AN ANALYSIS OF POLICIES GUIDING THE DESIGN AND DELIVERY OF AN INCLUSIVE CURRICULUM AT AN OPEN DISTANCE E-LEARNING UNIVERSITY

By

Thomas Odera Ongolo

Submitted in accordance with the requirements for the degree of

DOCTOR OF EDUCATION

in the subject

CURRICULUM STUDIES

at the

University of South Africa

Promoter: Prof M.C. Maphalala

Co-promoter: Prof S.A. Ngubane-Mokiwa

July 2018

Table of Contents

LIST OF FIGURES

LIST OF TABLES

ACKNOWLEDGEMENTS

DECLARATION

Student number: <u>55567355</u>

I declare that ***An analysis of policies guiding the design and delivery of an Inclusive Curriculum at an Open Distance e-Learning university*** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and materials have not been submitted to any University.

19 July 2018

_____
Signature

_____
Date

ABSTRACT

This qualitative study used phenomenological inquiry method to explore key policies and learning delivery strategies that guide the ODeL academics in designing and delivering inclusive curriculum. The study looked specifically at UNISA academic staff, relevant UNISA support departments, and officials responsible for ODeL development in their provision of inclusive learning at UNISA. The three conceptual frameworks of Transactional Distance, Universal Design for Learning and Social Choice Theories provided the lens which guided the study. The study used Semi-structured interviews and document analysis in capturing details about policy influencing design and delivery of ODeL and to obtain faculty and staff perspectives. The major finding of this study is that both academics and staff were not familiar with disability, impairment, or assistive technology issues. They lacked expertise in inclusive design and there was no consequences for posting none inclusive online course materials and modules. Policies are insubstantial, cosmetic and there are policy pretences, while the key departments of ARCSWiD was weak in driving relationship and communications with departments in steering curriculum inclusion. Based on these findings, recommendations for future research include: academics policy awareness be conducted to enable them be familiar with disability. There should be rejuvenation of ARCSWiD, the disability unit by strengthening the unit to be responsive to disability related issues for efficiency, effectiveness and wider outreach. The University, Teaching and Learning Development Department within UNISA should prioritize developing systems for noncompliant management for academics who do not design inclusive curriculum and hold continuous training on how to use inclusive and universal design approaches. The UNISA management should create change in UNISA which is tailored to heighten efficient implementation of integrated education policies, stakeholder's dialogue and interaction.

DEFINITION OF CONCEPTS

The concepts used in the study are defined below. These definitions serve to explain the concepts' meaning within the context of this investigation.

E-learning:

The concept of E-learning covers a number of applications, learning methods and processes (Rossi, 2009). E-learning has been conceptualised in various ways, which has resulted in the overlapping of the definitions of computer learning, online learning, technology enhanced learning and distance learning (Garrison & Anderson, 2003; Moore, Dickson-Deane & Galyen, 2011; Sangrà; Vlachopoulos & Cabrera, 2012). Some scholars define e-learning as the delivery of content using all electronic media, including the internet, intranets, extranets, satellite broadcasts, audio/video tapes, interactive TV and CD-ROMs (Urdan & Weggen, 2000). Others define e-learning as the acquisition and use of knowledge distributed and facilitated by electronic means (Meyen et al., 2002). In addition, certain scholars define e-learning as an innovative approach for delivering well-designed, learner-centred, interactive and facilitated learning environments to anyone, anyplace, anytime by utilising the attributes and resources of various digital technologies along with other forms of learning materials suited for open, flexible, and distributed learning environments (Khan, 2005). The present study defines e-learning as a way of teaching and learning using digital technologies to facilitate students' learning.

Inclusive design learning:

Inclusive design learning is a system developed to celebrate students' diversity and recognises that learning takes place in different social contexts, including schools (Department of Education, 2001). Inclusive design learning is also defined as designing for all, regardless of race, ethnicity, disability, gender, sexual orientation, language, socio-economic status and any other aspect of an individual's identity that might be perceived as different (Polat, 2011).

Curriculum delivery

There are many ways in which a curriculum enables learners to achieve their learning goals; these include teaching, learning support, advice and guidance, coaching and

mentorship, feedback and assessment, personal development planning, skills development and practice, and access to resources. Curriculum delivery should be both accessible and inclusive.

Curriculum development

Richter (2011) conceptualises curriculum development as a process where educators develop a formal curriculum. The present study conceptualised curriculum development as the planned, purposeful and systematic process to implement improvements in the education system which is guided by students' needs. A curriculum must be designed to address students' questions, concerns, and problems that may be unique to the virtual environment.

Curriculum design

This may be described as planning an intellectual journey for students through a series of experiences that will result in learning. Curriculum design includes aims, intended learning outcomes, syllabi and teaching methods. It also involves ensuring that the curriculum is accessible and inclusive, so that students with disabilities and those from different backgrounds can participate, with an equal chance of success.

Disability

A complex system of restrictions imposed on people with physical, sensory and intellectual impairments resulting in environmental barriers, denial of their rights and equal participation and opportunities (Strnadova, Hájková & Květoňová, 2015).

Open Distance E-learning [ODeL]:

ODeL is the acronym for learning that is fully online, supported by online tutorials, and at a distance. This work uses the concept of Open Distance E-Learning (ODL) synonymously with terms such as distance education or open learning (Sharma, 2007; Mohakud, Mohapatra & Behera, 2012) therefore, Distance education denotes the type of education where teachers and students are separated by location and time (Mohakud et al*.,* 2012). Open learning refers to the introduction of new ways of accessing education to individuals who were previously disadvantaged (Koul, 2000; Mohakud et al*.,* 2012). It is an approach

to learning that offers students flexibility and choice over what, when, where, at what pace and how they learn (UNISA, 2015). Moreover, ODL is a supra dimensional concept which at bridges geographical, social, economic, time educational and communication distance between institution, academics, student, courseware and their peers (UNISA, 2015). It provides flexibility, focuses on student-centredness by supporting students and constructing learning programmes with the expectation that students are able to succeed (UNISA, 2015). This form of education enhances learning at institutions, with the application of support systems to students (Dzakiria & Christopher, 2010; Pityana, 2004).

ODL

ODL refers to flexible learning through mediated information and instruction, encompassing technological, face-to-face and other forms of learning, by bridging time, geographical, economic, social, educational and communication boundaries.

LIST OF ACRONYMS

RCSWiD: UNISA Advocacy and Resource Centre for Students with Disabilities

UCLD: UNISA Department of Curriculum and Learning Development

E-learning: the delivery of content using all electronic media, including the internet, intranets, extranets, satellite broadcasts, audio/video tapes, interactive TV and CD-ROMs

ICT: Information and communication technology

ODeL: Learning that is fully online, supported by online tutorials, and at a distance.

SWD: Students with disabilities

UDL: Universal design for learning

UNCRPD: United nation convention on the rights of persons with disabilities

UNISA: University of South Africa

CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION TO THE CHAPTER

This chapter gives the background, purpose and description of the research problem. The rationale, significance and philosophical argument of the study are provided. A description of the research design and methodologies applied to the population from which the sample was chosen and data analysis techniques used.

1.2 BACKGROUND TO THE STUDY

Before 1994 in South Africa, the education system adopted the policy of separated systems of education which was delineated by racial categories and which perpetuated segregation, inequality, fragmentation and lack of provision for the majority. This practice was considered discriminatory because the services and funding of the different education departments were not the same (Isabirye, 2014). Since then, South Africa has evolved into a relatively advanced country, with legislation and policies that promote the equality of groups facing discrimination, such as people with disabilities. The educational policies have enabled students with disabilities to attain the highest educational levels, with the University of South Africa UNISA) emerging as the largest open and distance university in Africa and as the one with the highest number of students with disabilities (Pityana, 2009).

Open and distance universities are increasingly using web pages and Internet resources for essential learning materials and owing to the growing number of students with disabilities studying at these institutions, accessibility issues are turning out to be of paramount importance (Donohue, 2014). Numerous studies report that a large number of students with disabilities have experience of inaccessible web materials and learning barriers in an ODeL system, which creates an educational divide and hinders their successful learning (Roberts, 2011; McEwan and Weerts 2007; Ngubane-Mokiwa, 2013; Kane, Shulman, Shockley & Ladner, 2007).

At open and distance universities, the open distance learning (ODL) system used an author-editor model as the main method of course development based on print media. According to this model, a subject matter expert wrote the draft of a study guide and an editor polished it in readiness for production. The lecturers followed a standard ODL curriculum with a study guide, where teaching was done through correspondence, supported by virtual classrooms and using inflexible curricula and assessments (Deppler, 2012). The model has since evolved to the point that an academic provides the content, which a web designer authors for placement on a server (Deppler, 2012).The effects of the change from an ODL to an ODeL system have been far-reaching, and in the case of the latter, the lecturer is now expected to be knowledgeable about the alternative methods of designing coursework, disability access issues, and the digital divide as well as how to accommodate students with disabilities **(**Badza & Chakuchichi, 2009; Davis *et al.*, 2007). The ODeL lecturer should be able to identify the problems that students with disabilities experience and to provide support up to a certain level. Lecturers are encouraged to be diverse planners, facilitators, and assessors, as well as creative inventors, in order to overcome barriers to learning and create a positive learning environment for all learners (Davis *et al.*, 2007).

However, some lecturers experience serious challenges in the ODeL teaching of students with disabilities, with the most significant barriers to inclusivity being the lack of an inclusive mind-set, lack of knowledge about pedagogy, high teaching workloads and a lack of time for instructional development (Moriarty, 2007). Other factors include web designers having little or no accessibility experience and a lack of information regarding the best ways to quickly and easily identify accessibility problems (Roberts *et al.*, 2011).

In this context, Disability is viewed through the social model. It is the complex system of restrictions imposed on people with physical, sensory and intellectual impairments resulting in environmental barriers, denial of their rights and equal participation and opportunities. The study does not use the students' sensory, physical, intellectual or mental condition as a lens to identify disability, but takes a broader perspective and refers to the barriers and disadvantage imposed on all students with disabilities by the learning structure, environment and academic society. It takes a progressive view of better understanding of disability by incorporating various and transecting factors (e.g.

economic, social, cultural barriers and political) that place restrictions in the way of full inclusion and the success of students with disabilities in higher education (Strnadova, Hájková & Květoňová, 2015).

As described above, an inadequate knowledge of access issues, presentation of core learning content, in-depth skills training for lecturers and lack of support services, contributes significantly to hindering lecturers from delivering inclusive quality education to students with disabilities in an ODeL environment.

Therefore, there is a need to examine the structure of curriculum design and delivery in the ODeL system for students with disabilities. Furthermore, it is important to identify the challenges that lecturers face, and to explore the role of different stakeholders in support of lecturers and students, as well as to identify delivery strategies to support students with disabilities.

1.3 RATIONALE OF THE STUDY

The researcher's interest in conducting this study started when he was undertaking a short programme at the University of South Africa (UNISA). During his interaction with the course content, his lecturers and the student support services, he realised that serious barriers to learning were being experienced by the above mentioned stakeholders as well as by fellow students. The lecturers had difficulty identifying and supporting students with disabilities in the ODeL system. On the other hand, students with disabilities had difficulty coping with the pace and methods used by lecturers for teaching and assessments in the ODeL system. Rohleder, P., Bozalek, V., Carolissen, R., Leibowitz, B. & Swartz, L. (2008) support the above view when they note that learning difficulties do not originate simply from the deficit within the learner, but also from within the system. This indicates that the problems that students encounter in the learning environment may also be caused by the system, which is not able to respond to the needs of specific students.

Similarly, scholarly reasons prompted the researcher to interrogate the relationship between policy and exclusion - the will to include versus the lack of implementation strategies. Bohman (2010) posits that students with disabilities should refrain from accepting the educational services that they receive as they are, without critically evaluating them. They also need to actively participate in making the system more

student-centred, thereby ensuring that they achieve their learning goals.

Some of the researcher's attitudes and responses to learning were shaped by policies and practices which were oppressive and exclusionary, particularly those that labelled and reminded him of his status as a disabled student. He was therefore encouraged to question the status quo. It can be posited that, these attitudes are not detrimental until students with disabilities start accepting them and their "social status as natural, necessary, or inevitable." If the student tolerate and accept this attitude, they will be sloppy submit substandard, not adhere to deadlines work and may take long to complete their degrees.

Finally, significant empirical research has focused on disability support services (Isabirye & Dlodlo, 2014; Phillips, Terras, Swinney & Schneweis, 2012), and barriers which students with disability encounter in ODeL (Bergey, Deacon & Parrila, 2017; Ngubane-Mokiwa, 2013; Rochette & Loiselle, 2012). However, gaps exist in experiences of academics and their interaction with support services for an inclusive curriculum; this warrants an investigation. This study therefore sought to explore the key policies that guide the design and delivery of inclusive learning in an ODeL system and how the situation can be improved. It will examine the strategies for curriculum design and delivery in the said system. The study will further use the current policy documents, academic experiences and literature to propose inclusive criteria for designing and delivering an accessible ODeL framework.

1.4 THE PROBLEM STATEMENT

The Draft White Paper on e-education in South Africa as issued by the Department of Education (Department of Education, 2003) defines how students and lecturers engage with technology in ODL. The paper commends that e-learning should become a "mainstream activity" in higher education institutions (HEI); a recommendation that is in line with the Department of Education's (2004) development plans of reaching the millennium goal of "education for all by 2020". Though the policy structures have been initiated by the designers of higher education innovators, the few academics that are passionate about using technology in teaching are not appositely trained and aimed toward pedagogical innovation nor are they self-motivated to bring about radical changes

in learning delivery through e-learning (Fraser & Maguvhe, 2008). Consequently, few academics understand what e-learning is, how it works and how it can be implemented (Isabirye & Dlodlo, 2014; McLaughlin, 2014).

Currently, little is known about the policies guiding inclusive curriculum design in an ODeL context. There is scanty research in South Africa on the curriculum delivery strategies that academics use to facilitate inclusive learning in open distance e-learning. Equally, there is little interest in how lecturers can improve online learning for students with disabilities (Fuller *et* al., 2004). The study therefore examined policy guidelines and learning delivery strategies towards an inclusive ODeL curriculum. The study further went deeper by establishing the challenges faced by lecturers; the role of different stakeholders in support of lecturers; and the identification of delivery strategies for use by lecturers to support students with disabilities.

1.5 OBJECTIVES OF THE STUDY

Due to the challenges that lecturers face in an ODeL system concerning their design of inclusive curriculum for students with disabilities, this study seeks to:

- Explore the key policies that guide inclusive curriculum design at UNISA
- Identify inclusive design strategies that UNISA academics use in the ODeL setting
- Investigate inclusive learning delivery strategies used by the academics at UNISA
- Use the research participants' views and literature-based guidelines to develop inclusive criteria framework for ODeL contexts

1.6 MAIN RESEARCH QUESTION

This study investigated the following question;

- What are the key policies and learning delivery strategies that guide the ODeL academics when designing an inclusive curriculum?

Further questions probed included:

- What are the key policies that guide inclusive curriculum design in the ODeL setting?
- What inclusive design strategies do the academics use in the ODeL setting?

- What inclusive learning delivery strategies do the academics use in the ODeL setting?
- How can curriculum design and delivery be more inclusive in the ODeL setting?

1.7 RESEARCH PARADIGM

A paradigm is an all-encompassing system of practice and thinking that defines the nature of inquiry process along three dimensions: ontology, epistemology and methodology (Sim and Van Loon, 2004).

In this study, despite the existence of UNISA policies such as the Open Distance Learning policy, Students with Disabilities policy and, the Use VLE Training model, which support transformation and promote inclusion of disability in UNISA, the dominant practice is the design and delivery of an ODeL curriculum which creates barriers to students with disabilities. In addition, lecturers and curriculum designers do not have exposure or prior training to facilitate learning for students with disabilities (Fraser & Maguvhe, 2008).

1.7.1 Ontological assumptions

Creswell (2013) notes that the ontological issues relate to discovering how people make sense of their social worlds in the natural setting by means of daily routines, conversations and writings while interacting with others around them. He adds that many social realities exist due to varying human experience, including people's knowledge, views, interpretations and experiences. Reality can be explored, and constructed, through human interactions, and meaningful actions. UNISA has multiple realities concerning how policies are enabling an inclusive ODeL curriculum and this calls for a qualitative study that is underpinned by the outlook that reality and truth are a biased social construct (McMillan & Schumacher, 2010:54).

When I joined UNISA and was confronted by learning barriers, the view was that these were all due to lack of inclusive skills among academics. During data collection from the curriculum developers, academics and accessibility experts, I listened to their stories, observed their reactions and then made meaning out it (Nieuwenhuis, 2010:52). Analysing the stories and publishing the thesis will contribute to the body of learning towards improving the design and delivery experiences of academics and curriculum developers

(Cohen, Manion & Morrison, 2008).

1.7.2 Epistemological assumption

Society and events are understood through the mental processes of interpretation that is influenced by interaction with social contexts. Those active in the research process socially construct knowledge by experiencing real life or natural settings. (Habermas, 2005:7). The participants were conscientized on the research objectives and demonstrated their willingness to be part of a transformation agenda. The dimensions of rhetoric, tradition, power, objectivity, reflexivity and reality were a more personal and interactive mode of data collection.

A critical paradigm informed this study, which according to Smith (2000) strives towards empowerment of people discriminated against, on their own terms. During the data collection, I made all participants understand the research objectives, encouraged inductiveness and made them see themselves as part of shaping transformation.

1.7.3 Methodological assumptions

This study worked with academics, curriculum developers and staff involved in making curricula inclusive to discover means by which their views could be captured. Their experiences and perspectives were captured, articulating their contribution on matters that impact them.

By conducting a qualitative study, meant getting as close as possible to the participants being studied. This meant being open and interacting freely with the participants so that they could be relaxed and share their stories. Creswell (2013)

1.8 RESEARCH DESIGN AND METHODOLOGY

This segment gives a summary of the design procedures that were followed in carrying out the study. A phenomenological enquiry and a qualitative approach were used to address its objectives. The said enquiry served to explore staff and academics' and learning designers' experiences to understand the delivery strategies they use to support students with disabilities. Participants' experiences, perspectives and meanings they attached to policy and inclusive education were explored using this enquiry (Creswell, 2017).

Data were collected from academic staff, relevant UNISA support departments, and officials responsible for ODeL development. The twelve participants were chosen using purposeful sampling while semi structured interviews were used to collect data. According to Giorgi and Giorgi (2009), an interview enables participants' words and language to be easily captured and interpreted, making it possible for the participants' original words to be placed alongside the researcher's interpretations, or even as in changes of these words. This approach provided an opportunity for me to address the research problem in the participants' own settings and without any inconvenience to them. Interviews were done through a conversation manner, which is a natural activity for them (Creswell, 2013:185). The literature review covers the main concepts in the study: namely policies, curriculum design and delivery in an ODL University. I arranged The in-depth face-to-face interviews to be all digitally recorded and directly transcribed. Categorical content analysis was used to analyse data based on extracts from the data collected. Similarly, the study discussion and findings used the three theories; Transactional Distance Theory, Universal Design for Learning Theory and Social Choice Theory, that frame this study while the literature reviewed was also used to buttress the basis for the discussion of findings.

1.9 SIGNIFICANCE OF THE STUDY

There is strong evidence to support the concept that e-learning should be unconstrained, inclusive and able to provide a curriculum that is accessible to students with disabilities. However, appropriate training needs to be provided to users and developers, together with the necessary management tracking system. This study will help to fill the knowledge gap in terms of the delivery strategies that could be used by lecturers to support students in an inclusive curriculum. In addition, it will inform the current status of implementation with regard to the move towards ensuring that students with disabilities are accommodated in an ODeL environment.

An ODeL system that is accessible provides a number of benefits to students and teaching staff with disabilities. Williams and Fardon (2005) affirmed that learning material that is made available online can offer far more options for accessibility than analogue content - for instance, electronic text can be read aloud and translated into braille, and audio files

can be electronically transcribed as text. Finally, the e-learning environment can provide students with a much greater degree of flexibility, as lectures can be listened to when circumstances allow, rather than at a set time and place. Tutorial discussions take place on asynchronous discussion boards, which are also free of the time and place restrictions of their analogue counterparts. These inclusive benefits are not only limited to students with disabilities, as provision is made for accessible course design to help all students. Technologies such as web-based lecture systems are valuable for both students with disabilities and the broader student population. Text made available as an audio file can be listened to in different settings, and subtitles can be used to read the content of a video presentation when sound is not appropriate. Information that is less fixed to a specific format can be accessed in multiple ways and is more easily searchable (Williams & Fardon, 2005).

1.10 THE ORGANISATION OF CHAPTERS
Chapters in the study are arranged as follows:

Chapter One provides highlight to the policy in design and delivery of an inclusive curriculum at UNISA. Also presented is the statement of problem, objectives and purposes of the study and the research questions. Also stated is the significance of the study, the research paradigm, the research design and methodology and clarified the main concepts used.

Chapter Two presents the three theoretical frameworks that informed the framing of this study. The transactional distance theory (TDT), the Universal Design for Learning (UDL), followed by the Social Choice Theory, is espoused using Tables and figures.
The literature is also presented and discusses the concepts that relate to the policies that promote design and delivery of inclusive curriculum for students with disabilities, and the evolution of ODeL. The review further covers international situation and focuses on UNISA.

Chapter 3 covers in the detail the research methodology and design. The chapter also elaborates on the qualitative approach, the sampling techniques and data collection procedures. The ethical considerations are explained and concludes with a discussion of the data analysis approaches used.

Chapter 4 provides the research analysis and findings. Passages from the direct quotes and interviews were used to illustrate the words as they were said.

Chapter 5 discusses the findings using the literature reviewed and the three theories that inform the study.

Chapter 6 completes the study, synthesising the three theories that frame this study and the perspectives of academics to make recommendations. The proposed Inclusive Criteria Framework for Designing and Delivering an ODeL curriculum that accommodate all students is elaborated, followed by proposed areas for further research.

1.11 CONCLUSION

This chapter summarised the policy in design and delivery of inclusive curricula in an ODeL setting and presented the statement of the problem, objectives, questions and purpose of the study. The chapter further discussed the significance of the study and outlined definitions of different concepts used in the study and provided the research paradigm, research design and methodology, the division of chapters and conclusion.

CHAPTER 2

CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

2.1 INTRODUCTION

The present study is informed and framed by three conceptual frameworks. This chapter highlights the Transactional Distance Theory (TDT), Social Choice Theory (SCT) and Universal Design for Learning (UDL). A discussion of these theories is provided, linking them to inclusive curriculum design for students with disabilities at an ODeL university. The chapter further explores studies on policies in design and delivery of inclusive curriculum in order to identify the essential policies and components that enable inclusion. Literature was analysed on policy in the design and delivery of inclusive curriculum and justifying the need to eliminate barriers and include all students in ODeL. The analysis argues for an inclusive framework to guide policy in design and delivery in ODL.

2.2 TRANSACTIONAL DISTANCE THEORY

Transactional Distance Theory (TDT), the first theory underpinning this study explains the distance between the lecturer and student which was propounded by Michael Moore (1973), this theory defines *transactional distance* in relation to the interactions that exist within an instructional programme. These involve three variables: *dialogue*, *structure* and *learner's autonomy*. Additionally, scholars assert that in any educational programme, even in face-to-face education, there is some *transactional distance* which pertains to the separation of the teacher from the learner (Moore & Kearsley, 1996).

2.2.1. Function of *Dialogue*

Dialogue is developed by teachers and learners in the course of the interactions that occur when the one communicates information and the other responds (Moore & Kearsley, 1996). The relationship subsequently becomes purposeful, constructive and valued by each party. The content of the course, the nature of the medium of delivery, the philosophy and emotional characteristics of teachers and the learners' personalities have a direct effect on the extent and quality of the dialogue, and transactional distance will be overcome depending on the extent of this variable (Moore & Kearsley 1996). As exhibited

in the paper based learning, dialogue is in the form of written feedback or exchanges in a discussion forum on myUnisa, an internet-based learning tool.

2.2.2. Function of *Structure*

Structure on the other hand, refers to the ways in which the teaching programme is designed and usually reflects "the rigidity or flexibility of its" educational objectives, teaching strategies and evaluation methods, which in turn determine to what extent each learner's differences are taken into consideration (Mueller, 1997). Thus, structure is largely a function of the organising teaching and communication (Garrison, 2000).

According to Moore (1972:23), structural distance is created by the way the learning material is designed which enables the student to reach his/her learning goals. The transactional distance is reduced if there is a continuous dialogue between the student and lecturer, and the learning content and system are well-structured. The transactional distance widens, if there is less communication (dialogue) and the learning is not well designed. The TDT requires all the parties in the learning system to play a positive and active role as the process is reciprocal. Figure 2.1 (below) describes the reciprocal relationship of cause and effect between *dialogue* and *structure.*
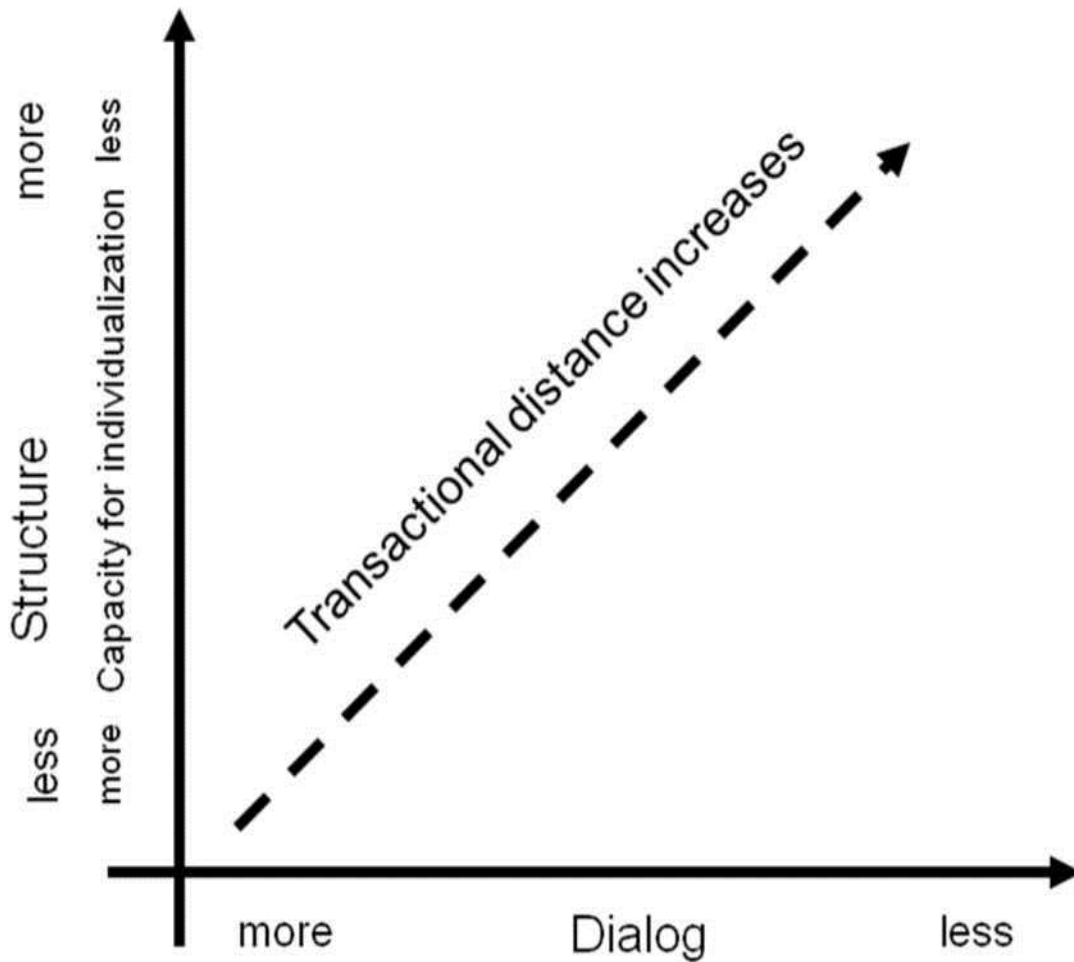
Figure 2.1: Dialogue + Structure determines TDT (Moore, 2006)1

2.2.3. Function of Autonomy

Autonomy describes the students' capacity to learn independently. Moore (1972: 79) postulates that *autonomy* is determined by the student's learning styles, personality, prior experience and the engagement with the learning material. Moore further adds that students' autonomy is also about them generating ability to self-regulate and self-direct their learning. The hypothesis is that the more distant the programme, the more autonomous the students who will choose to participate.

Figure 2.2 (below) describes how the student in ODL setting becomes autonomous.
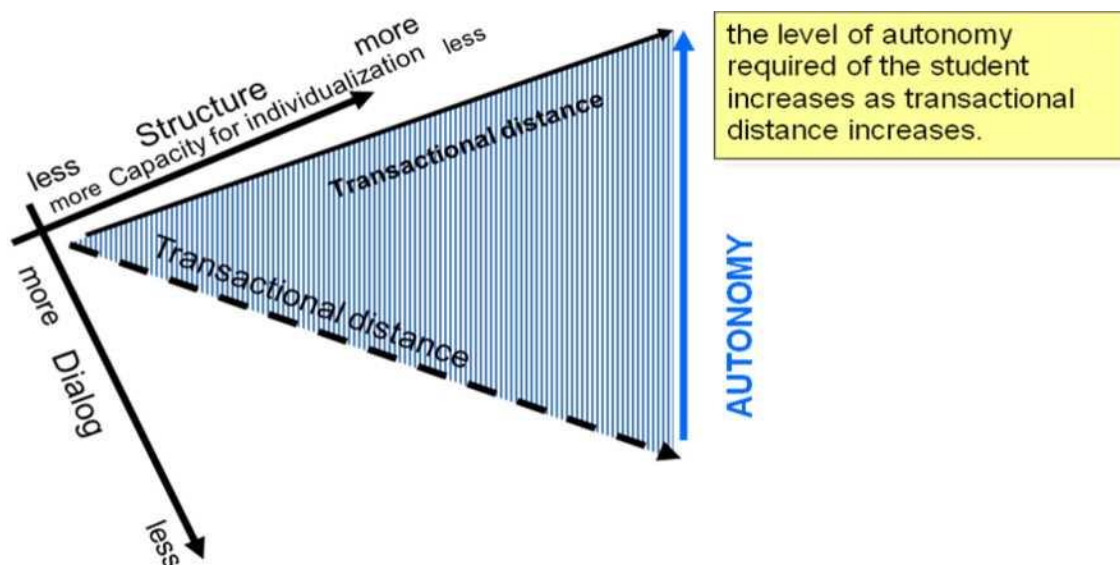
Figure 2.2: Autonomy and transactional distance (Moore, 2006)1

Moore (2006) argues that then the transactional distance increases when the student becomes autonomous when they are able to learn without depending greatly on the lecturer. Therefore, a universally designed ODeL increases student autonomy by offering increased opportunities for interaction between all the students and academics.

2.2.4. How Transactional Distance Theory is conceptualised in the study

In the case of this study, the theory helps present the lecturer's awareness and the way their curriculum is designed which determine the transactional distance. The higher the accessibility and dialogue the less the transactional distance, which supports the students' chances of having a positive learning experience and success in learning. The lower the dialogue due to accessibility, the higher or wider the transactional distance, which reduces the chances of the students having a positive learning experience and succeeding in their ODeL studies. Similarly, the autonomous function should enable the study to establish the relationship between policies and universal design where a student becomes autonomous and then transactional distance increases. Therefore, a universally designed ODeL increases student autonomy by offering increased opportunities for interaction between all the students and academics.

The theory also helps to qualify the quality of the delivery applied to teaching and learning. This becomes important due to the fact that the student assumes the responsibility of constructing knowledge. Thus, learning becomes more learner-centred and typifies the move to the constructivist approach in distance learning (Fraser & Lombard, 2002; Granger & Bowman, 2003).

2.3 SOCIAL CHOICE THEORY

The social choice theory is associated with two origins. The first of source of the origin is the normative analysis in terms of personal welfare (extensively explored in modern welfare economics), and the origins of this, through utilitarianism, which was developed by Bentham (1789). The second is the mathematical theory of elections and committee decisions, which was developed by List (2013). The social choice theory studies the properties of collective decision-making processes and procedures (List, 2013; Pildes & Anderson, 1990). This theory consists of a cluster of models and results concerning individual inputs (i.e. votes, preferences, judgments) into collective inputs (i.e. collective decisions, preferences, judgments and welfare) (List, 2013). Social choice theorists study questions related to individual and collective inputs by developing general models and proving theorems (List, 2013).

Dryzek and List (2003) argue that social choice theory is a mathematical theory of group decision making concerned with the normative and logical questions of how they should, and could, aggregate information about the views, interests or preferences of individuals into group decisions. Fishburn (2015) notes that the theory is concerned with relationships between individuals' preferences and social choice. Social choice theory has been used to understand democracy (Dryzek & List, 2003), political philosophy (Sen, 2012). The origins of social choice theory can be traced to two rather distinct sources. The first source of the origin is the normative analysis in terms of personal welfare (extensively explored in modern welfare economics) and the origins of this, through utilitarianism, which was developed by Bentham (1789). The second is the mathematical theory of elections and committee decisions, which was developed by Kenneth Arrow and Nicolas de Condorcet.

2.3.1 How Social Choice Theory is conceptualizes in the study

Social choice theorists ask us to envision a system in which we all have equal access to raise and object to issues and amendments. This system has powerful agenda-setting agents, equal access to debate and all votes count the same. Research on democratic settings shows that there is a high risk of disequilibrium and instability outcomes in a policy space that involves three or more alternatives or participants (Arrow, 1963). Changes in member's preferences were also reported to lead to a total breakdown in equilibrium (McKelvey, 2007). Other researchers added that inconsistencies could be prevalent in institutions (Plott, 1967; Davis & Hinich, 1968; Schofield, 2011). According to Van Mill (2002) democracy is a messy process which involves problems of free and equal participation. Van Mill (2002) emphasises the importance of understanding the foundations of institutions and how choices of members contributes to their development. Research using Social Choice Theory in education settings is limited. By means of the above-mentioned research, the present study aims to make a contribution in the Social Choice theory by exploring inclusive curriculum design for students with disabilities at an ODeL university. In the context of higher education, social choice theory assists in analysing a situation whereby educators often have different preferences for curriculum provision while institutions present them with merely one offering (Rapport, 1989).

2.3.2 Social Choice methods

This section demonstrates that there are several different "reasonable" methods of making a social choice. As a result, these different methods produce different social choices. For this reason, "implanting inclusive design strategies" has obstacles. This is because every method used in the implementation of feedback requires justification.

The following example provides an illustration of the different social choice methods. First, two educators give a course rating of 5 out of 10 and indicate "that far too much improvement was required". Another educator gives the course a rating of 4 and remarks "that too much improvement was required". The fourth educator gives the course a rating of 2 and says that "too little improvement was required". The fifth educator gives a rating of 1 indicating the "far too little improvement was required". How should we use these ratings to decide how to change the course?

One method is to calculate the mean rating and then choose the option with the nearest to the mean. This rule balances the deviations to the right and left of the ideal option. In this example, the mean rating is 3.4, which is nearest to the scale point "3": "about right." This choice corresponds to the option of keeping the amount of work as it is. In this example, the five educators' preferences were used to produce a single option. A social function is a process that takes a collection of individual educators and their teaching preferences as a result uses these preferences to determine the choice of a single education option (Burt, 1996). Figure 1 provides an illustration of the social change function.

Two educators want large cuts
One education wants moderate cuts
One student wants moderate additions
One student wants large additions

Social change function

Social Choice:
Keep it as it is
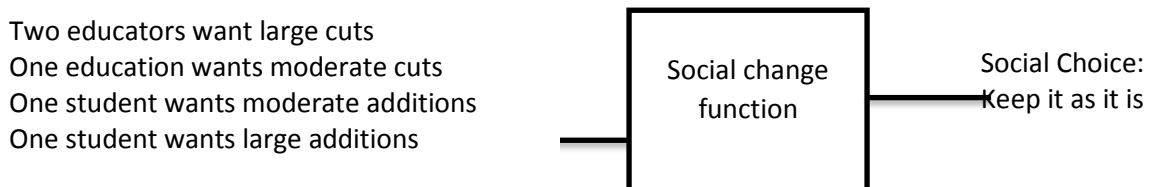
Figure 2.3: A Social Choice Function: The Option nearest the Mean Rating1

The social choice functions are associated with the Pareto optimum. According to (Awad, Caminada, Pigozzi, Podlaszewski & Rahwan, 2017) a Pareto optimal outcome (given individuals preferences) cannot be replaced with another outcome that is more preferred by all individuals and is strongly more preferred by at least one individual. When applied in the context of curriculum design introduced above, all options between and including "large cuts" and "large additions" are Pareto optima. For example, the option of "keep it as it is" is a Pareto optimum, even though no educator has it as an ideal option. To change this option by making additions would be to disadvantage those educators demanding cuts while to make cuts would be to disadvantage the educators who want additions. Therefore, the concept of a Pareto optimum is not predominantly helpful in making a choice: in many situations, there are multiple Pareto optima.

The second rule associated with this optimum is suggested by the observation that most educators have only one (or a few) option(s) as their ideal. In this situation, serving the wishes of the modal student is often in the institutions' best interest. In the example above, the social choice would be "large cuts".

A third rule is additive utilitarianism. This social choice function takes each option and adds up the sum of the individual values to obtain a total utility for the option. The social choice becomes the option with the greatest total value, that is, "the greatest good of the greatest number." Applying additive utilitarianism in the above mentioned example "moderate cuts" as the social choice because "moderate cuts" is the choice of the median student. In line with the above mentioned example, this means that the total utility is a maximum for the option corresponding to the first preference of the median educator. To move to an adjacent option; for example, one point to the left, would reduce by one unit the utility of the majority of educators to the right of the new option. This reduction would not be offset by the gains of one unit of utility experienced by the minority of educator to the left of the old option, the median.

The final social choice functions are those stemming from Rawls' criterion of justice. His theory of justice holds that society should strive toward equality of opportunity and that, where inequality exists, societal rules should be formulated to advantage the least resourced among its members (Waldman & Akin Ojelabi, 2016). In this function, the option is chosen that maximises the utility for the educator who receives the least value from the option (Waldman & Akin Ojelabi, 2016). In this case, "no change" is the social choice: with this option both of the (two) students wanting "large cuts" and the (one) educator wanting "large additions" enjoy a utility of 3. Any other option results in either of the two students or the one educator experiencing a utility of less than 3. Because this rule relates to notions of inequality, it is not surprising that the same social choice results from choosing the option that has the least inequality as measured by the Gini coefficient, although in general, the two rules will give somewhat different social choices (Cullis & Jones 1992).

2.4 THE THEORY OF UNIVERSAL DESIGN FOR LEARNING

2.4.1. Universal Design for Learning (UDL)

The term *universal design was coined* by Architect Ronald Mace in the 1980's when architectural requirements began to call for improved accessibility for people with and without disabilities (Messinger-Willman & Marino, 2010). An example of a universal design feature in architecture would be ramps that make it easier for people using wheelchairs,

bicycles and baby strollers to cross the street. The K-12 educational community adopted universal design under the name Universal Design for Learning (UDL) (Messinger-Willman & Marino, 2010). UDL was developed with the aim of providing access points to the curriculum. Students are provided with the opportunity to circumvent barriers based on their individual learning needs (Perez, Gulley & Prickett, 2017; Scott & Temple, 2017). Universal Design for Learning (UDL) offers an educational framework for an educator that could maximise the design and delivery of course instruction by emphasising multiple representations of material, varied means for student expression, content and knowledge and multiple ways to motivate and engage student learning (Smith, 2012). When applied to teaching and learning, the UDL framework focuses targeted approaches on supporting a student's affective, strategic and recognition learning networks (Rose & Meyer, 2002; Rose & Meyer, 2006; Rose & Gravel, 2010). In addition, the UDL framework also provides educators with an opportunity to improve gaps in a student's prior knowledge, as well as to scaffold and support their learning, and to facilitate metacognition (Rose & Meyer, 2002; Rose & Gravel, 2010). This is because students come into the classroom with their own frame of reference regarding how knowledge works. The UDL has been used to focus on how policy measures the designing and delivering of an inclusive ODeL curriculum at UNISA.

2.4.2. The UDL principles
The UDL theoretical framework makes use of three principles to guide the development of flexible curricula. These principles include, support recognition learning through multiple flexible methods of presentation (i.e., what is this?), support strategic learning by providing multiple, flexible methods of expression (i.e., How am I going to do that?) and supporting effective learning by providing multiple, flexible methods of presentation (i.e., Why should I learn this?) (Rose et al., 2005). Innovative technologies are used in an attempt to accommodate learner differences in UDL (Meo, 2008). This suggests that digital text can be incorporated to create flexible curricular materials where readability levels can be altered (Jackson, 2004). Another advantage of the UDL theoretical framework is its ability to help educators move beyond a "one size fits all" model of instruction, which could maximise the various educational benefits which are needed in a diverse classroom community. Students are able to focus on higher order thinking compared to low levels of

knowledge acquisition, all associated with Bloom's taxonomy. However, Rose et al. (2005) note that increased practitioner responsibilities, shifting teacher responsibilities and roles, insufficient time, training, and a lack of personal resources pose formidable barriers to effective UDL development and implementation.

2.5. THE UDL FRAMEWORK

The UDL framework is designed to promote access, participation and progress of students with disabilities (Silver-Pacuilla, 2006) and relies on technology to improve the education of students with disabilities (Messinger-Willman & Marino, 2010). The framework focuses on a holistic approach to curriculum development (Messinger-Willman & Marino, 2010). The UDL framework can be extended to capture the way in which learning is influenced by cultural variability (Chita-Tegmark et al., 2017). Effective use of the UDL framework can activate prior knowledge, the practical application of knowledge or skill and augment cogitatation among students (Ralabate, 2011). The UDL framework can also reduce barriers for culturally diverse students and increase the learning opportunities for all students and help them develop proficiency in a broader range of expressive, analytic and cognitive styles important for academic success (Chita-Tegmark et al., 2017). Research shows that educators who use the UDL framework to help them design courses could identify clear goals aligned with the instructional practices (Smith, 2012). In addition, students could positively engage in the courses.

The UDL framework is designed to promote access, participation and progress of students with disabilities (Silver-Pacuilla, 2006) and relies on technology to improve the education of students with disabilities (Messinger-Willman & Marino, 2010). The framework focuses on a holistic approach to curriculum development (Messinger-Willman & Marino, 2010). The UDL framework can be extended to capture the way in which learning is influenced by cultural variability (Chita-Tegmark et al., 2017). Effective use of the UDL framework can activate prior knowledge and enhances meaning-making and the practical application of knowledge or skill among students (Ralabate, 2011).

2.5.1 The UDL and Means of Engagement

The South African Higher Education Opportunity Act of 2008 proclaimed UDL as a logical plan that could lead to best educational practices. According to Ralabate (2011:n.p.), UDL is as a result of human rights and special education legislation, both of which promulgated the re-design of education to promote access to education for students with diverse needs. The challenges caused by non-usage of UDL led to a change in the design of the curriculum, allowing learning to be presented in a flexible manner that allows all types of students to actively engage hence minimising barriers to learning (Rabalate, 2011:n.p.).

It can be postulated that the UDL should enable the student to navigate around the learning environment carefully. UDL should be structured to allow the students a variety of choices for how they want to learn while conforming to the set learning outcomes and objectives. It is also necessary to ensure that students are proficient in communication, composition and problem-solving (Bocconi & Ott, 2013:330; Ralabate, 2011:n.p.). Reeves, Herrington and Oliver (2004) highlight that a learning environment should have nine indicators. These indicators include, 1) authentic tasks that have real-world relevance; 2) learning tasks that are well-defined and include a number of subtasks; 3) complex learning tasks that require students to undertake complex investigations; 4) a learning environment that provides the students with an opportunity to investigate the tasks from different perspectives; 5) provision of collaborative and reflective opportunities; 6) integration across different subject areas; 7) assessment that is integrative; 8) possible products that include more than one iteration; and 9) allowance for competing answers and solutions.

2.5.2. UDL and Multiple Means of Representation

This UDL principle addresses the "what of learning". Research shows that multiple representations can have immense benefits for students' learning (Rau & Matthews, 2017) by developing a deeper understanding of domain concepts that would be difficult to achieve with a single representation (Ainsworth, 2006). Students are able to undertake fundamental abstractions to successful learning when they are able to construct and switch between multiple representations in a domain (Ainsworth & van Lebbeke, 2004). For example those learners with sensory disabilities (e.g. blind or deaf); learning disabilities (e.g. dyslexia); language or cultural differences, may all require different ways

of approaching content. However, research also cautions that multiple representations may fail when not used correctly (). This research is in line with findings which demonstrated that students tend to treat representations in isolation and find it difficult to relate, translate and integrate information from multiple representation (van der Merj & de Jong, 2006). A student is more likely to be confused when they experience problems with interpreting each individual representation and, in addition, making connections among multiple representations and the information they intend to convey. Educators may support students with integrated representations or multiple representations with dynamic linking or translation between them in order to obtain the benefits of multiple representations (Ainsworth, 2006; Goldman, 2003).

Learner perceive and comprehend information presented to them differently. Research shows that multiple representations might provide benefits when students are learning complex new ideas (Ainsworth, 2006). Others may simply grasp information quicker or more efficiently through visual or auditory means rather than printed text. Also, learning, and transfer of learning occurs when multiple representations are used, because these allow students to make connections within, as well as between, concepts. In short, there is not one means of representation that will be optimal for all learners; providing options for representation is essential. One study reported that students preferred certain types of representations and did not use the three dimensional models interchangeably (Wu, Krajcik & Soloway, 2001).

2.5.3. UDL and Multiple Means of Action and Expression

This last UDL principle encourages and allows "the how of learning". Learners differ in the way in which they navigate a learning experience and express what they know. There is a noticeable distinction between the strategic neural networks of a novice and those of an expert learner (Smith, 2012). The latter have the ability to develop strategic approaches that facilitates their success in learning because of their ability to set goals outline effective steps to obtain their goals, employ effective strategies and monitor their ongoing progress until they reach that goal (Smith, 2012). However, novice learners may experience learning difficulties because they have not yet developed these facilities in learning (Bransford, Brown, & Cocking, 2000; Rose & Gravel, 2010). The last principle

encourages allows educators to offer students multiple opportunities in order for them to gain, express and demonstrate their understanding (National UDL Center, 2011).

2.6 UDL AND INCLUSION

2.6.1. UDL and Accessibility

Holistic design is viewed differently by different authors, for instance, when designing for learning, emphasis should be given to collaborative pedagogy before accessibility, with an aim of availing accessible learning experiences for the students while others view accessibility in relation to technical access to ICT tools. Schenker and Scadden (2002).The human rights approach is one model which has been promoted by stakeholders to make access to higher education for people with disabilities a legal matter. However, Brajnik warns against the rights holders tendencies and suggest that it is presented as an issue of ICT best practice, educational and social justice and equity Brajnik (2000).

Core to these discussions on universal ODeL, is understanding of is the accessibility and the design and delivery of inclusive modules. Shaw (2000) emphasises the importance of considering accessibility in terms of access to the learning curriculum. In this context, the study will be extending this concept on accessibility in terms of how policies influence design and delivery of inclusive ODeL curriculum. This will help academics to design and deliver effective learning to a diverse student population.

2.6.2. How Universal Design for Learning is conceptualised in the study

UNISA as an ODeL university encompasses diverse students with diverse learning needs. Consequently, this calls for the policy to drive a curriculum with courses, modules, content and materials which accommodate all students without adaptation (Universal Design). It requires that the academics, lecturers, curriculum developers and, disability support services have to acquire the necessary knowledge regarding how to design and deliver accessible ODeL. In an ODL environment, the use of UDL approaches by academics and in designing modules avoids reactive learning design, which only responds to barriers. It avoids making the students with disabilities feel as though they are an afterthought.

2.6.3. How the three Theories are linked in the study

The study has woven the three theories to show that if transactional distance theory is used, the autonomous function enable the study to establish the relationship between policies and universal design where a student becomes autonomous, opportunities for interaction between all the students grows and then transactional distance increases. Universal Design for Learning (UDL) theory then buttress this argument by demonstrating that increase in student autonomy offers increased opportunities for interaction between all the students and academics. While a Social Choice theory reinforces this line by demonstrating that there are several different "reasonable" methods of making a social choice.

As a result, these different methods produce different choices. For this reason, scaffolding and supporting learning can have emphasis on multiple representations of material, varied means for student expression, content and knowledge and multiple ways to motivate and engage student learning.

2.7. REVIEW OF LITERATURE

This section further explores studies on policies in design and delivery of inclusive curricula in order to identify the essential policies and components that enable inclusion. Literature on such policies and justifying the need to eliminate barriers so as to include all students in ODeL.

2.8. Disability in the educational context

Globally, there are more than 1 billion people with disabilities (i.e. is one in seven people) (WHO, 2015). In the educational context of online learning, according to Kinash, Crichton, and Kim-Rupnow (2004), students with disabilities are among the least considered.

Disability is viewed in terms of a social model in South Africa (Donohue & Bornman, 2014). However, research shows that the proponents of this model seem to have neglected the need to understand the challenges experienced by people with disabilities, which do not emanate from the social environment, but from individual, environmental, economic and political spheres (Mutanga & Walker, 2015). Disability Rights researchers have now shifted towards developing a better understanding of disability by incorporating various and transecting factors (e.g. economic, social, cultural barriers and political) that place

restrictions in the way of full inclusion and the success of students with disabilities in higher education (Strnadova, Hájková & Květoňová, 2015).

The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), which was adopted in 2006 and ratified by South Africa in 2007 (UN Enable, 2014), obligates states to fulfil realization of human rights for persons with disabilities. However, full participation of students with disabilities is still a concern in South Africa (Lourens, 2015; Lourens, McKinney & Swartz, 2016).

2.8.1. International and National Policies

United Nations Sustainable Development Goal 4 involves achieving inclusive and quality education for all, which reaffirms the belief that education is one of the most powerful and proven vehicles to inclusion (UNESCO, 2014). The framework of inclusive education aims to ensure that all stakeholders can participate in a meaningful way in a common task, contribute in different ways and be valued and respected as equal members of the community of the educational institution (Department of Education, 2002). Fuller, Bradley and Healey (2004a) define inclusive education as learning among disabled and abled students in environments with appropriate networks of support. This suggests that when a learning environment is inclusive, students are able to participate in university learning to the best of their abilities in accordance to their needs. Moreover, an inclusive curriculum for disabled students enables them to access barrier-free course content.

According to the South Africa Education White Paper, inclusive education suggests that education structures and methodologies are created to make it possible for universities to meet the needs for all and to increase the participation for all learners in the culture and curricula of centres of learning (Department of Education, 2001). Recent years have witnessed phenomenal growth and expansion in South Africa in terms of assistive technology, access and support in higher education for students with disabilities (Munemo & Tom, 2013; O. Mutanga 2017). South Africa has devised comprehensive and specific policies for inclusive education as regards students with disabilities (Department of Education, 2001a; Department of Higher Education and Training 2013). Some universities also have policies supporting the inclusion of students with disabilities. Approximately 21% of the universities surveyed by Matshedisho (2007) were using formal policies to

provide support for students with disabilities. However, it is argued that policy does not translate to practice in South Africa (Liasidou, 2012).

Inclusive education comprises of benefits for all students. Students who learn in diverse environments have been shown to have a high critical and active thinking ability, capacity for intellectual engagement and academic motivation as well as intellectual and social self-concepts (Millem, 2003). These students also are more likely to persist academically than their counterparts (Gadbow, 2002; Gale, 2011; Getzel & Thoma, 2008). Academic persistence in completing enrolled qualifications results in long-term economic contributions to society (Fuller, Healey, Bradley & Hall, 2004b; Malakpa, 2007). Academic persistence in university also leads feelings of empowerment and achievement among students (Gadbow, 2002; Salend & Whittaker, 2012)

Inclusive education involves changes in attitudes, behaviour and ways of working, and encourages effective ways of addressing the rights of students of different cultures and contexts. Inclusive education involves linking its missions to those of the education system (Fine, 2000; UNESCO 2003). All stakeholders should be willing to invest their time to the inclusive education process in order to contribute to its development (Fine, 2000).

2.8.2   The context Open Distance e-Learning

Recent years have seen a considerable burgeoning in distance education in a number of developing countries (Al-Qahtani & Higgins, 2013; Moore & Kearsley, 2011; Stella & Gnanam, 2004). The traditional method of providing the curriculum to students in distance education has been through correspondence (Al-Qahtani & Higgins, 2013; Bower & Hardy, 2004; Lei & Gupta, 2010; Moore & Kearsley, 2011; Munemo & Tom, 2013). However, most distance learning universities use a blended learning approach involving face-to-face education and the use of technology (UNISA, 2015). Research demonstrates that there is an association between blended learning components and student centeredness that consequently influences enhances good practice in higher education (Pallof & Pratt, 2011; Garrison & Kanuka, 2004).   To this effect, instance learning universities have seen an increase in the use of information technology for teaching and learning purposes in recent years. According to Macfadyen and Dawson (2012) 93% of

higher education institutions in the United States have, since the late 1990's, invested heavily on the campus-wide implementation of a web-based learning management system. These institutions embedded the learning management system within a wider network of platforms and systems responsible for supporting the teaching and learning mission.

The incorporation of relevant learning technologies is an attempt to provide flexible education on several policy agendas and universities e.g. some in the United Kingdom (Lentell, 2012), United States (Macfadyen & Dawson, 2012) and Africa (Ndlovu & Walton, 2016). Service delivery to students in an Open Distance eLearning (ODeL) institution is different to that of a residential university. Therefore, the support provided to students should complement the course materials that are inclusively made accessible to all students using ODeL methods. Holistic frameworks should inform the incorporation of students' characteristics to provide them with holistic student support. Educators should also consider students' learning needs when designing curricula. In addition, the technology, which students use, should be well thought-out in order to ensure that they are able to access their learning materials. Lentell (2012) argues that the responsibility for holistic frameworks and support for departments offering distance learning rests with university management. According to Isabirye and Dlodlo (2014), benefits of learning technology usage are best realised if this management supports a culture of innovative thinking in teaching, learning and assessment. The use of technology in a university could be facilitated by the management ensuring clear communication of the potential benefits of e-learning technologies to academics (Childs, Blenkinsopp & Walton, 2005).

However, distance education also offers challenges to students, including: their level of formal education; ICT literacy; learning styles; degree of learner support, as well as the relevance of course content to career interests. Furthermore, it involves the extent and nature of interaction with instructors or other students as well as feedback received in coursework and tests (Moore & Keasley, 2011). Distance learning also encounters globalisation challenges involving: monitoring quality; harmonising diversity and bridging over the digital divide (Guri-Rosenblit, 2011) and the knowledge divide (UNESCO, 2016). However, with support from different stakeholders and dedicated staff, such challenges

are easier to overcome with an open and distance learning mode of delivery compared to conventional universities, where space, time, operational costs and infrastructural barriers become critical challenges.

2.8.3   E-learning

Distance learning has evolved as a result of new technologies (Sangrà et al.; 2012). However, this evolution poses a major challenge for educational institutions (i.e. integrating these technologies into learning materials). Research shows that learning technologies have the potential to help educators adopt the seven principles of good practice in undergraduate education; encourage contact between students and faculty, develop reciprocity and cooperation among students, encourage active learning, give prompt feedback, emphasize time on task, communicate high expectations and Respect diverse talents and ways of learning and improve overall quality of education delivery (MacFadyen & Dawson, 2012). It is also demonstrated that the appropriate use of learning technologies can increase student sense of community (MacFadyen & Dawson, 2012), student engagement (Coyne, Pisha, Dalton, Zeph & Smith, 2012; Draper Rodríguez, Strnadová & Cumming, 2014; Macfadyen & Dawson, 2010; 2012) and academic persistence (Giesbers, Rienties, Tempelaar & Gijselaers, 2013; Lee, Choi & Kim, 2013; Lombardi, Murray & Gerdes, 2012; MacFadyen & Dawson, 2012; Moon, Todd, Morton & Ivey, 2012). This means that it is important for a university to invest in learning technologies that support and enhance student engagement with peers, instructors and learning materials for better academic outcomes.

A number of institutions of higher learning use information technology (ICT) to offer their lessons. Czerniewicz, Ravjee and Mlitwa (2006) posit that it is worthwhile to view ICT's as a thread in a complex net of transformation including historical redress, curriculum transformation, diversity, equity, etcetera   Some of the challenges students may encounter in universities are the lack of basic computer skills to operate technologies. Although a number of students have access to technology, Czerniewicz and Brown (2009) argue that access to a computer does not imply inclusion and meaningful access to ICT (see also, Czerniewicz, 2001).

The philosophy of inclusion is based on values that aim to maximise the participation of all in society and education by minimising exclusionary and discriminatory practices (Booth, 2005). Inclusion is conceptualized as a process that involves changing values, policies and practices within learning environments and beyond (Polat, 2011). Ainscow (2005) identifies key elements for inclusion in education. First, inclusion is a never-ending process to find better ways to respond to diversity. Second, inclusion is concerned with the identification and removal of barriers. Third, it involves the presence, participation and achievement of all students and lastly, inclusion consists of an emphasis on those groups of learners who may be at risk of marginalisation, exclusion or underachievement. According to Czerniewicz and Brown (2009), inclusion requires a deeper notion of access, one that incorporates the full range of resources which informed understanding and application of access. It also calls for informed understanding of the factors which enable and constrain ICT take-up within higher education. In other words, all those involved ought to have a deeper understanding of what access entails in order to understand the challenges encountered by students.

The world is reliant on more technology today. The prominence and reliance on ICT is strongly correlated with the increase of inequalities and exclusions throughout the world (Castells, 1998, 2009). Inequalities can be interpreted in the form of access to resources such as internet and internet data which can be sourced from technology such as laptops, tablets and advanced cell phones. Another form of inequality is evident in the skills required to operate information technologies. Students who find it challenging to do so may feel despondent, and experience low self-esteem which may have a negative impact on their academic outcomes.

2.8.4   E-learning and Universal Access

Distance learning institutions possess near unlimited ability to open access to a number of diverse students including those with disabilities (UNESCO, 2016). In developing countries, open and distance education is regarded as the best option to provide education to all. Various reasons are adduced. Time and place do not restrict student participation in learning because an ODL institution offers students the flexibility to learn wherever they are (Moore & Kearsley, 2011). Distance learning is regarded as the solution

to providing education of good quality to a wide number of people at a reduced cost (Lentell, 2012). Researchers argue that the current and future functioning of distance education is no longer solely dependent on national policies, but also on global factors (Guri-Rosenblit, 2011). However, distance education has taken new roles to educate diverse clientele without the limitation of boundaries: in this case, the use of digital technology is highly prized.

The world of ICT is important for teaching a diverse group of students because students' learning is mediated through it (Brozo & Puckett, 2009; Ciampa, 2017). The use of technology for learning is thought to be another way of opening equal opportunities for students with limitations and those with disabilities (Firat, 2017). According to Geith and Vignare (2008) open distance education has the potential to close the gap between students with differing limitations and provide opportunities to access learning. Successful e-learning is associated with innovative methods of teaching, such as Massive Open Online Courses (MOOCS) in a number of ODL institutions (Gooley & Lockwood, 2012).

E-learning has been documented as experiencing challenges in Africa (Lwoga, 2012; Nneka Eke, 2010; Tarus, Gichoya & Muumbo, 2015). These challenges consist of lack of proper course monitoring, shortages of trained academic and technical staff in instructional design, shortages and or lack of appropriate technology while, where technologies are available, they are not affordable (Taurus, 2011). Therefore, learning technologies in developing countries should not be restricted to access and privilege alone.

2.8.5   E-learning Advantages and Disadvantages

According to Šumak, HeričKo and Pušnik (2011), e-learning technologies are mostly used by universities and other educational organisations for providing new and innovative ways for delivering education to their students. E-learning has advantages and disadvantages, both of which may impact on students' academic outcomes. Some of the advantages of online learning, compared to face-to-face learning are: that it is convenient, in that it reduces the amount of time and costs a student uses to travel to and from campus; in so far as students have different learning styles, they are able to access different types of

learning materials suitable to their individual learning styles; students are not campus bound, they can study anywhere as long as they have access to a computer and the internet (Rohleder, Bozalek, Carolissen, Leibowitz & Swartz, 2008); students are able to learn at their own pace and can interact freely with their online tutors and lastly, students are able to develop skills during the process of learning their courses online. Here, the researcher means skills that involve operating a computer and acquiring the necessary internet skills that students need to able to make use of in their lives and careers. The Department of Education (2001) posits that information technologies serve to develop the kind of graduates and citizens required for the information society.

However, e-learning also has its disadvantages. Some students who lack motivation or discipline may find it challenging to study their courses online and may therefore fall behind (Sahin & Shelley, 2008). Students who are new to studying their courses online may feel isolated from their online tutor or peers because the said online tutor and peers may not be available online when the student needs help while encountering challenges. Sometimes students may feel frustrated when they encounter challenges regarding the internet or, for example, when they have to download files from various servers (Zembylas, 2008). Lastly, there are also inequalities among students who do not have the necessary skills and resources to participate in online courses (Rohleder et al., 2008). Such inequalities can be frustrating to students and may sometimes encourage students to depart from their courses. Students who experience challenges with learning technologies may therefore be forced to drop out of university when they cannot identify ways of dealing with these challenges.

Student attrition theorists show that a student's decision to leave or stay in the university is dependent upon their interaction with the institution (Bean, 1984; Lovitts, 2001; Tinto, 1975). Research findings indicate that students with disabilities may develop negative attitudes towards programmes when they encounter complex expository tests and instructional materials limiting their ability to access information (Lee & Erdogan, 2007; Marino, 2010).

2.9. THE CONTEXT OF THE UNIVERSITY OF SOUTH AFRICA

The University of South Africa (UNISA) is an established Open Distance Learning institution that provides teaching and learning to its stakeholders through a blended approach (UNISA, 2013). It prides itself on providing a service to humanity (UNISA, 2014). In order for the university to achieve its mission, it has to bring all the aspects of blended learning and the challenges in the African context together. This will allow the university to provide effective education to all students. The university's focus is placed on student centeredness and blended learning strategies (UNISA, 2013).

After being criticized for the utilization of learning strategies which are common to all as well as students application of rigid curricula and content (CHE, 2009), UNISA aims to strengthen the capacity of its academics with the relevant ODeL competencies for the ODL context (HEQC, 2008). These ODeL competencies involve broad accommodation in learning, interactive student support and the design of programmes geared towards successful throughput (CHE, 2009; HEQC, 2008). The university has a mandate to have expertise that can design learning materials, pedagogy tools, system for interactiveness with other services and services to support learning (HEQC, 2008).

2.9.1. UNISA and the Open Distance Learning Policy

The aim of the Open Distance Learning Policy (Unisa, 2015) is to highlight the fundamental principles that serve as the foundation for the functioning of the university as an open distance higher education institution. The principles provide guidelines aimed at transforming the university so that its core business becomes its blended approach to education. In addition, the university aims to make use of effective educational and social technologies in learning programmes in appropriate and innovative ways that improve the quality of teaching and learning of students (UNISA, 2015).

The policy consists of a comprehensive list of definitions of concepts together with detailed descriptions of the six broad principles that serve as the foundation for curriculum development:

- Student-centeredness
- Open Distance Learning (ODL)
- Blended learning

- Student support
- Tutoring in ODL
- Widening participation

These principles apply to all programmes offered at the university with the aim of providing guidelines that assist the university in achieving its goals of providing quality education to diverse students. The focus of the policy is to address equalization of opportunities for the groups in South Africa who were previously disadvantaged and had missed access to higher education (UNISA, 2015). The university aims to align the curriculum with student profiles and to have academic integrity and be responsive to its vision and mission, national educational imperatives and societal and employment needs (UNISA, 2015).

Students are a priority in the UNISA education setting. In order for them to be able to progress, they should be provided with professionally compiled, pedagogically sound, interactive and engaging educational materials (Arvanitakis, 2014; Inglis, Palipana, Trenholm & Ward, 2011). Student-centeredness (UNISA, 2012) takes into account students' worldview and their lived experiences as well as their prior learning in the development of curricula in order for them to be able achieve their learning objectives and aspirations. The educational strategies should therefore enable successful learning through rich environments for active learning; establish links between students' existing knowledge and contexts and new knowledge and skills that need to be constructed as well as encouraging the development of independent, higher level cognitive skills (UNISA, 2015). Arvanitakis (2014) emphasises that we should change the way we view teaching in order to achieve integrating a student's framework to the curriculum. This is because education can be likened to a journey beyond the walls of the university and what is taught at university is discussed at home, at the workplace, in schools and so on (Ajuwon, 2008). Arvanitakis (2014) warns that it should be recognised that lectures or tutorials can influence even those who never set foot in the university.

ODL universities therefore provide an opportunity for education to be available to a large proportion of the population who were historically denied university access (Arvanitakis, 2014). Moreover, Pityana (2009) highlights the fact that distance learning addresses two major barriers in South Africa. The first is location whereas the second is lack of funds.

2.9.2. E-learning and Previously Disadvantaged Groups

The Apartheid system denied access to educational opportunities to disadvantaged students (Department of Higher Education and Training, 2012). However, since 1994, the complexity in the teaching and learning climate has increased. Students who were historically underrepresented at university (i.e. those with disabilities, female students, Black, Coloured and Indian students) can now access university (Council on Higher Education, 2005). The Council on Higher Education (2005) report nonetheless cited the lack of reliable data on students with disabilities in the South African higher education system.

However, students with disabilities are still underrepresented at university because of the inherited attitudes and stereotypes that reinforce the marginal position of disabled people (Council on Higher Education, 2005). Their underrepresentation at university was linked to the lack of awareness of higher education and lack of skills as well as a lack of adequate provision for them to be able to make the transition to higher education (i.e. practical, procedural and personal and financial) (UK National Disability Team and Skill, 2004). However, even although the access to higher education has increased among students from historically underrepresented groups, their throughput still remains relatively low (Council on Higher Education, 2007, 2010). This would suggest that students are faced with a number of challenges at university that lead to them dropping out from their programmes.

The participation of students with disabilities in higher education is still of concern (Council on Higher Education, 2005). Matshedisho (2007b) argues that one of the difficulties of redressing the issue of unequal access to higher education for students with disabilities arises out of the challenge of transforming rights formalised on paper into real rights. Research identifies several barriers, categorised as: situational and institutional,

dispositional and epistemological barriers (Garland, 1993; Rezabek, 1999) restrict students' participation, progress and persistence in university (Barnes, 1991; Shevlin, Kenny & McNeela, 2004; Stodden, Whelley, Chang & Harding, 2001).

2.9.3. UNISA students with disabilities policy

This policy spells out principles which apply to all students with disabilities enrolled for programmes at the university. The aim of the principles described in the said disability policy is to provide guidelines that would aid the achievement of inclusion, barrier-free access and acknowledgement of diversity among all students in the university environment. The policy focuses on offering students with disabilities a meaningful experience in the university environment. UNISA may not discriminate, directly or indirectly, against any student with disabilities and will ensure an enabling environment to prevent barriers, delays, inconvenience and unfair practices (UNISA, 2008, pp. 1). Moreover, students with disabilities should use appropriate assistive technology to facilitate learning and to support the independence of students, e.g. mobility devices, hearing aids, Braille writers, adapted access computers, magnifying glasses and voice synthesizers (UNISA, 2008, pp.2).

2.9.4. Curriculum at UNISA

According to Van den Akker et al. (2009), the curriculum is generally divided into various levels: SUPRA (International level of curriculum), MACRO (National level of curriculum), MESO (Institutional/School level of curriculum), MICRO (Teacher/classroom level of curriculum) and NANO (Student/individual level of curriculum). Therefore, any division/level of curriculum should combine all the learning units into one in order to build in only relevant teaching/learning resources. It is advised that countries' curriculum plans for teaching and learning should be driven by principles of the curricular spider web (Van den Akker, 2004). Apart from the levels just mentioned, a curriculum may be represented by three main layers. The first layer (representation) is the intended, planned or prescribed curriculum which is a formal/written policy of ideas that are framed by educational rationale/theories and intentions of teaching/learning that specify the intentions of the curriculum. The second layer is the implemented, enacted or practised curriculum, which is the interpretation of the intended curriculum as perceived by teachers and the actual

process of teaching in operation. The third layer is the attained, achieved or assessed curriculum that is the learning experiences as perceived by learners measured through their learning outcomes. Van den Akker (2004) points out that educator can offer curricula in various forms. Van den Akker (2003) emphasises that the clarification of these forms is important when attempting to understand the problematic efforts to change a curriculum. Van den Akker (2004) also differentiates between three levels of the "intended", "implemented" and "attained" curriculum (see Table 1 for a more refined typology). A refined typology of the Van den Akker study (2004) is provided in table 1 below. There, ten components address ten specific questions about the planning of student learning. According Van den Akker (2013) the rationale (i.e. which consists of the main principles) serves as a major orientation point, while the nine other components are ideally linked to that rationale and preferably, are also consistent with each other. The importance of these components differs across curriculum levels and representations (De Groot-Reuvekamp, Van Boxtel, Ros & Harnett, 2014).

Table 2.1: Typology of curriculum representations 1

INTENDED	*Ideal*	Vision (rationale or basic philosophy underlying a curriculum)
	Formal/Written	Intentions as specified in curriculum documents and/or material
IMPLEMENTED	*Perceived*	Curriculum as interpreted by its users (especially teachers)
	Operational	Actual process of teaching and learning (also curriculum-in-action)
ATTAINED	*Experimental*	Learning experiences as perceived by learners
	Learned	Resulting learning outcomes of learners

Van den Akker et al. (2009) further draw attention to the issue that the micro curriculum is an educator's one. This curriculum is defined as the plan for learning, in which the educator's rationale is to facilitate the module from their perspective. An educator's perspective starts with objectives while a student's perspective starts with assessment (Biggs, 2003). This process helps in aligning a successful curriculum with students' needs

(Van den Akker, Branch, Gustafson, Nieveen & Plomp, 2012). Students are more likely to experience learning barriers when there is an absence of alignment between learning outcomes and assessment (Biggs, 2003). Poor alignment of learning outcomes and assessments is related to low academic persistence (Ramrathan, 2013).

Van den Akker et al. (2009), posit that learning is about understanding a rationale for learning, content, learning activities, learning resources, when/where learning takes place, and assessment (the *curricular spider web already mentioned*) as the fundamental requirements for learning. It is worth noting that the spider web does not include learning outcomes, whereas the learning outcomes are very important in terms of measuring students' performance. Achievement of the learning outcomes is an indicator of whether the e-learning environment has e-learning signals to help students have a satisfactory learning experience.
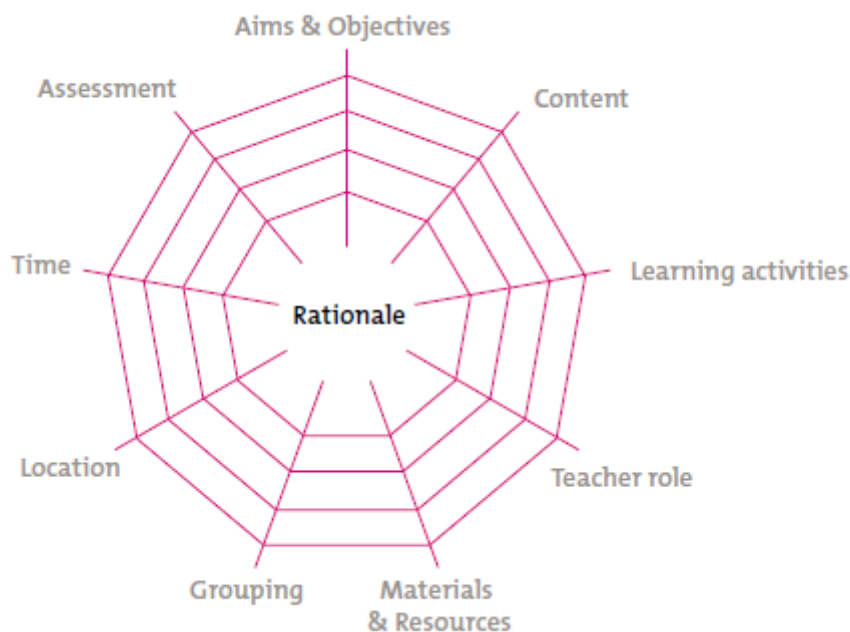
Figure 2.4: Curriculum Spider Web from Van den Akker et al. (2009 p. 11) 1

2.9.5. E-learning Design and Delivery at UNISA

University of South Africa (UNISA) is an Open Distance Learning institution with over 400,000 students in South Africa and internationally. In 2005, it introduced a course management system, myUnisa, to enhance communication between lecturers and students. Teaching and learning at UNISA is in the form of presentations done live presentation or recorded presentations by lectures. (Naidoo, 2012; Wessels, 2011). The online platform, myUnisa enhances contact between the university and students throughout the world. UNISA students also make use of this platform to start social networks (i.e. WhatsApp groups) to form study groups. In addition, myUnisa is platform used to facilitate and improve teaching and learning at UNISA. Students are also able to use this platform to communicate with lecturers and retrieve administrative data like academic and assignment records, period and results of examinations , and fee statements (Davies, 2011; Naidoo, 2012). Tutorial classes are additionally conducted using video conferencing facilities, workshops. Students are able to access these technologies through the Multi-Purpose Community Centres. All registered students are able to access free internet at these facilities.

As a result, UNISA describes itself as a comprehensive ODL institution subscribing to innovative and teaching and learning strategies in order to deliver inclusive education to all (UNISA, 2015; Naidoo, 2012). Therefore, lecturers need to put more emphasis on students' learning to realize inclusive learning (Blackie, Case & Jawitz, 2010). This means that the former need to measure the comprehension of each student. The successful learning processes which are is also important for students' academic persistence (HEQC, 2008; UNISA, 2015, Wessel, 2011). Research furthermore demonstrates that this persistence is dependent upon the improvement of educators' knowledge and skills (DEST, 2005). A majority of research studies on staff development are focused more on educators from residential universities, which means that educators in ODL institutions are under researched.

2.10. E-LEARNING MODEL

UNISA has completely changed its model of teaching and learning with the innovative ODeL in higher education (Jung, 2005; UNESCO, 2002). In 2011, UNISA introduced a new model, which was fashioned from the University of Leicester's Carpe Diem model (UNISA, 2011). This model known as the VLE training model incorporate UNISA specific context by inculcating e-learner-centre, assessment, institutional capacity building (UNISA, 2011). The model was appreciated that educators needed online capacity and the success of myUnisa as a tool that supports teaching and learning. There was recognition that all UNISA academics required the capacities to manage electronic technologies that included multi-media, discussion forums, use of external resources and designing online activities (UNISA 2011).

2.10.1. E-learning and Staff Development

Staff development at UNISA is carried out at central and respective departments (Ramalibana, 2005). Capacity development that is cross cutting focuses on organisation's priorities (that is diversity management, computer technology, and new staff induction), while respective departmental capacity development emphasizes to each departments' priorities (Ramalibana, 2005). The university has mechanism staff development through on boarding programmes, peer trainings, targeted seminars and structures for research support (HEQC, 2008). Members of staff are also encouraged to attend workshops and conferences for academic development. It is worthwhile to note that some of these workshops are on disability awareness and delivering inclusive learning that accommodates students with disabilities (Isabirye, 2015).

2.10.2. Learning barriers and E-learning

Students experience various learning barriers. As previously mentioned, these barriers are categorised as situational and institutional, dispositional and epistemological (Garland, 1993; Rezabek, 1999). Situational barriers are issues such as transportation, age, time constraints, and family responsibilities while institutional barriers are categorised as an institution's programmes, policies, and procedures and include problems with admissions, registration, scheduling of courses, financial aid and support services. Dispositional barriers include items such as a student's personal background, attitude,

motivation, learning style, and self-confidence. Epistemological barriers refer to any one, or a combination, of the following: difficulty level of the programme, its technicality, students' prerequisite knowledge and personal interests or relevance of the course was difficult or that the course was too technical and of personal interest and relevance of the content.

Learning barriers are conceptualised as anything standing in the way of a students' effective learning. An example of a learning barrier in this context is the inaccessibility of course material, such as written text, graphics and diagrams (Ngubane-Mokiwa, 2013), practical observations and electronically formatted material. These barriers manifest themselves in various ways. These barriers only become obvious when learning breakdown occurs or when students drop out or when the exclusions become obvious. Students at distance learning universities are documented as having experienced barriers in various categories, which included elements ranging from costs, access to the internet and motivators, feedback and teacher contact, student support and services (i.e. lack of support services such as tutors and technical assistance), alienation and feelings of isolation, lack of experience (i.e. inexperience as regards this mode of learning), and training (Galusha, 1998). Students' learning barriers are also linked to a lack of suitable academic strategies as well as social and affective difficulties which all impacted negatively on academic persistence (Frazier, Youngstrom, Glutting, & Watkins, 2007) and deficient test taking strategies (Qi & Mitchell, 2011; Reaser, Prevatt, Petscher, & Proctor, 2007).

Moore introduced the Theory of Transactional Distance to show that distance education is not merely a geographical separation of learners and educators but is a pedagogical concept (Moore, 1993). This concept describes the relationship between students and educators that exists when they are separated by space or time. According to Moore (1993) this relationship is ordered into a typology that is shaped around the most elementary constructs such as the structure of instructional programmes, the interaction between learners and educators and educators, and the nature of the degree of self-directedness of the student. Moore's (2003) argument is in line with that of Keegan (1996) who highlights that distance education characteristics include the quasi-permanent separation of teacher and learner; as well as the influence of an educational organisation

in planning and preparing learning materials and providing student support. In addition, the use of technical media; the provision of two-way communication; and the quasi-permanent absence of the learning group is important in teaching students as individuals rather than as groups (Keegan, 1996). The quasi-permanent separation of teacher and learners and between learners characterises e-learning and distance education, raising considerations related to distance (Falloon, 2011).

The separation of students and educators affects teaching and learning when there is no support provided to students. Students' reality is inextricably part of the context of their learning experience and requires the educator to endeavour to see the world through the students' eyes (Falloon, 2011). In short, students' learning barriers are more likely to be addressed when educators view the world through their students' eyes. According to Moore (1991), dialogue (D) and structure (S) are inversely related. High levels of structure (+S) combined with limited or low levels of dialogue (−D) contribute to high transactional distance. Increasing dialogue (D) then becomes a major implication for design, though this is influenced by the third variable, learner autonomy (A). Murphy and Cifuentes (2001) emphasise that a delicate balance between course structure and dialogue between the instructor and learners is critical for online students' academic persistence. A high degree of structure and high dialogue could reduce transactional distance (Akyol & Garrison, 2008; Garrison, Cleveland-Innes & Fung, 2010; Shea, Pickett & Pelz 2003; Shea & Bidjerano, 2009).

Bergey, Deacon and Parrila(2017); Getzel, 2008; Rochette and Loiselle (2012) asserts that students with disabilities have lower retention rates, take longer to complete degrees, and display lower degree completion rates than do their peers without disabilities. This can be linked to the significant challenges which students with disabilities experience when adjusting to university and they encounter unique transition needs (Milsom & Hartley, 2005; Skinner & Lindstrom, 2003). According to the White Paper 6 (Department of Education, 2001b), "students who are vulnerable to learning and exclusion are those with disabilities and impairments". This policy document highlights that barriers to learning reside primarily within the system consisting of negative attitudes to- and stereotypes of difference, an inflexible curriculum, inappropriate language of learning and teaching,

inappropriate communication, inaccessible and unsafe built environments, inappropriate and inadequate support services, inadequate policies and legislation, the non-recognition and non-involvement of parents and inadequate and inappropriately trained managers and educators.

2.10.3. Support Services in E-learning

All members of staff including academic and support staff have the responsibility to provide a learning environment in which students with disabilities are not disadvantaged. Members of faculty are agents of change for inclusive learning; consequently, their support is important for any educational setting (Ashman, 2012; Ballard, 2012; Boyle, 2012; Deppeler, 2012). Making better use of resources forms the cornerstone of inclusion; therefore, making use of available resources and up to date knowledge to support learning is very critical.

The National Plan for higher education policy highlights that universities should be aware of the challenges which students with disabilities encounter and provide support to these students (Department of Education, 2001a). University support services (i.e. textbooks on tape, note takers, extended time, accessible information points) influence the academic persistence of students (Moswela & Mukhopadhyay, 2011). It is important for students with disabilities to explore the various support services in order to meet their academic demands (Wehman, 2006). Research on the support services in universities shows that some factors are more likely to hinder effective provision (Singleton & Aisbitt, 2001). These factors include lack of trained tutors; limited awareness of issues related to assessment and identification of disability and its implications for learning among staff and the existence of centralised services rather than support at a departmental level.

Students may experience several barriers with web-based course materials. These barriers include uncaptioned videos, disorganised websites, and course media unreadable by screen readers (Gladhart, 2010). Students also perceive their disabilities to be a barrier to their success in online courses (Roberts, Crittenden & Crittenden, 2011). In other research it was found that some institutions of higher learning in the United States were reported to have no formal policies to ensure online course compliance while other

institutions reported that departments or faculty were responsible for ensuring the online compliance of course material (Green, 2010). Educators also acknowledge that certain disabilities such as visual and hearing impairments may be more difficult to accommodate than others (Phillips, Terras, Swinney & Schneweis, 2012). In addition, educators did not possess, or were uncertain if they had possessed, e-learning advantages and the knowledge, technology, and support to make online accommodations.

In South Africa, some of the identified learning barriers include technical problems, staff resistance to change, absence of e-policy and lack of staff motivation and training (Isabirye & Dlodlo, 2014). The difficulties experienced by students should influence attempts to implement inclusive education; i.e. changes in teaching practice if the needs of students with disabilities are to be considered.

2.11 UNISA'S STAFF ATTITUDE TOWARDS E-LEARNING

2.11.1. Students' experiences and attitudes towards E-learning

Studies have been conducted in the South African context amongst non-disabled students in some ODL universities. For example, Geduld (2013) found that students in ODL universities experienced challenges with time management, coping with personal stress, deficient information technology skills and proficiency in English as the instructional language. Geduld (2013) also noted that despite universities offering favourable learning environments, not all participants meet all the requirements for effective ODL. It is therefore important to identify students who do not have experience with distance learning because they are at greater risk of performing poorly in their studies (Wood, 1996). However, Ngubane-Mokiwa (2013) concludes that it is the universities which do not offer favourable learning environments that affect students with disabilities; and these included difficulty with braille scientific signs, inaccessibility of graphic learning, software incompatibility and timely access to electronic materials

2.11.2. Educators' experiences and attitudes towards E-learning

Educators have a critical part in teaching and learning in ODeL. Macharia and Pelser (2012) concluded that the availability and access to computing technology, the quality and character of the institution's leaders, play an essential role to the success in e-Learning

diffusion. However, academics have been reported to experience challenges regarding the use and success of e-learning in an academic environment (Islam, Beer & Slack, 2015). These challenges include among others, students' learning styles and culture, pedagogical e-learning, technology, technical training, and time management challenges (Islam et al., 2015). Therefore, support for students and those serving them is important for providing effective inclusive education to all students. Research shows that there is a relationship between educators' development as e-educators and students' academic persistence (Leu & Ginsburg, 2011; Bissaker, 2001).

Educators in two Technical and Vocational Education and Training colleges were reported to experience challenges in providing support to students with disabilities due to lack of knowledge, teaching approaches and resources (Ngubane-Mokiwa & Khoza, 2016). Some educators in another South African university distanced themselves from the responsibility of providing support to students with disabilities (Van Jaarsveldt & Ndeya-Ndereya, 2015). There is evidence of educators' attitudes, organisational inertia and increased staff resistance in playing a major role in the resistance and rejection of the use of learning technologies in universities of higher learning (Gibbs & Gosper, 2006). Educators therefore experience challenges when integrating e-learning into the curriculum, limited cooperation among departments, software developers and facilitators as a result of their perception of learning technologies (Childs et al., 2005).

Educator's attitudes influence educational settings and are important for the successful implementation of inclusion policies (Martin, 2011; Muscio, 2010; Yuen & Westwood, 2001). Moreover, Shevlin et al. (2004) describe a positive and informed educators' attitude to be important in ensuring that students gain access and receive equitable treatment. It is therefore essential to explore and understand the attitudes of service educators towards technologically enhanced materials. Yuen & Westwood, 2001 notes that some educators in inclusive programmes were found to hold strong negative attitudes about inclusion (Yuen & Westwood, 2001). Furthermore, educational environment-related variables, such as the availability of physical and human support, were consistently found to be associated with attitudes to inclusion (Muscio, 2010).

There is a need for flexibility in the curriculum of higher education institutions (Howe, 2011; Smith, 2004). A number of educators indicated that they experience challenges in actively engaging in inclusive practices in their curriculum (Howe, 2011). Teachers highlighted specific activities being more appropriate for inclusion. Smith (2004) warns that students with disabilities are often expected to integrate into the curriculum, rather than adjustments being made to ensure the inclusion of these students.

Some academics were found to have a deficit in professional preparation (Lieberman, Houston-Wilson & Kozub, 2002). It was discovered that they had not received pre-service training on how to include students with disabilities in their curriculum (Fejgin, Talmor & Erlich, 2005). Others were found to be underprepared to incorporate students with disabilities into the class (Lieberman et al; 2002). This consequently means that there is a need for the curriculum to be adapted in order to meet the needs of online educators.

2.11.3. Management and E-learning

There is research evidence which suggests that the implementation of integrated education policies is mainly dependent on management (Bailey, 2004; Praisner, 2003; Riehl, 2000; Ryan, 2003, Sharma & Desai, 2008). The attitude held by managements' is believed to be important in facilitating inclusive practices because their values and attitudes are aligned to their decisions in creating and developing an inclusive environment. As a result, students might be denied access to the curriculum through managements' negative attitudes towards access technology.

2.11.4. Educators' experiences with myUnisa

Student support in distance learning is developed to address the exclusion challenges with which students are faced and is important for academic persistence (Arko-Achemfuor, 2013). UNISA introduced (myUnisa) with the aim of bridging the gap between students and educators for effective student support (Mbatha & Naidoo, 2010; Quan-Baffour, 2013). It is important to understand the nature of the communication between educators and students in order to improve support processes when using technologies (Butcher, 2003). Educators encountered challenges with myUnisa due to limited computer knowledge and skills (Cant & Bothma, 2011; Coetzee & Potgieter, 2012; Nyoni, 2013;

Quan-Baffour, 2013). Moreover, Nyoni (2013) reported that some educators were not aware what undergirds ODL approaches, teaching and learning tools. The challenges educators experience when using this learning management system could also be linked to their perception of it. For example, Coetzee and Potgieter (2012) established that educators handling the various teaching functions on myUnisa are perceived, adopted and utilised these differently. Educators who experienced a fear of technology perceived teaching through the learning management system to be a mystery and impossible (Quan-Baffour, 2013). Quan-Baffour (2013) undertook a study at Unisa Where short training sessions were offered to however, these were inadequate technology.

Other educators were found not to have the patience or the drive in managing learning management systems (Cant & Bothma, 2011; Christie & Jurado, 2009). Cant and Bothma (2011) also found that some educators made little use of such systems because they had little experience to the learning management system and see no value in using the learning management system. Morgan (2003) reported that members of faculty did not optimally use the learning management systems as they felt that the technology was complex and to use. Other findings suggest that although educators are reluctant, unwilling or unable to use systems of this kind, the educators acknowledge the benefit they bring in supporting the student (Bothma & Cant, 2011).

Learning management systems continue to fail, have partially failed or have failed completely in South Africa (Kekwaletswe & Ng'ambi, 2006). These systems play a role in the challenges for a number of distance learning institutions based on the industrial model, which aims to educate the young for a working life of 40, or even more years, yet in the 21st Century much of what they taught will be out-of-date within a few years, if it is not already (Bates, 1998). Therefore, skilled educators are required for successful teaching and learning using technology (Bates, 1998).

However, academics who lacked basic computer skills at UNISA found some ways and means of overcoming the technological obstacles in order to improve their open distance teaching practice (Quan-Baffour, 2013). Nevertheless, it is worth noting that although UNISA offers e-training to educators periodically, but this seems to be inadequate (Nyoni,

2013). Learning management systems have the potential to provide the students with universal support when their context and background is considered in their design and implementation (Kekwaletswe, 2012; Phahlane & Kekwaletswe, 2012).

2.12. E-learning and Research Gaps

Although there is abundant research on the experiences of students with disabilities at universities, there is a scarcity of research addressing issues such as curriculum delivery, alternate assessment procedures, progress and success in university (Boxall, Carson & Docherty, 2004). Students use various ways to learn and they express their understanding differently (Perkins & Blythe, 1994). However, curriculum delivery and assessment practices do not always take account of this.

2.13 CONCLUSION

The chapter used the three theoretical frameworks in this study; Social Choice theory, Transactional Distance Theory and Universal Design for Learning with argument on how these theories affect policy in design and delivery on an inclusive ODeL curriculum. This chapter has shown that in order for inclusive learning to take place, educational practices must be student centred (UNESCO, 2016). This means that educators must first identify their students' academics, social and cultural levels in order to determine how best to facilitate learning. Second, educational teams need to identify what types of support systems are needed to provide curriculum content for all students to learn (Downing & Peckham-Hardin, 2007). The argument of this thesis has further showed that a well-designed and conducted curriculum will help equip academics in online settings with the required skills to include and accommodate all students.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. INTRODUCTION

The Literature review revealed the value of a well-planned and presented curriculum in helping to equip academics in online settings with the skills required. However, some studies revealed that university lecturers need to arrive at a clear idea of exactly what curriculum content will be important for all students to learn (Downing & Peckham-Hardin, 2007). In this chapter, the research methodology used in determining key policies and learning delivery strategies that guide ODeL academics when designing an inclusive curriculum, is discussed.

This chapter presents the methodology that directed the enquiry, the qualitative research approach, population, sample, data collection through interviews, focus groups and document analysis, instrumentation and conclusion. The research question was framed as follows after elaborating the problem statement: "What are the key policies and learning delivery strategies that guide the ODeL academics when designing an inclusive curriculum?" The researcher was guided by the following four research objectives during data collection:

- What are the key policies that guide inclusive curriculum design in the ODeL setting?
- What inclusive design strategies do academics use in the ODeL setting?
- What inclusive learning delivery strategies do academics use in the ODeL setting?
- How can curriculum design and delivery be more inclusive in the ODeL setting?

3.2 RESEARCH PARADIGM

The research process consists of three major dimensions: ontology, epistemology and methodology. A paradigm is an all-encompassing system of practice and thinking that defines the nature of inquiry along these three dimensions (Sim & Van Loon, 2004).

3.2.1 Ontological assumptions

Reality can be explored, and constructed, through human interactions, and meaningful actions. This could be seen through multiple realities how policies are enabling an inclusive ODeL curriculum at UNISA. Creswell & Potch (2017) note that the ontological issues relate to discovering how people make sense of their social worlds in the natural setting by means of daily routines, conversations and writings while interacting with others around them. They add that many social realities exist due to varying human factors, including people's knowledge, views, interpretations and experiences. Therefore a qualitative type of research is required which is supported by understanding that reality and truth are a biased social construct (McMillan & Schumacher, 2010:54).

When I joined UNISA and was confronted by learning barriers, the view was that it was all due to lack of skills as regards inclusion among academics. During data collection from the academics, curriculum developers and accessibility experts, I listened to their stories, observed their reactions and then made meaning out of it (Nieuwenhuis, 2010:52). Analysing the stories and publishing the thesis will contribute to the body of learning towards improving the design and delivery experiences of academics and curriculum developers (Cohen, Manion & Morrison, 2008).

3.2.2 Epistemological assumption

Society and events are understood through the mental processes of interpretation that are influenced by interaction with social contexts. Those active in the research process socially construct knowledge by experiencing the real life or natural settings (Habermas, 2005:7). The participants were conscientized on the research objectives and demonstrated their willingness to be part of a transformation agenda. The dimensions of rhetoric, tradition, power, objectivity, reflexivity and reality were a more personal and interactive mode of data collection.

A critical paradigm informed this study, which according to Smith (2000) strives towards empowerment of people discriminated against, on their own terms During the data collection, I ensured that all participants understood the research objectives, felt comfortable, encouraged them and saw themselves as part of shaping transformation.

3.2.3 Methodological assumptions

This study worked with academics, curriculum developers and staff involved in making curricula inclusive to discover means by which their views could be captured. Their experiences and perspectives were captured, articulating their contribution on matters that impact them. By conducting a qualitative study, meant getting as close as possible to the participants being studied. This meant being open and interacting freely with the participants so that they could be relaxed and share their stories Creswell (2013).

3.3 SIX DIMENSIONS OF CRITICALITY

As prescribed by Boje and Al Arkoubi (2009), in this section the key elements of critical paradigm for this study: objectivity, tradition, power, reflexivity and reality, rhetoric.

3.3.1 Rhetoric

Rhetoric is being able to analyse the other people's use of language expressions, arguments and other symbolic meanings in a more coherent manner. Terminology on disability has been used in a manner that disempowers and demeans students with disabilities thereby perpetuating stereotyping which promotes. This view is drawn from the medical model of disability which regarded persons with disabilities as deficient, sick and needed full support. In order to counter this tendency, I approached the study from a human rights perspective, using respectful language when referring to the students with disabilities. The study also promotes a discourse towards empowerment (Boje & Al Arkoubi, 2009).

3.3.2 Tradition

Cultural practices and Tradition has been used against marginalised populations such as women and vulnerable groups. Norms and practices which dictate institutional traditions are not easy to overlook. I have positioned myself as a participant-observer and have utilised unstructured interviews to accommodate free responses (Boje & Al Arkoubi, 2009).

3.3.3 Power

The dominant few has exploited and used power to benefit; critical in this paradigm refers to being able to challenge commonly held views, or accepting matters on face value. During my data collection to shape the narrative of online learning barriers, I provided the space to demystify online learning experiences (Boje & Al Arkoubi, 2009:110).

3.3.4 Objectivity

Objectivity paradigm calls for understanding that development of knowledge is subject to different interpretations. During data collection, I maintained objectivity without preconceived ideas. I acknowledge all experience encountered especially those constructed within a specific context with the staff of UNISA (Boje & Al Arkoubi, 2009:110).

3.3.5 Reflexivity

Reflexivity paradigm demands self-critic, and interaction at personal and collective levels. During my study, there were interactions with UNISA staff and at the same time observed these interactions, which alerted me to my own biases. As the researcher, I recorded these perceptions of interactions in memo form in my "notepad" folder. These helped me in the administration of data collected (Boje & Al Arkoubi, 2009:110).

3.3.6 Reality

Reality domain calls for questioning the truth and the real learning experience of the participants. During the data collection process, I maintained focus on the research problem, question and theoretical framework as a guide. (Boje & Al Arkoubi, 2009:110).

3.4   RESEARCH APPROACH

Qualitative approach has been used in this study. The qualitative research approach describes their life-world from the point of view of the people who participate. By so doing, the said approach "seeks to contribute to a better understanding of social realities and to draw attention to processes, meaning patterns and structural features" (Flick, Kardorff & Steinke, 2002: 1). Additionally, Miller, Dingwall & Murphy (2003: 325) opine that "qualitative design is a useful tool for addressing many of the problems and dilemmas facing

contemporary organizational stakeholders." In support of the above assertions, Imenda and Muyangwa (2006:56) add that this type of research "assumes that there are multiple realities which are socially constructed through individual and collective definitions of the situation." Therefore, the researcher has chosen to use the qualitative research approach in order to explore and acquire in-depth understanding.

The qualitative research approach was picked as it would enable the collection of qualitative data to discover the natural flow of events and processes concerning key policies and learning delivery strategies at UNISA and their interpretation (Henning et al., 2004). Trochim and Donnelly (2008) posit that a qualitative research approach facilitates the gathering of accurate data which will give an in depth understanding of the ODeL processes.

Qualitative research approach is both inductive and descriptive. It is inductive as data is first observed in a particular situation and then generalisation is developed between the observed objects. Following the observations and intuitive understandings, data is collected to build concepts, hypotheses or theories. This approach is also descriptive, since the researcher is interested in the process, meaning and understanding expressed through words and pictures, and not in numbers (Creswell & Potch, 2017).

3.5   RESEARCH DESIGN

According to Mertens (2005), "phenomenological research, as a qualitative research approach, focuses on the subjective experiences of research participants, seeking their perceptions and the meanings they attach to a phenomenon or experience." Forinash and Grock (2004) explain that in phenomenology, researchers can investigate the phenomena as a whole block rather than fragmented parts while Groenewald (2004) put emphasis on not only just describing the phenomenon accurately, but avoiding being objective and using any pre-conceived perspectives and maintaining. The phenomenologist school of thought, therefore puts focus on understanding the Social and psychological phenomena perspectives of the participants.

3.5.1 Giorgi's phenomenology

Giorgi's phenomenological approach is grounded on the principle that the researcher must be true to the facts as they are presented and what they reveal themselves (Giorgi, 2009). Giorgi therefore developed a methodology for data analysis. His methodology targeted accurate capturing of the detailed experiences and the psychological meanings. In order to do so, Giorgi believes that the researcher should be able to study and discover how individuals describe their experiences in the contexts where they live (De Castro, 2003).

Giorgi developed his method building on his philosopher Merleau Ponty's argument ''phenomenology is best understood in the light of a phenomenological method which is descriptive and qualitative, has elements of reduction, searches for essences and is focused on intentionality'' (Giorgi & Giorgi, 2003; Giorgi, 1985). Giorgi further posits that in descriptive phenomenology there must be bracketing, analysing and description of data. Through this the researcher becomes well acquainted with the data and can break down the descriptions into component parts such as clusters of meaning units therefore arriving at a conclusion.

Giorgi's method was used due to the following:

- Descriptions of experiences are the major emphasis which the study wants to investigate.
- It consists of clear steps
- It is flexible to all samples of criteria
- Tried and tested by researchers
- It is built on earlier approaches of analysis (De Castro, 2003)
- It alerts one to data contamination.

In qualitative methodology, a case study design was used. This design refers to the detailed analysis of a single or small number of units which may include a single person, a group of people, an organisation or an institution. Imenda and Muyangwa (2006); Speziale, Streubert and Carpenter (2011); de Vos, Strydom, Fouche and Delport (2011) and Creswell (2014), in support of this, explain a case study as a design which develops an in-depth analysis of a case, often a programme, event, activity and process .

3.6 SAMPLING

3.6.1. Population Sample

The population of this study was made up of UNISA permanent staff: five UNISA academics (lecturers/professors) from the departments of Languages, Mathematics, Inclusive Education, Computer Science, and Communication, three members of the Department of Curriculum and Learning Development (DCLD) responsible for helping lecturers to develop educationally sound learning experiences and environments for UNISA students and two staff members from the Advocacy and Resource Centre for Students with Disabilities (ARCSWiD) as well as two UNISA departmental officials responsible for ODeL design, websites and accessibility.

3.6.2. Sampling procedure and sample

In the selection of participants for the study, purposive sampling procedure was employed because of the design of the study, which was specifically aimed towards a particular group of people. To answer the research question, the study targeted a sample of academics and staff responsible for developing inclusive, educationally sound learning experiences at UNISA. Hence, the main aim was to establish their impressions of policy in the design and delivery of an inclusive curriculum in ODeL University.

Table 3.1: List of Participants in the Study 1

	Participants	Number
1	UNISA academics (lecturers/professors	**5**
2	**UNISA Department of Curriculum and Learning Development (DCLD)**	**3**
3	UNISA Advocacy and Resource Centre for Students with Disabilities (ARCSWiD)	**2**
4	**UNISA departmental officials responsible for support of ODeL design and websites accessibility**	**2**

Table 3.2: List of academics in the stud y 1

Participant	Department	Exposures
Male Professor	Department of Languages	Special education experiences and had supervised Masters and PhD students with disabilities
Female Lecturer	Department of Communication	Had lectured and monitored students with disabilities, including assessment of transcripts
Male Senior Lecturer	Department of Mathematics	Had lectured and monitored students with disabilities, including assessment of transcripts
Female Senior Lecturer	Department of Computer Science	Had lectured and monitored many students with disabilities, including assessment of transcripts
Male Senior Lecturer	Department of Inclusive Education	Inclusive education lecturer with extensive experience on disability policy processes and had supervised students with disabilities

Table 3.3: List of members of the Department of Curriculum and Learning Development (DCLD) 1

Participant	Department	Exposures
3 Female Manager: Curriculum Developer in curriculum development	Senior curriculum developer	She Was information rich due to her position and interaction with UNISA policy makers; Was active in drafting of a model ODeL curriculum
Female Curriculum and policy monitor	Curriculum Development	She was experienced, linked policy and curriculum delivery, and tracked curriculum performance
Male Curriculum developer	Curriculum designer	He was new in the development of inclusive modules

Table 3.4: List of staff members from ARSWID1

Participant	Department	Exposures
2 Male ARCSWiD officer	ARCSWiD student with disability relations	The officer is the first group of calling point for students with disabilities at UNISA, coordinating registration, bursaries, registering impairments and needs, facilitating accessibility support, and communicating with departments and lecturers
Female ARCSWiD officer	ARCSWiD students relations	The officer coordinates deaf students in contacting departments and lecturers, trained staff on basic sign language

Table 3.5: List of UNISA departmental officials responsible for support of ODel design and websites accessibility 1

Participant	Department	Exposures
2 Male Accessibility support officer	Coordinator of accessibility technology and students materials transcription	Very knowledgeable, accessibility expert, and experienced on access technology, design of inclusive websites, supported curriculum designers and lecturers on inclusion;
Female accessibility curriculum developer	Science subjects Curriculum developer	She was inclusive curriculum expert, was very experienced in design of curriculum, was keen on designing modules which were inclusive of students with disability, and had supervised students with disabilities

3.7. DATA COLLECTION INSTRUMENTS AND PROCEDURES

The methodology entailed aspects of triangulation. The notion of triangulation in this study involved the practice of viewing issues from different angles by using several data collection techniques. McMillan and Schumacher (2010) affirm that different strategies may yield different insights about a topic of interest and thus affect the credibility of findings. Additionally, De Vos, et al. (2011) emphasise that the main advantage of triangulation is that each type of data can be collected and analysed separately and independently. Hence, three methods were employed to measure experiences regarding policies, learning design and delivery strategies. Those used were: semi structured interviews, focus group interview and document analysis.

3.7.1 Semi structured Interviews (Appendix C1, C2, C3)

To guarantee a good semi structured interview in a phenomenological enquiry, capturing the description of experiences the participant has lived through is essential. This can be attained through face to face interview which is often longer and information reached (Englander, 2012). The study chose this method to enable collection of rich description from the participants, therefore discovering the meanings participants attach to their experiences.

Permission was sought and received from participants to audio-record the interview so as to assist the researcher to collect data adequately. Interviews were held in a formal conversation (Henning et al., 2004) and brought participant's feelings, convictions, experiences, and beliefs about policies and design of learning strategies, and inclusive curriculum. Questions asked during the interview covered:

(a) there was opening question; (b) bridging questions; (c) thematic questions; (d) follow up questions to gather additional data or clarification; and (e)rounding up and closing questions to summarise the interview (Krueger & Casey, 2009).

3.7.2 Focus group interview (Appendix I)

Focus group interview was composed of four staff members with representation from each group which included 1 academic, 1 DCLD, 1 ARCSWID, and 1 departmental official responsible for support of ODeL design. This was used to further get information on perceptions, knowledge, policy utilization and collaboration in design and delivery of inclusive ODeL curriculum. The main aim of the focus group interview was to further establish whether or not UNISA policies were sufficiently supportive in design and delivery of an ODeL curriculum that includes students with disabilities. Semi structured interviews were used to gather in-depth information about these staff members' perceptions of UNISA policies in ensuring an inclusive ODeL curriculum.

Permission was sought and received from the focus group participants to tape and record the interview so as to assist the researcher to collect data adequately. This interview was conducted towards the end of data collections after majority of staff from academics, DCLD, ARCSWID and official responsible for support of ODeL design had

been interviewed. Hence, de Vos, Strydon, Fouche and Delport (2011) define "focus group interview" as an organised discussion in a neutral and conducive atmosphere. The themes of the focus group interviews were the following:

- Ways UNISA policies have supported the design and delivery of ODeL education for students with disabilities
- Improving policy to enhance design and delivery of inclusive ODeL for students with disabilities
- Coping of such students with the delivery of an inclusive ODeL curriculum at UNISA
- Challenges academics and staff faced in supporting the design and delivery of inclusive curricula in an ODeL system
- Academics and DCLD/ARCSWiD work together on design and delivery of ODeL curriculum issues at UNISA;
- Kinds of support required which would help the design and delivery of an inclusive curriculum in the ODeL system at UNISA.

3.7.3 Document analysis (Appendix L)

The documents which were analysed relating to policies in design and delivery of inclusive curriculum included the following:

- UNISA transformation policy
- UNISA disability policy and strategy
- Draft model of an inclusive ODeL curriculum.

In this regard, Creswell (2014) affirms that documents are vital materials for the retrieval of data because they also represent data to which participants have given attention. The UNISA transformation policy was picked as it give expressed institutional commitment to realise diversity, while the disability strategy grounds it operationalization with clear implementation roadmap for disability inclusion in UNISA.

3.8. DATA ANALYSIS

Using Giorgi's phenomenal approach, interviews were digitally recorded, transcribed directly, and listened through to get a general sense of what the participants were saying. The data was then transcribed into meaning units, grouped into clusters then synthesised into general description Giorgi's (2003)

3.8.1 The process of data analysis

Twelve participants provided their experiences and identified as P1 to P12, P1 representing the first to be interviewed and P12 the twelfth and last to be interviewed. Giorgi's phenomenology was adapted by taking into consideration the four major qualities. ''Phenomenology is descriptive; it makes use of reduction, searches for essences, and focuses on intentionality'' (Giorgi, 1985). During the interview, the face value of experience as given by the respondent was picked while the context in which the descriptions were noted.

Secondly, phenomenological reduction was made by bracketing all his biases, notions and prejudices not to contaminate the quality of the data (Giorgi, 1985).

Thirdly, in respect to essences, focus was on the characteristics that cannot change of the studied phenomenon and this starts when there is participants own consciousness and awareness (Giorgi, 1985; De Castro, 2003).

Fourthly, intentionality "refers to the intentional act by which every human being is related to the world and objects" (De Castro, 2003, p. 50) and is embedded in the human consciousness. This marks the spirit of consciousness as it relates with our interaction with the reality and world view.

Giorgi (2009) recommending that the following steps should be followed during analysi. These include the following:

a)   This involved listening to the recordings several times to get acquainted with the data in accordance to the phenomenological reduction. Then the data was transcribed verbatim thereby unveiling the meaning of the experiences from the respondent (De Castro, 2003; Taylor-Powell, 2003).

The research has been presented so that readers of this study can trail the process. The data from P1 has been used to illustrate how the data was processed in this study while other transcripts are provided in the appendix.

The respondent identified as P1 was a man in his early 50s. He is a Professor in languages, had long experience in teacher education and currently works as a supervisor of Master's and PhD students at the University of South Africa. He has worked in various institutions, through different educational regimes, both during the racially constructed apartheid times and post 1994. He saw the merger of the different colleges to establish the new UNISA and has served in different leadership positions. At the time of the interview, P1 had supervised two students with disabilities.

During my interview with P1, he emerged as a sincere person keen to provide the information I required. He was very knowledgeable and direct and expressed himself without hesitation. While sharing his experiences, P1 was exalted for having supervised a Master's and a PhD student with disabilities. But similarly, his frustration was evident with the way policies were being implemented in ensuring there was an inclusive ODeL curriculum at UNISA. But, worth noting, he was ready to offer recommendations regarding solutions to address identified weaknesses. His positive stories about the UNISA policies and how students with disabilities have studied different programmes, with some returning as lecturers and staff were encouraging. His different examples of stories and barriers that cause ODeL not to be inclusive and the inadequate capacity of staff made him a model participant in this study.

b)   Breaking the whole description into meaning units: The description was divided into

meaning units. The respondents' narrative was broken into sub divisions so as to make the data manageable. In order to identify the sub divided units, they were further sub divided by considering the different key terms.

c)   Re-grouping meaning units: Grouping of ideas was performed and 14 questions outlined. Next, the responses to these 14 questions were grouped according to the similarity of ideas in the responses. Through different grouping, thorough description of each respondent's experience was developed and therefore possible to identify the psychological intentions in the descriptions of policies (Giorgi & Giorgi, 2003, 1989; Ratner, 2001).

d)   Transforming the meaning units: During this phase, the meaning units were then transformed to enable each unit to be analysed by responding to how it was related to the research questions.

e)   Data Synthesis and integration of researcher's insight: In the final step, using data from the 12 respondents, general experiences and perceptions were documented. (Giorgi & Giorgi, 2003; Giorgi, 2009).

3.9. ETHICAL AND SAFETY CONSIDERATIONS
3.9.1. Ethical considerations
(Kumar, 2005) stated that ''Ethics or ethical considerations are rules or principles of conduct that govern a professional group'' The study was carried out in line with the ethical policy of UNISA.

I have observed the University Policy and procedures on Research Ethics and its policy and procedures on managing and preventing acts of plagiarism and I understand their content. The supervisor and I have considered and discussed the ethical issues that arise from this research. The ethics and research committee (ERC) received and approved my ethical clearance application as required by the ERC. The application clearly specified the research topic, objectives and expected outcomes, inclusion or exclusion criteria,

methodology, research design and full description of research dissemination of findings and results.

As found in in Appendix 3, an ethical clearance certificate was issued to the researcher, enabling him to conduct the full research. In conducting research, the researcher adhered to the UNISA policy and ethical principles as enshrined in of the Belmont report.

3.9.2 Obtaining respondents' informed consent (respect to persons)

Kumar (2005: 212) observes that "it is considered unethical to collect information without the knowledge of respondents, and their expressed willingness and informed consent". The researcher explained to the respondents the objective of the study and the kind of information that was being solicited. Each of the participants received a letter explaining the nature of data required from them. Permission was sought from participants to be interviewed and tape-recorded. Participants were assured of the anonymity and confidentiality of the data to be collected in the letter. Participants were assured that the data collected will only be used for the purpose stated in the letter. Protection of the identity of participants by omitting their names in the research report to ensure privacy and anonymity. The participants were also assured that the collected data would be kept under lock and key (Tobin, 2009).

Additionally aspects that were also explained to the respondents included the following:
• Benefits accruing out of Investigation
• Discretion of respondents to refuse to withdraw from the study
• Procedures of Research including tape recording
• Environment and interview duration
• The administrative processing of participation

Because the research includes individual interviews and the focus group interviews which were recorded using a voice recorder, the recording data will be stored safely at UNISA's Faculty of Education for a period of three to five years, and thereafter destroyed. All observation and interview schedule notes will also be concealed and

and stored in secure place for the period of the study for three to five years and subsequently destroyed.

3.10. CONCLUSION

The methodology used in this study is elaborated in this chapter. A qualitative research approach was utilised in identifying experiences with the policies and design of learning strategies. A semi-structured interview was employed as the main data collection instrument. The data analysis used the phenomenology approach; data reduction, organisation and interpretation. Reliability and validity were also discussed. Also applied were the strategies of transferability, credibility, dependability, conformability and authenticity to ensure validity and reliability of the findings. The ethical considerations using the Belmont report guided the researcher. The next chapter focuses on data analysis, interpretation and presentation techniques employed by the study.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1. INTRODUCTION

Covered in this chapter are data analysis, interpretation and presentation techniques employed by the study. Finally, the data establishes perspectives of the participants on their concerns and experiences regarding the policies and design of inclusive ODeL learning.

4.2. THE PROCESS OF DATA ANALYSIS

Twelve participants provided data which was analysed in this chapter, codenamed P1 to P12 as mentioned. A focus group interview was also conducted and is represented by codename P13. The interviews were digitally recorded, transcribed directly and then analysed. The process described below illustrates Giorgi's approach which was used by the researcher.

4.3. WALKING THROUGH THE DATA

4.3.1. Step 1: Getting to know the data

Analysis started by listening to the recordings several times, then transcribing them verbatim. To facilitate ease of identification of participants, these were coded to conceal their identities as suggested by de Jong (2006) and in line with ethical considerations, which emphasised anonymity of participants. They were basically coded into the following groups: academics, curriculum developers and staff. Table 4.1 below constitutes an example of the questions used to collect data from the participants interviewed, code-named P1 to P12.

Table 4.1: Examples of the questions used to collect data1

Main Research Question	Data Tool	Data Obtained
Ways UNISA policies have supported the design and delivery of ODeL education for students with disabilities	Semi structured interview guide Document analysis	Disability Strategy developed with dedicated unit to coordinate
How to improve policy to enhance design and delivery of inclusive ODeL for students with disabilities	Semi structured interview guide	Development of inclusive curriculum tracking system
Challenges which academics and staff faced in supporting the design and delivery of inclusive curriculum	Semi structured interview guide	Awareness, sufficient personnel and inclusive design skills
How academics and DCLD / ARCSWiD work together on design and delivery of ODeL curriculum issues at UNISA	Semi structured interview guide	Limited collaboration and linkages
Kinds of support which would help the design and delivery of an inclusive curriculum in ODeL system at UNISA	Semi structured interview guide	Broad based programmes of training, compliance management system and greater advocacy

The researcher then read the transcripts while noting impressions of what transpired. This process enabled him to obtain a global picture of all the transcripts and to understand the meaning of the experience from the participants' viewpoints (De Castro, 2003; Taylor-Powell, 2003). To ensure that the researcher viewed the experience through the participants' lenses, he had to assume what Husserl (2008) calls a "phenomenological attitude". This meant that he bracketed his personal views and knowledge about policies in design and delivery of the ODeL curriculum. After having a broad view of data, the research was able to eliminate some theoretical and experiential assumptions as well as desisting from questioning the data's validity (De Castro, 2003; Husserl, 2001, 2008). This phase is referred to as phenomenological as it was understanding the participants' language and their whole experience (Giorgi 1985)

Table 4.2: Biographical information of some of the participants 1

Participant Code Name	Designation	**Number of years in service**	**Gender**	Area **of service**	Department
P1	Professor	Over 20 years	Male	Experienced and had supervised Masters and PhD students with disabilities	Department of Languages
P2	Lecturer	8	Female	Had lectured and monitored students with disabilities, including assessment of	Department of Communications

				transcripts	
P3	Senior Lecturer	10	Male	Had lectured and monitored students with disabilities, including assessment of transcripts	Department of Mathematics
P4	Senior Lecturer	10	Female	Had lectured and monitored many students with disabilities, including assessment of transcripts	Department of Computer Science
P5	Senior Lecturer	Over 15	Male	A lecturer with disability and had supervised students with disabilities	Department of Inclusive education
P6	Head of department	Over 20	Female	Senior Manager and was information rich due to her position and interaction with	Department of Curriculum and Learning Development (DCLD)

				UNISA policy makers	
P7	Curriculum and policy monitor	Over 25	Female	Experienced, linked policy and curriculum delivery, and tracked curriculum performance	DCLD
P8	Curriculum developer	10	Male	Keen in development of inclusive modules	DCLD
P9	Student with disability relations	Over 15	Male	Officer was the first call for students with disabilities at UNISA, coordinating registration, bursaries, registering impairments and needs, facilitating accessibility support, and communicating with	ARCSWID

				departments	
P10	Deaf students relations	8	Female	Sign language interpreter, supported deaf students in contacting departments and lecturers, she trained staff on basic sign language	ARCSWID
P11	Coordinator of accessibility technology and students materials transcription	15	Male	Very knowledgeable and experienced on access technology, design of inclusive websites, supported curriculum designers and lecturers on inclusion; He was staff with disability	ARCSWID

P12	accessibility curriculum developer	Over 20	Female	very experienced in design of curriculum, was keen on designing modules inclusive of students with disability, supervised students with disabilities, she was staff with disability	Science subjects – DCLD

4.3.2. Step 2: Identifying meaning units

In this section, the data obtained through interviews and focus group discussions were processed to develop themes and sub themes which were responding to the research questions as they appeared on the interview guides.

At this stage, the meaning units, were grouped by looking at the different key terms, , values, aspects and attitudes that the participants expressed in line with Giorgi's model of data analysis. However, certain categories that emerged were deemed to be very important by the researcher to assist in developing some of the issues under discussion. Transcribed text data were segmented into codes, which were then tallied into some themes. The developed themes were formulated from the research questions and interview questions and are listed in section 4.4.

The emerging challenges were formulating names for the main themes that captured what the clusters described and experiences communicated in the interview. In response, the process of naming theme was flexible to allow theme adjustment.

4.4: Themes extracted from transcripts

4.4.1. Theme 1: How the policy is influencing design and delivery of inclusive curriculum in UNISA

Sub-Themes:

- Interaction with students with disabilities

- Interlink between policies and training in an integrated approach

- Challenges those policies face in responding to inclusive design and delivery of curriculum for students with disabilities

4.4.2. Theme 2: UNISA core mandate and Inclusive curriculum

Sub-Themes:

- UNISA's initiative to include students with disabilities in the designing of strategy

- Impression on delivering of inclusive policies which recognise students with disabilities

- Support resources in response to inclusive design and delivery

- Challenges as regards the full cycle of the policy.

4.4.3. Theme 3: Inter-departmental linkage for inclusive curriculum

Sub-Themes:

- Proximal relation between ARCSWiD, academics and teaching and learning

4.4.4. Theme 4: Challenges in the inclusion of students with disabilities

Sub-Themes:

- Professional development, focusing on academics and curriculum delivery experts, with respect to including students with disabilities

- Better ways of ensuring policies that support design and delivery of an inclusive curriculum

4.4.5. Theme 5: Strengthening inclusion of students with disabilities

Sub-Themes:

- Recommendation to enhance experience of students with disabilities at UNISA

- Priorities to create change in UNISA

4.5. Step 3: Re-grouping meaning units

Step 3 was a phase where grouping of ideas was performed and relevant responses captured. A detailed description of each participants' experience was also developed on policies in design and delivery of ODeL curriculum, therefore enabling the unpacking of psychological intentions in the description (Giorgi & Giorgi, 2003, 1989; Ratner, 2001).

4.5.1. Theme 1: How the policy is influencing design and delivery of an inclusive curriculum in UNISA

Academics, curriculum developers and staff identified a number of factors that influenced the design and delivery of an inclusive ODeL curriculum at UNISA. Most of these factors were similar to those observed during the literature review. The major factor identified by the academics was the existence of strategy and plans.

The study established that among the respondents, where there was interaction with students with disabilities, this occurred through: Regular contact, incidental encounter, faculty encounter, social encounter; although some such students had no interaction.

The Academic Support Officer had regular contact with students. A staff member of curriculum development [P8] had an incidental encounter with a student and was inspired by his story. Now he is developing an interest in inclusion. Similarly, a lecturer [P4] noted that his interest was stimulated through collegial interaction. The interactions were further grounded when an ARCSWiD staff member [P9] noted that:

> *"We hold workshops to lecturers to make curriculum accessible."*

A professor and PhD promoter [P1] added that he was a promoter for a SwD and had regular communication, while two other lecturers are Master's and PhD supervisors for some SwD. An ICT lecturer noted that he had come across SwD in the faculty when marking scripts. One member of staff was in daily contact as a sign language interpreter for the deaf.

However one lecturer was of a different opinion; [P5] added,

> *"In my programmes, I have no interaction with SwD."*

Another participant seemed to concur that not every staff member was in contact with students with disabilities: the curriculum developer with disability [P12] said:

> *"I lacked interaction with other SwD".*

4.5.1.1. Sub-theme: Implementation of policy

There was unanimous agreement by all respondents which included the curriculum developer with disability, the PhD promoter/ professor, the sign language interpreter and the practitioner concerning UNISA's initiative to include SwD in the designing of strategy. One staff member [P9] noted:

> *"Inclusion of disability was being conducted through Strategy and Planning of the University".*

While another [P5], stated:

> *"I see there is allocation of resources for meeting the needs for students with disabilities".*

UNISA's SwD enrolment manager acknowledged that ARCSWiD had representatives in the Senate Tuition and Learning Committees and was therefore promoting inclusion throughout the institution. A curriculum developer [P7] highlighted that:

> *"…by employing people with disabilities in departments including some after graduation, was creating opportunity".*

A staff member of curriculum development [P6] noted:

> *"UNISA management support disability, starting from Council. Yes, the committee has it as agenda on monthly meetings".*

This opinion was reiterated by one experienced curriculum developer [P7] when she added:

> *"We have a policy on teaching effectiveness, to foreground academicians as teachers".*

However, some were only partially positive about UNISA's initiative to include SwD in the designing of strategy. Many lecturers similarly believed that UNISA's inclusive initiative in this regard faced challenges. A curriculum developer with disability [P12] said:

> *"Theoretically there are policies everywhere but practically there is no enforcement".*

But a concerned curriculum developer [P6] suggested some management activism:

> *"We should have policy enforcement guidelines and penalties for not implementing policies".*

4.5.2. Theme 2: UNISA core mandate and inclusive curriculum

Here participants argued that: Policies are insubstantial, policies are cosmetic, and there are policy pretences, policy non-inclusiveness and policy diversities.

The general view is summarised by words of a member of staff [P9]:

> *"Policies aren't sharpen enough so far; they should be more visible and prominent."*

The view was further echoed by a curriculum developer with disability [P12] when she averred:

> *"Yes, but should be practical not for lip service only".*

While another, [P11], reiterated:

> *"Policies should act more than the document".*

A curriculum developer [P7] responded:

> *"Yes, resources are there but change are not well managed; because there should be a smooth transition from old to new, so that the teaching and learning is not disrupted to a point where student suffer and lecturers are unable to work".*

When the question "Is support embedded in the curriculum?" was asked, [P8] responded thus:

> *"Yes, it helps to create accessible teaching-learning process"*

When further probed, another staff member [P11] noted:

> *"My concerned with the design of the curriculum is that it's not on student support system; all modules should have at least one introductory podcast, vodcast, videos, content authoring project as an inclusive instrument".*

A Professor [P1] also expounded on this point when he added:

> *"Curriculum did not cater for students with mental disabilities or slow learners; no plan to operationalize inclusiveness".*

Despite the concerns, an academic support officer [P9] commented positively:

> *"Yes, curriculum covers alternative assessments…"*

Similarly, in recognition of the UNISA core mandate and inclusive curriculum, transformation was taking place,

> *"Through ODeL platform, it is a good model"* as noted by an ICT lecturer [P4].

4.5.2.1. Sub-theme 1: An impression on delivering of inclusive policies which recognize

SwD: inclusiveness is in its infancy, implementation at its maturity, and some implementation in its adolescence

A member of staff [P5] noted:

> *"The issue of disability hasn't yet reached to the consciousness of academics or programs or curriculum designers".*

On the question of who was responsible to lobby that UNISA's curriculum be inclusive, [P7] stated:

>*"Strategies to employ more PwD need to be redesigned"* was volunteered
>by an accessibility expert [P11].

A curriculum developer with disability [P12] indicated:

>*"Time of the curriculum doesn't allow to attend courses at any time of the*
>*year; resources not seen delivered in UNISA; resources are not available*
>*ahead of the enrolment of a SwD".*

On the question of how participants thought policy should respond to matters of inclusive design and learning, [P5] observed:

>*"Policy is just reactive…."*

while [P12] offered:

>*"Policy is general issue but touches indirectly"*

and a Professor [P1] warned:

>*"Without knowledge and experience, many damages could happen on to*
>*SwD".*

Staff member [P10] expressed concerns about exclusion within inclusion, by saying:

>*"Still UNISA is yet to consider deaf students, only one sign language*
>*interpreter in the whole campus, no attention".*

While an ICT lecturer [P4 shared his experiences by saying:

>*"No resources that creates inclusivity in the department".*

The same view was substantiated by [P10] who added:

>*"Assessment techniques are not accommodating to students with*
>*disabilities especially deaf and blind students".*

There was, however, a difference in opinion, where some staff felt positive about efforts towards an inclusive curriculum. A curriculum staff member [P6] emphasised the point:

"Policy supports inclusive curriculum",

while an academic support officer [P9] added that:

"Yes, policies and implementation plans are there".

An MA/PhD supervisor explained:

"Change is coming though awareness should continue as staff turnover every time; academics are generalists and do not have specific knowledge about SwD".

4.5.2.2. Sub-theme 2: Interlink between policies and lecturers training in an integrated approach

The opinions of participants are that inclusion **is inefficiently underway and there is limited awareness of making learning inclusive.** A curriculum developer with disability [P12], when questioned about the podcast's accessibility – it was certainly not accessible –

When asked if *my*Unisa is inclusive of SwD, [P2] stated:

"Lecturers are required to do their own podcasts, yet many of them cannot get the time other than the marking. So, the duties of lectures are silently added to, and they are not taken away from the big marking spaces, meetings etc. besides doing course design. So, they just don't get to it".

There were efforts to conscientize lecturers on inclusion as noted by curriculum developer [P6]:

"General awareness is there but not specific knowledge, so no integration on design and development".

However, a fellow curriculum developer [P8] felt what was being offered was not enough:

"Greater sensitisation about the issue of disability is missing".

Similarly, the observation of an ARCSWID staff member was that there was lack of synergy when he noted:

"There is no uniformity and integration among the provision of services".

A curriculum developer [P8] explained these main challenges as knowledge on how to provide inclusive learning responses when she posited:

"The issue is lack of understanding of what disability is, lack of understanding of what support needs of students with disabilities are, and how to respond; because, often, lecturers and support staff don't really know how to support, and therefore they avoid supporting them. So, they leave it to others to whom they think are better, able to support them".

4.5.2.3. Sub-theme 3: Challenges those policies face in responding to inclusive design and delivery of curriculum for SwD

The range of challenges captured included lack of attention, gaps in leadership due to a dearth of integration, lack of awareness and infrastructure, lack of communication, lack of preparedness and lack of systems in place. One staff member pointed out that it is not a question of insufficient attention, but rather that the UNISA administrative structure limits ARCSWiD when she explained:

"ARCSWiD is responsive but they are not in the academics' structure".

But there was a strong view that DCLD should play a more significant role:

"Teaching and learning (academics) processes should also be responsive".

Similarly, the curriculum cycle did not place emphasis on an inclusive curriculum, as noted by a curriculum developer [P12]:

"No time space in a curriculum development process to allow for inclusive strategies to be implemented".

When asked about the progress of the science curriculum DCLD worked on, [P12] stated:

"It was very successful but it did not include students with disabilities".

and [P11] further explained:

"The new alternative assessment methods, where the system opens at specific times, allows you to do the assessment, and then closes at specific time, does not allow students who need extra time".

A curriculum staff member [P7] observed that challenges were solvable as they were operational in nature:

"Implementers are the challenge; we see with academics in delivery dates and time frames".

And added that,

"Collaboration between academics, support officials, SwD and ARCSWiD is missing".

When asked if the curriculum department and ICT office would solve the challenges in the long run, [P12] opined that:

"Seeking a contact person from each department on inclusive education the engineering department assigned a deaf person".

[P7] commented:

"Policies sound good where they are but shelved and nobody interrogates them".

[P5] referred to the:

> *"Leadership challenge, No effective supervision by heads on seeing curriculum being inclusive".*

[P11] mentioned that:

> *"We have students who cannot read and write, at all. Either because they got disable later in life, and they haven't learnt reading methods like braille and so on, they haven't learnt to use technology, but they are still in our system studying. And those categories pause a huge inclusive challenge, for those people".* [P 10]

Other major challenges included lack of awareness and infrastructure, lack of communication:

An ICT lecturer [P4] noted that:

> *"Academics do not know the needs of SwD and there is no database; difficulty in assessment; no feedback from students. We have no feedback and no communication with SwD despite challenges".*

[P10] remarked that there were:

> *"No inclusive materials and tutorial for the Deaf".*

There were impressions from staff and lecturers that students with disabilities lacked preparedness. This view is evident when P12 notes:

> *"Students with Disabilities are not coping with ODeL curriculum as there are some discrepancies with the understanding level of learning skills and semester models; students come out of school unprepared for university".*
>
> *"Students with Disabilities should play a great role to communicate to their peers about their needs to their respective lecturers".*

"With staff turnover, staff leaving all the time, new staff coming in, so, if you are training a set of staff last year, you may not have the same staff this year" [P12].

4.5.2.4. Sub-theme 4: **Support resources for inclusive curriculum**

Many observed that there was a need for more human and technological resources, and that resources are not inclusively oriented, while there is a demand for training as regards implementation and quality of delivery.

"We need more human and technological resources" noted an Academic Support Officer [P9].

Similarly, resources are limited to *my*Unisa; these are solely uploaded by academics, noted a curriculum developer [?] with disability:

"Learning technologies are at scarce not only for People with Disabilities but for others as well, internet for e-learning, and ODeL regime is lacking in remote rural areas". – MA/PhD supervisor

"Resources are enough but failed due to bad internet connection" – Lecturer (P 11B)

"Technologies are not inclusively oriented" - P 10

"There is no support" – Sign language interpreter [ ]

Some staff members highlighted essentials:

"Assistive technologies such as computers".

"Video conferencing, podcasts and vodcasts in the e-learning are not accessible to Students with Disabilities" – stated [P11].

"As long as there is a database of who needs what kind of assistive technologies, I am optimistic that the support can be provided" – Curriculum developer

When asked if UNISA co-workers were oriented towards inclusive design and learning, [P7] expressed a negative response.

[P7] added that:

> *"For the last 5 years, there has been a non-engagement, there has been silly mistakes going through, people just rubberstamp everything that comes through. Alternatively, they object to certain amount, and then it just goes away. It is then never resubmitted; there is no engagement to solve a problem".*

With respect to enhancing training on implementation and quality of delivery, a curriculum developer [P7] noted that:

> *"Academics need training on how the curriculum is implemented within the time frame; the delivery times is not specified in the policy to allow this, the quality evaluations do not ask questions about inclusiveness; I think that recommendation should be taken up by UNISA".*

4.5.3. Theme 3: Inter-departmental linkage for inclusive curriculum

There were discussions on the need for everybody to collaborate.

> *"There is relationship but not strong in a team work approach Staff member"* [P9] noted.

> *"Everybody in the academic circle should collaborate"*–Sign language interpreter.

While [P5] responded:

> *"Open distance learning theoretically reaches out to larger number of students, but reaching out mean a reciprocal relationship. The student may not be reaching back, to the university, because of the lack of facilities, infrastructure from his or her side".*

Discussion on collaboration was advocated, to cut across disciplines; as one staff member pointed out:

> *"UNISA assessments [do not show close relationship] as academics are not involved".*

On leadership, the discussions gravitated around ARCSWiD, with each department being called to take responsibility; a staff member added:

> *"Each department should be accommodating and not all assigned to ARCSWiD".*

This assertion is further complemented by [P1], when he insists:

> *"It should be everyone's responsibility to place disability in the Institutional Operational Plan which makes it a responsibility of everyone".*

A lecturer [P1] added that:

> *"It should be everyone's responsibility not restricted to ARCSWiD only. Disability issues should be everybody's custodianship not only to ARCSWID; there should be one department that help each faculty on trainings and awareness which is ideal; the question should be "what is your need?" Rather than "what is your type of disability?"*

This view counters a lecturer's [P5] reflections that services were much better in the past, when he asserted:

> *"It used to be great in the past but not now; Inclusivity custodianship used to be under disability steering committee but no more now so now we need a different approach to make ARCSWiD a custodian of inclusion".*

The collaboration can only be effective if there is synergy, as asserted by lecturer [P3]:

> *"It should be close to departments and course lecturers; students should alert on the type of needs; it should be everyone's responsibility not ARCSWiD's only".*

The academic support officer reiterated this:

> *"Yes, we should share policy for Students with Disabilities and its implementation with ARCSWiD, and build healthy relationship; and we work closely with academic sections".*

In all these, responsibility should be interdisciplinary: the inclusive department and the department that deals with assessment, as well as the department dealing with students with disability, should be very much on board.

> *"Some students do not disclose the type of disability in due time so they will not get provision of services from ARCSWiD"* – Sign language interpreter

4.5.4. Theme 4: Challenges in the inclusion of students with disabilities
4.5.4.1. Sub-theme 1: Challenges in the full cycle of the policy

The data was collected to bring out the different perspectives of participants; the first group presented are academics. Some of the issues noted were lack of advocacy and good governance, lack of skills in accommodating students' needs, and lack of proper implementation.

A staff member [P1] highlighted some critical challenges:

> *"There is no good planning platforms, no governance, and no reporting and no good conversation to enrich practices".*

Another lecturer [P5] concurred:

> *"People generally forget about policies because they don't have them in their flip charts and on their desks. So, if you were to ask any academic, "what is the status of disability in terms of teaching and learning; is it included in the policy?", they will say, I haven't seen the policy in a long time, am not aware, am not sure whether. That is where ongoing awareness should begin".*

A Professor located the challenges higher in the hierarchy, when he noted:

> *"We lack advocacy among the leadership".*

The issue of capacity was pointed out as skills (presumably skills in accommodating SWDs' needs). This was also supported by [P3]:

> *"Students with disabilities are not coping with classes because lecturers lack skills on accommodating each individual needs".*

However, one academician [P4] was of the view that lack of proper implementation was also a factor. He said:

> *"Piloting is missing in the module development; policies are there but not practical".*

Among the curriculum designers, there was a shared opinion but they also mentioned some other perspectives. Lack of proper implementation emerged as a significant factor, especially as noted by [P12]:

> *"If you are coming with an inclusive curriculum, the first thing you will face is No, there are austerity measures".*

When clarity was further sought regarding piloting of the redesigned curriculum to the Students with Disabilities, [P7] stated:

> *"Development of the curriculum doesn't follow the whole process due to time constraint".*

[P12] was of the view that:

> *"Changing the 7 year UNISA cycle can help".*

When asked if staffs thought people were open to including the needs of students with disabilities in their design and teaching, [P6] stated that:

> *"No, more work is needed to create openness. Disability does not feature at all".*

Among the disability support staff, there was positive commitment towards inclusion. However, this view was qualified:

> *"Transformation is taking place in UNISA but not in terms of disability".*

One major curriculum challenge highlighted was:

> *"Four modules are expected per year but students with disabilities can't cope with more than three".*

In general, the ARCSWiD team were trying to cope with implementation.

4.5.4.2. Sub-theme 2: Professional development, focusing on academics and curriculum delivery experts, as regards including SwD

There was an acknowledgement of limited training on inclusive professional development.

> *"So far not, there is growing interest as the number of SwDs are increasing"* the Academic Support Officer stated.

An ICT lecturer indicated that:

> *"I have not done any professional development on inclusion".*

The need for training is a priority, and much organisation needs to be put into place within departments as pointed out here:

> *"Training should be given to each academic hierarchies, given that ARCSWiD provided with the statistics on disability profile".*

In addition, the specifics should include monitoring, as observed:

> *"There is policy on inclusion but we are not tracking it".*

A curriculum developer with disability was even more topical in pointing out:

> *"Yes, but we need more inclusion on e-learning".*

A Professor expressed caution:

> *"No, the problem with academics is that they are territorial and tend to focus only on their research areas. They do not realise that inclusion is a human right".*

However, a lecturer was more innovative; she indicated that:

> *"Not sure of Professional Development among the institution and department but individuals do have some efforts such as applying for grants to change the situation".*

An experienced lecturer [P5] was even bolder, declaring that:

> *"Key Performance Areas should be recorded as performance agreements; collaboration and networking is needed with several other departments".*

4.5.4.3. Sub-theme 3: Better way of ensuring policies that support design and delivery of inclusive curriculum

The data also brought out some participants' suggestions: some stemmed from experiences while others were proposals for enabling policies to be more informative. There was a call to address the key issues interdepartmentally:

> *"Address the key issues of fragmented policies and conceptual environment".*

And another academic insisted:

> *"There should be closer networking between the various departments; there shouldn't be support department in one hand, and academics on the other hand, because we all work with students as a common denominator".*

Management responsiveness was also identified by a professor:

> *"Deans and authorities need to report the issue's necessity and set systems and representativeness should be in place to ensure that inclusion of students with disabilities is undertaken".*

This was further reinforced with the view [P9]:

> *"Having disability in the Institutional Operational Plan, makes it a responsibility for everyone".*

Quality of delivering ODeL was also raised; a lecturer cautioned on accessibility:

> *"Access to curriculum should be there, but it shouldn't be access with penalty, where students get materials late".*

He added that:

> *"We should use multiple modes of representation, multiple modes of action and expression, and multiple modes of engagement as part of the universal design".*

While an academic support officer proposed the need for representation:

> *"Consider disadvantaged students in design and delivery".*

Other suggestions made by participants, which could facilitate shared learning, included:

> *"… Set up a committee with PwD in it and approved by UNISA",*
> *"Involvement of different stakeholders such as DCLD and accommodation of technologies",*
> *"Apply e-learning from distant places from USA and Europe; change of policy to sharpen the design and delivery system",* and
> *"The disability unit should be alert in producing the statistical information; doesn't know the effective delivery which really demand special announcement to primary lecturers"* – Lecturer P11)

4.5.5. Theme 5: Strengthening inclusion of SWD
4.5.5.1. Sub-theme 1: Suggestions to enhance experience of SwD at UNISA

On making policy more facilitative, there was a call for more stakeholder engagement. A staff member made it clear that:

> *"Students need to be organised to be loudly noticed".*

While a curriculum developer with disability emphasized the:

> *"… Engagement of SwD to promote their issues, determination",*

and another staff member pointed out:

"… Use students' forums and associations for SwD".

There was also a call for the disability unit to be vigorous in terms of their communication with academics, as departments and also in saying to CODs,

"with this module, you have this students with disability, let your lecturers know about it, and let them know that support will be needed; and this is what we are doing now", as one staff member put it.

Efforts towards advocacy must be sustained, to avoid wrong attitudes which maintain, for instance:

"we don't have space here which is against the transformation agenda".

On design, there was call for more work on advocacy. The ARCSWiD should help put pressure on everyone in the academic circle. An academic support officer [P9] stressed this:

"Advocacy Unit from top-down i.e. from the Council going down".
This is further clarified:

"ARCSWiD must train academics, regular training, and give awareness on the development of inclusive curriculum".

This is buttressed by a curriculum developer [P8] who indicated that this:

"… should be with greater collaboration with experts in the area of Inclusive education".

On delivery, the opinion was expressed:

"Management should develop system for managing compliance to better improved inclusive designs".

"Experts and academics should use learning and experiences to better improved inclusive designs" noted curriculum developer [P12].

A professor [P1] noted that:

> *"No one should be excluded from education, everyone has a right and everybody should play their own role in mainstreaming SwD in the education system; myUnisa should be revised so as to accommodate the needs of blind students".*

He added that '*development of curricula should move away from the design cycles that we have at UNISA, and prolonging the development to a coherent and inclusive curriculum"; the current curriculum at UNISA needs to be revised,"* he closed.

4.5.5.2. Sub-theme 2: priorities to create change in UNISA

A proposal for a robust advocacy and awareness to heighten interaction was discussed. This was summarised as follows:

> *"It is useful to have champions that are disabled, they embody the task, but also champions also needs to be supported by other non-disabled persons, the champions need to connect with the colleges, and the deans of the colleges, and they need to find people that can help them".*

The advocacy strategy was further expounded by [P7]:

> *"Step up institution wide advocacy and awareness creation; which must start from Council going down. Then the management of the university will be sensitized too, and it will come down to staff".*

On UNISA courses and their delivery,

> *"There should be a committee that vets every course that comes out, and that committee should have people with disability, so that they check for suitability, and usability and accessibility before it gets approved into the UNISA system".*

[P7] added:

> *Similarly, there should be a mechanism which informs primary lecturers after registration is done; to say, in your module, we have so many deaf students, blind students. This will give lecturers opportunity to give extra support. And the assessor training course UNISA gives to new lecturers coming in, should add the issues of inclusivity, on how to accommodate, how do you do assessment for the kind of students. It is currently not there".*

[P7] also emphasised:

> *"The need to Design for everyone by using universal design principles. You will ensure, how will average student access my material if I have illustrations, how can a blind person access that. How will my podcast which has audio benefit persons who are deaf, how will my content, my standard content, my printed content, impact on students who are dyslectic" – P7*

The need for conscientizing students with disability was discussed.

> *"SwD should be united and fight for their right; there must be more networking, regular networking, and student's voices should be coming in as well."*

> *"University community, Students with and without disabilities must be aware of inclusiveness to inform policy decision; policy enforcement must apply as well. It is about creating more opportunity for everybody to be on the ship of higher education."*

The students' study materials must be action oriented and disseminated. Learning and experiences should be used to better operationalize policy for the design and delivery of inclusive curriculum, while units which work on disability issues need to be strengthened.

"Students should know their rights in collaboration with ARCSWID; plans and process should be responsive and quality driven".

4.6. CONCLUSIONS

In this chapter, the researcher synthesized and captured the participants' experiences (Giorgi & Giorgi, 2003; Giorgi, 2009). This was followed by the logical steps of analysis with the final step being summary of data using tables to determine the frequency distribution of responses.What emerged is that each individual has distinct social experiences, however, when their context is considered as a group, certain practices and values are likely to be shared (Ratner, 1991). After comparing the common themes to discover the similarities and differences, the study then universalized the findings by centralizing on key characteristics and aspects regarding policies in design and delivery of an ODeL curriculum.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1. INTRODUCTION

This chapter presents and discusses the findings as they relate to the theories that underpin the study, with the backing of the literature review.

5.2. KNOWLEDGE OF POLICY IN INFLUENCING DESIGN AND DELIVERY OF AN INCLUSIVE CURRICULUM IN UNISA

A large number of staff have no knowledge about the existence of policies governing delivery of an inclusive curriculum, which is best summarised by a participant as follows: "*Policy aren't sharpen enough so far; they should be more visible and prominent*" with another emphasising, "Policy should act more than the document", while a lecturer noted *"Policies sound good where they are, but shelved and nobody interrogates them".* These are all in line with Nyoni (2013) who noted that some educators were not aware what undergirds ODL approaches, teaching and learning tools.

The above finding indicates that a large number of academics were not aware of policies which provide support to students with disabilities, teaching approaches and resources which is similar to the findings in a recent study by (Ngubane-Mokiwa & Khoza, 2016) in two Technical and Vocational Education and Training colleges. What also emerged from the academics was a stance of being detached from the responsibility of providing support to students with disabilities, as may be understood from these comments: *"Policy is general issue but only touches indirectly" and "Policy is reactive".* We also see the significance of academics' attitudes, as captured in this comment by a lecturer*, "The lack of understanding of what disability is, lack of understanding of what support needs of students with disabilities are, and how to respond, because, often, lecturers and support staff don't really know how to support, and therefore they avoid supporting them. So, they leave it to others to whom they think are better able to support them."* This finding is consistent with Van Jaarsveldt and Ndeya-Ndereya (2015). We also observe that most of

the participants (41.7%) note they have no say on how the policy is influencing the design and delivery of an inclusive curriculum.

5.3. INTERACTION WITH STUDENTS WITH DISABILITIES

Interaction between academics and students with disabilities in the ODeL system, is through faculty encounter, and or through the UNISA learning management system (*my*Unisa), whose aim is to bridge the gap between students and educators for effective student support (Mbatha & Naidoo, 2010; Quan-Baffour, 2013). One curriculum development staff member did cite an incidental personal encounter with a student with disability, which had inspired him.

Among the other frequent means of interaction with students with disabilities, are social encounters and regular contacts. A staff member noted that she "started as a volunteer Sign Language Interpreter for the Deaf". All UNISA members of staff, including academic and support staff, have the responsibility to provide a learning environment in which students with disabilities are not disadvantaged. Members of faculty should be agents of change for inclusive education: as a result, their support is important for any educational setting (Ashman, 2012; Ballard, 2012; Boyle, 2012; Deppeler, 2012).

5.4. UNISA INCLUSION OF STUDENTS WITH DISABILITIES IN THE DESIGNING OF STRATEGY

The majority of the participants had a positive response regarding UNISA's consultative initiative to include students with disabilities in the designing of policy and strategy. A curriculum developer noted that *"Yes, the committee has it as agenda on monthly meetings"*, while a lecturer responded, *"yes, curriculum covers alternative assessments"*. There are some who believe that UNISA's initiative is partially positive or completely positive but does result in challenges as explained by a Curriculum Developer with disability who declares: "*Theoretically, there are policies everywhere but practically there is no enforcement. Resources are there but change is not well managed*". Worth noting is the fact that there are participants who believe that UNISA has diverse policies and there is evidence of improvement. A lecturer noted that *"we have a policy on teaching effectiveness, to foreground academicians as teachers*".

A significant proportion of the participants argued that the delivery of inclusive policies which recognise SwD is in its infancy, which shows that there is a modicum of implementation; for instance, *"we hold workshops to lecturers to make curriculum accessible"*. A sizable number of the participants believe that transformation is taking place at UNISA, *"though awareness should continue as there is staff turnover every time"*.

Table 5.1: Implementation of inclusion 1

	Frequency	Percentage	Cumulative Percentage
Policies are insubstantial	2	16.7	16.7
Policies are cosmetic	2	16.7	33.3
Policy pretences	2	16.7	50.0
Policy non inclusiveness	1	8.3	58.3
Policy diversity	1	8.3	66.7
Not sure	2	16.7	83.3
Transformation is going on	2	16.7	100.0
Total	12	100.0	

The above table and responses clarify research questions two and three, which sought to understand the inclusive learning design and delivery strategies which academics use in ODeL at the University. The theme of inclusion emphasises the importance of giving priority to policy. Document analysis findings show that citation of the Section 1.2 of the UNISA Open Distance Learning Policy, which states, "The university commits itself to advancing social justice with an emphasis on redress, equity and empowerment of the previously disadvantaged groups in South Africa such as Blacks, women, people with

disabilities, the rural and urban poor and adults who have missed out on opportunities to access higher education" (UNISA, 2008: n.p.) is common in statements and plans. Similarly, in the operational plan, Goal 5 strives towards an environment which makes learning possible for the students with disabilities (UNISA, 2010).

Findings further show that, the UNISA disability policy and strategy widely consulted staff during its development, however on the actual implementation of policy, about a quarter of the respondents think that there is policy but its implementation is not visible. A respondent emphasised, *"…we should be practical and not just give lip service only"*. Furthermore all curriculum developers supported the view *"[That] all modules should have at least one introductory podcast, Vodcast, videos, Content Authoring Project as an inclusive instrument"*.

However, 16.7% of respondents were of the view that policies are insubstantial, cosmetic and there are policy pretences. Consequently, when one looks at the academics' and staff members' experiences in providing an inclusive curriculum, it is clear that students with disabilities at UNISA are not receiving what the university promised them.

5.5. INTERLINK BETWEEN POLICIES AND TRAINING IN AN INTEGRATED APPROACH

Organisational inertia and increased staff awareness play a major role in the inclusion of students with disability in ODeL, which was clarified by a curriculum developer, *"… issue of disability hasn't yet reached to the consciousness of academics or programmes or curriculum designers"*, which confirms to (Gibbs & Gosper, 2006, P.46-54.). A large number of participants consider that integration between policies and training is taking place, but inefficiently.

When asked whether they had been consulted on the issue of integration between policies and training, some of the staff asserted that they have no say on the issue of integration between policies and training. One lecturer underscored the point that *"Time of the curriculum doesn't allow to attend courses at any time of the year; resources are not*

available ahead of the enrolment of students with disabilities" while another academic noted the issues resulting from staff turnover mentioned earlier.

5.6. CHALLENGES POLICIES FACE IN RESPONDING TO INCLUSIVE DESIGN AND DELIVERY OF CURRICULUM FOR STUDENTS WITH DISABILITY

A range of factors emerged concerning challenges which policies face in response to inclusive design and delivery of a curriculum for students with disability. Findings revealed that such issues include a gap in leadership due to a dearth of integration: ""Curriculum did not cater or accommodate for mental disability like students with epilepsy or slow learners"", and *"We have students who cannot read and write, at all. Either because they got disable later in life, and they haven't learnt reading methods like braille and so on, they haven't learnt to use technology.* In addition lack of administrative and management attention *("No resources that creates inclusivity in the department")* and "… only one Sign Language Interpreter" create further difficulties which policies and implementers face,

The lack of communication awareness (as seen in "*Assessment techniques are not accommodating students with disabilities especially deaf and blind students"*; reinforced by *"Without knowledge and experience, many damages could happen on students with disabilities")* is also frequently mentioned as a challenge. Support features equally as a significant issue. Most of the participants believe that resources are not inclusively oriented and that there is a need for more human and technological resources.

Challenges in usability of ODeL infrastructure are captured in a lecturer's words: *"…reaching out means a reciprocal relationship. The student may not be reaching back, to the university…"* Similarly, the new alternative assessment methods erect another barrier, where the system "closes at specific time," thereby not accommodating students who need extra time.

Challenges stemming from the full cycle of the policy are evident from the absence of formal policies to ensure online course compliance: *"There is no time space … to allow for inclusive strategies to be implemented".* While a curriculum developer's concerns are expressed in the words, "*For the last 5 years, there has been non-engagement…"* Lack of advocacy and lack of proper implementation as noted in the statement, *"…there is no*

focus on Inclusive curriculum", are the most commonly mentioned issues and challenges deriving from this cycle.

The evidence established corresponds to Moore advance in (Gokool-Ramdoo, 2009, p.1) and summaries as ''distance education policy deficit, which is caused by myopic institutional vision, stagnating national plans, poor resource deployment, and poorly understood opportunities for personal development.'' (Gokool-Ramdoo, 2009, p.12). The dearth of policy is evident through delivery of core modules which are not inclusive which then restricts access to education for all students, including those with disabilities, as there are no clear disability indicators to guide the implementation strategy (Gokool-Ramdoo, 2009, p.3).

5.7. PROXIMAL RELATION BETWEEN ARCSWID AND TEACHING AND LEARNING

Though the two departments of ARCSWID and DLCD should be the drivers in design and delivery of inclusive curricula, findings show that there is a lack of strong relationship and communication between them. Both ARCSWID and DLCD should be more involved in designing and facilitating learning which ensures fulfilment of learning needs

Findings indicate that there is demand for advocacy to increase awareness of ARCSWID and their services. So, when policies are in place, plans should also be developed to see how they are to be implemented. As posited by Beaty and Feldman (2012) division of labour is more about distribution of tasks in the vertical and parallel structure of the institution. Division of labour is more to do with devolving of authorities than providing quality service.

5.8. CUSTODIANSHIP AND RESPONSIBILITY OF INCLUSIVITY AT UNISA

Asked what they thought who the custodian was, who shouldered the responsibility for inclusivity at UNISA, the majority (75%) of the participants responded that the issue of inclusivity should be everyone's responsibility, as noted: "*Disability issues should be everybody's custodianship not only to ARCSWID; … the question should be 'what is your need?' Rather than 'what is your type of disability?'*"

Alternatively, some of the participants (25%) think that the issue of inclusivity should be limited to ARCSWID, the unit in charge of disability issues, because it was represented in the Senate Tuition Learning Committees.

Table 5.2: Responsibility for inclusivity 1

	Frequency	Percentage	Cumulative Percentage
It should be everyone's	9	75.0	75.0
Units in charge of disability issues	3	25.0	100.0
Total	12	100.0	

5.9. THE DISTRIBUTION OF CHALLENGES FACED AT UNISA BY STAKEHOLDERS CAN BE GROUPED INTO THOSE FACED BY ACADEMIC, CURRICULUM DESIGNERS AND SUPPORT STAFF

The heading is based on the participants reporting the issue, who account for 46.2%, 30.8% and 23.15% respectively. Findings show that among academics, professional development, focusing on curriculum delivery and expertise with respect to inclusion, was cited. A large number of the participants reported that there is no training on professional development on inclusive ODeL and urged that this should be given: "*Greater sensitization about the issue of disability is missing in current training"*. It is worth remarking that UNISA periodically offers e-training to educators, but this seems to be inadequate (Nyoni, 2013). Isabirye and Dlodlo, (2014) further report that UNISA educators did not have, or were uncertain if they had, e-learning advantages and the knowledge, technology, and support to make online accommodations.

Findings also revealed that training should focus on educational environment-related variables, such as the availability of expertise, physical and human support, since they were consistently found to be associated with attitudes to inclusion and success of inclusion, as argued by (Yuen & Westwood, 2001; Muscio, 2010).

Findings further indicated that academics experience challenges providing a successful inclusive e-learning environment, e.g. regarding lecturers being required to make and upload their own podcasts; an issue which is also documented by (Islam, Beer & Slack, 2015). However, (Quan-Baffour, 2013) discovered a number of academics who lacked inclusive skills but devised some ways and means of overcoming the technological obstacle in order to improve their open distance teaching.

Curriculum developers have called for revision of the current curriculum as part of enhancing the experience of students with disabilities at UNISA. Some have called for policy enforcement guidelines and penalties for not implementing policies, while others advocated for flexibility in the ODeL curriculum, a call which is in tandem with the views of (Howe, 2011 and Smith, 2004).

Findings also showed that there is need for management's efficient implementation of integrated education policies as the latter are mainly dependent on management (Bailey, 2004; Praisner, 2003; Riehl, 2000; Ryan, 2003, Sharma & Desai, 2008) to respond to the large number of participants who think that integration between policies and training is inefficiently realised.

Findings further demonstrated that there is a need for uniting students with disabilities to claim their rights or to explore the various support services in order to meet their academic demands as cited in (Wehman, 2006).

5.10. BETTER WAY OF ENSURING POLICIES THAT SUPPORT DESIGN AND DELIVERY OF INCLUSIVE CURRICULUM

Most of the participants consider that there should be leadership and representativeness. Educators play an important role of the delivery of learning, as concluded by Macharia and Pelser (2012) when they underscore that leaders play an essential role in the success of quality and character of the institution in e-learning diffusion.

Findings also demonstrated that there should be a means to address the key issues interdepartmentally, to ensure policies that support design and delivery of inclusive

curriculum are implemented. The focus on departments or faculty is operationalized when responsibility is institutionalised by ensuring that course material complies with online requirements (Green, 2010).

Furthermore findings further show that priorities to create change in UNISA should be tailored to heighten interaction by creating stakeholders' advocacy and awareness. Therefore, support for and from students is necessary, as proposed by a lecturer: *"Students with disabilities should play a great role to communicate to their peers about their needs to their respective lecturers"*, while those staff members serving students are important for imparting effective inclusive education to all students. Leu and Ginsburg (2011) have demonstrated that there is a relationship between educators' development and students' academic persistence (Leu & Ginsburg, 2011; Bissaker, 2001).

5.11. CONCLUSIONS

This chapter dealt with data analysis to synthesise experiences of twelve UNISA academics and staff as regards to policies in design and delivery of an inclusive ODeL curriculum. In identification of experiences, concerns and views about ODeL curriculum Giorgi's descriptive analytical procedures were applied.

The analysis revealed that, The University dons and staff experienced three types of policy experiences: they were not exposed to *policy awareness to enhance inclusive curriculum*; there was also a *policy process omission,* where even when a strategy was in place, modules which were developed were not inclusive; and, with respect to *policy management,* there was a lack of explicit departmental management to provide tracking and compliance.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1. INTRODUCTION

Conclusions are addressed in the chapter by addressing each research questions and then making recommendation. Findings are discussed by applying the three theories with conclusions reached using the literature review. Finally, the suggestions for further research are then proposed.

6.2. ORGANISATION OF MAJOR FINDINGS

The study findings included multiple aspects that are related to policy awareness, policy process and policy management for designing and delivery of an inclusive ODeL curriculum.

Under policy awareness, policy process and policy management for designing and delivery of inclusive ODeL curriculum, there are sub-themes which include:

Policy Awareness:

1 – Knowledge of the policy which influences design and delivery of inclusive curriculum at UNISA

2 – Interaction with Students with Disability

Policy Process:

3 – UNISA's initiative to include students with disabilities in the designing of strategy

4 – Inclusive curriculum as one of the core mandates of UNISA

5 – Impression on delivering of Inclusive policies which recognize Students with Disability

6 – Interlink between policies and training in an integrated approach

7 – Challenges and inconsistency between policy and practice in responding to inclusive design and delivery of curriculum for Students with Disability

8 – Any support resources for responding to inclusive design and delivery of curriculum

9 – Proximal relation between ARCSWID and teaching and learning

10 – Challenges ensuing from the full cycle of the policy

Policy Management:

11 – Professional Development focusing on academics and curriculum delivery experts on including Students with Disability

12 – Better ways of ensuring policies that support design and delivery of inclusive curriculum

13 – Suggestions to enhance experience of Students with Disability at UNISA

14 – Priorities to create change in UNISA

The following section espouse how the answers to the research questions were reached.

6.3. FINDINGS RELATED TO THE RESEARCH QUESTIONS

The research demonstrated that study was aimed at tackling a research problem by answering a specific research question. The response to research questions follows below with the aim of illustrating that the study was not carried out in a vacuum, but instead aimed at tackling a research problem by answering specific research questions. The primary research question was: What are the key policies and learning delivery strategies that guide the ODeL academics when designing an inclusive curriculum? While the four specific research questions were:

6.3.1 What are the key policies that guide inclusive curriculum design in the ODeL setting?

The first research question is grounded in the policy of equalization of human rights for adults who had missed out in accessing higher education. Is South Africa. The research question therefore sought to elicit the experiences of UNISA academics and staff from Departments of Curriculum and Learning Development (DCLD), ARCSWID, and departmental officials responsible for ODeL design, accessibility of websites in terms of their awareness and level of engagement with the policy in making teaching and learning accessible for all.

The UDL framework was used as a lens to view the way in which learning is influenced by cultural variability, and the practical awareness of disability (Ralabate, 2011; Chita-Tegmark et al., 2017). The social choice theory in the study also helped in analysing the

situation whereby educators often express different preferences for curriculum provision, yet institutions present them with only one offering (Rapoport, 1989). Analysis using the transactional distance theory explained the relationship between designing inclusive learning material and how it determines the transactional distance. If there is more dialogue and inclusivity between the lecturer and the student, the less the transactional distance. (Moore, 2006), and this enhances ODeL learning experiences which is positive. Findings revealed that both academics and staff reported that they were not familiar with disability, impairment, or assistive technology issues, and were therefore not aware of some of the policy challenges in this area, including the significant challenges or opportunities of cross-departmental working. These responses demonstrate that a large number of academics and staff at UNISA were not knowledgeable regarding policies and how to provide support to students with disabilities, teaching approaches and resources; this is similar to evident in a recent study by (Ngubane-Mokiwa & Khoza, 2016) in two Technical and Vocational Education and Training colleges. However, UNISA runs a system where all have equal access to raise and object to issues and amendments, which could be used to raise these needs.

6.3.2 What inclusive design strategies do the academics use in the ODeL setting?

This second research question was intended to draw out the experiences of the UNISA academics and staff in terms of their academic engagement, development of modules, challenges, inter-departmental collaboration, and competences. On the actual implementation of this policy, academics reported that they offered several modules which were inclusive. About a quarter of the participants think that there is policy but its implementation is not visible. There was an acknowledgment of different methods used to ensure the ODL system was inclusive through staff onboarding, feedback to students, tutorial letters and personal telephonic support (Gatsha & Evans, 2010:156). It is essential to put energy in careful planning across departments for the ODeL system to be inclusive and function effectively.

The study recognises that the Universal Design for learning framework enables the student to navigate around the learning environment carefully, helping academics design courses and identify clear goals aligned with the instructional practices. When applying

the social choice functions, the Pareto optimum outcome was the evidence that academics were not given students a range of modules to choose from while still conforming to the set learning outcomes and objectives. (Awad, Caminada, Pigozzi, Podlaszewski & Rahwan, 2017; Smith, 2012; Bocconi & Ott, 2013:330; Ralabate, 2011:n.p.). By using the transactional distance theory, we could understand the gap between students and the institution, between students and lecturers/tutors, between students and courseware, and between student and student. It is the cognitive space between learning peers, teachers and content in a distance education setting (Moore, 1973).

The study's most significant finding was the absence of expertise in designing inclusive modules, or compliance in posting accessible online course materials. The findings further revealed that the two key departments of ARCSWID and DCLD have a weak relationship and communication to drive the design and delivery of an inclusive curriculum, as facilitators, actualize students' learning needs. The above responses clarify Research Question Two and emphasise the importance of implementation of policies for design of inclusive ODeL strategies at UNISA.

6.3.3 What inclusive learning delivery strategies do the academics use in the ODeL setting?

The majority of study participants approved UNISA's consultative approach to include Students with Disability in designing of strategy. However, delivery of inclusive policies which recognise such students is in its infancy. The most frequent means of interaction between staff and SwD was through faculty encounters, social encounters and regular contact. The academics reported an absence of formal policies to ensure online accessible course compliance, lack of administrative and management attention, resources not being inclusively oriented, lack of advocacy, academics' attitudes, organisational inertia and staff awareness.

Though the university system management captures diversity and students' learning needs, this data has not been analysed to promote universal design approaches. Universal design approach gives opportunity for diverse learning styles and needs and enables more interaction between the student and the lecturer.

When applying the UDL framework in analysis, it underpins design which promotes access, participation and progress of SwD (Silver-Pacuilla, 2006). Applying the social choice function of additive utilitarianism, the study took each option and added up the sum of the individual values to obtain a total utility for the option. The social choice becomes the option with the greatest total value, that is, "the greatest good for the greatest number". The transactional distance theory is further used to ground this argument: Moore (2006) maintains that transactional distance increases when students' become self-reliant therefore it offers opportunities and interactions in academia and increasing students' thus throughput.

UNISA staff therefore have an obligation to use UDL approaches in their ODL environment in designing modules which will therefore avoid reactive learning design which only responds to barriers. This prevents making the students with disabilities feel as though they are an afterthought. Table 6.1 below tabulates findings:

Table 6.1: Policy facilitating inclusive ODel 1

	Frequency	Percentage	Cumulative Percentage
Policies are insubstantial	2	16.7	16.7
Policies are cosmetic	2	16.7	33.3
Policy pretences	2	16.7	50.0
Policy non inclusiveness	1	8.3	58.3
Policy diversity	1	8.3	66.7
Total	8	100.0	

The findings evidenced that policies are insubstantial, even cosmetic, and that there are policy pretences. Hence, when one looks at the academics and staff experiences in providing an inclusive curriculum, it is clear that SwD at UNISA are not receiving what the University promised them.

6.3.4 How can curriculum design and delivery be more inclusive in the ODeL setting?

The final question sought the views of academics' and other staff members' on how their experiences could help create improvement towards an inclusive ODeL. The study advances the theory of Rawls' criterion of justice in the social choice function, which holds that society should strive toward equality of opportunity and that, where inequality exists, societal rules should be formulated to advantage the least resourced members (Waldman & Akin Ojelabi, 2016). The study further posits the application of a holistic design of a UDL framework, which considers partnership between academics and curriculum designers with the sole aim of making learning accessible for the students (Schenker and Scadden, 2002). The theory also helps to qualify the quality of the delivery applied to teaching and learning. This becomes important due to the fact that the student assumes the responsibility of constructing knowledge. In this manner, learning becomes more learner-centred and typifies the move to the constructivist approach in distance learning (Fraser & Lombard, 2002; Granger & Bowman, 2003). Accessibility should further be viewed in relation to justice.

The UNISA management or education stakeholders that include students should balance the advocacy for access to higher education for people with disabilities as a human right issue but and as an issue of ICT best practice. (Brajnik, 2000). The findings indicate that the issue of inclusivity at UNISA should be everyone's responsibility, while ARCSWID, the unit in charge of disability, has few staff members and should be strengthened so that its work on disability related issues is efficient, effective and wider in its outreach. The UNISA management is not consistently tracking compliance with and implementation of integrated education policies which should help guide the UNISA inclusion agenda across departments.

The research has proved through the responses to the four research questions, confirmed that professional development and training on inclusive ODeL should be given to academics and staff to reinforce e-learning knowledge, technology and support for online accommodations. There should be a means to address the key issues interdepartmentally to ensure policies that support design and delivery of inclusive curriculum are accompanied by a compliance management system and are implemented. SwD need to be united to claim their rights and made aware of how to explore the various support services in order to meet their academic demands. This finding from this question are captured in the recommendations for an inclusive ODeL for all UNISA students. The next section presents the proposed criteria for designing and delivering an inclusive ODeL framework.

6.4. THE INCLUSIVE CRITERIA FRAMEWORK

Following the findings that many staff at UNISA face challenges in providing an inclusive ODeL curriculum due to policy related omissions, the study has developed a framework to help academics and staff to acquire and strengthen e-learning knowledge. Although the framework developed will not furnish direct guidelines for module delivery practice, it contains important criteria for inclusive delivery policies and processes.

The Inclusive Criteria Frameworks sets out six general inclusive criteria for processes and delivery of policies at UNISA. These consist of the following:

1. **Accessibility**:

   A curriculum module is accessible when no student is excluded from the Open Distance e-Learning or in any other way discriminated against. It is essential that the module is designed to meet the requirements of universal design for students' needs. Resources are available to remove barriers. Staff should know that there is a catalogue of assistive devices which exist at the University, and where to go to access support.
   Indicators: Inclusive models

2. **Competence**:

   University academics and staff must possess the knowledge and skills needed to properly meet the students' learning needs. Competence should focus on availability

of knowledge, skills and experience necessary to design and deliver an inclusive curriculum.

Indicators: Further capacity development of academics, curriculum developers, use of web accessibility guidelines and standards, availability of information to learn from feedback.

3. **Coordination**:

An inclusive ODeL curriculum needs to be coordinated on three levels: within the design process, during the various delivery steps, and within other policies and intersectionalities.

Indicators: Coordination unit, Management tracking of departmental plan to be inclusive

4. **Efficiency**:

An inclusive curriculum is efficient when it is able to achieve the best learning process for all students, using the available resources in the shortest time and at the lowest cost.

Indicators: Procedures and regulations, duration of process, delegation of decision-making power and tracking compliance.

5. **Flexibility**:

An inclusive ODeL curriculum is flexible when it is able to respond to different needs of learners, is compatible or easy and usable, and when academics and developers receive support for their work, cooperate and communicate with learners and interdepartmentally.

Indicators: Synergetic actions, Compatible or easy and usable platforms, Academics, researchers and developers obtain support for their work, Cooperation and communication with learners, designers and academics

6. **Students' influence**:

    SwD should be involved in all aspects of an inclusive curriculum design and delivery process. Lack of involvement by such students exposes the risk of barriers, wasting time and resources.

    Indicators: Presence and strength of students' organisations, availability of disability strategy guiding inclusion at the University, involvement of SwDs at policy level, empowerment of SwDs during registration and inductions, communication with SwDs in the curriculum delivery process, the influence of SwDs on decisions in the process.

The developed framework matrix is presented in the table (Table 6.2) below:

Table 6.2: The inclusive criteria framework 1

Numb-ers	Inclusive Criteria	Framework	Indicators
1	Accessibility	When curriculum module is accessible; universal design is used; no student is excluded from Open Distance e-learning or in any other way discriminated against.	• Inclusive modules
2	Competence	• When academics and staff have the knowledge and skills needed to properly meet the students' learning needs	• Academics' awareness • Curriculum developers • Further capacity development • Use of accessibility guidelines and standards • Availability of information in order to learn from feedback
3	Coordination	When coordinated at three levels: within the design process, during the various delivery steps, and within other policies and intersectionalities	• Management tracking of departmental plan to be inclusive
4	Efficiency	When achieving the best learning process for all students, using the available resources in the shortest time and at the	• Procedures and regulations • Mechanisms able to control the costs and effectiveness

		lowest cost	• Delegation of decision-making power and compliance tracking.
5	Flexibility	When inclusive ODeL curriculum is flexible, able to respond to different needs of learners	• Compatible or easy and usable platforms • Academics, researchers and developers obtain support for their work • Cooperation and communication with learners, designers and academics
6	Students' influence	When SwDs are involved in all aspects of an inclusive curriculum design and delivery process. Lack of their involvement creates the risk of barriers, waste of time and resources.	• Presence and strength of students' organisations • Availability of disability strategy guiding inclusion at the University • Involvement of SwD at policy level • Empowerment of SwD during registration and inductions • Communication with SwD in the curriculum delivery process,

6.5. RESEARCH PRESENTATION AND DISSEMINATION

The research thesis will be similarly produced into audio format, video with sign language interpretation and braille to enable all groups of persons with disabilities to access it. It is also hoped that through a workshop with staff at UNISA, this research will change the policy awareness, policy operationalization and policy tracking of ODeL curriculum at UNISA.

6.6. RESEARCH LIMITATIONS

Acknowledging the sensitivity of some specific disability issues, I chose to be cautious, especially when seeking examples of non-compliance with policy. I faced restriction and

embargos concerning some cases as certain participants were bound by non-disclosure clauses while others were subject to confidentiality.

Secondly, giving a direct interview was a principle method of data collection. There was a possibility of participants unconsciously holding back some information or given politically correct answers that exposing the study to inaccurate evidence. (Corbetta, 2003). In recognition of this, neutral questions were asked not to illicit what the participant perceived to be the answers and by posing further elaborations and rationale behind them.

6.7. THE RECOMMENDATIONS

Recommendations are made available to lecturers, staff and the university as an institution.

Recommendation to enhance experience of students with disabilities at UNISA

1- First, it is recommended that more work on policy awareness amongst academics be conducted to enable them to become familiar with disability, impairment, or assistive technology issues, and to be aware of some of the policy challenges and opportunities in this area, including cross-departmental working.

2- Second, there should be rejuvenation of ARCSWID, the disability unit, by strengthening its work on disability related issues for efficiency, effectiveness and wider outreach.

3- Third, the University Department for Tuition and Learning Development within UNISA ought to prioritise devising systems for noncompliant management of academics who do not design an inclusive curriculum, and conduct continuous training on the approaches that all colleges and departments should use for realization of universal design approaches in their design and delivery of modules to enhance experience of students with disabilities.

4- Fourth, the UNISA management should create change in UNISA which is tailored to heighten efficient implementation of integrated education policies, dialogue with and between stakeholders.

5- Finally getting students with disabilities conscientised and united to claim their rights and to explore the various support services in order to meet their academic demands.

6.8 AVENUES FOR FURTHER RESEARCH

Further research could focus on contact universities in South Africa using ODeL practices with specific focus on sciences as an example and inclusion of students with disabilities as this research concentrated on the University of South Africa which has a long tradition on ODeL.

6.9 CONTRIBUTION OF THE STUDY TO THE KNOWLEDGE FIELD

The study demonstrated that there is strong evidence to support the concept that e-learning should be unconstrained, inclusive and able to provide a curriculum that is accessible to students with disabilities. However, appropriate training needs to be provided to users and developers with a management tracking system. This study has helped fill the knowledge gap in terms of the delivery strategies that could be used by lecturers to support students in an inclusive curriculum.

6.10 CONCLUSIONS

This study was able to locate the place of policy in the design and delivery of an inclusive curriculum at UNISA. In closing, it is the researcher's hope that this information will be helpful to those who are designing and delivering inclusive ODeL within their institutions. It is the researcher's belief that if institutions set systems for management of inclusive curriculum design compliance, open distance E-learning programmes will lead to multiple benefits, including improved experience of students with disabilities in ODeL, increased interdepartmental collaboration, and shared responsibility for success.

6.11 REFERENCES

Ainsworth, S. (2006). DEFT: A conceptual framework for considering learning with multiple representations. *Learning and Instruction, 16*(3), 183-198.

Ainsworth, S. E. & van Lebbeke, N. (2004). Multiple forms of dynamic representation. *Learning and Instruction, 14*(3), 241-255.

Ajuwon, P.M. (2008). Inclusive education for students with disabilities in Nigeria: Benefits, challenges and policy implications. *International Journal of Special Education*, *23*(3), 11-16.

Akyol, Z., Garrison, D. R. & Ozden, M. Y. (2009). Online and blended communities of inquiry: Exploring the developmental and perceptional differences. *The International Review of Research in Open and Distributed Learning*, *10*(6), 65-83.

Al-Qahtani, A. A. & Higgins, S. E. (2013). Effects of traditional, blended and e-learning on students' achievement in higher education. *Journal of Computer Assisted Learning*, *29*(3), 220-234.

Arvanitakis, J. (2014). Massification and the large lecture theatre: From panic to excitement. *Higher Education*, *67*(6), 735-745.

Arrow, K. (1963). *Social choice and individual values*. New Haven: Yale University Press.

Ashman, A. (2012). Facilitating inclusion through responsive teaching. In C. Boyle & K. Topping (Eds.), *What works in inclusion?* (pp. 81 - 97). Maidenhead: Open University Press, UK.

Ata, R. (2016). An exploration of higher education teaching in second life in the context of blended learning. *Turkish Online Journal of Educational Technology, 15*(3), 9-26.

Awad, E., Caminada, M. W., Pigozzi, G., Podlaszewski, M., & Rahwan, I. (2017). Pareto optimality and strategy-proofness in group argument evaluation. *Journal of Logic and Computation*, *27*(8), 2581-2609.

Badza, A. & Chakuchichi, D. 2009. Managing inclusion of student with visual impairment in open and distance education: challenges for learner support. Available online at http://www.icevi.org/publications/icevi_wc2006/09_inclusive_educatio nal_practices/Posters/afr_059_badza&chakuchichi%20article.pdf Accessed on 16 September 2012

Ballard, K. (2012). Inclusion and social justice: Teachers as agents of change. In S. B. Carrington & J. MacArthur (Eds.), *teaching in inclusive school communities*. (pp. 65 - 84). Milton: John Wiley & Sons Australia.

Barnes, C. (1991) *Disabled people in Britain and discrimination: a case for anti-discrimination legislation.* London: Hurst & Co.

Bentham, J. (1972). *An introduction to the principles of morals and legislation (Chapters I–V)* (pp. 17-51). New Jersey, USA: Blackwell Publishing Ltd.

Bergey, B. W., Deacon, S. H. & Parrila, R. K. (2017). Metacognitive reading and study strategies and academic achievement of university students with and without a history of reading difficulties. *Journal of Learning Disabilities*, *50*(1), 81-94.

Bissaker, K. (2001). Did they get what they came for? Evaluating lecturers' learning. *International Education Journal*, *2*(4), 41-52.

Blackie, M.A.L., Case, J.M. & Jawitz, J. (2010). Student-centeredness: The link between transforming students and transforming ourselves. *Teaching in Higher Education*, 15(6), 637-646.

Bocconi, S. & Ott, M. (2013). ICT and universal access to education: Towards a culture of accessibility. *Information Systems, E-learning, and Knowledge Management Research.* 278, 330-337.

Booth, T. (2005). Keeping the future alive: Putting inclusive values into action. *Forum, 47* (2), 151-158.

Booth, T., Ainscow, M. & Dyson, A. (2006). *Improving schools, developing inclusion*. London: Routledge.

Borda, J. C. (1781), "Mrmoire sur les 61ections au scrutin", Memoires des l'Acadrmie Royale des Sciences; English translation by A. de Grazia, Isis, p.44 (1953).

Bower, B. L. & Hardy, K. P. (2004). From correspondence to cyberspace: Changes and challenges in distance education. *New Directions for Community Colleges*, *2004*(128), 5-12.

Boxall, K., Carson, I., & Docherty, D. (2004). Room at the academy? People with learning difficulties and higher education, *Disability & Society. 19*(2), 99–112.

Boyle, C. (2012). Teachers make inclusion successful: Positive perspectives on inclusion. In C. Boyle & K. Topping (Eds.), *What works in inclusion?* (pp. 98 – 109). Maidenhead: Open University Press, UK.

Bransford, J.D., Brown, A.L. & Cocking, R.R. (2000). *How People Learn: Brain, Mind, Experience, and School*. Washington, DC: National Academy Press.

Brozo, W. G. & Puckett, K. (2009). *Supporting content area literacy with technology.* Boston, MA: Pearson/Allyn and Bacon.

Burt, G. (1996). Quality provision for students: The implications of social choice theory. *American Journal of Distance Education*, *10*(1), 37-49.

Castells, M. (1998). *The Information Age: economy, society and culture. Vol.* III. End of the millennium. Malden, MA: Blackwell.

Castells, M. (2009). *Communication power*. Oxford University Press: Oxford.

Chew, E., Turner, D.A. & Jones, N. (2010). In love and war: Blended learning theories for computer scientists and educationalists. In F.L. Wang, J. Fong & R. Kwan, (Eds.), *Handbook of research on hybrid learning models: Advanced tools, technologies, and applications*. Hershey, PA: Information Science Reference.

Childs, S., Blenkinsopp, E., Hall, A. & Walton, G. (2005). Effective e-learning for health professionals and students - barriers and their solutions. A systematic review of the literature - findings from the HeXL project. *Health Information & Libraries Journal*, *22*(s2), 20-32.

Chita-Tegmark, M., Gravel, J. W., De Louredes, M., Serpa, B., Domings, Y. & Rose, D. H. (2011). Using the universal design for learning framework to support culturally diverse learners. *Journal of Education*, vol 192 n1 p.17-22.

Ciampa, K. (2017). Building bridges between technology and content literacy in special education: Lessons learned from special educators' use of integrated technology and perceived benefits for students. *Literacy Research and Instruction, 56*(2), 1-29.

Council on Higher Education. (2005). *South African higher education responses to students with disabilities.* Pretoria, South Africa: Council on Higher Education.

Council on Higher Education. (2007). *A case for improving teaching and learning in South African higher education.* Pretoria, South Africa: Council on Higher Education.

Council on Higher Education. (2009). *Annual report of the Council on Higher Education 2008/2009*. Pretoria, South Africa: Council on Higher Education.

Council on Higher Education. (2010). *Access and throughput in South African higher education: Three case studies*. Retrieved April 01, 2017, from

http://www.che.ac.za/sites/default/files/publications/Higher_Education_Mo nitor_9.pdf.

Coyne, P., Pisha, B., Dalton, B., Zeph, L. A. & Smith, N. C. (2012). Literacy by design: A universal design for learning approach for students with significant intellectual disabilities. *Remedial and Special Education*, *33*(3), 162-172.

Creswell, J.W. & Potch, C.N. (2017). *Qualitative enquiry and research design: Choosing among five approaches. California, United States*: Sage Publications.

Cullis, J., and P. Jones. 1992. *Public Finance and Public Choice.* London: McGraw Hill.

Czerniewicz, L. (2001). Reflections on learning online – the hype and the reality. *South African Journal of Higher Education, 15*(3), 17-23.

Czerniewicz, L., Ravjee, N., & Mlitwa, N. (2006). ICTs and the South African higher education landscape.

Czerniewicz, L., & Brown, C. (2009). A study of the relationship between institutional policy, organisational culture and e-learning use in four South African universities. *Computer & Education, 53*(1), 121-131.

Davis, O. A., & Hinich, M. J. (1968). On the power and importance of the mean preference in a mathematical model of democratic choice. *Public Choice*, *5*(1), 59-72.

De Castro, A. (2003). Introduction to Giorgi's Existential Phenomenological Research Method. Psicologia desde el Caribe**,** 11,   45 -56. Available at:http://www.redalyc.org/pdf/213/21301104.pdf (accessed on 6/9/2017).

De Vos, A.S. (2002). Combined qualitative and qualitative approach. In De Vos, A.S., Strydom, H., Fourche, C.B. and Delport, C. S. L (2002). Research at

grassroots: for the social sciences and human service profession. Pretoria: Van Schaik.

Department of Education. (2001a). *National Plan for higher education.* Pretoria: Government Printers.

Department of Education. (2001b). *Education White Paper 6.* Pretoria: Government Printers.

Department of Education. (2002). *Draft guidelines for the implementation of inclusive education.* Pretoria: Department of Education.

Department of Higher Education and Training. (2012). *Green Paper for Post-School Education and Training.* Pretoria: Department of Higher Education and Training.

Department of Higher Education and Training. (2013). *White paper on post-school education and training.* Pretoria: Department of Higher Education and Training.

Deppeler, J. (2006). Improving inclusive practices in Australian schools: Creating conditions for university-school collaboration in enquiry. *European Journal of Psychology of Education 21*(3), 347-360. doi: 10.1007/BF03173421

Deppeler, J. (2010). Professional learning as collaborative inquiry: Working together for impact. In C. Forlin (Ed.), *Teacher education for inclusion – changing paradigms and innovative approaches* (pp. 180-188). Milton Park, Abingdon, Oxon: Routledge.

Deppeler, J. (2012). Developing inclusive practices: Innovation through collaboration. In C. Boyle & K. Topping (Eds.). *What works in inclusion?* (pp. 125 - 138). Maidenhead: Open University Press, UK.

De Groot-Reuvekamp, M. J., Van Boxtel, C., Ros, A. & Harnett, P. (2014). The understanding of historical time in the primary history curriculum in England and the Netherlands. *Journal of Curriculum Studies*, *46*(4), 487-514.

De Rijdt, C., Stes, A., van der Vleuten, C. & Dochy, F. (2013). Influencing variables and moderators of transfer of learning to the workplace within the area of staff development in higher education: Research review. *Educational Research Review, 8*, 48-74.

Donohue, D. & Bornman, J. (2014). The challenges of realising inclusive education in South Africa. *South African Journal of Education, 34*(2), 1-14.

Downing, J. E. & Peckham-Hardin, K. D. (2007). Inclusive education: What makes it a good education for students with moderate to severe disabilities? *Research and Practice for Persons with Severe Disabilities*, *32*(1), 16-30.

Draper Rodríguez, C., Strnadová, I. & Cumming, T. (2014). Using iPads with students with disabilities: Lessons learned from students, teachers, and parents. *Intervention in School and Clinic*, *49*(4), 244-250.

Dryzek, J. S., & List, C. (2003). Social choice theory and deliberative democracy: A reconciliation. *British Journal of Political Science*, *33*(1), 1-28.

Dyson, A. (1999). Inclusion and inclusions: Theories and discourses in inclusive education. In: Daniels, H., Garner, P. (Eds.), *World Yearbook or Education*. Kogan Page, London, pp. 36-53.

Dzakiria, H. & Christopher, A.A. (2010). *Interaction issues in Malaysia Open Distance Learning (ODL).* Paper presented at the 6th Pan-Commonwealth Forum on 24-28 November, 2010 Kochi, Kerala, India: Le Meredien.

Englander, M. (2012). The interview: Data collection in descriptive phenomenological human science research. *Journal of Phenomenological Psychology.* 43(2012), 13 -35.

Falloon, G. (2011). Making the connection: Moore's theory of transactional distance and its relevance to the use of a virtual classroom in postgraduate online teacher education. *Journal of Research on Technology in Education*, *43*(3), 187-209.

Fejgin, N., Talmor, R. & Erlich, I. (2005). Inclusion and burnout in physical education. *European Physical Education Review, Vol II (I)*, 29-50

Fishburn, P. C. (2015). *The theory of social choice*. New Jersey, USA, Princeton University Press.

Firat, M. (2017). E-Learning Tools and ICT usage of open and distance education students. *Journal of Technology & Information Education*, *9*(1), 99-108.

Forinash, M. & Grocke, D. (2004). Phenomenological Inquiry. In B. L. Wheeler, (Ed.). *Music Therapy Research*. Gilsum, NH, Pennsylvania: Barcelona Publishers.

Frazier, T. W., Youngstrom, E. A., Glutting, J. J. & Watkins, M. W. (2007). ADHD and achievement: Meta-analysis of the child, adolescent, and adult literatures and a concomitant study with college students. *Journal of Learning Disabilities*, *40*, 49–65.

Fraser, W.J. & Maguvhe, M.O. 2008. Teaching life sciences to blind and visually impaired learners. Journal for Biology Education, 42 (2): 8489.

Fuller, M., Bradley, A. & Healey, M. (2004a). Incorporating disabled students within an inclusive higher education environment. *Disability and Society, 19*, 455-468.

Fuller, M., Healey, M., Bradley, A., & Hall, T. (2004b). Barriers to learning: A systematic study of the experience of disabled students in one university. *Studies in Higher Education, 29*(3), 303-318. doi: 10.1080/03075070410001682592

Gadbow, N. (2002). Teaching all learners as if they are special. *New Directions for Adult and Continuing Education, 93*, 51 - 62. doi: 10.1002/ace.49

Garrison, D.R., & Anderson, T. (2003). *E-learning in the 21st century. A framework for research and practice.* London: RoutledgeFalmer.

Garrison, D. R., Cleveland-Innes, M. & Fung, T. S. (2010). Exploring causal relationships among teaching, cognitive and social presence: Student perceptions of the community of inquiry framework. *The Internet and Higher Education, 13*(1), 31-36.

Garland, M. 1993. Student perceptions of the situational, institutional, dispositional and epistemological barriers to persistence. *Distance Education, 14*(2), p.81-98.

Gale, T. (2011). Student equity's starring role in Australian higher education: Not yet centre field. *The Australian Educational Researcher, 38*(1), 5-23. doi: 10.1007/s13384-010-0007-3

Galusha, J. M. (1998). *Barriers to learning in distance education: University of Southern Mississippi, United States*

Garrison, D. R. & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The Internet and Higher Education, 7*(2), 95-105.

Geduld, B. (2013). Students' experiences of demands and challenges in open distance education: A South African case. *Progression, 35*(2), 102-125.

Geith, C. & Vignare, K. (2008). Access to education with online learning and open educational resources: Can they close the gap? *Journal of Asynchronous Learning Networks, 12*(1), 105-126.

Giorgi, A. (2009). The descriptive phenomenological method in psychology: A modified Husserlian approach. Pittsburgh, PA: Duquesne University Press.

Giorgi, A.P. & Giorgi, B.M. (2003). The descriptive phenomenological psychological method. In P. Comic, J.E. Rhodes and L. Yardley (Eds.). *Qualitative Research in Psychology* (pp.243-273). Washington DC: American Psychological Association.

Getzel, E. E. (2008). Addressing the persistence and retention of students with disabilities in higher education: Incorporating key strategies and supports on campus. *Exceptionality*, *16*(4), 207-219.

Getzel, E. & Thoma, C. A. (2008). Experiences of college students with disabilities and the importance of self-determination in higher education settings. *Career development for exceptional individuals, 31*(2), 77-84. doi: 10.1177/0885728808317658

Giesbers, B., Rienties, B., Tempelaar, D. & Gijselaers, W. (2013). Investigating the relations between motivation, tool use, participation, and performance in an e-learning course using web-videoconferencing. *Computers in Human Behaviour, 29*(1), 285-292.

Gibbs, D. & Gosper, M. (2006). The upside-down-world of e-learning. *Journal of Learning Design, 1*(2), 46-54.

Gladhart, M. A. (2010). Determining faculty needs for delivering accessible electronically delivered instruction in higher education. *Journal of Postsecondary Education and Disability, 22*(3), 185-196.

Goldman, S. R. (2003). Learning in complex domains: When and why do multiple representations help? *Learning and Instruction, 13*(2), 239-244.

Gooley, A. & Lockwood, F. (Eds.). (2012). *Innovation in open and distance learning: Successful development of online and web-based learning*. Abingdon, United Kingdom: Routledge.

Green, K. (2010, November). Faculty training is a major investment for online education programs: ADA compliance remains a major vulnerability. *Managing Online Education*, 1-2.

Groenewald, T. (2004). A phenomenological research design illustrated. *International Journal of Qualitative Methods,* 3(1), 1-26.

Guri-Rosenblit, S. (2011). *Digital technologies in higher education: Sweeping expectations and actual effects*. New York: Nova Science Publishers, Inc.

Henning, E., Van Rensburg, W. & Smit, B. (2004). Finding your way in qualitative research. Pretoria: Van Schaik.

HEQC. (2008). Institutional Audit Framework. Retrieved May 1, 2017, from http://www.unisa.ac.za/contents/projects/docs/HEQC%20FOUNDING%20 DOC%202001.pdf.

Howe, P. D. (2011). A contemporary review of English language literature on inclusion of students with disabilities in physical education: A European perspective. *European Journal of Adapted Physical Activity*, 2(1).

Hycner, R. H. (1985). Some guidelines for the phenomenological analysis of interview data. *Human studies,* 8(3), 279-303

Inglis, M., Palipana, A., Trenholm, S. & Ward, J. (2011). Individual differences in students' use of optional learning resources. *Journal of Computer Assisted Learning*, *27*(6), 490-502.

Isabirye, A. K. & Dlodlo, N. (2014). Perceived inhibitors of innovative e-learning teaching practice at a South African University of Technology. *Mediterranean Journal of Social Sciences*, *5*(4), 390.

Islam, N., Beer, M. & Slack, F. (2015). E-learning challenges faced by academics in higher education: A literature review. *Journal of Education and Training Studies*, *3*(5), 102-112.

Kane, S., Shulman, J., Shockley, T. & Ladner, R. 2007, May. *A web accessibility report card for top international university web sites.* Paper presented at the 2007 International Cross-disciplinary Conference on Web Accessibility (W4A) from 7-8 May, 2007, Banff, Canada.

Keegan, D. (1996). Foundations of distance education (3rd ed.). London: Routledge.

Kinash, S., Crichton, S. & Kim-Rupnow, W. S. (2004). A review of 2000-2003 literature at the intersection of online learning and disability. *The American Journal of Distance Education, 18*(1), 5-19.

Koul, L. (2000). Distance Education and Open Learning. In *Sixth survey of educational research, 1993-2000.* New Delhi: NCERT.

Lee, Y., Choi, J. & Kim, T. (2013). Discriminating factors between completers of and dropouts from online learning courses. *British Journal of Educational Technology*, *44*(2), 328-337.

Lee, M. & Erdogan, I. (2007). The effect of science-technology society teaching on students' attitudes toward science and certain aspects of creativity. *International Journal of Science Education*, *11*, 1315–1327.

Lei, S. A. & Gupta, R. K. (2010). College distance education courses: Evaluating benefits and costs from institutional, faculty and students' perspectives. *Education*, *130*(4), 616.

Lentell, H. (2012). Distance learning in British universities:. *Open Learning: the Journal of Open, Distance and e-learning*, *27*(1), 23-36.

Liasidou, A. (2012). *Inclusive education, politics and policy making*. London: Continuum.

Lieberman, L.J., Houston-Wilson, C. & Kozub, F.M. (2002). Perceived barriers to including students with visual impairments in general physical education. *Adapted Physical Activity Quarterly, 19*, 364-377.

Leu, E. & Ginsburg, M. (2011). *First Principles: Designing effective Education Program for In-service Lecturer Professional Development*. Washington, DC: USAID.

Li, L. I., Niu, B. Y. & Tang, X. J. (2015, December). Online Marketing Research Based on Social Choice Theory and Cloud Computing. In *Utility and Cloud Computing (UCC), 2015 IEEE/ACM 8th International Conference on* (pp. 391-396). IEEE.

List, C. (2013). Social choice theory. https://stanford.library.sydney.edu.au/archives/win2013/entries/social-choice/

Lwoga, E. (2012). Making learning and Web 2.0 technologies work for higher learning institutions in Africa. *Campus-Wide Information Systems*, *29*(2), 90-107.

Lombardi, A. R., Murray, C. & Gerdes, H. (2012). Academic performance of first-generation college students with disabilities. *Journal of College Student Development*, *53*(6), 811-826.

Macfadyen, L.P. & Dawson, S. (2012). Numbers are not enough. Why e-Learning analytics failed to inform an institutional strategic Plan. *Journal of Educational Technology & Society, 15*(3), 149-163.

Madriaga, M. (2007). Enduring disablism: Students with dyslexia and their pathways into UK higher education and beyond. *Disability & Society*, *22*(4), 399-412.Naidoo, G. (2012). Improving ICT for ODL in the UNISA Department of Public Administration. *Mediterranean Journal of Social Sciences,* 3(12), 127-149.

Malakpa, S. W. G. (2007). Problems and prospects in employment and job retention of the blind and visually impaired in the United States: A future

concern of special education. *International Journal of Special Education, 22*(1), 53-58.

Marino, M. T. (2010). Defining a technology research agenda for elementary and secondary students with learning and other high incidence disabilities in inclusive science classrooms. *Journal of Special Education Technology*, *25*(1), 1–28.

Marino, M. T., Gotch, C. M., Israel, M., Vasquez III, E., Basham, J. D. & Becht, K. (2014). UDL in the middle school science classroom: Can video games and alternative text heighten engagement and learning for students with learning disabilities? *Learning Disability Quarterly*, *37*(2), 87-99.

Martin, K. (2011). Attitudes of pre-service teachers in an Australian university towards inclusion of students with physical disabilities in general physical education programs. *European Journal of Adapted Physical Activity*, *3*(1), 30-48.

Mertens, M. (2005). Research and evaluation in education and psychology (2nd ed.). Thousand Oaks, CA: Sage.

Messinger-Willman, J. & Marino, M. T. (2010). Universal design for learning and assistive technology: Leadership considerations for promoting inclusive education in today's secondary schools. *Nassp Bulletin*, *94*(1), 5-16.

Matshedisho, K. R. (2007). Access to higher education for disabled students in South Africa: A contradictory conjuncture of benevolence, rights and the social model of disability. *Disability and Society, 22*(7), 685–699.

McKelvey, R. D. (2007). Intransitivities in multidimensional voting models and some implications for agenda control. In J. H. Aldrich & J. E. Alt (Eds.), *Positive changes in political science: The legacy of Richard D. McKelvey's most influential writings* (pp. 41-52).

Meyen, E., Aust, R., Gauch, J. M., Hinton, H. S., Isaacson, R.E., Smith, S. J. & Tee, M. J. (2002). E-learning: A programmatic research construct for the future. *Journal of Special Education Technology*, *17*, 37–46.

Milsom, A. & Hartley, M. T. (2005). Assisting students with learning disabilities transitioning to college: What school counselors should know. *Professional School Counseling, 8*(5), 436-441.

Mohakud, L. L., Mohapatra, R. L., & Behera, S. K. (2012). Encouraging higher education through Open and Distance Learning (ODL): Some aspects. *Turkish Online Journal of Distance Education*, *13*(4), 359-368.

Moon, N. W., Todd, R. L., Morton, D. L., & Ivey, E. (2012). Accommodating students with disabilities in science, technology, engineering, and mathematics (STEM). *Atlanta, GA: Center for Assistive Technology and Environmental Access, Georgia Institute of Technology*.

Moore, M. 1972. Learner autonomy: The second dimension of independent learning. *Convergence,* 5 (2), 76-88.

Moore, M.G. 1973. Toward a theory of independent learning and teaching. *Journal of Higher Education*, *XLIV* (12): 661 -79.

Moore, M.G. 2006. Theory and theorists. European Distance and E-Learning Network. Paper presented at the Barcelona Research Workshop (Castelldefels, October 27). Available online at http://www.eden-online.org/node/372. Accessed on 23 May 2013.

Moore, M. G., & Kearsley, G. 1996. *Distance Education: A Systems View*. Belmont: Wadsworth.

Moore, M. (1991). Editorial: Distance education theory. *The American Journal of Distance Education, 5*(3), 1–6.

Moore, M. G. (1993). Theory of transactional distance. *Theoretical principles of distance education*, *1*, 22-38.

Moore, J. L., Dickson-Deane, C. & Galyen, K. (2011). E-learning, online learning and distance learning environments: Are they the same? *The Internet and Higher Education, 14*(2), 129–135.

Moore, M. G., & Kearsley, G. (2011). *Distance education: A systems view of online learning.* Cengage Learning.

Moore, M. G., & Kearsley, G. (2011). *Distance education: A systems view of online learning.* Cengage Learning.

Moswela, E., & Mukhopadhyay, S. (2011). Asking for too much? The voices of students with disabilities in Botswana. *Disability and Society*, *26*(3), 307-319. doi: 10.1080/09687599.2011.560414.

Muscio, A. (2010). What drives the university use of technology transfer offices? Evidence from Italy. *The Journal of Technology Transfer*, *35*(2), 181-202.

Munemo, E., & Tom, T. (2013). Access and support of assistive technology for people with visual impairments in Open and Distance Learning institutions (ODL) in Zimbabwe. *Journal of Emerging Trends in Educational Research and Policy Studies*, *4*(3), 553- 559.

Murphy, K.L., & Cifuentes, L. (2001). Using Web tools, collaborating, and learning online. *Distance Education: An International Journal, 22*(2), 285–305.

Mutanga, O. & Walker, M. (2015). Towards a disability-inclusive higher education policy through the capabilities approach. *Journal of Human Development and Capabilities 16*(4), 501–517.

Mutanga, O (2017). Students with disabilities experiences in South Africa higher education-a synthesis of literature. *South African journal of Higher Education, Vol 31, No 1.*

Ndlovu, S. & Walton, E. (2016). Preparation of students with disabilities to graduate into professions in the South African context of higher learning: obstacles and opportunities: original research. *African Journal of Disability*, *5*(1), 1-8.

Ngubane-Mokiwa, S. (2013). Information and communication technology as a learning tool: Students with blindness at UNISA. *PhD thesis, University of South Africa, Pretoria.*

Ngubane-Mokiwa, S., & Khoza, S.B. (2016). Lecturers' experiences of teaching STEM to students with disabilities. *Journal of Learning for Development, 3*(1), 2311-1550.

Nneka Eke, H. (2010). The perspective of e-learning and libraries in Africa: challenges and opportunities. *Library Review*, *59*(4), 274-290.

Perez, L., Gulley, A. & Prickett, L. (2017). Improving Access to Higher Education with UDL and Switch Access Technology: A Case Study. In *Empowering Learners With Mobile Open-Access Learning Initiatives* (pp. 13-30). IGI Global.

Perkins, D. N. & Blythe, T. (1994). Putting understanding up front. *Educational Leadership, 51*(5), 4–7.

Phillips, A., Terras, K., Swinney, L. & Schneweis, C. (2012). Online disability accommodations: Faculty experiences at one public university. *Journal of Postsecondary Education and Disability*, *25*(4), 331-344.

Pildes, R. H. & Anderson, E. S. (1990). Slinging arrows at democracy: Social choice theory, value pluralism, and democratic politics. *Columbia Law Review*, *90*(8), 2121-2214.

Pityana, N.B. (2004). *Open distance learning in Africa: Access, quality, success. Pretoria: University of South Africa*. Retrieved April 28, 2017 from http://www.unisa.ac.za/contents/ about/principle/odl_africa.pdf.

Pityana, N. (2009, June 7–10). *Open distance learning in the developing*

world: Trends, progress and challenges. Keynote address at 23rd ICDE World Conference on Open Learning and Distance Education: 'Flexible Education for All: Open –Global – Innovative', Maastricht, The Netherlands. Retrieved April 10, 2017, from http://uir.unisa.ac.za/handle/10500/411

Plott, C. R. & Levine, M. E. (1978). A model of agenda influence on committee decisions. *The American Economic Review*, *68*(1), 146-160.

Polat, F. (2011). Inclusion in education: A step towards social justice. *International Journal of Educational Development, 31*(1), 50-58.

Qi, S., & Mitchell, R.E. (2011). Large-Scale Academic Achievement Testing of Deaf and Hard-of-Hearing Students: Past, Present, and Future. *Journal of Deaf Studies and Deaf Education, 17*(1), 1-18.

Ralabate, P. K. (2011). Universal design for learning: Meeting the needs of all students. *The ASHA Leader*, *16*(10), 14-17.

Ramrathan, L. 2013. Towards a conceptual framework for understanding student dropout from HEIs. *South African Journal of Higher Education, 27*(1), 209–220.

Rapoport, A. 1989. *Decision Theory and Decision Behaviour: Normative and Descriptive Approaches.* Dordrecht: Kluwer.

Reaser, A., Prevatt, F., Petscher, Y., & Proctor, B. (2007). The learning and study strategies of college students with ADHD. *Psychology in the Schools*, *44*, 627–638.

Rezabek, R. (1999, October). Barriers to distance education enrollment. Paper presented at TeleLearning Conference*.* October. Austin, TX.

Richter, D., Kunter, M., Klusmann, U., Lüdtke, O. & Baumert, J. (2011). Professional development across the teaching career: Teachers' uptake of

formal and informal learning opportunities. *Teaching and teacher education*, *27*(1), 116-126.

Roberts, J. B., Crittenden, L. A. & Crittenden, J. C. (2011). Students with disabilities and online learning: A cross-institutional study of perceived satisfaction with accessibility compliances and services. *Internet and Higher Education, 14*(4), 242-250.

Rochette, A. & Loiselle, F. (2012). Successfully performing a university student's role despite disabilities: Challenges of an inclusive environment and appropriate task modification. *Disability and rehabilitation*, *34*(25), 2201-2206.

Rohleder, P., Bozalek, V., Carolissen, R., Leibowitz, B. & Swartz, L. (2008). Students' evaluations of the use of e-learning in a collaborative project between two South African universities. *Higher education, 56*(1), 95-107.

Rose, D.H. & Gravel, J.W. (2010). Universal design for learning. In P. Peterson, E. Baker, & B. McGraw (Eds.), *International Encyclopedia of Education* (119–124). Oxford: Elsevier.

Rose, D.H. & Meyer, A. (2002). *Teaching Every Student in the Digital Age: Universal Design for Learning.* Alexandria, VA: ASCD.

Rose, D.H. & Meyer, A. (2006). *A Practical Reader in Universal Design for Learning.* Cambridge, MA: Harvard Education Press.

Rossi. P.G. (2009). Learning environment with artificial intelligence elements. *Journal of e-learning and Knowledge Society*, 5(1), 67-75.

Sahin, I. & Shelley, M. (2008). Considering students' perceptions: The distance education student satisfaction model. *Educational Technology & Society*, *11*(3), 216-223.

Salend, S., & Whittaker, C. (2012). Inclusive education: Best practices in the United States. In C. Boyle & K. Topping (Eds.), *What works in inclusion?* Maidenhead: Open University Press, UK.

Sangrà; A., Vlachopoulos, D., & Cabrera, N. (2012). Building an inclusive definition of e-learning: An approach to the conceptual framework. *The International Review of Research in Open and Distance Learning, 12*(2), 145-159.

Scott, L. & Temple, P. (2017). A conceptual framework for building UDL in a special education distance education course. *Journal of Educators Online*, *14*(1), 48-59.

Sen, A. (2012). The reach of social choice theory. *Social Choice and Welfare*, *39*(2), 259-272.

Sharma, M. (2007). *Distance education: Concepts and principles.* New Delhi: Kaniska Publishers.

Sharpe, R., Benfield, G., Roberts, G. & Francis, R. (2006). The undergraduate experience of blended e-learning: A review of UK literature and practice. *The Higher Education Academy*, 1-103.

Shea, P. & Bidjerano, T. (2009). Community of inquiry as a theoretical framework to foster "epistemic engagement" and "cognitive presence" in online education. *Computers & Education*, *52*(3), 543-553.

Shea, P.J., Pickett, A.M. & Pelz, W.E. (2003). A follow-up investigation of 'teaching presence' in the SUNY Learning Network. *Journal of Asynchronous Learning Networks, 7*(2), 61–80.

Shevlin, M., Kenny, M. & McNeela, E. (2004). Participation in higher education for students with disabilities: An Irish perspective. *Disability and Society, 19*(1), 15–30.

Schofield, N. (2011). Is the political economy stable or chaotic? *AUCO Czech Economic Review*, *5*(1), 76-94.

Singleton, C. H. & Aisbitt, J. (2001). *A follow-up of the national working party survey of dyslexia provision in UK universities.* Paper Presented at the 5th British Dyslexia Association International Conference from 18–21 April 2001, University of York. UK.

Sim, S., & Van Loon, B. 2004. Introducing critical theory. Royston: Icon.

Skinner, M. E. & Lindstrom, B. D. (2003). Bridging the gap between high school and college: Strategies for the successful transition of students with learning disabilities. *Preventing School Failure: Alternative Education for Children and Youth, 47*(3), 132-137.

Smith, A. (2004). The inclusion of pupils with special educational needs in secondary school physical education. *Physical Education and Sport Pedagogy, 9 (1)*, 37-53

Smith, F. G. (2012). Analyzing a college course that adheres to the Universal Design for Learning (UDL) framework. *Journal of the Scholarship of Teaching and Learning, 12*(3), 31-61.

Speziale, H. S., Streubert, H. J., & Carpenter, D. R. (2011). *Qualitative research in nursing: Advancing the humanistic imperative.* Philadelphia, Lippincott Williams & Wilkins.

Stella, A. & Gnanam, A. (2004). Quality assurance in distance education: The challenges to be addressed. *Higher Education, 47*(2), 143-160.

Stodden, R., Whelley, T., Chang, C. & Harding. T. (2001). Current status of educational support provision to students with disabilities in postsecondary education. *Journal of Vocational Rehabilitation, 16*, 1–10.

Strnadova, I., Hájková, V., & Květoňová, L. (2015). Voices of university students with disabilities: Inclusive education on the tertiary level – a reality or a distant dream? *International Journal of Inclusive Education, 19*(10), 1080–1095.

Šumak, B., HeričKo, M., & Pušnik, M. (2011). A meta-analysis of e-learning technology acceptance: The role of user types and e-learning technology types. *Commercial Human Behaviour, 27*(6), 2067-2077.

Tarus, J. (2011). *Adoption of e-learning to support teaching and learning in Moi University.* Thesis presented in partial fulfilment of the requirements for the degree of Master of Philosophy (Information Technology), Moi University.

Tarus, J. K., Gichoya, D., & Muumbo, A. (2015). Challenges of implementing e-learning in Kenya: A case of Kenyan public universities. *The International Review of Research in Open and Distributed Learning*, *16*(1).

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, *45*(1), 89-125.

UNESCO. (2014). *Sustainable development begins with education - How education can contribute to the proposed post-2015 goals.* France: United Nations Educational, Scientific and Cultural Organization.

UNESCO. (2016). *Learning for all: Guidelines on the inclusion of learners with disabilities in Open and Distance Learning*. France: United Nations Educational, Scientific and Cultural Organization.

UNISA. (2008). *Students with disabilities policy*. Pretoria: University of South Africa.

UNISA. (2012). *Curriculum policy*. Pretoria: University of South Africa.

UNISA. (2013). *Tuition policy*. Pretoria: University of South Africa.

UNISA. (2014). *UNISA 2013-2015: Towards a high performance university.* Pretoria: University of South Africa.

UNISA. (2015). *The Open Distance Learning Policy*. Pretoria: University of South Africa.

Urdan, T. A. & Weggen, C. C. (2000) *Corporate e-learning: exploring a new frontier*. Berwyn, PA: WR Hambrech & CO.

Van den Akker, J. (2004). Curriculum perspectives: An introduction. In J. van den Akker, W. Enschede: *Curriculum landscapes and trends* (pp. 1-10). Netherlands Institute for Curriculum Development. Place in the Netherlands: Springer Netherlands.

Van den Akker, J. (2013). Curricular Development Research as Specimen of Educational Design Research. *Educational Design Research*, 53-70.

Van den Akker, J., Branch, R. M., Gustafson, K., Nieveen, N. & Plomp, T. (Eds.). (2012). *Design approaches and tools in education and training*. Place: Springer Science & Business Media.

Van den Akker, J., de Boer, W., Folmer, E., Kuiper, W., Letschert, J., Nieveen, N. & Thijs, A. (2009). *Curriculum in development.* Enschede: Netherlands Institute for Curriculum Development.

van der Merj, J. & de Jong, T. (2006). Supporting students' learning with multiple representations in a dynamic simulation-based learning environment, *Learning and Instruction, 16*(3), 199-212.

Van Jaarsveldt, D. E. & Ndeya-Ndereya, C.N. (2015). 'It's not my problem': Exploring lecturers' distancing behaviour towards students with disabilities. *Disability and Society, 30*(2), 199–212.

Van Mill, D. (2002). An empirical test of social choice theories of disequilibrium. *Australian Journal of Political Science, 37*(2), 317-332.

Waldman, E. A. & Akin Ojelabi, L. (2016). Mediators and substantive justice: A view from Rawls' original position. *Ohio State Journal on Dispute Resolution, 30*(3), 391-430.

Wehman, P. (2006). *Life beyond the classroom: Transition strategies for young people with disabilities.* 4th ed. Baltimore, MD: Paul Brookes.

Wessels, R. (2011). Students' perspectives on case study teaching in public administration at Unisa. A pilot study. *Admnistratio Publica*, 19(2), 76-79.

Wessels, R. G. (2012). The reception of satellite broadcast in Public Administration Teaching at the University of South Africa. Unpublished paper. Unisa. Pretoria.

Whiting, L. S. (2000). Analysis of phenomenological data: Personal reflections on Giorgi's method. *Nurse researcher***, 9(2), 60-74.

WHO. (2015). *WHO Global Disability Action Plan 2014-2021 – Better Health for All People.* Switzerland: World Health Organisation.

Wood, H. (1996). *Designing study materials for distance students.* [On-line]. Retrieved April 1, 2017, from: http://www.csu.edu.au/division/oli/oli-rd/occpap17/design.htm

Wu, H. K., Krajcik, J. S., & Soloway, E. (2001). Promoting understanding of chemical representations: Students' use of visualization tool in the classroom. *Journal of research in science teaching, 38*(7), 821-842.

Yuen, M., & Westwood, P. (2001). Integrating students with special needs in Hong Kong secondary schools: Teachers' attitudes and their possible relationship to guidance training. *International Journal of Special Education*, *16*(2), 69-84.

Zembylas, M. (2008). Engaging with issues of cultural diversity and discrimination through critical emotional reflexivity in online learning. *Adult Education Quarterly*, *59*(1), 61-82.

APPENDICES

UNISA | university of south africa

COLLEGE OF EDUCATION RESEARCH ETHICS REVIEW COMMITTEE

13 April 2016

Ref : **2016/04/13/55567355/21/MC**
Student: Mr TO Ongolo
Student Number : 55567355

Dear Mr Ongolo

Decision: Ethics Approval

Researcher: Mr TO Ongolo
Tel: +2772 7982 874
Email: thomas.ongolo@gmail.com

Supervisor: Prof. M.C Maphalala
College of Education
University of KwaZulu-Natal
Tel: +2783 430 1088
Email: MaphalalaM@unizulu.ac.za

Co-Supervisor: Dr S. Ngubane-Mokiwa
College of Education
Institute for Open Distance Learning
Tel: +2712 337 6188
mokiwsa@unisa.ac.za

Proposal: An analysis of policies guiding the design and delivery of an Inclusive Curriculum at an Open Distance eLearning university

Qualification: D Ed in Curriculum Studies

Thank you for the application for research ethics clearance by the College of Education Research Ethics Review Committee for the above mentioned research. Final approval is granted for the duration of the research.

The application was reviewed in compliance with the Unisa Policy on Research Ethics by the College of Education Research Ethics Review Committee on 13 April 2016.
The proposed research may now commence with the proviso that:
   1) The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
   2) Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should

be communicated in writing to the College of Education Ethics Review Committee. An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.

3) The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.

Note:

The reference number **2016/04/13/55567355/21/MC** should be clearly indicated on all forms of communication [e.g. Webmail, E-mail messages, letters] with the intended research participants, as well as with the College of Education RERC.

Kind regards,

Dr M Claassens
CHAIRPERSON: CEDU RERC
mcdtc@netactive.co.za

Prof VI McKay
EXECUTIVE DEAN

COLLEGE OF EDUCATION

2016 -04- 2 5

Office of the Executive Dean

App

reval template 2014

Appendix B: INFORMED PERMISSION TO UNISA

UNISA Research and Ethics Committee
University Of South Africa

379 Queen's
Crescent
Lynnwood,
Pretoria
South Africa

RE: **PERMISSION TO CONDUCT RESEARCH AT UNISA**

Title of the research: Policies Guiding the Design and Delivery of an Inclusive Curriculum at UNISA.

Dear Dr. Retha Visagie,

I'm Thomas O. Ongolo, a DEd student attached to the Institute for Open Distance Learning at Unisa. I am undertaking a research study that will, if successfully completed, lead to the award of a DEd degree.

I am requesting permission to conduct the research using UNISA staff and academics in the study entitled: Policies Guiding the Design and Delivery of an Inclusive Curriculum at UNISA.

The aim of this study is to explore and analyse **Policies Guiding the Design and Delivery of an Inclusive Curriculum at UNISA.** It is hoped that the study will enable me come up with effective guidelines that could guide the design and delivery of inclusive curriculum in open distance learning environments. It is envisaged that this will consequently lead to effective teaching and learning for students with disabilities.

This research will assist in highlighting design and delivery of inclusive curriculum

experiences of academics at UNISA and therefore contributed to the envisaged guidelines for effective inclusive curriculum for ODeL contexts. There are no potential risks expected in this study.

Feedback procedure will entail distribution of thesis documents. The findings will also be readily available in an article that will be published in a distance education journal and in the thesis that will easily be accessible from the Unisa library. Please note that for purposes of the integrity of this research, Unisa as an institution and I as the researcher have ensured that good research practices and conduct are observed. In this regard I sought a full ethical clearance from the ethical committee (CEDU REC).

Yours sincerely,

Mr. Thomas O. Ongolo

For any questions and clarity concerning this study, do not hesitate to contact the researcher or the supervisor on the contacts below:

Supervisor: Prof. M C Maphalala, Tel: 012 429 4381 or Co-Supervisor: Dr S.A. Ngubane-Mokiwa, 012-337-6188

Researcher: Mr. Thomas O. Ongolo; Contact
details: 0727982874

Appendix C1: Interview Guide

INTERVIEW GUIDE FOR Academics (lecturers/professors),

This research is being conducted by Thomas Odera Ongolo, a doctoral student at the University of South Africa [UNISA]. Thank you for agreeing to participate in the study.

Your answers will be treated confidentially. I am in the process of writing my doctoral thesis and am collecting data for that purpose. For my doctoral thesis I am very interested in **Analysing Policies Guiding the Design and Delivery of an Inclusive Curriculum at an ODeL University.** The purpose of this interview is to gain an understanding of the key policies and learning delivery strategies that guide the ODeL academics when designing an inclusive curriculum. It is conducted to inform inclusion in the ODeL setting.

The interview will be tape-recorded (**EXPLAIN WHY AND ESTABLISH VERBAL CONSENT FROM PARTICIPANTS**) and will take the maximum of ONE hour. Please feel free to express your opinions openly and honestly. The researcher will treat all information collected from this discussion confidentially. Under no circumstances will individual responses will be identified by name in formal or informal meetings or documents. I would like to acknowledge participants by name in a list in the Acknowledgements section of the report, but sources of individual responses will not be identified in discussing results, and efforts will be made to ensure that readers cannot identify these responses.

Month/ Date /Year --

SECTION A: PERSONAL AND ACADEMIC EXPERIENCES

1. Please tell me about your career journey and how your contacts have been with students with disabilities in ODeL education setting?

SECTION B: POLICIES

1.   How do you understand UNISA policy in terms of:

a)   Design and delivery of ODeL education for students with disabilities?

b)   Capacity development for academics on inclusive ODeL education for students with disabilities?

c)   Integrated support for delivery of inclusive curriculum in ODeL system?

2.   What policy plans are there in your department on designing and delivering inclusive ODeL curriculum for students with disabilities?

3.   Is there a need to improve policy to enhance design and delivery of inclusive ODeL for students with disabilities?

SECTION C: DESIGN AND DELIVERY OF CURRICULUM

1.   Tell me about your knowledge of design and delivery of inclusive strategies in the ODeL setting.

2.   What inclusive design strategies do UNISA academics use in the ODeL setting?

3.   How can you describe ways academics relate to students with disabilities on ODeL curriculum issues?

4.   Tell me about the challenges faced by academics in designing inclusive curriculum in the ODeL setting.

5.   What resources do academics have to design and deliver inclusive curriculum in the ODeL setting.

6.   What inclusive learning delivery strategies are used by academics at UNISA?

7.   How do academics ensure delivery of inclusive ODeL curriculum?

8.   Do you think the students with disabilities cope with your delivery of ODeL curriculum?

9.   What kind of investment in professional development for academics and those supporting learners exist to design and deliver inclusive curriculum in UNISA?

10.   What do you think is a better option for designing and delivering an inclusive curriculum for ODeL education for students with disabilities? Support your answer please.

SECTION D : RECOMMENDATIONS

We have discussed quite a number of issues today relating to Design and Delivery of an Inclusive Curriculum at UNISA. In your opinion, what do you think must be done in this institution in order to enhance the experiences of students with disabilities?

1. What recommendations can you offer towards enhancing the experiences of students with disabilities at UNISA?
2. Can you identify the areas that need most improvement regarding Design and Delivery of an Inclusive Curriculum at UNISA?

_____

CLOSURE

Thank you very much once again for sharing your views with me today. I really appreciate your views, comments and suggestions.

Appendix C2: Interview guide for staff members from Department of Curriculum and Learning Development (DCLD)

This research is being conducted by Thomas Odera Ongolo, a doctoral student at the University of South Africa [UNISA]. Thank you for agreeing to participate in the study. Your answers will be treated confidentially. I am in the process of writing my doctoral thesis and am collecting data for that purpose. For my doctoral thesis I am very interested in **Analysing Policies Guiding the Design and Delivery of an Inclusive Curriculum at an ODeL University.** The purpose of this interview is to gain an understanding of the key policies and learning delivery strategies that guide the ODeL academics when designing an inclusive curriculum. It is conducted to inform inclusion in the ODeL setting.

The interview will be tape-recorded (**EXPLAIN WHY AND ESTABLISH VERBAL CONSENT FROM PARTICIPANTS**) and will take the maximum of ONE hour. Please feel free to express your opinions openly and honestly. The researcher will treat all information collected from this discussion confidentially. Under no circumstances will individual responses will be identified by name in formal or informal meetings or documents. I would like to acknowledge participants by name in a list in the Acknowledgements section of the report, but sources of individual responses will not be identified in discussing results, and efforts will be made to ensure that readers cannot identify these responses.

(Month/Date/Year) _____

Format: The interview is divided into 2parts

1.   How do you understand UNISA policy in terms of:

a)   Design and delivery of ODeL education for students with disabilities?

b)   Capacity development for DCLD staff and academics on inclusive ODeL education for students with disabilities?

c)   Integrated support for delivery of inclusive curriculum in ODeL system?

2.   What policy plans are there in DCLD on designing and delivering inclusive ODeL curriculum at UNISA?

3.   Is there a need to improve policy to enhance design and delivery of inclusive ODeL for students with disabilities?

1.   Tell me about your role and DCLD in supporting the design and delivery of inclusive curriculum in ODeL system at UNISA?

2.   Tell me about the challenges faced by DCLD in supporting the design and delivery of inclusive curriculum in ODeL system at UNISA?

3.   How can you describe ways academics relate to DCLD on design and delivery of ODeL curriculum issues at UNISA?

4.   What resources do **DCLD** have to design and deliver inclusive curriculum in the ODeL setting.

5.   Do you think the students with disabilities cope with delivery of inclusive ODeL curriculum at UNISA?

6.   What do you think need to be done by the academics and DCLD in designing and delivering inclusive ODeL curriculum at UNISA?

7.   Please share with me your thoughts about how DCLD can better support the design and delivery of inclusive curriculum in ODeL system at UNISA?

8.   What do you think is a better option for designing and delivering inclusive curriculum for ODeL education at UNISA? Support your answer please.

9.   What kind of investment in professional development for academics and those supporting learners exist to design and deliver inclusive curriculum in UNISA?

10. Is there any other issue you would like to tell me about apart from those I have asked about?

We have discussed quite a number of issues today relating to Design and Delivery of an Inclusive Curriculum at UNISA. In your opinion, what do you think must be done in this institution in order to enhance the experiences of students with disabilities?

1. What recommendations can you offer towards enhancing the experiences of students with disabilities at UNISA?
2. Can you identify the areas that need most improvement regarding Design and Delivery of an Inclusive Curriculum at UNISA?

_____

_____

CLOSURE

Thank you very much once again for sharing your views with me today. I really appreciate your views, comments and suggestions.

APPENDIX C3: INTERVIEW GUIDE FOR ARCSWID STAFF MEMBERS

Interview guide for staff members from the Advocacy and Resource Centre for Students with Disabilities [ARCSWID]

This research is being conducted by Thomas Odera Ongolo, a doctoral student at the University of South Africa [UNISA]. Thank you for agreeing to participate in the study. Your answers will be treated confidentially. I am in the process of writing my doctoral thesis and am collecting data for that purpose. For my doctoral thesis I am very interested in **Analysing Policies Guiding the Design and Delivery of an Inclusive Curriculum at an ODeL University.** The purpose of this interview is to gain an understanding of the key policies and learning delivery strategies that guide the ODeL academics when designing an inclusive curriculum. It is conducted to inform inclusion in the ODeL setting.

The interview will be tape-recorded (**EXPLAIN WHY AND ESTABLISH VERBAL CONSENT FROM PARTICIPANTS**) and will take the maximum of ONE hour. Please feel free to express your opinions openly and honestly. The researcher will treat all information collected from this discussion confidentially. Under no circumstances will individual responses will be identified by name in formal or informal meetings or documents. I would like to acknowledge participants by name in a list in the Acknowledgements section of the report, but sources of individual responses will not be identified in discussing results, and efforts will be made to ensure that readers cannot identify these responses.

(Month/Date/Year) _____

Format: The interview is divided into 2parts

SECTION A: POLICIES

1.   How do you understand UNISA policy in terms of:
a)   Design and delivery of ODeL education for students with disabilities?
b)   Capacity development for ARCSWID staff and academics on inclusive ODeL education for students with disabilities?
c)   Integrated support for delivery of inclusive curriculum in ODeL system?
2.   What policy plans are there in ARCSWID on designing and delivering inclusive ODeL curriculum at UNISA?
3.   Is there a need to improve policy to enhance design and delivery of inclusive ODeL for students with disabilities?

SECTION B: DESIGN AND DELIVERY OF CURRICULUM

1.   Tell me about your role and ARCSWID in supporting the design and delivery of inclusive curriculum in ODeL system at UNISA?
2.   Tell me about the challenges faced by ARCSWID in supporting the design and delivery of inclusive curriculum in ODeL system at UNISA?
3.   How can you describe ways academics relate to ARCSWID on design and delivery of ODeL curriculum issues at UNISA?
4.   What resources do **ARCSWID** have to design and deliver inclusive curriculum in the ODeL setting.
5.   Do you think the students with disabilities cope with delivery of inclusive ODeL curriculum at UNISA?
6.   What do you think need to be done by the academics in designing and delivering inclusive ODeL curriculum at UNISA?
7.   Please share with me your thoughts about how ARCSWID can better support the design and delivery of inclusive curriculum in ODeL system at UNISA?
8.   What do you think is a better option for designing and delivering inclusive

curriculum for ODeL education at UNISA? Support your answer please.

9. What kind of investment in professional development for academics and those supporting learners exist to design and deliver inclusive curriculum in UNISA?

10. Is there any other issue you would like to tell me about apart from those I have asked about?

SECTION D: RECOMMENDATIONS

We have discussed quite a number of issues today relating to Design and Delivery of an Inclusive Curriculum at UNISA. In your opinion, what do you think must be done in this institution in order to enhance the experiences of students with disabilities?

1. What recommendations can you offer towards enhancing the experiences of students with disabilities at UNISA?

2. Can you identify the areas that need most improvement regarding Design and Delivery of an Inclusive Curriculum at UNISA?

_____

CLOSURE

Thank you very much once again for sharing your views with me today. I really appreciate your views, comments and suggestions.

APPENDIX D: ACADEMICS & STAFF CONSENT FORM

I have read the information presented in the information letter about the study: Policies Guiding the Design and Delivery of an Inclusive Curriculum at UNISA

I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and add any additional details I wanted. I am aware that I have the option of allowing my interview to be audio recorded to ensure an accurate recording of my responses. I am also aware that excerpts from the interview may be included in publications to come from this research, with the understanding that the quotations will be anonymous.
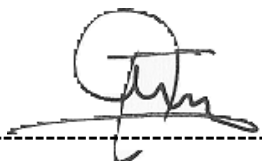
I was informed that I may withdraw my consent at any time without penalty by advising the researcher.

With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

Participant's Name (Staff):--

Participant's Signature ------------------------------------- Date: ------------------------------

Researcher Name: T.O. Ongolo

Researcher's Signature ------------------------------------- Date: 6/01/2016