly that Becvar and Becvar (2012, pp. 80-83) state that cybernetics does not merely focus on structural change from within the structure itself, but that "we can think of the continually changing environment continually opening up further possible habitats for species to evolve *into* through internal pressures" and that a system such as that, e.g. a school, "… becomes distinct from its environment through its own dynamics". Thus, exploring how schools are ultimately rooted in communities within specific locations while still being a structural entity of their own interacting with other structures, proves valuable in identifying not only the 'what' but also the 'why' of how schools manifest functional or dysfunctional sexuality education.

3.4 Methodology

This study comprised of a qualitative analysis of semi-structured interviews based on how schools adapt and function regarding sexuality education within different contexts of the Free State province, at urban and rural level (Blanche, Blanche, Durrheim & Painter, 2011). This allowed the

researcher to gain a contextual understanding of the individual schools, and furthermore to create and co-construct meaning with different stakeholders at various levels of school ecologies as a means to understand how context-specific sexuality education is mediated within school structures.

3.4.1 Participants

Eight schools were approached to participate in this study. The intention was for an equal distribution between rural and urban contexts within the Free State. However, only five schools consented to participate. This intention to purposively approach schools for their demographic contextual forms part of non-probability sampling and is sufficient in providing insight into the dynamics of school contexts without the intent to generalise the data (Blanche et al., 2011). From the five schools, 10 participants of various stakeholder levels took part. Participants (n=10) were spread among urban (n=3) and rural (n=2) schools, with various races represented (as identified by participants and confirmed through their language use within the study), such as white (n=6), coloured (n=1) and African (n=3). Furthermore, the majority of participants were primarily teachers within the area of Life Orientation (n=6), with the remainder of the participants (n=5) comprising of managerial personnel of the various schools, personnel who are directly linked to Life Orientation. Participants belonged to both genders, male (n=4) and female (n=6). Table 3.1 presents the demographic distribution of participants. The schools selected further reflects a wide scope of contexts and geographies, from rural to urban, and from mixed-gender to single-sex schools.

Table 3.1: Demographics of participants

Participant	School no.	School type	Participant role	Gender	Race	Age group
1	1	Urban	School principal	Female	White	41-50

2	1	Urban	Deputy headmistress	Female	White	61-70
3	1	Urban	Deputy headmaster	Male	White	51-60
4	2	Rural	Life Orientation and English teacher	Male	African	31-40
5	3	Urban	Life Orientation teacher	Female	White	21-30
6	1	Urban	Life Orientation teacher	Female	White	31-44
7	3	Rural	Life Orientation teacher	Male	Coloured	41-50
8	4	Rural	School principal	Male	African	51-60
9	5	Rural	Life Orientation teacher and Head of Department	Female	African	41-50
10	1	Urban	Life Orientation teacher	Female	White	31-40

3.4.2 Data gathering andanalysis

The primary method for accumulating data employed was semi-structured interviews with participants (Appendix A). Participants 1-3, however, preferred a focus group, which remains a valuable method for collecting data within specific boundaries, while providing an inter-connected view on the topic of sexuality. The remainder of participants were interviewed individually. Interviews ranged between 30 to 45 minutes in length, with participants co-constructing narratives with the researcher in their understanding of sexuality education and the way their specific school context manifests and sustains the sexuality-education climate at structural level, both of the school itself and the school as situated within the broader context of communities and the province. This co-construction is indicative of the co-creation aspect of knowledge, and critical in not merely observing the system but to become a part of the school system and thus construct a narrative indicative of a Second Order Cybernetic analysis (Becvar & Becvar, 2012; Blanche et al.,2011).

Data analysis was informed through Tesch's (1992) method of coding. The recorded interviews were first transcribed verbatim and read separately by the researcher as an observer of the data (which also connects to a First Order Cybernetic perspective), while simultaneously connected and constructed throughout the process, possible themes emerging from the researcher's view (indicative of a Second Order Cybernetic perspective). After the data were viewed in totality, similar narratives were coded and themes extracted based on highly frequent cross-sectional narratives of the different participants. In guiding the interviews and following the overall aim of the study, data analysis was done during and after interviews, and must thus not be a separate measure of merely viewing the data in its totality during the coding process. This is indicative of the researcher's role as both an observer and co-creator within the system of the school itself (Becvar & Becvar, 2012; Blanche, Durrheim and Painter, 2011), interplaying the role of First and Second Order Cybernetics. While themes such as educator restrictions and silence were identified, this study focussed primarily on the theme of boundaries and school systems. This article, however, places emphasis on the theme extracted in response to the question: What are the challenges different schools are contextually faced with during sexuality education? Through the analysis of data, two subthemes to this question became evident: a) school-level boundaries to teaching comprehensive sexuality education (CSE), and b) community- and national-level boundaries to the teaching of comprehensive sexuality education.

3.4.3 Ethical considerations

This study was primarily approved and registered at the institution through which the study was undertaken. Ethical clearance was provided to conduct research within schools on consenting participants (Ethical approval code **UFS-HSD2016/1385** was provided; Appendix B). All

participants approached were briefed about the scope of the study and were informed as to the nature and content of the interviews. Participants were also briefed that, should the need arise, they could withdraw from the study or could refuse to answer any questions which cause discomfort. Participants were not misled in any manner. To ensure anonymity, any data that may lead to the identification of any participant or any of the schools or location of the schools were removed and coded (and is indicated accordingly).

3.5 Results and Discussion

The results of this report focus on answering the primary question posed: What are the challenges different schools are contextually faced with during sexuality education? Two important subthemes emerged through this question and will accordingly be discussed below. The subthemes pertain to two system boundaries: a) the system of the school and b) the system of the school within the community and larger provincial demographic setting.

3.5.1 School-level boundaries

From the onset of the primary interview with school management, it became clear that School 1 has a firm hierarchy within the context of sexuality education and how it is implemented at systemic level. Observing the system itself primarily led to a clear illustration of how the system structures itself from the inside outward, and indicates various levels of role players when considering sexuality education as a subject within the school. When asked about the specific role players that govern sexuality education and how it is implemented, Participant 1 (the school principal of School 1) responded:

> **Participant 1:** The school governing body governs by means of approving policies. They govern by determining the curriculum and extracurricular activities offered by the school, so the school policy is the first way of governing content, where you must understand that the senior management team or first, the executive team including myself and the two deputies, then communicate to the senior management team. And then we also have grade heads in place for different grades, because of the different developmental stages of the [children], and then we have the subject teachers, so ... even though the governors determine and approve policy, the practical implementation happens on educator level, and I think it's mainly the best guide, is the Life Orientation curriculum with needs that we identify through by means of grade meetings.

The school principal then further elaborated on the school culture, specifically the school ethos, in approaching sexuality education. It becomes evident through the following narrative that the principal links sexuality education to various stakeholders, especially other teachers, and thus creates an open boundary for change to be instilled at various levels, not merely just within the Life Orientation classroom. The specific question that produced this narrative was on how the school perceive and manage topics of cultural diversity and sexuality, specifically what morals underly the teaching thereof:

> **Participant 1:** We try to work it into the curriculum. The grade tens if I'm correct... Did a whole project on femininity in poetry. So maybe that's an implicit way again, but they are offered the opportunity to communicate explicitly about the matter. One of our ethos, or part of our ethos, is femininity. So the question has been raised by a girl "Are you forcing me, or are you choosing my sexual orientation for me?" No, but this is a girls' school and we do have a uniform at school.

This, however, is in response to the internal structure within the school and how sexuality education manifests at various levels (up to individual-educator level). This becomes visible, especially in relation to who is accountable for instilling sexuality education, as reflected through the narrative of a teacher from the same school on whether teachers outside the scope of Life Orientation should be stakeholders and whether they should be teaching it. It is important to note that on a managerial level, the principal frames and shapes the context for the school system to expand the subject areas and thus to be accountable; however, the following narrative exemplifies, at teacher level, that this

context is often restricted and closed in boundaries, thus isolating sexuality education to the Life Orientation classroom:

> **Researcher:** Do you feel that other teachers have a role in teaching about sex and sexuality in their subjects?
>
> **Participant 6:** No, I don' think so. The kids do not have time to discuss these issues, or to have a class discussion about any of this. I know there are teachers who do talks and things about, for instance, boyfriends or relationships. But that's not part of their content. To me, it feels as if LO is the only place where you have time to do that. It's so filled for maths, and for science, I think biology is the only other physical science … that's where they speak about reproduction and the anatomy. I know, for instance, in matric they discuss pregnancy and birth and things like that. Although I don't think the whole sex education part gets involved in that. That's more anatomy.

It is noteworthy that the context created from managerial level for various subjects and role players to become accountable within the teaching of sex and sexuality may fail at practical level, specifically due to the attitudes of teachers in their perspective of whether or not they are role players within the content taught. The following narrative is reflected from Participant 4 when questioned about whether all teachers have a part in sexuality education:

> **Participant 4:** I don't think, they have … I don't think they think they have that responsibility, based on their attitude towards sexuality. For them it is not their responsibility.
>
> **Researcher:** So, if they teach math or biology, they stick to maths and biology.
>
> **Participant 4:** Yes, and you will focus more on the content that you feel comfortable with. This sexuality is just rushed.

These narratives reflect the scope within which sexuality education is evaded at inter-subject level. Valuable sources of interdisciplinary methods of teaching about sex and sexuality are not fully realised. While Participant 1 draws on the use of teaching sex and sexuality within the school, specifically during English, it is important to note that the managerial response to the school merely shapes the context for sexuality education to take place at various sub-systemic levels. However,

the teachers have autonomy in how they approach the subject or, otherwise, silencing it completely (Bhana, 2015). This context becomes of crucial importance, as Becvar and Becvar (2012) notes, that its systems evolve within specific boundaries and that these boundaries of subsystems interconnect and manifest within wider systemic ecologies.

Participant 5 reflects on the superficiality of the curriculum and the boundaries with which sexuality education manifest or, in turn, how teachers often place focus on the physical aspect thereof, with minimal focus on comprehensive sexuality education, reflecting on how teachers often interpret the curriculum and content in ways that conflict with their own values (Ahmed, Flisher, Mathews, Mũkoma & Jansen, 2009; Rooth, 2005; Swanepoel & Beyers, 2017) or are completely silenced:

> **Researcher:** [What is] your experience up to now from the CAPS; what is your opinion of the way it explains and stipulates sex and sexuality that you have to teach?
>
> **Participant 5:** Okay … I think it is very well done, but very superficial. You cover it … you do it a lot, instead of going deeper into the issues and what the learners are experiencing, for example, if they are gay … the judgment from others, how they exert themselves in their communities. Instead of talking about that, it is always always about sex before marriage, STDs, and that I have a problem with. I don't think that CAPS and being teachers go deep into the subject matter.

It is at such a level where specific subject areas teaching about gender and sexuality can become crucial at implicit levels. I reflect here, at Second Order Cybernetic perspective, on my narrative as a probe during the interview with Participant 4:

> **Researcher:** I remember a girl asking me during a lesson on verb conjugations why it is always "girls who knit the sweater". For the tense the question stipulated: The girl_____(to knit) the sweater yesterday. The learner wanted to know why boys couldn't be knitting the sweater.

However implicitly, this question posed by the learner not only bids firm footing to enter conversation about how gender and sexuality education is breached within different subject areas;

it also raises awareness on how sexuality education can be taught at implicit levels during subjects such as English. This reflects Spreen and Vally's (2012) narrative indicating the need for an interdisciplinary approach to the teaching thereof in that teaching should extend beyond the boundaries of mere specific school curriculums. It is noteworthy that based on discussions, such as during my classroom practice both as a teacher and researcher, I reconstructed future work set out to reflect less gender-specific bias, a small probe that at implicit level connected to the subject area of Life Orientation in teaching gender equality. However, as DePalma and Francis (2014) and Unterhalter (2003) postulate, it is once again within the culture and school culture that such a challenging of gender normativity could be boundaried off, and, as reflected through the narrative of Participant 5, the context of the school does not always allow for certain topics to be breached. Due to the urban nature and socio-political climate within which the school is located, great importance is attached to abstinence-based sexuality education:

> **Researcher:** So, if I would ask you abstinence versus comprehensive sexuality education, what would your reaction be to the abstinence counterpart?
>
> **Participant 5:** It plays a crucial role. But given the time and age we are living in now, it is so difficult to control it. I choose abstinence.

When asking Participant 8 this question as to whether the school would emphasise abstinence or comprehensive sexuality education, he responded by emphasising the importance of the physical component thereof:

> **Participant 8:** Well, it's a lot on reproduction, reproduction in terms of how we need to conduct ourselves, especially the learners. The information that need to be disseminated, the safety in terms of what would be the repercussions if you indulge in unsafe sex. These are the things we focus on.

This way in which sexuality education manifests becomes clear from the above narratives in how schools adapt and sustain a certain method of broaching the topic, which is relevant to the specific

school setting and learner population. However, while there is valuable information to be gained through interdisciplinary teaching of sexuality education through various subjects, the responsibility mainly falls on the Life Orientation part of the curriculum as a means to approach the topic, thus shunning responsibility as teachers may often feel too uncomfortable moving beyond the spheres of their own subject content. Participant 5's narrative emphasises that teachers find themselves in uncomfortable pedagogies which are often rooted in shame and embarrassment when teaching topics such as sex and sexuality. The participant further elaborates on the differences in age and cultural background of educators, which make the topic difficult to be broached optimally:

> **Participant 5:** Life Orientation mainly, most of the teachers are old. So it becomes difficult for them to teach most of the things because they feel squirmish, others because of their cultural background, they think they are too old to speak to children … and if it is a graphic issue, sometimes it tends to be too graphic for them. And sometimes they do not have the background of psychology, so their approach is the main issue.

3.5.2 Linkage of the school to community and national ecologies

Through the analysis of data it became evident that there is a strong link between the school itself and the wider community boundaries within which the school is situated. This becomes clear through the following narrative of Participant 9, who had formerly taught Life Orientation in the Eastern Cape and now teaches in the Free State:

> **Participant 9:** I feel that even though we have different provinces and each different province has its own dynamic, so I would feel that the national department would allow the provincial department to interact and involve the community leaders in the different provinces based on how they feel. Eastern Cape it is okay, we are allowed, we know we have the headman, the chief, if you have permission from that you can go ahead with everything. But here in theFree State it is a different story.

Furthermore, Participant 4 draws on community norms and values influencing what content is to be taught within the classroom, further reflecting the contextual nature of sexuality education within school systems:

> **Participant 4:** For me it's the school that must lead the community because you realise that in the community there are norms or cultures which they are not relevant to our times. And you'll realise that the community will want those things to be instilled on the lives of the learners and it becomes difficult for these young learners to cope with this changing world. For me, the school is having power because as the institution it must bridge that gap of culture and the modern ways.

Connecting with the above narrative, Participant 7 reflects on the difficulty of the system to adapt to the norms of the community. This participant echoes the work of Masehela and Pillay (2014) in that schools are situated within specific communities and must often adapt to the norms and values set forth by the communities. This once again reflects the nature of closed-boundary community ecologies, which leaves limited space for schools to adapt to wider national social justice and inclusivity:

> **Participant 7:** Our school comes from a poor community. The norms and values that are set within those settings are very traditional, it has been influenced by the way the church wants us to live, how our parents, their own parents perceive their own sexuality, type of topics are allowed to be discussed in the home; therefore, you have to be quite sure that the way in which you attempt to address the topic will not be in conflict with the child's.

Participant 6 reflects a similar narrative but, however, elaborates further on the difficulties of teaching about gender and sexuality within the classroom due to national boundaries which influence her classroom practice. Linking to the historic underpinning of apartheid and South Africa, the participant elaborates that, even within an urban school with a more open means to discuss the topic, there are still limitations and closed boundaries as to what can be discussed:

> **Participant 6:** Due to the whole racism aspect of South Africa, it is very difficult to discuss cultural views because you have to be very careful not to open up a racist or racial discussion. It is difficult when you have so many culture groups in your class, because you could say something offensive. That's difficult because you, you need to be sensitive and although these are kids, they don't always hear what you are saying. So they will hear something and they will take it and run with it without actually understanding what it was meant to be.

Participant 9 faces similar challenges. It is noteworthy that both teachers are female, and although Participant 6 teaches within an open-boundaried urban area, she is faced with the implications of racism and struggles to accommodate different cultural backgrounds within the classroom. This aligns with Epstein and Morrell's (2012) findings that male power still dominates South African culture, with women taking on subordinate positions within practice. Participant 9, however, an African teacher within a rural setting, faces different challenges connected to community pressures, as reflected through her narrative on male masculinities. This is visible in how sexuality topics are approached by a female within the classroom to accommodate the norms and values of boys and African masculinities, thus influencing her classroom pedagogy to extend beyond the classroom for optimal interaction to take place. The following two narrative extracts reflect that sexuality education is not only influenced by closed school-culture boundaries and teacher discomfort within the classroom but also by the norms of the community:

> **Participant 4:** I tried but you realise that at school level sometimes learners, they … for example, in township schools in [school name removed] you realise that at secondary school, especially at grade 12, teachers they could tell learners that Life Orientation is not useful.

Participant 4 later during the interview noted the difficulty of teaching a community where initiation takes place as normative practice within the rural community where the participant is located. This is also reflected through the narrative of Participant 9:

> **Researcher:** And how do you approach it, how comfortable do you feel teaching the kids in your school about sex and sexuality?

> **Participant 9:** I'm comfortable with it. But the problem is where I am working now, because of the cultural differences we have boys who are from initiation schools, so they feel if you talk to them about sexuality as a woman, so they tend to be squirmish about it, others they just don't want to listen, but others they laugh, instead of taking you seriously.
>
> **Researcher:** How, as a female teacher, does this implicate your classroom practice? Have you had a specific situation that you can speak about?
>
> **Participant 9:** In the other class I tried to introduce the issue [sexuality] and they [the boys] just stood up and left. And then we had to talk to the community leader who is male and then you invite them and talk to them and explain this is in the curriculum, these are the things we need to talk about, they are not gender based, they are more like trying to help the kids, it's a life-skillsthing.

This narrative contrasts with that of Participant 5, who experiences greater discomfort when crossing the closed boundaries during topics of sexuality. Of note is that while Participant 9 (an African female in a rural school) feels comfortable addressing these topics, Participant 5 (a younger, white female teacher within an urban community) experiences discomfort with it, specifically drawing on the broader system of parents as closing the boundaries to her pedagogy.

> **Researcher:** What other sources do you use during sexuality education?
>
> **Participant 5:** I cannot show them any videos because the principal and parents will be against it, but I do make use of textbooks. But textbooks can only take you so far, when you are in a classroom setting you need to take the individual learners into consideration when talking to them about something so sensitive.

One of the reasons thereto may be age, as reflected earlier, where older teachers feel more at ease during such topics, while a second reason may be that teachers find stronger alignment with learners through cultural similarity, as is the case with Participant 1. However, this again points to the highly entrenched nature of culture, race and gender infused in the teaching of sexuality (Asher, 2007). This is drawn on by Participant 5 as well, when asked whether comprehensive sexuality education is possible in South African schools:

> **Participant 5:** You know … in most of the cases, I don't know if it is all our schools, in most of the cases you'll realise some teachers won't support it [comprehensive sexuality education].

Participant 9 sees things from a different angle than Participant 5. Her view aligns with the research of Goldman (2008), reflecting that it is the parents within the context of School 5 (Participant 9) which shape the responsibility of who must be teaching sexuality education, and ultimately what topics should be taught:

> **Researcher:** How receptive are the parents to what you are teaching, and have there been any issues from parents dictating what you should teach?
>
> **Participant 9:** No, parents are okay with it. And many parents are relieved because they cannot talk about the birds and the bees to their kids because most are kids living with grandparents. It is difficult for the grandparents to introduce the subject. If the child is starting with menstrual period, what do they say to the child? If it's a boy and the boy is horny, how do they address these types of things?
>
> **Researcher:** I am also working on silence, and how many parents silence this …
>
> **Participant 9:** Yes, that is the major issue.

The participant reflects on her experiences as a female teaching Life Orientation, and in approaching the topic at a more personal level, is questioned herself. In contrast hereto, Participant 6 was unsure as to whether the parents would object to the teaching of sexuality education:

> **Participant 6:** I am quite careful because I am not sure if the parents understand what the kids are learning and what they should be learning, and if they would agree.

There is thus uncertainty as to whether the parents would agree with the teaching of sexuality in the classroom, specifically in an all-girls school. The participant reflects an open narrative to discussing sexuality in the classroom, drawing on her comfort during such topics; however, she becomes apprehensive once the topic is breached to include male sexuality:

> **Participant 6:** I think for us it's easier to discuss those things. I don't think we have even come close to discussing the male criteria of sex education with them. I must be honest.

Participant 4, an African male within a rural setting, draws on the difficulty and the prevalence of pregnancy within the school setting, which mediates the type of sexuality education (in the form of abstinence based) which is to be presented. This links to who to involve during sexuality education and how incidences of sexuality often draw on the accountability of Life Orientation teachers:

> **Participant 4:** She approached me and say, you know, I have a problem, I didn't have any person I could share these problems with. She said she came to me after the listener was doing the … reproductive and how they can abstain not to be pregnant. She came to me and say, I'm pregnant. And it shocked me a little bit why this little girl come to me and tell me this, but I said let me behave maturely and right to listen to her. I regarded her and I give her the procedures on how to approach her parents.

The participant in this case boundaried the situation between himself and the parents, and the topic was not breached to wider levels within the school, such as approaching the principal. This need for the accountability of the school in sexuality education is also reflected by Participant 8, a school principal within a rural setting. The below narrative reflects how family structure determines the responsibility of teachers to approach the topic, as the community is often not equipped with the knowledge or experience to broach the topic of sex and sexuality optimally:

> **Participant 8:** Most of our learners are teenagers. They become sexually active at a very early age. I am not really sure whether it is because of the family backgrounds or what. Some of them are child-headed families with no parents.

Through the above narratives one can deduce the importance of involving various stakeholders during the process of sexuality education. It is thus noteworthy that accountability cannot be the sole responsibility of the Life Orientation teacher. The community and broader levels of the school

itself must become involved if positive feedback is sought. This is in line with the First Order Cybernetic framework in identifying various components that form interactional patterns which manifest sexuality education, aligning with the postulation that various factors are contextually at play influencing the manner in which positive or negative feedback interacts with the school system's boundaries.

Meier and Hartell (2009) argue that South Africa should not move towards a uniform culture and must thus accommodate individual cultures within a democratic and uniform framework of respect and acceptance of diversity, a notion reflected by Participant 6. Within an all-girls school, the boundaries of crossing over into male sexuality is often closed (as discussed previously). However, the participant draws on respect for diversity of views and an open platform for questions as core values to accommodate positive feedback in establishing change, whereas a lack thereof would root classroom teachings in a close-boundaried system, which is in contrast with wider national policies and reform:

> **Participant 6:** They do have their views as to what is a feminist. But I think we are very used to stereotypes. So we will have various views on that and amongst that we will have the ones who do not understand. Or what does it mean to be a feminist? Or what does it mean to stand for what's right in the true sense of the word.

The following narrative of the participant aligns with the instilling of respect as a core value during sexuality education, reflecting the way individual classroom practice is contextually boundaried by specific barriers (such as culture and gender), as mentioned before:

> **Participant 4:** I always say to my learners when we discuss, have a debate, that everybody is allowed to have their own opinion. We are not all the same, I work mainly with learners who are from another colour, so because I am white and they are not, there is already a difference in the way we do things. But they understand that, and I understand where they come from. Actually, they are very cooperative

> in the way they respect one another: Ok, this is how you feel, or what you believe, and I may not agree with it, but you are allowed to live your life that way.

From the above narratives it becomes clear that South Africa is faced with various challenges of mediating sexuality education to be implemented to instil positive feedback and ultimately systemic change. In analysing the narratives, the importance of viewing school structures within a demographic context became increasingly clear, and to thus question whether a uniform framework of knowledge is applicable across the national system at provincial levels. This is aligned with Epstein and Morrell's (2012) findings that no knowledge can be seen as absolute, as absolute knowledge stands in contrast to democratic values. As such, it must be acknowledged that schools are situated within specific communities which oftentimes mediate the type of values and knowledge that must be taught (Chabilall, 2012). However, as noted by Davids (2014), sexuality issues such as HIV and AIDS are firmly rooted in community-level boundaries, where masculinity and femininity inequalities remain rife (Kendall, 2011; Moletsane, 2011). It is thus important to bridge the gap of mere knowledge as to what content should be taught at contextual level by establishing a wider network of stakeholders who are accountable during the teaching of sex and sexuality (Mathews, Boon, Flisher & Schaalma, 2006). Participant 9, for example, draws a clear link between opening the boundary to sexuality education and involving the community to shape comprehensive sexuality education that is applicable at wider levels, while still upholding contextual values and norms:

> **Participant 9:** We had to talk to the community leader who is male and then you invite them and talk to them and explain this is in the curriculum, these are the things we need to talk about, they are not gender based, they are more like trying to help the kids, it's a life-skillsthing.
>
> **Researcher:** And how receptive was the community leaders to this; how open were they to adjusting their values?

> **Participant 9:** It's how you approach them, like the one that we work with has an open mind, very flexible. I even invited him to one of the lessons as well and then I showed him what was in the book and I am not trying to question what they are doing there. I am trying to give the learners the skills to be able to cope with all of the challenges facing them.

This need for schools to be accountable for sexuality education becomes increasingly clear through participant narratives reflecting that learners are not always adequately prepared at home, as many families are often child-headed or consist of parents who are not adequately equipped to discuss the topic. Participant 8 also draws on a multi-stakeholder approach in which programmes are implemented that reflect the content and the need to be taught (contextually tailored in this instance pertaining to abstinence as a means to curb the high prevalence of teenage pregnancies in the school), and how parents received it:

> **Participant 8:** We have been having a project here at school that deals with sexuality education in trying to prevent early experiences.
>
> The main focus was on grade 8, and the objective thereof was to try and demonstrate to the learners the difficulty of having a child. What they did was to provide them with cell phones and dolls. And this approach, I mean, it was for communication. Even at night, when they were at home, they called these learners to say, "Feed the child". It was like a role play. When a child cries, what to do, such things. Feed the child; take the child to the doctor, the financial implications involved regarding raising the child.
>
> **Researcher:** In order to curb them from initiating sex? And then, just at community level, how receptive has the community been because the school resides in a specific community and what you implement here would not always work in other schools. How did the community respond?
>
> **Participant 8:** It was positive because we started with the parents. We have to involve the parents. Actually, we invited all the parents who were going to be involved. We gave them the reasons as to the main purpose of the research and all the parents agreed and pledged their support for the programme. And I must confess in the beginning it yielded results, but since we stopped it …

The need for such interventions at contextual level is drawn on accordingly by another participant:

> **Participant 9:** I would feel that the national department would allow the provincial department to interact and involve the community leaders in the different provinces based on how they feel.

There is thus a need for tailored programmes to be introduced into schools, aimed at introducing topics that are contextually relevant, while upholding values of respect and collaboration with both community- and national-level expectations (Weeks, 2012). However, in establishing such support for positive feedback to occur and a means to change the way schools manifest and mediate comprehensive sexuality education, school structures will need to produce open boundaries to both national- and community-level stakeholders. It is within such an approach that contextual change can occur (Bhana & Pattman, 2009), instead of rooting the structure of schools in teachings that are not nationally based on respect and diversity and thus rooted in unsafe traditional values and norms. There is a further need for educators to be trained and equipped with the necessary knowledge and skills to mediate challenges of gender and sexuality that arise within school contexts (Wood, Rogow & Stines, 2015), especially regarding the role of all teachers who are accountable beyond the scope of Life Orientation alone.

In synthesis of the above, the results indicate that schools as stand-alone entities embody a specific culture and within the school system has various influences which mediate how sexuality education is taught. This relates to, for example, how teacher beliefs and school climate would influence whether abstinence is advocated, for example, above that of comprehensive sexuality education. Further findings links the school to the broader community frame, and shows that it is not merely the internal dynamics of the school that influence how sexuality education manifest, but that parental input and community culture further mediates how sexuality education is viewed and ultimate taught.

3.6 Conclusion and Recommendations

The paradigm shift to social justice and post-apartheid South Africa has seen one of the most inclusive constitutional policies globally being implemented. Inclusivity of gender and sexuality diversity has been of forefront focus in establishing inclusivity and acceptance for all cultures. However, as key role player in restoring societal harmony, schools have yet to practically implement sexuality education that is applicable across South Africa, while still adhering to community and societal rules and norms. Incidences of sexual abuse, heteronormativity, sexism and patriarchal attitudes remain rife not only within schools but also within South African society. Research has largely focussed on individual incidences of socially unjust practices in schools; however, a systemic multi-stakeholder approach is needed as a means to understand and better tailor interventional strategies at contextual level. This becomes especially relevant when examining schools as individual systems, each encountering and responding to challenges to sexuality education in relation to the specific contextual climates in which they are situated.

This article raised the question: How do schools mediate sexuality education in Free State provincial schools to accommodate contextual challenges? Using a First and Second Order Cybernetic perspective, it was found that schools forming closed boundaries with the community are barred from successfully implementing sexuality education. A strong link was found between the community and the school system, where community input largely influences the manner in which the various stakeholders (such as management and teachers) implement the type of sexuality education. It will be of value for further studies to investigate the manner in which teachers and management respond to these challenges. As there are various barriers identified within the wider ecology of the schools investigated within the current study, the emphasis largely underscores the

cultural nuance of the environment within which schools are situated. Further studies are recommended to understand how schools and stakeholders consequently manage and respond thereto.

These findings are consistent with the initial literature review in Article 1 of this thesis. Furthermore, it was found that teacher communication within the broader system of the school structure and community is needed for open boundaries that provide them with skills and knowledge that are aligned with national standards as well as respecting indigenous knowledge and practices. Such a linkage allows for positive feedback to be incorporated into the system, while allowing for overall systemic structure to be retained at contextual level. Establishing contact with stakeholders (such as parents and the wider community) outside of the school system itself becomes increasingly important, as well as involving other systems (such as community elders and leaders within certain rural settings) to deliver input as a means to establish feedback within the school structure that will lead to positive feedback and subsequent change aligned with the dynamic and changing values and practices at national level.

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ARTICLE 4:
Investigating Sexuality Education in the Free State Province: A Matter of Space, Place and Culture

Abstract: Sexuality education has faced various challenges in being successfully implemented within secondary schools in South Africa. Research points to barriers thereto which include teacher bias and limited knowledge as core mediators to socially just education. Research in the area of Life Orientation, the core subject area underlying sexuality education, has largely focussed on teacher responses and challenges within the teaching of sexuality. Scant research exists, however, on how schools as a systemic whole manifest and sustain sexuality education. This research paper is guided by the primary question: How do schools, from a systemic level, mediate sexuality education in relation to space, place and culture? As such, the research reported within this paper encompasses a systemic approach to understanding how sexuality education is maintained within schools. Through purposive sampling, 12 participants from six schools in the Free State province were chosen to take part in semi-structured interviews. The sample of participants comprised of Life Orientation teachers as well as school principals, vice-principals and heads of departments. Through the framework of cybernetics, it was found that schools face different challenges in relation to their geographical place, as well as the space within which the schools reside socio-politically. Core themes which emerged are curriculum boundaries and teacher knowledge, as well as how school culture forms the foundation to how sexuality education manifests within a specific context.

Keywords: cybernetics, sexuality education, space, place, social justice

4.1 Introduction

South African culture has become increasingly complex, with multicultural norms and indigenous knowledge systems having to adhere to a uniform benchmark of constitutional rights based on inclusivity and acceptance of diversity (The Bill of Rights, 1996). This plurality of culture implicates teaching culturally sensitive topics such as sexuality, as many educational spaces are faced with the need to transfer knowledge which is flexible to societal norms and values (Weeks, 2012). This need for the flexibility of adaptable knowledge to the 21st-century paradigm shift from static knowledge is further intensified by globalisation and the need to consider the developmental changes in school systems related to the array of identities and cultures in schools (Jonck & Swanepoel, 2015; Matus & McCarthy, 2003; McCarthy, Giardina, Harewood & Park, 2003). This requires a multicultural space where knowledge and teacher pedagogical approaches are tailored which are not just aligned with curriculum and policy stipulations, but also culturally acceptable across the spectrum of culturally diverse learners from various backgrounds (Howard, 2003; Irvine, 2010; Pang, 2001; Swanepoel & Beyers, 2015). The classroom is thus highly underpinned by South Africa's socio-political context of place, space and culture (Cross, Mungadi & Rouhani, 2002), and this complicates the manner in which content is taught as knowledge should ideally be dynamic and continuously reconstructed in such a way that educators need to constantly reflect on and adapt their pedagogical approach to cultural diversity (Gay & Kirkland, 2003).

The topic of sexuality within school spaces has become of forefront focus in recent South African research (cf. Adams Tucker, George, Reardon & Panday, 2017; Jearey-Graham & Macleod, 2017; Pattman & Bhana, 2017) and is, in conjunction with cultural purity, an equally difficult concept to dynamically construct and act upon within the classroom setting. In a further effort to curb issues

related to unsafe sexual practices, schools have become primary platforms for implementing programmes to readdress past injustices which remain rife at present (Shefer, Kruger, Macleod, Vincent & Baxen, 2015). Post-apartheid South Africa is still troubled with racial and sexual inequalities, implicating the way educators adapt and tailor pedagogies to fit the needs of learners, not only within classroom spaces but also to mediate teachings to the relevance of learners' socio-political backgrounds and spaces (Department of Basic Education, 2011; Msibi, 2012). Schools have thus become key settings within which identities can emerge and be constructed (Woolley, 2017). However, South African school spaces have not shown the desired influence in creating and shaping learner identities, which calls for the need to examine how the immediate context of schools and the subsequent broader societal space and place thereof influence identity formation in terms of culture, race and gender (Dawson, 2007).

There has been, however, a global shift in creating curriculum spaces that are indicative of inclusivity of gender and sexuality (Haberland & Rogow, 2015). While school spaces may also be better aligned with policies and mission statements of inclusivity, teachers face ongoing challenges to align teaching to critically engage and intervene in issues related to sexuality (Vavrus, 2009). As core facilitators to programmes related to sexuality implemented at educational levels, teachers are increasingly being positioned in spaces of negotiating and reflecting on pedagogies which align with the ideals of comprehensive and socially just education (Ahmed, Flisher, Mathews, Mũkoma & Jansen, 2009) to reflect and challenge past apartheid-based inequalities and instil values of inclusivity and acceptance within places of learning (Howard, 2003; Larrivee, 2000).

4.2 Schools as Spaces and Places of Culture and Sexuality

Fields and Payne (2016) draw on ‘place’ as the material construct of the school itself, in a tangible respect of visibility. It is within certain places such as schools that meaning is constructed by learners and their actions, thus “schools become schooling” which ultimately becomes “actions” rather than just a place within a certain location. In conjunction with the need to curb risks related to unsafe sexual practices, it is important to acknowledge the importance of changing core values and destructive gender norms within classroom spaces (Cobbett-Ondiek, 2016), and thus not to place sole focus on changing places as prime areas of intervention. A contextual approach to such an understanding is needed as teaching about sex and sexuality is not limited to the classroom as a place of learning, but also toward the broader place and context of the school setting and community as a whole (Haberland & Rogow, 2015; Mthatyana & Vincent, 2015). It is accordingly that DePalma and Francis (2014) and Sanjakdar et al. (2015) argue for the need to instil intercultural and critical pedagogies within school spaces to establish sexuality education (SE) and cultural diversity which engage multiple levels of the learners’ contexts, diverse cultures, and, in turn, a multi-stakeholder approach thereto. Accordingly, Gorski (2008) argues that it is not sufficient to merely classify oneself as ‘intercultural’, but that the need arises to continuously develop a deeper conscious awareness of the socio-political context of one’s pedagogy and its relations to hegemony, power and privilege.

However, school spaces often neutralise gender and sexuality, desexualising learners and, in turn, creates perceptions of retaining learner innocence through silencing the topic of sex and sexuality (Shefer & Ngabaza, 2015). Vavrus (2009) reflects the argument that school spaces are dictated by social norms and regulations of power, and that this is to the disadvantage of teaching the content

aimed at by national policy benchmarks. Sociological order and normative discourses have established the dichotomy of ‘male’ and ‘female’ as the culturally accepted norm by which masculinity and femininity are compared, learned and subsequently acted upon (Lee, Marks & Byrd, 1994; Rahimi & Liston, 2009). Smith, Schacter, Enders and Juvonen (2017) furthermore found that adolescents who do not fit these normative gender norms are at higher risk of victimisation and emotional distress, with boys being at higher risk of depression where gender norms are of salient importance. On the other hand, girls are contradictorily sexualised through the media and representations of bodily images, yet scrutinised morally by how they dress (expected to dress according to the image of virginity and sexual innocence). This contrasts with boys not being subjected to the same standards as to what is morally and socially acceptable (Heslop et al., 2015). Mulvey and Killen (2015), however, found that age is a strong mediator to resisting gender norms and peer pressure. In their study, they found that younger children are less likely to conform to gender norms, while older adolescents, especially boys, are less likely to challenge gender stereotypes as a means to assimilate to peer-group and societal norms.

Educational settings are salient spaces of socialised gender expectations and gender-specific triggers. This is visible in the division of single-sex-based schools and mixed-gender schools, each carrying specific challenges and norms by which school ethos is realised. Gender and sexuality serve as strong regulators of how power manifests and is exerted within educational spaces (Carrera, DePalma & Lameiras, 2012; Connell, 2014; Haberland, 2015), especially at secondary schooling level with the onset of adolescent puberty and sexual exploration and experimentation. However, sexuality and gender already manifest as strong socialised structures in primary-school spaces, which are often overlooked and mistakenly classified as spaces where sex and gender evade the need for teaching, mistakenly classifying primary schools zones of sexual comfort,innocence,

and adult-based exclusivity of knowledge (DePalma & Jennett, 2010). Furthermore, there is the assumption that the youth is vulnerable and should be restricted in terms of sexuality knowledge, while research points to the need for establishing sexuality literacy at early ages and to acknowledge the youth's role within society and their sexual citizenship (Robinson & Davies, 2017).

Drawing extensively on the emotional underpinning of teacher discomfort, Reygan and Francis (2015) as well as Elia and Eliason (2010) refer to the hegemonic control of heteronormative attitudes within which sexuality pedagogies are situated. Francis (2016) furthermore echoes the work of Beyers (2013) and Pokharel, Kulczycki and Shakya (2006) in the discomfort of teachers in responding to, or acknowledging, these relations of hegemonic control in the classroom by either complete silence surrounding sexuality, or by playing it 'safe' as a means to not only eliminate emotional triggers and stay within safe socially accepted spaces of gender and sexuality when teaching about what is healthy sexual behaviour. However explicitly or implicitly teachers approach sexuality, the frustration and fear with which messages often manifest situate knowledge within spaces which promote the marginalisation of sexuality and gender.

4.3 Research Aim and Questions

There is an urgent need to gain understanding as to how educators utilise schools and classrooms as spaces of social change during sexuality education (Cobbett-Ondiek, 2016). This study aims to understand how schools within the same contextual space of the Free State province, manifest and mediate sexuality education. As schools are contextually different, it is understandable that there will be contextual factors which create boundaries to how different schools approach sexuality

education. The main question guiding this study is thus: How do schools, from a systemic level, mediate sexuality education in relation to space, place and culture?

4.4 Theoretical Framework: First and Second Order Cybernetics

The underpinning for this article's theoretical framework stems from the work of systems thinking, more specifically, cybernetics from a First and Second Order perspective. Banathy and Jenlink (2003) draw on cybernetics in the self-regulating manner in which systems manifest and sustain order at structural level. More specifically, systems are continuously influenced by feedback processes and the way systems subsequently respond thereto and regulate themselves as a means to maintain structural integrity and homeostasis. At First Order Cybernetic level, emphasis is not on the meaning of such feedback, or noise, and subjectivity thereto is thus not relevant. Focus is placed on the 'what' counterpart of how systemic structure is maintained, as opposed to 'why' the components of the system behave as they do. Through a First Order Cybernetic perspective the patterns that underlie systemic structure is investigated, and the patterns of interactions are explored that subsequently create rules and boundaries (Becvar & Becvar, 2012). This theoretical perspective is valuable from a First Order Cybernetic perspective in understanding what components of socio-political space and geographical place influence schools' systemic boundaries, but furthermore to establish and investigate boundaries and interactional feedback patterns within schools and community systems that sustain sexuality education within context-specific and culturally diverse structures and what maintains functionality, or, in turn, dysfunction.

Hoffman (1985) argues, however, against the control exercised through acting as mere observer of a system and explaining interactional patterns without considering the role of the self within the

system and in turn the influence of the self as a stakeholder and researcher within the process as well. For this reason, the qualitative research investigation of this study is further underpinned by the perspective of the researcher as a part of the systemic interaction and not merely an 'objective' observer as from a First Order Cybernetic perspective (Heylighen & Joslyn, 2001), with reflexivity and feedback also being incorporated at systemic level of the narratives. This is aligned with Second Order Cybernetics, where the researcher becomes a participant in the research process, being able to further explore the observed system from a more contextual perspective. The researcher thus co-constructs narratives with participants (Reinertsen, 2014) and forms an integral part in constructing data that are contextual to the realities of the participants' contexts and the manner in which the researcher, as both a participant in narrative construction and as an observer, understands and explains the 'what' and 'why' of sexuality education within specific settings.

4.5 Methodology

This study utilised a qualitative research method encompassing an interpretive paradigm as a means to understand the contextual underpinning of how schools manifest sexuality education. This paradigm is especially relevant in exploring the beliefs, attitudes and experiences of the participants within their respective environments (Thanh & Thanh, 2015). This is further reflected in using semi-structured interviews underlying the methodology of the study. As the aim of this study was to gain a better understanding of how schools uniquely respond to and face boundaries regarding sexuality education, a qualitative approach proved valuable in gaining an in-depth perspective of the contexts of the participants and their specific experiences. It furthermore provided participants with the opportunity to reflect more deeply on their teaching practices, while allowing for conversation and probing which shed light on how sexuality education is located within aspecific

place and space, especially in relation to the cultural underpinning of space and place, which is unique across the schools (Blanche, Blanche, Durrheim & Painter, 2011). Lastly, the use of a cybernetic framework further aligns with the study in that the researcher can both observe participant narratives while also incorporating subjective perspectives and experiences as a means to co-construct narratives alongside the participants and during the analysis of the data.

4.5.1 Participants

Twelve stakeholders within the primary context of education and schools were purposefully sampled. Non-probability sampling was utilised, and schools were specifically chosen on the contextual differences underlying them as well as the culturally diverse climates which surround them spatially (Blanche et al., 2011). As such, schools were sampled and approached for gatekeeper consent (the principal being the primary gatekeeper), and permission was then granted or denied for conducting research within the school at managerial level and teacher level. Although eight schools were initially approached to provide for an equal distribution between rural and urban schools, only six of the schools consented to participate. The twelve participants (n=12) were thus selected from the sampled schools and were spread across urban (n=2) and rural (n=4) schools. The gender composition of the participants were spread among males (n=5) and females (n=7). The sample included Life Orientation (LO) teachers (n=7), while the remainder of the participants subsume managerial roles within the schools at various levels (n=7), all of whom are or were directly involved with Life Orientation. Table 4.1 illustrates the demographic distribution of participants.

Table 4.1: Demographics of participants

Participant	School no.	School type	Participant role	Gender	Race	Age group
1	1	Urban	School principal	Female	White	41-50
2	1	Urban	Deputy headmistress	Female	White	61-70
3	1	Urban	Deputy headmaster	Male	White	51-60
4	2	Rural	Life Orientation and English teacher	Male	African	31-40
5	3	Urban	Life Orientation teacher	Female	White	21 - 30
6	1	Urban	Life Orientation teacher	Female	White	41-50
7	3	Rural	Life Orientation teacher	Male	Coloured	41-50
8	4	Rural	School principal	Male	African	51-60
9	5	Rural	Life Orientation teacher and Head of Department	Female	African	41 - 50
10	1	Urban	Life Orientation teacher	Female	White	31-40
11	6	Urban	School principal	Female	White	51-60
12	6	Urban	Life Orientation teacher for two years	Male	White	51-60

4.5.2 Data gathering andanalysis

Data gathering was primarily informed through semi-structured interviews with participants (Appendix A). Each interview lasted between 30 and 45 minutes. The study primarily comprised of individual interviews; however, due to time constraints Schools 1 and 6 requested group interviews. The researcher assisted in creating a dialogue within which participants provided

contextual information regarding their perceptions and experiences of sexuality education. Knowledge is, from a contextual and qualitative approach, a co-constructed concept. As such, First Order Cybernetics primarily informed the desktop review of literature and aspects within the results and discussion section through looking at the 'what' counterpart of systemic patterns. However, at a Second Order Cybernetic level, I was active in the construction of knowledge, and as such stimulated the debate as a means to better understand the contexts the participants face in relation to sexuality education (Becvar & Becvar, 2012; Blanche et al., 2011). The researcher thus stimulates the information and probes from various sides in a complimentary manner, also in the subsequent analysis to determine patterns and themes that emerge. This study was accordingly guided by Tesch's (1992) method of data analysis. Interviews were transcribed, and similar patterns were identified and coded. From these codes certain themes emerged, with this manuscript specifically focussing on the themes of space, place and culture. While the data were viewed in its entirety at the end of data collection and transcription, it is important to note that data analysis had already commenced during the interviews, providing the researcher with the opportunity to better stimulate contextual factors and patterns which emerged during other interviews. As such, after the data were transcribed, each narrative was coded and themed under the respective frequencies uncovered. These themes will accordingly inform the basis of the results and discussion. All questions asked to participants reflected the following:

1. Their understanding of gender and sexuality, sexuality education, and social justice.

2. Their experiences related to sexuality education.

3. Their perspectives and attitudes related to sexuality education.

4. Difficulties and challenges that they have experiences within the classroom, school, or community, related to sexuality education.

The discussion of the results is categorised under the three themes that emerged during the analysis of the data, namely:

1. Boundaries, gaps and limitations in space within the sexuality education curriculum.
2. The gap between teacher beliefs, attitudes and values and overall sexuality education benchmarks in the space of the Free State province.
3. Boundaries to geographical place, space and culture within the implementation of sexuality education.

4.5.3 Ethical considerations

This study was primarily registered with the host institution to perform research within schools within the Free State (Appendix B). Gatekeeper consent and briefing was done, with the open acknowledgement that participation in the study is not mandatory, and that participants could withdraw at any time. No deception took place, and each participant was fully briefed about the scope and aims of the study. All narratives were coded and any references which may be indicative of the school or participants were removed. The coded data is presented in the report through participant numbers, with no references alluding to any specific school on any level.

4.6 Results and Discussion

The qualitative analysis of the data from participant narratives indicates that a strong thematic link related to space, place and culture is established. The coding and thematic categorisation of the data established various aspects in the form of subthemes related to the beforementioned. These

subcategories include the curriculum, boundaries related to personal backgrounds of the teachers, and geographical contexts in terms of place and space in the Free State province. The discussion of these categories will commence with micro-level boundaries at curriculum level and expand to include the broader geographical boundaries related to sexuality education. While the discussion will be based on the categorical perspectives of these boundaries, it is important to note the reciprocal role these factors play within schooling systems within one boundary, as opposed to being separate components working in isolation.

4.6.1 Boundaries, gaps and limitations in space within the sexuality education curriculum

It became clear through participant narratives that the space provided by the Curriculum and Assessment Policy Statements (CAPS) for Life Orientation bids either too closed or too open boundaries during the teaching of Life Orientation and its subcomponent of sexuality education. Participant 10 illustrated the boundary of time and the curriculum as a closed boundary to optimal sexuality education in her school, as reflected through the below narrative when asked how she experienced the space provided within the curriculum based on the topic of sexuality:

> **Participant 10:** If I look at the CAPS curriculum and what is required and what is required timewise for LO … what we do have, or the time that we do have is way less than what we are supposed to. Which makes it quite difficult to incorporate things like sexual and sexual orientation or education. Because you are only working with the books, of course, so there is not really time. You have to incorporate everything into your schedule.

She then further elaborated on the manner in which this closed boundary leads to learner attitudes, further restricting the space within which sexuality education is taught:

> It's also very difficult when you are sitting with children who think that Life Orientation is a waste of time. So even though you are teaching important content, they don't necessarily feel it's important.

> What they take out of here, I don't always know if it is positive or if it is something that they deem as important for them to carry on with life.

Participant 5 also reflected on the limitations of the Curriculum and Assessment Policy Statements, as seen through the below narrative:

> **Researcher:** What is your opinion of the way it [CAPS] explains and stipulates sex and sexuality that you have to teach?
>
> **Participant 5:** Okay … I think it is very superficial. You cover it … you do it a lot, instead of going deeper into the issues and what the learners are experiencing, for example, if they are gay … the judgment from others, how they exert themselves in their communities. Instead of talking about that, it is always about sex before marriage, STDs, and that I have a problem with.
>
> **Researcher:** And is that specifically the CAPS, or would you say the textbooks as well?
>
> **Participant 5:** I think it is all round still, I don't think that CAPS and being teachers go deep into the subject matter.

Participant 5 reflects a narrative of critical reflection as to the limited space of content of the Curriculum and Assessment Policy Statements and the boundaries thereto within which teachers teach sexuality education. Her narrative reflects the way the space in which teachers have to interpret content can lead to open or closed boundaries depending on the teachers' perspectives of content relevance and personal choice. Research into sexuality education and its implementation within South African spaces has shown that emphasis is largely placed on the physical aspect of sexuality, thus placing importance on aspects such as HIV and AIDS, condom usage, and abstinence versus safe-sex practices (Goldman, 2008; Thaver & Leao, 2012). This emphasis deflects from the overall aim of holistic development in limiting the space within which sexuality education is mediated to not include aspects of sensuality, pleasure and the emotional underpinnings of relationships and sexual practices which are often completely silenced within the classroom space (Francis, 2010; Lees, 2017).

4.6.2 The gap between teacher beliefs, attitudes and values and overall sexuality education benchmarks in the space of the Free State province

The boundaries that mediate the type of sexuality education that teachers deliver, as deduced from the following narrative extracts of participants, are twofold. Firstly, the personal values and attitudes of teachers implicate the manner in which content is interpreted and presented, and secondly, the aspect of school place and culture further plays a critical role in what type of sexuality values are advocated in the classroom. It is again evident through the following extracts and discussions that sexuality education in South Africa is highly entrenched in the socio-political climate which is contextually based. What is important through the discussion hereof, especially through a cybernetic perspective, is that teachers are not solely responsible and accountable for what content is taught. The Curriculum and Assessment Policy Statements thus provides contextual space to accommodate the socio-political climates of different schools and takes into account the needs of different spaces and places depending on province and overall geographical location in accordance with other schools. There is thus space within which the teacher can mediate different messages, depending on their own personal beliefs and experiences (Brown, 2013; Francis, 2017; Gacoin, 2010; Kasonde, 2013), or ideally to tailor messages toward a comprehensive framework of sexuality education advocating learner-centred agency and acknowledging their roles within society as active and equal members with citizenship (Haberland & Rogow, 2015).

The teacher is merely one component of a larger system encompassing not only the curriculum, but is also placed within a space where the larger suprasystem of place and culture relates thereto, playing equally mediating roles. The role of culture and teacher background knowledge, for example, is drawn upon by Participants 9 and 11. This lack of knowledge often leads to misinformed teaching, causing teachers to draw on information which is not applicable to the needs

of the learners (Brown, 2013; Swanepoel, Beyers & de Wet, 2017). This is seen through the following narratives:

> **Participant 11:** We work with different cultures at this school, like Sotho, Xhosa, Zulu, etcetera, coloured people, and I don't necessarily think the teacher that presents the class always understands the cultures when it comes to sexuality ... Sometimes I feel we are trying to force down a Western culture on some of the children, and when they leave here they step into another world.
>
> **Participant 9:** LO mainly, most of the teachers are old. So it becomes difficult for them to teach most of the things because they feel squirmish, others because of their cultural background they think they are too old to speak to children … and if it is a graphic issue, sometimes it tends to be too graphic for them. And sometimes they do not have the background of psychology, so their approach is the main issue.

In analysing the system within a 'what'-First Order Cybernetic perspective, the first level of the system, which dictates the space within which sexuality education is taught, accounts for the personal background of the educator, specifically religion, when asked about what content the participants deem most important during sexuality education and why.

> **Participant 10:** We discuss STDs, what would you do to prevent it, what behaviour … so the behaviour is rather important, what will the risky behaviour, the main headings of the …
>
> **Researcher:** Would you advocate condom usage or abstinence?
>
> **Participant 10:** For me, abstinence.
>
> **Researcher:** Why?
>
> **Participant 10:** For me, Christian beliefs. For me, as a Christian, it is often difficult to put my point across when I know there are others who do not have the same belief system that I have.

While Participant 10 takes on a very direct approach of abstinence due to Christian beliefs, Participant 6 (below) illustrates a more contextual approach which accommodates diversity of views and religion. This once again links with the manner in which the Curriculum and Assessment Policy Statements open space for debate and critical conversation, or as in the previous

participant's narrative, a space for the personal interpretation in how sexuality content is addressed at practical level within the classroom.

> **Researcher:** And how do you bypass this personal bias? We all have a past. We all have experiences that have shaped our beliefs about homosexuality, about teenage pregnancies, abortion, sensitive issues. How do you bypass your own bias, your own religion that dictates certain things, and enter a classroom and then objectively start speaking about these sexual issues?
>
> **Participant 6:** It's probably the hardest thing, but you have to tell them from the start if they ask you what your opinion is, tell them this is my opinion, my beliefs, not to influence you in any way, and many times they would ask me, "What is your opinion, ma'am?" and I would say, "This is my beliefs: I'm a Christian and I believe this, and this, and this, and it's not judging what you believe", and that's a big thing. They want to know that you do not judge them in how they think life should be or situation should be, or lifestyle should be.

4.6.3 Boundaries to geographical place, space and culture within the implementation of sexuality education

Participants 6 and 10 are situated within the same school; however, both reflect different ways of approaching sexuality education from the vantage point of their own backgrounds and culture. Probing further into how Participant 10 teaches from the positioning of an abstinence-only-based perspective, it becomes evident that the broader community and system is directly linked to the way educators approach subjects during classroom practice, as well as the perception of educators as to their spatial movement and freedom to mediate content freely. Consider, for instance, the below narrative in which the educator reflects on spatial limitations to her approaching sexuality education to include community-level boundaries, specifically the geographical context between urban and rural spaces, as well as parental-level boundaries, which mediate the space within which her content is positioned:

> **Participant 6:** For us it is definitely the environment the [learners] grow up in; you cannot compare the education we would do here to the education you would do in a township school. The [learners]

> here are informed. I think what also influences me is that I'm the parent of two teenagers and I know the issues and I understand how they see things, and then also, keeping in mind that if I as a parent would agree or like when my daughter comes home that this is what the teacher did discuss. A simple example, for instance, we had a discussion in the grade 10 class; there was a case study in the book about oral sex and after class two girls came to me and said they don't know what oral sex is, can I please explain it to them. And I was quite careful because I don't know if the parents would want them to know that yet. Although when I thought about it again, I was wondering if they really didn't know, and if they did that to get me to feel uncomfortable. It was a confusing situation. I don't know if your parents would be comfortable with their kids learning these things from someoneelse.

The above narrative from Participant 6, who teaches in an urban setting, is confirmed by the narrative of Participant 8, a school principal within a rural setting in the Free State province. The below narrative reflects on how the positioning of sexuality education is specific to the setting where the school is located, thus creating specific contextual boundaries to the type of content and approach to teaching which is undertaken during Life Orientation:

> **Participant 8:** Well, it's a lot on reproduction, reproduction in terms of how we need to conduct ourselves, especially the learners. The information that need to be disseminated, the safety in terms of what would be the repercussions if you indulge in unsafe sex. These are the things we focus on.
>
> **Researcher:** So, is that what your Life Orientations focus on?
>
> **Participant 8:** Yes.
>
> **Researcher:** So, if I would ask you abstinence versus comprehensive sexuality education, would you lean more toward the abstinence counterpart?
>
> **Participant 8:** Yes, it plays a crucial role. But given the time and age we are living in now, it is so difficult to control it. Most of our learners are teenagers. They become sexually active at a very early age. I am not really sure whether it is because of the family backgrounds or what. Some of them are child-headed families with no parents.

Participant 6 referred earlier to the informed nature of the learners within her class, stipulating that the education at the school where she teachers will differ from that in townships and rural settings. Through a Second Order Cybernetic perspective, and adopting a 'why' lens, I question whether learners in different settings are truly more or less informed in comparison, and whether the

information and relevance thereof is rather different and contextually applicable. This once again indicates that knowledge is contextual, and that schools are contextually different in both place and space, thus forming different boundaries to sexuality education. However, all participating schools are situated within the broader boundaries of the Free State and South Africa as a whole. This is indicative through the narrative of Participant 4, who specifically stated that there are geographical boundaries to the teaching of sexuality education, which emphasises the importance of special influences during the teaching thereof:

> **Participant 4:** The community was having an influence on the school, based on my observation and experience. It was far east of the Free State. It is a rural place, it is one secondary and one primary. The learners they are not exposed to maybe to, what is happening. So you realise that they are stuck to change. So the school tried to bring change, but they are resistant to that change.
>
> **Researcher:** Can you give me an example, perhaps?
>
> **Participant 4:** Let me make a practical example. For example, in that place there is a culture amongst the black community, the initiation culture. And they will tell you that you must go there in order for you to be a man, and now these learners when they get to school, they don't want to accept the authority of teachers because culture has given them a view that they have the authority; they are men.

Culture once again becomes evident as a strong mediator as to how sexuality education is introduced within the classroom. The above narrative had me probing further into how gender differences of teachers may cause limitations to sexuality education. Participant 9 articulated this when asked about how the initiation culture influences her classroom practice. It is also important to note that a new stakeholder is introduced, namely the community leader, this being a specific strategy employed by the school within a rural area. This lends validity to how different systems manifest and sustain sexuality education, and in turn that teachers are merely one of numerous stakeholders in the process. This knowledge is valuable in understanding how boys react to a female teacher teaching about sex and sexuality after they had undergone initiation, as indicated in the following narrative:

> **Researcher:** Have you had a specific situation that you can speak about how it implicated your classroom practice?
>
> **Participant 9:** In the other class I tried to introduce the issue and they just stood up and left. And then we had to talk to the community leader, who is male, and then you invite them and talk to them and explain this is in the curriculum, these are the things we need to talk about, they are not gender based, they are more like trying to help the kids, it's a life-skills thing.
>
> **Researcher:** And how receptive was the community leaders to sexuality education; how open were they to adjusting their values?
>
> **Participant 9:** It's how you approach them, like the one that we work with has an open mind, very flexible. I even invited him to one of the lessons as well and then I showed him what was in the book and I am not trying to question what they are doing there. I am trying to give the learners the skills to be able to cope with all of the challenges facing them.

It is noticeable from the above mentioned that a multi-stakeholder approach is implemented in the process of sexuality education. The managerial aspect of opening the fluidity of boundaries between the school and the community becomes clear. This aligns with cybernetics in that new information can lead to systemic change, thus allowing for feedback that permits the system to adapt to ideal standards of comprehensive sexuality education (CSE) and social justice. While Participant 8 indicated earlier that, as school principal, he advocates abstinence, this does not cause the school system to remain unchanged. The principal drew on external sources which proved valuable, allowing for positive feedback to occur within the school:

> **Participant 8:** The main focus was on grade 8, and the objective thereof was to try and demonstrate to the learners the difficulty of having a child. What they did was to provide them with cell phones and dolls. And this approach, I mean, it was for communication. Even at night, when they were at home, they called these learners to say, "Feed the child". It was like a role play. When a child cries, what to do, such things. Feed the child, take the child to the Doctor, the financial implications involved regarding raising the child.
>
> **Researcher:** In order to curb them from initiating sex? And then, just at community level, how receptive has the community been, because the school resides in a specific community and what you implement here would not always work in other schools. How did the community respond?

> **Participant 8:** It was positive because we started with the parents. We have to involve the parents. Actually, we invited all the parents who were going to be involved. We gave them the reasons as to the main purpose of the research and all the parents agreed and pledged their support for the programme. And I must confess, in the beginning it yielded results, but since we stopped it … it was on the side of the university … the initiators, there is a very high level of pregnancy as we speak. On average here, per term, we have about five learners who fall pregnant. This is very high in my view. And I am talking about not only higher grades, from grade 9, even grade 8, we do have those who are pregnant now.

These narratives are indicative of the need to expand the space within which sexuality education takes place. The process should thus not be isolated to the classroom itself, but stakeholders such as parents and institutions should be involved in the process to allow for successful teachings to manifest. Participants within rural areas greatly emphasised the need to include the community and external sources. It is interesting to note from the following narrative that an urban school managerial team sustains the system internally, and that the school has a multi-stakeholder account of the dynamics within the school itself:

> **Participant 1:** The school governing body governs by means of approving policies. They govern by determining the curriculum and extracurricular activities offered by the school, so the school policy is the first way of governing content, where you must understand that the senior management team or first, the executive team, including myself and the two deputies, then communicate to the senior management team, and then we also have grade heads in place for different grades, because of the different developmental stages of the girls, and then we have the subject teachers, so, even though the governors determineand approve policy, the practical implementation happens on educator level.

Participant 10, residing within an urban context, also drew on the limitations of the teacher in teaching sexuality education. The participant also reflected on broadening the space within which sexuality education is taught, encompassing community-based interventions to bridge the gaps of the teachers' limited knowledge:

> **Participant 10:** In classes I see in Life Orientation it does cause the educator ... The educators of Life Orientation cannot do that section, because of their personality and the way they feel about it, but

> what we've done before is you've got the groups together and you talk to them. The boys together and the girls together, separated. So you get people to come talk about that. I think the biggest drawback in class at this stage is the educator having to conduct that lesson on sexuality and that's where you get a roadblock, always, because you got a mixed class.

I, however, question the approach undertaken by the school in separating boys and girls. The principal reflects on the limitations of the teacher in approaching a mixed class of boys and girls and thus intervening with programmes that create separate spaces for male and female learners to be educated. This creates little space for learners to converse and learn about differences and further dichotomises gender as only being male or female. I challenge this method of separation, in line with Francis (2017), in that schools are often places of gender categorisation, as discussed in the article's introduction, thus suggesting that gender diversity beyond the spectrum of male and female falls silent.

The contextual manner of different schools also becomes clear through the following narratives. While I have argued the difference in sexuality education between different schools, it becomes evident that the contextual space of the province also plays an important role. Consider, for example, how Participants 9 and 10 reflect on the contextual differences related to provinces:

> **Participant 9:** I would feel that the national department would allow the provincial department to interact and involve the community leaders in the different provinces based on how they feel. Eastern Cape was okay when I taught there; we were allowed, we know we have the headman, the chief, if you have permission from that you can go ahead with everything. But here in the Free State it is a different story.
>
> **Participant 10:** With the majority Sotho in the Free State, so the majority in the Free State. Western Cape is Xhosa and coloured people. So when you come to the Free State you've got a Sotho-dominant population and this will differ from other cultures, definitely.

Participant 6 referred to her previous teaching experience, drawing on how the differences in contexts mediate her teachings. She compares the type of teachings she gave in Johannesburg to

that of her current context of the Free State, highlighting again the importance of how place and space mediate the culture of teaching that manifests within classroom settings:

> **Participant 6:** It's a very open, liberal, accepted, rough, and out there [Johannesburg], where here [Free State] it's very narrowminded. It's like kids live in a box.

This article, in summary, reflects on three boundaries which are prevalent during sexuality education. Firstly, it is found that curriculum restrictions or silences of topics within the curriculum can either prohibit teachers to engage with the content fully, or ultimately lead to teachers enforcing silence and ignoring certain topics, such as homosexuality. Furthermore, the contextual specific nature of sexuality education is further found in that the geographical setting of schools influence the type of teaching and content related to such topics, and specifically influences the content that is taught in the classroom. Furthermore, the third level boundary found that teacher bias and attitudes strongly influence the process as well, in such cases for example where teachers are averted to certain topics it may be silenced or misconstrued, often to the negative perceptions of learners.

4.7 Conclusion

The aim of this article was to investigate the question: How do schools, from a systemic level, mediate sexuality education in relation to space, place and culture? Through the use of First and Second Order Cybernetics, it was found that place, space and culture are core themes which boundary sexuality education. Within the themes of space, place and culture there are various factors that further influence sexuality education, specifically the background knowledge and culture of teachers, religious underpinning of learners and teachers, and the geographic context of

the place within which schools are located. Space and place are interrelated concepts, and thus sexuality education must be understood as a contextually based concept which is located within specific spaces. Such spaces are governed by South African benchmark expectations of social justice and inclusivity. However, at practical level, it is not feasible to standardise the type of sexuality education that is taught. The study further found that sexuality education is not located solely within the Life Orientation classroom but extends to the school system and beyond for a systemic multi-stakeholder space where stakeholders such as parents and the community become integral role players in attaining systemic stability and providing sexuality education which is contextually relevant while upholding democratic national policies and curricular expectations.

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ARTICLE 5:
A Reflective Cybernetic Study on the Experiences of a Gay Male Teacher in the Free State Province

Abstract: Sexuality education has become a core component in advancing the ideals of social justice and inclusivity within schooling environments. Its implementation has, however, been met with resistance as its sensitive nature often leads to conflicting messages, especially in relation to the myriad cultures and ambiguity thereof when placed against the contrasting values characteristic of multicultural South Africa. This article speaks to my experiences as a gay male teacher within the context of teaching at primary and secondary schools in the Free State province. I draw on the challenges and barriers I experienced, especially as a new teacher, and reflect critically on how this influenced my growth as an educator in the following years. Primarily, my approach and pedagogy were positioned within silence and uncritical reflection as to how my teachings can align with the ideals of social justice and inclusivity. Framed through a cybernetic perspective, I investigate how my pedagogy has adapted and transformed toward a less reactive approach and in turn aligned more actively with the beforementioned ideals. This study is a self-reflective journey which accounts for my experiences within different systems, and how my presence influenced the systemic dynamics of the schools in which I taught.

Keywords: sexuality education, cybernetics, systems, reflective practice

5.1 Introduction

Sexuality education (SE) has become a core initiative within schools globally as a key approach to curbing risks associated with risky sexual behaviours (Francis, 2011). South Africa itself has seen constitutional reform and policy transformation in an effort to move toward sexual inclusivity (Bhana, 2014; Donohue & Bornman, 2014). However, the implementation of sexuality education has contextually been met with various barriers, specifically when viewed from the heterogeneous culture and norms reflected within the country's population composition and teacher responses thereto at practical level (Beyers, 2013; Helleve, Fisher, Onya, Mũkoma & Klepp, 2011). There has also been a paradigmatic shift in transferring knowledge which accommodates continuous societal change as opposed to mere static knowledge which is not aligned with cultural and societal dynamics (Weeks, 2012). While sexuality education has been shown as being effective, there are still various problems that arise during the teaching of topics characteristic of cultural plurality, thus necessitating the ongoing need to understand the challenges educators and educational institutions face in this regard (Meier & Hartell, 2009).

Schools are central spaces within which identities are produced and are subsequently often taught within structures shaped by power and inequality (Woolley, 2017). It is within such spaces that sexuality education must allow for learners to approach sexual-identity formation freely. Reddy (2010), however, postulates that while the educational landscape of freedom of expression has been introduced constitutionally, there are still restraints and boundaries which restrict sexual identities to emerge freely. One such boundary, for example, becomes clear when viewed on part of the bias and emotive nature with which educators often approach sexuality education. Many teachers do not feel comfortable and are not willing to discuss or engage critically about sexuality with learners

(Helleve et al., 2011). Educators still face a curriculum which encapsulates a benchmark ideal for sexuality inclusivity, but the standards at democratic-citizenship levels are not fully realised at practical level. The sexuality-education curriculum has further been referred to as broad, allowing for personal interpretation of content to influence socially just and inclusive messages within the classroom, often leading to teachers teaching what they believe to be correct and appropriate (Swanepoel, Beyers & De Wet, 2017).

There is thus a dominant culture of silence surrounding sexuality education, leading to the topic either being evaded completely or to be treated as a taboo within educational spaces (Francis, 2017a). Schools may further prohibit the free expression of sexuality by completely desexualising educational spaces as a means to retain the ideal of learner innocence (Shefer & Ngabaza, 2015). Educational spaces have not adapted to contextual change strived for at democratic level, and often perpetuate heteronormative attitudes inconsistent with the benchmark ideals imbedded in social justice and inequality (Gacoin, 2010). Accordingly, it is needed to examine how teachers and learners communicate within educational spaces and the way their personal identity formation is constructed, as well as how institutional culture influences the process thereof (Francis, 2017b). In response thereto, I aim to reflect on my own practices and growth within the construction of my teaching pedagogy and identity within educational spaces as a step towards the critical need for teacher self-reflection as a core means to better approach multicultural classroom contexts (Gay & Kirkland, 2003; Howard, 2003; Pithouse, Mitchell & Weber, 2009).

The identities of educators are policed within institutional culture (Mills, 2004), placing strain on the messages delivered during teacher-learner interaction. Socially just and inclusive messages become increasingly difficult when understood from the vantage point of educators embodying a sexual orientation different from the normative heterosexuality. Such policing of educator sexuality

has had widespread repercussions in the past, such as educators who have been dismissed or are themselves openly ridiculed for subscribing to an alternative sexual orientation (Collier, Bos & Sandfort, 2015; Macgillivray, 2008), not only by their peers but openly among learners. The policing of educator sexuality leads toward stereotypical expectations placed on teaching behaviour which, for example, favours masculinity among men and thus dictates that males should be masculine role models for the learners (Sargent, 2013). Such expectations have been found to lead to negative health outcomes and high anxiety levels, depression and identity confusion (Giordano, 2017; Howell & Weeks, 2017; Krumm, Checchia, Koesters, Killian & Becker, 2017; Stark et al., 2017). In such cases, the cycle of internalisation of homophobia becomes dominant, further advocating the norm of heterosexuality as the ideal and benchmark behaviour strived for in society (Flowers & Buston, 2001; Gacoin, 2010).

5.2 Rationale of the Study

This paper is the final part of a study comprising of my PhD thesis. The first article, through the use of Grounded theory and First Order Cybernetics, established various boundaries of sexuality education at individual, community and national levels. The subsequent two articles that emerged from the study focussed on the dominant silence surrounding sexuality education and the manner in which teachers and school managers view, approach and engage in sexuality education at such a systemic level. Article 4, in turn, placed the beforementioned within the concepts of space and place, examining how different contexts shape the way sexuality education manifests, specifically looking at geographical places such as urban and rural settings, the socio-political space of different school settings, and the subsequent cultural norms and values that are related to different spaces and places in South Africa.

It became evident that there are various boundaries which limit the space within which sexuality identities emerge, not only for learners but also for educators who are policed to prescribe to heteronormative guidelines of behaviour. As a male teacher who openly identifies as gay, I have experienced the policing of sexuality within educational spaces and the subsequent boundaries and expectations that positioned me and my pedagogy within heteronormative standards. This article speaks to my own experiences as a gay male teacher within the context of the Free State province, aligning current literature and research with my own experiences and barriers faced within educational spaces. The literature, in turn, provided me with the opportunity to reflect on how other teachers address sexuality within their respective contexts, and provided me with a stronger grasp of different approaches to situations and challenges within sexuality education. This method of self-study, according to Austin and Senese (2004), is critical in the formation of teachers to find their own voice and to improve their practices in an effort to become stronger leaders ofchange.

Through the writing of this article, I reflected critically on various aspects of my positioning and role within sexuality education. Some of the core questions which framed my reflection are:

1. How do I feel about being a gay male teacher?
2. Why did it make me feel this way?
3. How can I use my experiences in my teaching career?
4. How can I apply these experiences to my studies?
5. How has this changed the way I think?

5.3 A Cybernetic Perspective for Reflexive Practice

This article is framed through a cybernetic perspective and is accordingly guided through a systemic approach. A cybernetic approach guides the exploration of systems in order to shed light

on how systemic structure is obtained and subsequently maintained (Becvar & Becvar, 2012). While First Order Cybernetics aims to observe systems as a means to identify structural components and boundaries, Second Order Cybernetics guides the study of the researcher's perspective within the system as part thereof as well. As this study critically reflects on my own practice, the understanding of 'how' school systems maintain structural composition becomes of forefront focus (Heylighen & Joslyn, 2001). As such, the co-construction of the context within which I have positioned my own pedagogy will be reflected upon within the frame of research within the area of sexuality education (Reinertsen, 2014). Second Order Cybernetics is further useful in exploring how my role within educational spaces have perturbed the system, and the manner in which such perturbations have contextually allowed for systemic change to occur (Becvar & Becvar, 2012).

Complementing the 'how' dynamics of the system, this paper will also draw on First Order Cybernetics in accordance to providing observations as an observer apart from the system. By extracting myself from the narrative, I will be able to provide an exploration of what systemic parts relate to the overall system as a means to maintain structural integrity (Banathy & Jenlink, 2003). Emerging patterns identified through my observation of the system as an educator and wider research done in the area allow for the exploration of how componential interaction uphold the structure of how sexuality education is maintained (Becvar & Becvar, 2012). First and Second Order Cybernetics will thus allow for the personal and subjective construction of my narrative and experiences, while simultaneously upholding a form of objectivity through analysing literature based on educational spaces and sexuality education within South Africa.

The main method used within this paper will be a qualitative perspective of sexuality education from the vantage point of my experiences during the teaching thereof in the Free State province.

However, in order to ensure a form of validity, the discussion will also be informed by incorporating literature based on sexuality education, while being guided by the beforementioned questions as a frame for critical reflection. While reflection on my part will form the main narrative of the discussion, data will also be drawn from open e-mail correspondence between me and other stakeholders (specifically a school principal) based on sexuality education. To ensure that ethical guidelines are adhered to, no mention of the schools will be done that may implicate the privacy or identity of the institutions or stakeholders to whom correspondence was addressed or reflection is based upon.

5.4 My Role Within Education Related to my Sexuality and Teacher Persona

In Article 1, I drew extensively on the need to position sexuality education within a systemic perspective. As such, I had to continuously consider how my pedagogy aligns with the broader system of not only the school but also the parents and community levels. This, however, developed through my experiences during my 10 years of teaching, whereas I preliminarily viewed myself as teacher and the school principal as the core components to managing the learners. It is within this broader system that schools are contextually based, embodying an ethos which defines them in terms of space, place and culture (as discussed through Article 4). Francis (2017a) as well as Helleve et al. (2011) refer to this macro-level positioning of schools while still needing to uphold the policy and constitutional values characteristic of South African society within local communities.

Through my teaching career I had to continuously change my pedagogical approach to be tailored to the school culture I was working in. By this I argue that my teaching methods, attitudes and

assumptions differed not just from class to class, but had to be adapted ongoingly according to the school I taught at. I thus had to keep in mind that ‘one size does not fit all’ and had to tailor my approach to suit the broader system I was positioned within. One school I taught at, for example, embodied a very strong normative approach to privileging masculinity and dominance. Initially, it was a challenge to maintain order and a conducive learning environment with the male learners as my method of teaching at the time was based on establishing open empathetic support and conversational-based facilitation. At this point I had not disclosed my sexual orientation to any colleagues at school out of fear, although some parents had complaints and concerns that I might be gay. I was initially perceived as effeminate and submissive by the learners and staff. After establishing rapport with the more ‘dominant’ and ‘masculine’ teachers (as perceived by the learners and which the learners respected), and adopting a more authoritative stance in the classroom, rapport was strongly established, and the learning environment became conducive to the needs of the learners. As their openness toward me increased and their marks improved, the parents soon disregarded my personal persona and perceived me as a strong teacher within the school. I contrast this with my approach when teaching at an all-girls school, where authority within the broader system was already established through strong policy and school ethos. However, within the classroom, rapport was better established through my perceived femininity and open sympathetic persona among the learners.

In all the teaching positions I held I was appointed to teach English. Only at the commencement of my PhD was I given the opportunity to teach Life Orientation (LO). However, as my responsibility was to teach English, I had to ask myself: “Do I have a responsibility to also educate learners about sexuality?”, specifically as this was my primary educational specialisation and also aligned with the national benchmark standards of advocating social justice and equality across all subjects. I

also reflected on my learning and advocating that it is not solely the Life Orientation teacher's responsibility to teach sexuality, but that all teachers play an important role therein, be it verbally or non-verbally (Chaka, 2017). I also had to be aware of my intent toward incorporating sexuality education within my teachings, as I had not initially intended for my own sexuality to become the core of my pedagogy to educate learners about alternative sexualities. Questioning this now: What was and is my intent of incorporating sexuality education into my teachings? I can reflect on my growth as an educator. As a new teacher, my reasoning was to reflect my own beliefs and need for expressing my identity and sexual orientation. At present, 10 years later, the ideals of social justice and equality across all components of sexuality become core, with less emphasis merely on sexual orientation.

It is important at this juncture to note how my own values have influenced my pedagogy, as such a reflection is central to the manner in which I approached my teaching practice as a whole as well as my research and how I subsequently report thereon (Wood, 2014). During my own schooling years, I was not educated about sexuality education, and this led to my believing that my own sexuality was a taboo, a prevalent problem, as pointed out by Morrell (2003), which still remains problematic to this day (Mayeza, 2017; cf. Article 2 of this thesis related to silence and sexuality in schools). My approach to my teachings and research, in turn, was strongly motivated by this absence of sexuality education in my own youth. Although I did not initially set out to teach sexuality education or Life Orientation (my primary goal was to focus on Clinical Psychology), my exploration of gender and sexual issues at broader levels in schools refocussed my attention and interests to classroom practices and the role I can adopt to influence adolescents at a larger scale, a strong motivator for my shift in focus into furthering my studies in education itself.

I further aligned my values of equality and respect for diversity according to the principles set out by the Curriculum and Assessment Policy Statements (CAPS) (Department of Basic Education, 2011), specifically the principles of human rights, inclusivity and social justice, as well as active and critical learning. My practice thus evolved through my years of experience, where I initially taught the primary outcomes related to the content of English (uncritical to the beforementioned principles and silent about wider issues as discussed in Article 2), toward a more critical approach embodying the values of the broader societal needs of the learners. What follows is a reflective study of my growth as a teacher and how my experience has adjusted my pedagogy to include a more active approach to my own teachings.

5.5 Reflecting on My Practice

In an effort to engage my practice with critical and ongoing learning, I frequently reflect on my own behaviour and values as they manifest within the classroom. This has been found to be critical to adapting to social justice and equity issues in the classroom (Howard, 2003), developing critical consciousness toward managing multicultural challenges (Gay & Kirkland, 2003), and challenging dominant discourses of hegemony and sexual inequalities (Sanjakdar et al., 2015). Not only did I have to become better aquinted with my own privilege of being a white male teacher often teaching in more rural setting, but I also had to ongoingly inqure and learn about the traditions and values underscored by my learners, colleagues and the school climates as well. My own pedagogy as a gay male teacher was initially reflected on as being irrelevant to classroom practice directly after teacher training. As my main responsibility as of my first teaching position was to teach English, I saw the expression of my sexuality as a taboo and was told by peers, similar to the experiences of McCarthy (2003), that to remain in my position as a teacher I should not disclose my sexual

orientation. This prevailing silence prevails in school, where non-normative sexualities are often frowned upon and ignored, restricting educators of non-normative sexualities to engage critically with their environment (Irwin, 2002; Russ, Simonds & Hunt, 2002). This silence on my part was largely due to identity confusion and anxiety regarding my own sexuality, as well as the Christian ethos with which the school was characterised and the strong religious negation of any non-normative sexuality, which often leads to further victimisation and marginalisation of minority groups (Newman, Fantus, Woodford & Rwigema, 2017).

It was only at a later stage that I reflected on the manner in which I desexualised myself and my environment, removing myself as a 'gay male' from all interactions and social media, not due to being silenced by the school or community but due to my own fears and need for a masculine persona at the time. However, learners who struggled emotionally with certain topics, especially male learners who experienced strict religious upbringings, often approached me and asked various questions which at that time were of taboo nature for me to discuss openly. Of interest is that these questions were asked at the school referred to earlier where my feminine persona was questioned, yet after two years of rapport the learners found it easier to confide in me and adapt their own masculinity to express themselves in ways they would normally have considered feminine. Questions and comments I recall are:

1. Are 'wet dreams' normal?
2. Is it sinful to masturbate?
3. I feel I have sinned after experiencing a 'wet dream'.
4. How do two people of the same sex initiate sexual intercourse?
5. Will gay people be condemned by God?

While my sexuality was not public knowledge or openly breached at the time, I evaded such topics due to the implications of drawing my own sexuality into the classroom or in conversations with learners due to the repercussions which could follow not only from parents but from school management as well. This form of avoidance is drawn on by Vavrus (2009), as adults often avoid discussing such sensitive issues. Vavrus (2009: p. 383) goes on to postulate that:

> … as a domain of identity formation, sexuality is importantly unique [and] is not a frequent topic of conversation between adolescents and their parents, peers, or school counsellors. As a society, we do not go out of our way to provide adolescents with opportunities to explore theirsexuality.

As such, were I now to answer these questions at that stage of being a new teacher, I would have drawn reactively from personal background information instead of actively engaging with the topics, considering the wider suprasystem of the school and community. Reflecting on this now, I question my uncritical approach to my teachings on the following levels:

1. How did my own negation from accepting myself impact my pedagogy and my approach to the classroom environment?
2. Had I developed the critical consciousness I embody now, how would I have approached the context and accepted accountability regarding sexuality education in such scenarios?
3. What initiated the change from a passive role model to a critical agent actively striving for contextual reform at present?

Through the subsequent years, I strived to engage in critical reflection through my studies and work, and, in turn, became aware of how my internalised fear and heteronormative expectations were contradictory to my classroom practice. While I advocated open sexuality expression within society outside of the school, I walked into a closet each day once I entered the classroom. This is a common experience on part of homosexual teachers, as one does not have to come out as white,

being a male, or being heterosexual, thus making a non-normative sexuality a less salient part of teacher identity to engage learners with (Skelton, 1997).

5.6 Dealing with Conflict: Establishing my Rights While Respecting that of Others

In this section, I draw on email correspondence in which I engaged a school's principal after an incident occurred at school in which the stereotypical conforming notions of what male and female should be became evident through choices of clothing and colour. I was called to the office on account of a complaint lodged against me for wearing a pink shirt to school the previous day. After careful consideration of the complaint and the formality of the situation in requesting that I remove my sexuality from the teaching-learning environment, I initiated the following correspondence, the following being an extract reflecting on various aspects of my experiences at the school (researcher, personal communication):

> My concern is regarding being called in about a complaint from a parent. My biggest concern however lies with the complaint made that I openly expressed 'yes' when a learner asked me whether I am gay, and that I openly also said 'pink' when asked what my favorite color was. I was asked to remove myself from all networks such as Instagram, WhatsApp Groups etc. yet other teachers are active thereon? I was also told that my teaching and my sexuality are two separate entities, that I am there to teach about 'pronouns', and the rest is my own private life. However, how do I teach a curriculum that advocates the need for social justice and equality without breaching such topics based on gender and the influence thereof within language discourse? How do I approach a learner, like today for example, asking why it is always 'she' who knits, and why can't 'he' knit? How can a video to the school about accepting same sex marriage regarding social justice be shown, yet I can't educate them practically on the topic? I approached another teacher about this concern to express it privately, however was told I am 'different' and my sexuality has nothing to do with the children. However, how can this teacher and various teachers have pictures of them and their husbands and wives be on their desks, but I fear placing such a picture on my desk due to the repercussions thereof? Kindly assist in

> how we can approach this in order for all teachers to be treated equally regarding this topic, while still embodying not just the constitution, but also the curriculum as a whole.

Within this context, I was asked to abide largely by the cultural traditions of the school. The school I was teaching at at the time had not yet had an openly gay teacher, and the wider community of the school thus prohibited the expression of stereotypical behaviour akin to homosexual males (for example, not being allowed to wear a pink shirt). This is aligned with the work of Helleve et al. (2011) and Francis (2012) in that teachers are often faced with the difficulty of navigating teachings which reflect personal values while maintaining policy expectations as well as community norms and expectations.

The positioning of a gay male teacher in the school initially caused a cultural shock which led to positive feedback within the system. According to Becvar and Becvar (2012), positive feedback from a cybernetic perspective initiates systemic change in order to maintain structural integrity. My presence within the system caused the school to adapt and allow for me to co-exist within the system, while upholding the overall structure of the system itself. However, instead of finding myself in a system where I could not express myself, I adjusted and sensitised my colleagues, and over a period of a few months was able to exhibit more personal traits without trouble (specifically clothing style and speaking more openly about my personal life and background among the staff). While this was not always met with complete acceptance, the overall tolerance of my colleagues and school parents began to show, and the small perturbations caused minor positive feedback processes to change the overall system to allow for my persona to exist within more open boundaries.

I now reflect on my initial reaction (as impulsive and emotional) to directly respond to the complaint with the principal, as this is merely one component of the system encompassing my

colleagues, learners and parents. While enforcing my rights constitutionally, I now better acknowledge that equality and non-discriminatory practices cannot be enforced overnight, and that positive feedback within a system influences all components over a period of time, especially where tradition and culture have strongly been established.

The sensitisation of the role players within the school reflects in my work results, as can be seen in my Master's study (cf. Swanepoel, Beyers, & De Wet, 2017). It was found that the frustration levels experienced by participants when introduced to alternative sexualities are significantly higher as opposed to being continuously exposed thereto, leading to a desensitisation of content and lower frustration levels (Swanepoel, Beyers, & De Wet, 2017). In my own life, this became evident over time as my colleagues would more openly and with more ease engage in discussions about my background and relationships.

While I would not place photos on my desk of myself and my significant other, I was able to, at a later stage, be more open on social media to reflect my personal life more clearly. Thus, the system's boundaries extended and became more open to my presence therein, as small, positive feedback processes adjusted systemic structure to more widely encompass me as a part thereof. I further learned that there is a distinct boundary between my sexuality in the classroom and my personal life, and that there are certain intersections where these two components can be used for teaching, while still disengaging from becoming too personal.

My classroom practice, in turn, opened up for more interaction to take place within these boundaries. I reflect on the following narrative from the beforementioned email, which exhibit my classroom teachings at the time (researcher, personal communication):

> How do I approach a learner, like today for example, asking why it is always 'she' who knits, and why can't 'he' knit?

Classroom practice can often neglect the cross-curricular opportunities to engage critically on issues not always within the scope of the subject currently taught. However, by actively engaging therewith educators can communicate sexuality education in line with social justice through engaging with how the content fits into the broader scope and aims of the Curriculum and Assessment Policy Statements of social justice and inclusivity. The question in the narrative above reiterates through my use of gender-stereotypical nouns within the teaching of verb conjugations. At the time of setting up the worksheet, I uncritically approached the sentence as being feminine in nature. My own reactive knowledge at the time aligned ‘knitting’ with ‘feminine’. The learner’s active engagement with it, however, has me question my own values, and has subsequently led to me engaging more actively with the manner in which I set up worksheets and test papers, reflecting a broader scope of gender differences within the content. This aligns with the work of Bhana (2012) in that teachers are strong catalysts in developing learner capacities to critically question and engage in an effort to disrupt social power relations and inequalities. Without reflecting on the beforementioned, my perceptions of heteronormativity would have prevailed, with my positioning as the knower amplifying heteronormative stereotypes and inhibiting learner agency (Shefer & Macleod, 2015).

Stromquist (2007) draws on the way discourse has become central to the manner in which individuals shape actions within society. It is further elaborated on how teachers no longer use masculine language in the teaching context as a means to promote a non-sexist environment. Robinson (2014) reflects on the implicit nature of education and teaching. There is an emphasis on how teachers and learners are constantly interacting, whether through formal teachings, or merely

through implicit reading of texts. Learners often notice the unspoken meaning during learner-teacher interaction, and, as such, teachers should be conscious of the messages that are transferred at such levels, not solely through verbal interaction. In such a sense, by adjusting my own practice to not exhibit gender stereotypes, I positioned my pedagogy within a less sexist practice, and in turn reflected more open behaviour akin to sexuality and gender diversity. In that sense, my pedagogy has changed accordingly to not explicitly challenge the notions of heteronormative culture, but instead to deconstruct the dominant culture of heterosexual attitudes within my own teachings (Vavrus, 2009).

Consequently, this article set out to portray my personal reflection about my pedagogical approach and how I have grown within the area of social justice and sexuality education. Through the reflection of questions this article is guided into my various experiences in the Free State province. Through critical reflection and ongoing processing of experiences, I have reflected on my methods of how to adapt to a system while upholding my personal self, thus finding alignment with my role as a teacher but also that of an activist for social justice. Furthermore, I have also reflected on my role in conflict management, and how my approach to conflict has changed to uphold not only my own integrity, but also that of the system as a whole.

5.7 Conclusion

As a gay male teacher in the Free State province, I have been faced with numerous challenges of bias and prejudice, which inhibited my teachings of social justice and transformation. However, to promote the values of the beforementioned principles, I continuously strived to be positioned in the school systems I was employed at, where I would uphold the values and ethos of the school

while still affirming the broader constitutional values of inclusivity and social transformation. My pedagogical approach has thus shifted and transformed from a reactive or silenced approach to teachings, to an active approach which embodies critical reflection and a critical approach toward the task I assign my learners and the way we approach discussions within the classroom.

This article subsequently drew on my most prominent experiences from a cybernetic perspective. At a First Order Cybernetic level, the article speaks to literature which reflects the difficulty of approaching sexuality education within the classroom context. This framework further allowed me to investigate my own role within sexuality education and the manner in which my positioning within the system caused positive feedback and change. It responds to how my reflective practice has allowed me to find methods of adapting to different contexts, and further to adjust my way of approaching challenges which arise not only within the classroom but also the wider school ecology.

The primary discussion in this sense was based on how schools can adjust to changes within the system as a means to allow new information into the system. At a Second Order Cybernetic level, I was able to explore my own role within the broader system, and also draw on how my presence within the different schools' systems has influenced my own pedagogy. Through this, I was able to explore my own values, prejudices and personal growth through the duration of my teaching career, and how I continuously shape and adjust my pedagogical approach to be aligned with not only the macro-level policy and constitutional benchmarks but also that of the school context within which I reside.

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Concluding Remarks and Final Recommendations

Sexuality education (SE) has become cornerstone in curbing risks associated with unsafe sexual practices, decreasing the spread of HIV and AIDS, and lowering incidences of teenage pregnancy. Life Orientation (LO) has thus become a core component in which sexuality education is taught within schools. While there have been reports of the successful manner in which such a programme is realised in practice, the overall implementation thereof has not been successful to instil societal change and inclusivity throughout Southern Africa.

Various barriers to the successful implementation of sexuality education have been identified. As discussed through Articles 1 to 5 of this thesis, there are various geographical boundaries that inhibit and restrict the teaching of sexuality within schools. Research has been increasingly focussed on how sexuality education is impeded within schools. However, most of the research conducted focus on one component of the system within which sexuality education manifests, and, as such, calls for the need for a systemic investigation as to how schools implement programmes and interventions.

This thesis responds to the need for a systemic investigation of South African sexuality education. This becomes especially relevant when sexuality education is viewed through the context in which schools are located, specifically related to space and place. Post-apartheid South Africa strives toward the ideals of empowering previously disadvantaged groups and inclusivity, and this reflects through the overarching constitutional benchmarks and Curriculum and Assessment Policy Statements (CAPS). However, while these overarching standards apply to South African society as a whole, schools still face difficulties in realising these ideals at practical level.

The five articles which this thesis is comprised of investigated, through a systemic cybernetic manner, the way in which schools contextually manifest sexuality education. At the core of the findings is the concept of 'silence', which is subsequently reported on in Article 2 as being central to maintaining systems from adjusting educational practices to abide by the national benchmarks set forth. This silence is often perpetuated by teachers who are uncomfortable with discussing sexuality in the classroom, or educators who feel it is not their responsibility to teach it to the learners in the first place. There is furthermore a strong link to the community and broader suprasystem within which schools are situated which mediate sexuality teachings. Articles 1, 3 and 4 specifically drew on this in reflecting together that each school resides in a cultural community which holds certain norms and values which become core to how sexuality education is implemented.

Urban and rural settings are of valuable note, as discussed through the beforementioned research articles. It was found that schools within rural settings are often more closed and less receptive to new information, causing the school systems to become rooted in stagnant cultural values and practices. Place and space at provincial level are also noteworthy, as participants responded to how schools in different provinces differed in how open or closed boundaries were. Specifically, it was found, through the narratives from teachers at schools in the Free State province, that these schools allow for less space within which sexuality education is taught, and subsequently participants experience the school systems as more closed as opposed to other places in South Africa.

The final article of this dissertation allowed me, the researcher, through the use of Second Order Cybernetics, to explore my own boundaries and practices related to sexuality education. My experiences are aligned with those of the participants in that school systems within the Free State province are more closed to new information, having been firmly rooted in traditional values and

school cultures. However, through my systematic involvement and probing of the silent culture, I was able to instil change through the system in order to critically develop and expand on my own teaching practice.

It has become evident that schools can either be receptive of new information as a means to align to external societal benchmarks or be closed to it and stagnate in values and climate. I believe that positive feedback in the form of breaking the silence is a valuable way of opening systemic boundaries to adapt to more inclusive and socially just teachings. However, this must be done in a critical manner, and the community must be involved as far as possible in the process in order to have the system adapt toward a more practically aligned constitutional standard. Breaking the silence to instil systemic change, however, is a process that must be done in order to influence all stakeholders, and, as such, is not a quick fix to guarantee systemic change for the better. As such, more studies are needed as a means to investigate how this process can be implemented and how it will influence systemic change and sexuality education over the course of time.

Lastly, there is an urgent need for educators and educator induction to focus on self-reflective practices. Teachers within South Africa are faced with cultural pluralities within the classroom, needing to not only continuously adapt teaching methods but furthermore be sensitive to their own values, beliefs and biases. This becomes apparent in how teacher identities can influence classroom practices, and, as such, a critical awareness of the self must be continuously developed and understood in order to reflect on critical issues such as culture and sexuality within the classroom. This is not merely the role of the Life Orientation teacher; it is a role that needs to be adopted by all educators, who need to collaborate in order to better manage multicultural challenges within the classroom at cross-disciplinary level.

Appendix A: Interview Schedules

Interview Schedules (Principal)

Eben Swanepoel

Supervisor: Dr. Christa Beyers

The following questions will be used to initiate respondent narratives. Due to the semi-structured nature of questions, the questions stipulated here are merely focussed on answering the central questions of the study. In each case, sub-questions are provided to delve deeper into the main question's content if the teacher needs to elaborate. The aim of these questions are to arrive at new theoretical knowledge through induction, and it is thus crucial for the participant to respond as freely as possible.

Interview Schedule 1

1. *Have you experienced any difficulties regarding cultural difference, specifically homophobia, within the school?*

2. *What is the schools role during the teaching of sexuality to learners?*

3. *Are there any challenges which are experienced during the teaching of sexuality on part of Life Orientation teachers from the school?*

4. *How is sexuality education made relevant to the cultural diversity within the school?*

5. *To what extent does the principal regulate the teaching of sexuality education within the school?*

6. *How is sexuality education approached within the school?*

7. *Taking into account school culture and ethos, how important is sexuality education within the guidelines set within the school?*

Interview Schedules (Teachers)

Eben Swanepoel

Supervisor: Dr. Christa Beyers

The following questions will be used to initiate respondent narratives. Due to the semi-structured nature of questions, the questions stipulated here are merely focussed on answering the central questions of the study. In each case, sub-questions are provided to delve deeper into the main question's content if the teacher needs to elaborate. The aim of these questions are to arrive at new theoretical knowledge through induction, and it is thus crucial for the participant to respond as freely as possible.

Interview Schedule 1

1. *Drawing from your current understanding, how would you define gender, sexuality and sexual orientation?*
2. *As a teacher of Life Orientation, what has your experience been regarding the teaching of sexual orientation, specifically homosexuality, within the classroom?*
3. *Have you experienced any difficulties regarding cultural difference, specifically homophobia, during the process off teaching sexuality?*
4. *When approaching the teaching of sexuality, how confident are you that you are providing the learners with unbiased and relevant information?*
5. *When a topic surrounding homosexuality is to be taught, what sources of information do you consult to gain as much information as possible?*
6. *How do you approach the teaching of sex and sexuality within the classroom?*
7. *What challenges do you experiences during the teaching of sexuality within the classroom?*
8. *Have you had any challenges from parents or the school during the teaching of sexuality?*
9. *How do you make sexuality education relevant to cultural diversity within your classroom?*
10. *What is the role of the school within the teaching of sexuality?*

Interview Schedules (Parents)

Eben Swanepoel

Supervisor: Dr. Christa Beyers

The following questions will be used to initiate respondent narratives. Due to the semi-structured nature of questions, the questions stipulated here are merely focussed on answering the central questions of the study. In each case, sub-questions are provided to delve deeper into the main question's content if the teacher needs to elaborate. The aim of these questions are to arrive at new theoretical knowledge through induction, and it is thus crucial for the participant to respond as freely as possible.

Interview Schedule 1

1. *What is the role of the school within the teaching of sexuality?*
2. *What are your feelings toward the school teaching about sexuality in schools?*
3. *Is it possible for the school to accommodate sexuality content which applies to what you teach your child at home?*
4. *Is the sexuality content taught in school relevant to the need of your child?*
5. *What can be done to improve sexuality education in the school your child attends?*
6. *Have you experienced any challenges with the sexuality based content taught at school?*
7. *What can the school do to improve the teaching of sexuality education?*

Appendix B: Ethical Clearance

UFS-UV

Faculty of Education

05-Dec-2016

Dear Mr Eben Swanepoel

Ethics Clearance: A first and second order cybernetic analysis of barriers facing sexuality education in secondary schools

Principal Investigator: **Mr Eben Swanepoel**

Department: **School of Education Studies (Bloemfontein Campus)**

APPLICATION APPROVED

With reference to you application for ethical clearance with the Faculty of Education, I am pleased to inform you on behalf of the Ethics Board of the faculty that you have been granted ethical clearance for your research.

Your ethical clearance number, to be used in all correspondence is: **UFS-HSD2016/1385**

This ethical clearance number is valid for research conducted for one year from issuance. Should you require more time to complete this research, please apply for an extension.

We request that any changes that may take place during the course of your research project be submitted to the ethics office to ensure we are kept up to date with your progress and any ethical implications that may arise.

Thank you for submitting this proposal for ethical clearance and we wish you every success with your research.

Yours faithfully

Dr. Juliet Ramohai

Chairperson: Ethics Committee

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Appendix C: Editor's Letter

Rephrase it!
Academic Text Editing

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6 February 2018

Student: **Eben Haeser Swanepoel**
Student no.: **2007008276**

I declare that I edited the Doctoral thesis titled, *A First and Second Order Cybernetic Analysis of Barriers Facing Sexuality Education in Secondary Schools*

During the editing process I looked for and corrected spelling, grammar, punctuation, sentence and paragraph errors. I checked for consistency in style, and made suggestions where changes could be made. I also double-checked the references in-text and in the list of references to make sure that they correspond with the referencing style used by the student. Finally, I formatted the document to present neatly.

Yours sincerely

Johannes Pieter Odendaal