

# **Deconstructing the South African National Curriculum Framework: to what extent are UDL principles incorporated into the curriculum to ensure it is differentiated for children with disabilities?**

by

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## UNIVERSITY OF PRETORIA

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The author, whose name appears on the title page of this dissertation, has obtained, for the research described in this work, the applicable research ethics approval.

The author declares that he/she has observed the ethical standards required in terms of the University of Pretoria's Code of ethics for researchers and the Policy guidelines for responsible research.

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## ABSTRACT

**Background:** An inflexible curriculum without any opportunity for modification or adaptation does not support inclusive education. Reports on early childhood education have resolved that traditional approaches to curriculum, such as those emphasizing drill and repetition of isolated academic skills are not in line with contemporary knowledge of human learning and neuropsychology. There has been advocacy for early education for children from disadvantaged environments including those with special needs because investing in education for the vulnerable improves their survival. The Universal Design for Learning framework has been designed with the aim of addressing the diversity of all students and creating a flexible curriculum that supports access, participation, and progress for all learners. This framework helps educators by providing a guide for creating curricula that meets the needs of all learners from the beginning. The South African NCF is a framework that seeks to honour the diversity of young children and their capabilities and is said to also recognise the need for every child to equally participate in a curriculum programme that aims to guide integrated care and education in varied settings. Its six Early Learning and Developmental Areas have been arranged to help adults to organise activities for babies, toddlers and young children according to the children's development. This study was therefore aimed at examining the extent to which children with disabilities are conceptualised and accommodated in the South African National Curriculum Framework by; (i) identifying the nature of the language used in the curricula to mention, refer to or imply about children with disabilities; and (ii) by identifying and exploring the extent to which the South African NCF reflects and incorporates the principles of UDL.

**Method:** A comprehensive qualitative content analysis of the English version of the NCF curriculum document was conducted in order to understand the extent to which children with disabilities are mentioned and included in the South African National Framework Curriculum.

**Results:** The deductive content analysis revealed that there were a variety of terms used to refer to children with disabilities in different sections of the South African NCF. All of the three principles of UDL were also incorporated to some extent in the NCF. However, this is not consistent across the principles. The coding and in-depth reading of various goals, strategies and assessment within various ELDA's also highlighted that there are still too many opportunities that

were missed where UDL principles could be included and made more explicit for ECD practitioners to know how to practically differentiate the curriculum for children with disabilities

**Conclusion:** It is clear that the NCF does take into account the use of different terminology when referring to disability. It should also be noted that the NCF does take into account the principles of UDL in its design where cultural diversity is honoured and acknowledged. However, the number of missed opportunities cannot be ignored. There remains a gap for the NCF to explicitly detail how ECD practitioners could successfully ensure that every learner is benefited by the curriculum in all its components.

**Keywords:** children with disabilities, early childhood education, curriculum, ECD, inclusion, National Curriculum Framework (NCF), Universal Design for Learning (UDL)

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## LIST OF ABBREVIATIONS

AAC: Augmentative and Alternative Communication

CAPS: Curriculum Assessment Policy Statement

CCN: Complex Communication Needs

DBE: Department of Basic Education

D-CAPS: Differentiated Curriculum Policy Statement

DPO: Disabled Persons Organisations

DSD: Department of Social Development

DWCPD: Department of Women, Children and People with Disabilities

ECCE: Early Childhood Care and Education

ECD: Early Childhood Development

ELDA: Early Learning and Developmental Area

LMICs: Low-and-Middle-Income Countries

NCF: South African National Curriculum Framework

NGO: Non-Government Organisations

UDL: Universal Design for Learning

UNICEF: The United Nations Children's Fund

UNCRC: The United Nations Convention of the Rights of the Child

## Section 1: Problem Statement and Literature Review

### **1.PROBLEM STATEMENT AND LITERATURE REVIEW**

#### **1.1 PROBLEM STATEMENT**

A number of children on the African continent live in disadvantaged conditions and there is a great need, amongst others, to improve education including early childhood education (Atmore, 2019). It has become more necessary to improve opportunities for young children to access Early Childhood Development (ECD) programmes (Atmore, 2019). There has been an increase in the awareness of ECD provisioning in developing countries where there is strong advocacy for children with disabilities and those with developmental delays who come from disadvantaged environments to be included in government preschool supported programmes (Engle et al., 2014). In South Africa, there has been an increasing drive to support and value the development and learning of children in the early years (Department of Basic Education, 2015) and this notion has led to the development of the South African National Curriculum Framework (NCF) for children birth to four years (Department of Basic Education, 2015). It is believed that through this curriculum framework, children from different backgrounds and settings will have access to quality ECD services (Department of Basic Education, 2015). However, one cannot ignore current reports from inclusive education organisations which suggests that children with disabilities still have restricted access to ECD programmes and curriculum (Inclusive Education South Africa, 2020). This was already reported by Lake (2011) as well as Storbeck and Moodley (2011) more than a decade ago that the most vulnerable children and those with disabilities are mostly not likely to have access to ECD programmes with curriculum not sufficiently adapted for children with disabilities to participate in ECD programmes. In addressing the lack of progress of children with disabilities to participate within ECD programmes, there is therefore a need to make curricula more accessible for all learners (CAST, 2011). The Universal Design for Learning (UDL) is one such framework that is aimed at delivering flexible approaches to teaching and learning by addressing the diversity of all learners through a flexible curriculum that supports access, participation, and progress for all learners within the classroom context (Capp, 2017).

Reports on early childhood education have resolved that traditional approaches to curriculum, such as those emphasizing drill and repetition of isolated academic skills are not in line with contemporary knowledge of human learning and neuropsychology (Dalton & Brand,

2012). Such methods of learning have not been successful in producing problem-solving skills that children need in these modern times and are not consistent with the developmental characteristics of young children (Dalton & Brand, 2012). It is therefore suggested that implementing the principles of UDL, in the assessment of young children, caters for their variable skills and addresses their unique needs and capabilities (Dalton & Brand, 2012).

There has been increased demand and call for including children with disabilities into the mainstream curriculum in South Africa as this is regarded as the right for every learner (Engelbrecht et al., 2015). Sarton and Smith (2019) have advised that educating children with disabilities can first be done by improving teaching and learning for all children. This essentially means that effective teaching for children with special needs is the same as effective teaching for all (Sarton & Smith, 2019). For children with disabilities, the ECD programmes offer important opportunities for assessing learners' individual needs, designing specific developmental plans, and building support and capacity networks with parents (Black et al., 2017). However, there is a scarcity on the availability of data on the participation of children with disabilities within in ECD programmes in low-and middle-income settings like South Africa. There is also a lack of studies on evaluating the effectiveness of interventions to promote the inclusion of children with disabilities in ECD services, which makes it difficult to plan and provide more inclusive ECD services (Douglas et al., 2012; World Bank, 2015). This therefore leads to a question of whether the current curriculum identified for children in South Africa does indeed cater for the diverse needs of children with disabilities.

In its vision statement, the NCF is said to work with and for all children including children with disabilities in order to provide them with **equal** opportunities to achieve their full developmental potential (DBE, 2015). Formal ECD centres are influenced by the philosophies and goals of curricula, learning programmes and government priorities (Ebrahim et al., 2013). It is therefore important to explore whether the NCF does provide equal opportunities for all children from birth to four years, including those with diverse educational needs. It is also important to explore the extent to which the principles of UDL have been included within the NCF to provide children with disabilities the opportunity to participate in the curriculum.

## **1.2 LITERATURE REVIEW**

Child development, as suggested by Engle (2008), represents the ordered emergence of independent skills of sensorimotor, cognitive-language, social-emotional functioning. In South Africa, ECD is an umbrella term that is used to refer to the provision of the physical, emotional, social, spiritual and moral development for children from birth to nine years (Ebrahim, 2014). ECD, in South Africa, is divided into two phases; birth to 4 years, which is prior to schooling-going age, and from ages 5 to 9 which is the school-going age or otherwise known as the foundation phase which is inclusive of the reception year, grade R (Ebrahim, 2014). In 2012, South Africa had an estimate of approximately 5.3 million children aged below five years, representing about 10% of the total population (Meier, Lemmer & Niron, 2015) and more recently there has been an increase in that figure according to the South African Early Childhood Review 2019 (Hall et al., 2019) with approximately 7 million children in that age group in 2017.. With such a large number of children requiring ECD services, Atmore et al., (2012) have acknowledged that early childhood care and education (ECCE) which in South Africa is the birth to 4 phase of ECD, should be recognised as the foundation for success in future learning. In most discussions of early childhood services and programmes in South Africa, the term ECD is generally used to refer to this initial phase of ECCE and foundation phase referring to ages 5 to 9 years. For the purposes of this mini-dissertation, when the term ECD is used, it will refer to the former. It is essential to offer quality learning programmes that prepare children for adulthood and provide them with the necessary opportunities for social, cognitive, spiritual, physical and emotional development (Atmore et al., 2012). Meier et al., (2015) have identified benefits of investing in ECD programmes and these include; reduced school dropout and repetition rate, improved school achievement, higher levels of physical health and socio-emotional wellbeing, greater productivity in adulthood along with long economic benefits. This was further echoed by the South African minister of basic education who acknowledged that the most effective and cost-efficient time to intervene is before birth and the early years of life (Department of Basic Education, 2015).

### **1.2.1. Importance of ECD**

Additionally, investing in ECD is beneficial because children are born ready to learn and learning is achieved through interactions with the environment (Ebrahim et al., 2013). The basic

structural design of the brain is well established by birth, with areas responsible for early learning developing rapidly during pregnancy and the first 2 years of life (Ebrahim et al., 2013). For this reason, UNICEF recommends that all children should be provided the opportunity to participate in ECD programmes from a very young age when brain plasticity and neurogenesis are high and cognitive and psychosocial skills development is crucial (UNICEF- Connect, 2014 as cited in Meier et al., 2015). The department of health has also advocated for early education for children from disadvantaged environments including those with special needs because investing in education for the vulnerable improves their survival, growth and overall development (Engle et al., 2014).

### **1.2.2. Children with disabilities in South Africa within ECD**

Historically, preschools have been the main form of ECD provision in South Africa however, one of the biggest challenges in ECD in South Africa remains the need to increase access to these programmes (Atmore et al., 2012). Because of the unavailability and unreliability of the number of all children with disability, data on children with disabilities accessing education in low and middle-income countries (LMICs) is limited (Kuper et al., 2014) and a number of low-income countries were found to have inaccurate or missing data on learners with disabilities (Schuelka, 2018). The last available data that we have about the number of children with disabilities in South Africa was undertaken in 2011. It was estimated that there were approximately 243 000 children with disabilities between the ages of 0 to 4 (DSD, DWCPD & UNICEF, 2012). This, however, is most likely a serious under-estimation as accurate collection of data is affected by a lack of agreement on definitions, terminology, and data collection strategies (Hall et al., 2019). The South African Early Childhood Review of 2019 (Hall et al., 2019) which aims amongst others to provide data about children under six in South Africa, confirms that there are significant gaps and challenges in estimating the number of young children with disabilities or developmental delay in the country. Nevertheless, it is more likely that the occurrence of disability in children in the ECD age group in South Africa is somewhere between 11% and 23 %.

Nevertheless, available research elsewhere (Kuper et al., 2014) and in South Africa (Donohue & Bornman, 2014), shows that children with disabilities are less likely to enter education, have lower attendance rates and have lower transition rates to higher levels of



education. Additionally, findings of an analysis by UNESCO (2018) confirms that persons with disabilities, on average, are less likely to ever attend school, are more likely drop out of school, are less likely to complete their primary or secondary education, have fewer years of schooling, and they are less likely to have basic literacy skills. People with disabilities, as defined by UNESCO (2018), include those who have been diagnosed with a long-term physical, intellectual, mental and sensory impairments which may hinder their full and effective participation in society when compared on an equal basis with their non-disabled peers. When children with disabilities attend school, they are most likely to be in a lower grade for their age and have a lower quality educational experience than their typically developing peers (Mizunoya et al., 2018). It is estimated that up to 70% of children with disabilities of school going age in South Africa are not in school (Donohue & Bornman, 2014). While we do not know what the estimates are for children attending ECD facilities, it is most likely similar or possibly even worse if reports from inclusive education organisations are accurate (Inclusive Education South Africa, 2020).

The environment within which a child develops has a huge impact on their experience and the severity of their disability (WHO, 2011). In essence, an inaccessible environment creates disability by creating barriers to participation and inclusion (WHO, 2011). Some of the examples of possible barriers imposed by the environment include; a deaf child without access to a sign language interpreter, a wheelchair user in a building without an accessible elevator and a blind child using a computer without screen-reading software (WHO, 2011). In light of the above, the educational space is viewed as an environment in which all children should be treated as equal and an inclusive education atmosphere that is supportive of the various barriers to learning in which all children get equal access to education is proposed by the South African education department (Storbeck & Moodley, 2011) particularly with it. A number of international treaties such as the United Nations Convention on the Rights of the Child (UNCRC) have validated the need for inclusive and quality education with easier access to schooling for children with disabilities (McLinden et al., 2018). Despite calls for inclusive education, children with disabilities are often still excluded from education and learning opportunities, with disability continuing to be a neglected issue in the education sector (Mizunoya et al., 2018;WHO, 2011). Internationally, Walker et al., (2011) found that children with disabilities had reduced access to schools. UNESCO (2018) also learnt that learners with disability are among the population

groups that are most likely to experience exclusion within the education context. In South Africa, despite legalisation related to inclusive education (DBE, 2001) a growing number of reports from inclusive child rights organisations (Human Rights Watch, 2015; IESA, 2020), research reports (Philpott & McKenzie, 2017; Philpott & Muthukrishna, 2019) as well as reports commissioned from the national government (DBE & UNICEF, 2015) continue to show that young children with disabilities under 7 years of age continue to be excluded from ECD environments and programmes.

ECD is a crucial period for children with disabilities and developmental delays to receive early intervention, protection and support. The absence of which results in difficulties in functioning that can become devastating leading to exclusion and long-lasting marginalization (WHO, 2012). In accordance with the Children's Act of 2005 (South African Government, 2005) ECD must target those children who are most in need of early childhood stimulation and development and this is inclusive of children with disabilities (DSD, DWCPD & UNICEF, 2012). This means that not only do facilities need to be accessible, but programmes also need to be appropriate and inclusive of children with disabilities. (DSD, DWCPD & UNICEF, 2012). Some commentators have argued that ECD policies in South Africa (Philpott & Muthukrishna, 2019) including the SA National Early Childhood Curriculum framework (DBE, 2015) which serves as a guide for practitioners to implement inclusion appears not to be specific enough for this purpose when it comes to the inclusion of children with disabilities.

### **1.2.3. ECD Curricula in different contexts**

Criddle (2012) offer a captivating definition of curriculum which states that; curriculum is the content and organization of the preschool programme that includes all daily activities, transitions, and routines, which have an impact on the child's physical, socio-emotional and intellectual development. Across different countries, the structure and quality of and access to ECD curricula provision differs greatly (Meier et al., 2015). Soler and Miller (2010) did a comparison in curricula offered in 3 different high-income contexts (England, New Zealand and Northern Italy). They found that the curriculum offered was on a spectrum (Soler & Miller, 2010). This spectrum ranged from progressive views of the curriculum which places emphasis on the individual child and decentring adult authority; to vocational and instrumental views of education which stress the authority of the adult over the child and the needs of society rather

than that of the individual child (Soler & Miller, 2010). For example, In England, a child is seen as a future pupil therefore, the curriculum offered is centralised, competency-orientated (Soler & Miller, 2010). This means that a national educational goal and content is established and specified in advance where practitioners prepare the children for entry to school through formal teaching approaches and play is seen to be marginalized (Soler & Miller, 2010). In Northern Italy, Soler and Miller (2010) identified that the curriculum offered is localized and individualized. The child is viewed as a powerful partner who actively co-constructs the content of the curriculum (Soler & Miller, 2010). In this context, the goal of curriculum is generated to meet the local needs of the community in order to support collaborative community visions for young children (Soler & Miller, 2010). The curriculum in New Zealand provides a totally different view where the main values, orientation and goals are outlined but this curriculum does not define or specify how these goals should be achieved (Soler & Miller, 2010). The NCF, which is the South African curriculum, is said to consider the experiences of children from birth to four years in different settings while considering their learning and developmental needs within a rights based approach (DBE, 2015). Curriculum decisions should be made to not only focus on the content that needs to be covered, but also on how the learning materials used can foster the ability of the learner to use and apply their knowledge effectively. This leads to the realisation that even though there is a wide variety of preschool curricula currently available and in use, there has been a serious lack of valid evaluation of the different curricula in order to determine the effectiveness on each learner's school readiness (Preschool Curriculum Evaluation Research Consortium, 2008 as cited in Criddle, 2012).

#### **1.2.4. The South African National Curriculum Framework (NCF)**

In South Africa, it is the National Department of Basic Education that is responsible for development of the early learning programmes (Department of Basic Education, 2015). It is then the responsibility of the provincial departments to train, implement and monitor the implementation of the ECD programmes (Department of Basic Education, 2015). This has led to the development (through consultation with policy and relevant stakeholders) of the South African National Curriculum Framework for birth to four years (Department of Basic Education, 2015) which is deeply rooted in play-based learning for early childhood. This framework is one that aims to ascertain support for every child so that they can develop knowledge, skills, attitudes

and behaviours for life, learning, schooling and work (Department of Basic Education, 2015). Additionally, the South African NCF is a framework that seeks to honour the diversity of young children and their capabilities (Department of Basic Education, 2015). It is said to also recognise the need for every child to equally participate in a curriculum programme that aims to guide integrated care and education in varied settings (Department of Basic Education, 2015).

The South African NCF is divided into 6 Early Learning and Developmental Areas (ELDAs) which have been arranged to help adults to organise activities for babies, toddlers and young children according to the children's development (DBE, 2015). The ELDAs are i) Well-being; ii) Identity and Belonging; iii) Communication; iv) Exploring Mathematics; v) Creativity; vi) Knowledge and Understanding of the World. The NCF is therefore arranged under each ELDA as *aims, developmental guidelines, examples of activities and assessment guidelines* (Department of Basic Education, 2015).

The *aims* within the NCF are designed with the intention to give direction to children's development, learning and care in the different ELDAs and should focus upon their needs at that particular phase of the children's development and learning interests (DBE, 2015). Furthermore, the developmental guidelines describe broadly the development of children from the time they are born up until the age of about 5 and these guidelines should not be used as a checklist but rather as a framework for observation of each child and discussion with parents (DBE, 2015). The activities within the ELDAs are said to be examples and not prescriptions as they provide ideas on opportunities for learning and adults should take into account the special context of the child and effective indigenous, local and global practices when deciding on activities (DBE, 2015). Additionally, the advancing further section under activities, encourages adults to include all learners across developmental guidelines in a flexible manner and also include children with developmental delays and gaps as well as those with developmental growths and learning spurts (DBE, 2015). This is said to be inclusive of all children with barriers to learning and children with disabilities and special needs (DBE 2015). The last component of the NCF are the assessment guidelines and these are broad and are directly related to the developmental guidelines (DBE, 2015). These assessment guidelines form watch points for adults to observe in each child while enabling adults to identify possible challenges or barriers that children may face within the educational space (DBE, 2015).

### **1.2.5. Inclusion and differentiation**

The South African education department in its White Paper 6 acknowledges the concept of inclusion, which is the process of supporting both learners and educators within the education system so that the learners' full range of needs are met (Department of Education, 2001). It should be noted that the increasing calls for inclusive education and the need to respond to the diversity of learners in the classroom has resulted in the construction of the term differentiation (Blamires, 1999). Differentiation means that instructional approaches should be varied and adapted in relation to the individual and diverse learners in the classroom (Tomlinson, 2001 as cited in Mavrou & Symeonidou, 2014). Although differentiation has been extensively defined in literature, the concept is not fully understood in mainstream education and it is often interpreted as extra or side support that is offered to learners with special needs (Mavrou & Symeonidou, 2014). Dinnebeil et al., (2013) mention that in differentiated instruction, teachers actively manage the diverse learning needs of children within their classroom. Inclusive education does not focus on separate classrooms and schools for children with disabilities but rather begins with the assumption that all children deserve to be in the same educational space as their typically developing peers (Schuelka, 2018). It is thus important that national policy and guidelines encourage and facilitate inclusive education practices at the school and classroom level and for which the first step would be for national policy to clearly express that inclusive education is a right for all learners (Schuelka, 2018). Another important aspect to consider is that inclusive education policies and guidelines should be developed in collaboration and constant consultation with disabled persons organisations (DPOs), non-government organisations (NGOs), parents or caregivers of children with disabilities, children with disabilities themselves and other relevant community stakeholders (Rieser, 2012). This is because implementing inclusive education in schools demands the interactive participation of all role-players (Swart et al., 2004). Not only that, but in practice, creating an inclusive educational environment requires consideration of the rights of all learners, shared responsibility among all school authorities, changing organizational structures in order to promote collaborative decision making and creative problem solving (Swart et al., 2004). These rely on the new relationships being formed between all members of the school community so that they learn to think, feel and be together in innovative ways to ensure that the rights of all learners are acknowledged (Swart et al., 2004).

Advocates of inclusive education have then suggested that barriers to learning are not inherent in the capacity of the learner but occur in the interaction of the learner with the curriculum (Rose & Meyer, 2002; Dalton et al., 2012). Barriers to inclusive education which have been meticulously researched include; insufficiencies in policy guidelines, limited or lack of resources and facilities, shortage in specialised staff, inadequate teacher training and support, inflexible curricula, obstructive leadership, and negative cultural attitudes (Schuelka, 2018). Therefore, curriculum that is not structured in its content and methods could all lead to the failure to meet the individual needs of the learners and particularly those with special needs (Teferra, 1999 as cited in Schuelka, 2018). Schuelka (2018) has added that in addition to national policy clearly articulating and supporting inclusive education, it should also provide a flexible curriculum that can be accessed by all children with different educational needs.

When deconstructing the Greek-Cypriot curriculum, Mavrou and Symeondiou (2014) found that the curriculum itself was not adequate to enable educators to differentiate the curriculum for children with disabilities and undertook this deconstruction using the framework of Universal Design for Learning (UDL).

#### **1.2.6. Universal Design for Learning (UDL)**

An inflexible curriculum without any opportunity for modification or adaptation does not support inclusive education (Schuelka, 2018). Therefore, there needs to be a guide that is systematically designed from the beginning to cater for the diverse needs of all learners taking into account the true meaning of differentiation (Capp, 2017). One such guide is the Universal Design for Learning (UDL) framework which has been designed with the aim of addressing the diversity of all students and creating a flexible curriculum that supports access, participation, and progress for all learners (Meo, 2008). This framework helps educators meet this goal by providing a framework for understanding how to create curricula that meets the needs of all learners from the beginning (CAST, 2011). The UDL framework is effective in enhancing a learner's ability to acquire, generate, and use new knowledge (Rogers-Shaw et al., 2018). It is therefore essential that in inclusive education, the curriculum developed empowers learners by developing their individual strengths and by enabling them to actively participate in the process of learning and any barriers to learning are minimised (Department of Education, 2001).

The UDL framework is made up of 3 principles and from which guidelines and checkpoints have been developed to guide implementation (CAST, 2011). The UDL guidelines are arranged according to its principles i.e. representation, action and expression, and engagement (CAST, 2011). It is within this framework that the diversity of learners is addressed by suggesting flexible goals, methods, materials and assessments that would empower educators to meet the diverse needs of all learners (CAST, 2011). This essentially means that the UDL framework encourages those implementing it to create flexible designs from the beginning that have customizable options, which would allow all learners to progress from their current level of functioning and not from where others would have imagined them to be (CAST,2011). Furthermore, this framework is not only concerned about helping learners master a specific body of skills but rather concerned about supporting them become expert learners who are strategic, skilful, goal orientated, knowledgeable, purposeful and inspired to learn more (CAST, 2011). It is for this reason that when curricula are designed using UDL guidelines and principles, teachers are able to remove potential barriers that may possibly prevent learners from meeting the goal of becoming expert learners (CAST, 2011).

According to CAST (2011), the UDL framework considers the components of curriculum in its development and these are; goals, methods, materials and assessment. Goals are the learning expectations which are the concepts and skills that learners should be able to master (CAST, 2011). Within this framework, goals are the learning expectations which are structured in a way to acknowledge learner variability while methods refer to the instructional decisions, approaches, procedures, or routines that teachers use to enhance learning (CAST, 2011). Materials are defined as the resources used to present the learning content and what the learner utilises to demonstrate knowledge. Lastly, assessment is described as the process of gathering information about the learner's performance using a wide range of methods and materials in order to determine their knowledge, skills and motivation (CAST, 2011).

Mavrou and Symeonidou (2014) conducted an analysis of the Greek New National Curriculum (NNC) and how this curriculum was constructed to meet the needs of learners with disabilities who are at a school going age. Their findings suggested that the Greek NNC failed to integrate the principles of UDL to an extent which would enable teachers to realize that they are expected to differentiate the curriculum for all learners in the classroom (Mavrou &

Symeonidou, 2014). Symeonidou and Mavrou (2014) also found that inclusive education was not adequately reflected in the Greek NNC and that children with disabilities were not considered to be equal with their typically developing peers. Symeonidou and Mavrou (2014) concluded by suggesting that an inclusive curriculum should appreciate the individual differences of all learners in a balanced way, beginning from the rhetoric and moving on to the development of its goals, materials and teaching strategies that allow for differentiation. While their study did not focus on early childhood education, their manner of examining curricula from a UDL perspective provides a good framework for this to be applied to an early childhood curriculum as well. Dinnebeil et al., (2013) mention that as more and more children with special needs and multiple languages are included in early childhood education, applying the principles of UDL become increasingly important. This is because some children learn better by listening, others learn better by seeing, while others learn better by doing (Dinnebeil et al., 2013). Rarely does one find that a child is only an auditory or visual learner but most people including children, learn best from a combination of all these approaches (Dinnebeil et al., 2013). For this reason, the concept that learning is multisensory should be applied into every early childhood curriculum policy (Dinnebeil et al., 2013).

Findings from the nationwide audit of ECD provisioning in South Africa suggest that only a few learners with disabilities are enrolled in ECD programmes and centres and little is known about these learners (SA Early Childhood Review, 2019). Therefore, there needs to be research that focuses more specifically on learners with disabilities participation in the curriculum which would allow for more responsive and appropriate provisioning considering the variation in ECD curricula (Williams et al., 2001). With UDL based upon the most widely replicated phenomena that states that; in education, learners are highly variable in their response to instruction (CAST, 2011); this study is aimed at reviewing and deconstructing the South African National Curriculum Framework that is offered to children from birth to 4 years with respect to examining the extent to which children with disabilities are conceptualised as part of the NCF as well as the extent to which it incorporates the principles of UDL into its goals, methods and assessment. This therefore has implications for how children with disabilities are able to participate more effectively in the curriculum beyond just being present in ECD environment such as ECD centres.



## **2. METHODOLOGY**

### **2.1. Aims**

#### **2.1.1 Main aim**

The main aim of the study was to examine the extent to which children with disabilities are conceptualised and accommodated in the South African National Curriculum Framework (NCF) and to the extent to which it incorporates the principles of UDL.

#### **2.1.2 Sub-aims**

The sub-aims of the study were:

- i. to identify the nature of the language used in the curricula to mention, refer to or imply about children with disabilities.
- ii. to identify and explore the extent to which the South African NCF reflects and incorporates the principles of UDL.

### **2.2 Research design and phases**

A comprehensive qualitative content analysis of the English version of the NCF curriculum document was conducted in order to understand the extent to which children with disabilities are mentioned and included in the South African National Framework Curriculum for children from birth to four years. Additionally, the analysis was conducted to examine the extent to which the NCF reflects UDL principles in the components of its curriculum. The analytical framework guiding the study was the principles of UDL. This study followed a similar approach to that used by Mavrou and Symeondiou (2014) and Symeondiou and Mavrou (2014) in their analysis and deconstruction of the new national curriculum (NNC) developed for the Greek-Cypriot schools in Cyprus. A combination of qualitative content analysis approach (Elo & Kyngäs, 2008) and thematic analysis (Braun & Clarke, 2006) and was adopted to explore the two research aims. Qualitative content analysis is said to be useful when analysing documents and when making replicable valid inferences with the purpose of proving knowledge, new insights and a representation of facts and possibly a guide to action (Elo & Kyngäs, 2007). This methodology is one of the numerous methods used to analyse text data and it allows for the

subjective interpretation of the content of the text data through the systematic classification process of coding and identifying themes or patterns (Hsieh & Shannon, 2005). The three principles of the universal design for learning (UDL) was used in this study in order to analyse the content of the NCF document with the aim of answering the research question.

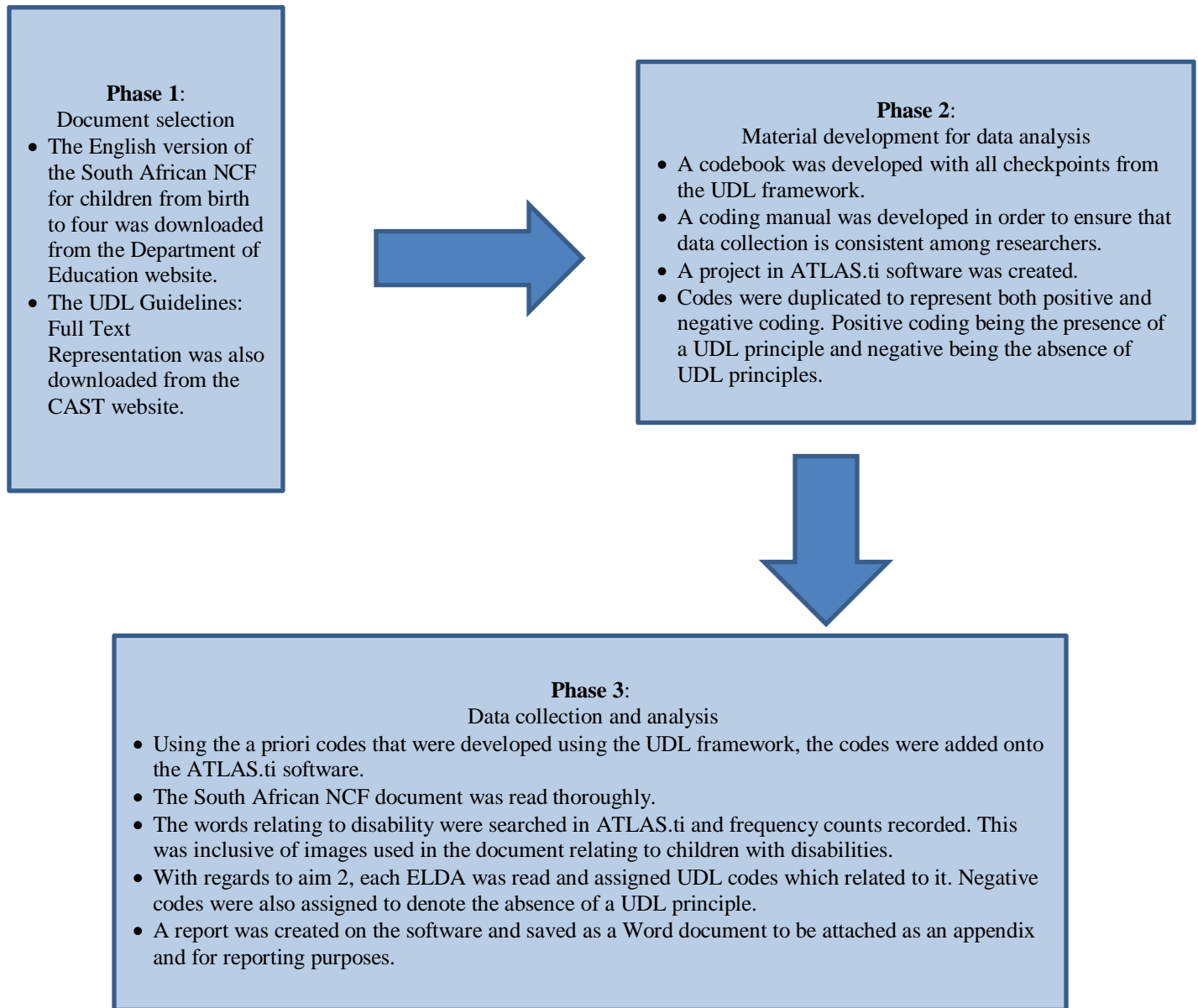


Figure 1. *Phases of the study.*

### 2.3 Pilot study

A pilot study was conducted in order to ensure that the coding manual that was designed would be effective in the process of content analysis of the South African NCF using the

UDL guidelines. One ELDA (communication ELDA) from the South African NCF was randomly chosen by both the supervisor and the student which was then analysed using the ATLAS.ti software. The findings were then compared and discrepancies were discussed and resolved.

Table 1 gives the results of the pilot study in terms of aims, materials, procedures, results and recommendations for incorporation into the main study.

Table 1

*Pilot Study Aims, Materials, Procedures, Results and Recommendations*

Aim	Materials	Procedures	Results	Recommendations
<p>To determine whether the proposed data analysis process would be effective using the predesigned coding manual and data analysis protocol.</p>	<p>ATLAS.ti software, coding manual (that had been previously designed), laptop, internet connection pen and paper, English version of the NCF and Full Text Representation of the UDL principles.</p>	<ul style="list-style-type: none"> <li>• A project was created in ATLAS.ti software.</li> <li>• The NCF document and the data analysis protocol were added onto the software.</li> <li>• The list of codes from the data analysis protocol were written in ATLAS.ti.</li> <li>• The South African NCF document was read and using the find function in PDF, the terms relating to disability were searched and the frequency of each was recorded. This was in relation to aim 1.</li> <li>• The ELDA that was chosen to be analysed for the pilot study was the one on Communication.</li> <li>• code groups for all the checkpoints that relate to one guideline were created and</li> </ul>	<ul style="list-style-type: none"> <li>• The search strategy in ATLAS.ti. and Adobe Reader yielded different results for terms relating to disability.</li> <li>• There was a total of 15 codes that were developed relating to aim 1.</li> <li>• <i>‘Children with disabilities and special needs’</i> yielded 7 quotations inclusive of images relating to children with disabilities. One image was used twice in the document.</li> <li>• <i>‘Disabilities’</i> generated more hits than the other codes,</li> </ul>	<ul style="list-style-type: none"> <li>• Refine and revise the search terms.</li> <li>• Only include hits generated in ATLAS.ti because a report can be developed using the software.</li> <li>• Include the analysis of images of children with disabilities for aim 1.</li> <li>• Record the frequency counts (for am 1) in a table form for visualization.</li> <li>• For aim 2, record the missed opportunity for using a UDL principle as negative.</li> <li>• Only code quotations that are explicit in their application of the UDL principles and remove repeated quotations.</li> <li>• Refine and review coding manual for interrater reliability.</li> </ul>

Aim	Materials	Procedures	Results	Recommendations
		<p>further grouped under its relevant principle.</p> <ul style="list-style-type: none"> <li>• A coding report was created and discussed with the other researcher.</li> <li>• The discrepancies were discussed in depth between the two researchers.</li> </ul>	<p>with a total of 20 quotations.</p> <ul style="list-style-type: none"> <li>• Terms such as <i>impairments</i> and <i>disorders</i> did not generate any hits in the NCF document.</li> <li>• There was a total of 60 codes created for aim 2. 30 codes were for positive coding and the other 30 was for the absence of practical application of the UDL principles.</li> <li>• There were 82 positive quotations for principle 1; 40 quotations for principle 2; 49 quotations for principle 3.</li> <li>• Results for absence of UDL principles were as follows: 51 quotations for principle</li> </ul>	

<b>Aim</b>	<b>Materials</b>	<b>Procedures</b>	<b>Results</b>	<b>Recommendations</b>
			<p>1; 23 quotations for principle 2; no quotations for principle 3.</p> <ul style="list-style-type: none"><li>• It was however discovered that some codes were repeated while others were not explicit in their application of UDL principles.</li></ul>	

## **2.4 Participants**

For the purpose of this study, human participants were not recruited as an evaluation of a curriculum was undertaken. Literature that was used consists of the South African NCF document, the 2018 version that is available in English and in full text (Department of Basic Education, 2015). For this reason, consent and assent was not required as the document can be retrieved online from the basic education department website. Another document that was used extensively in this research is the Universal Design for Learning (UDL) guidelines (CAST, 2011) which was retrieved from the Center for Applied Special Technology (CAST) website (CAST, 2011).

## **2.5 Materials and equipment**

Materials needed for this study included; a laptop and printer, pen and paper, Wi-Fi and internet data connection and Atlas.ti software as well as access to the University of Pretoria library in order to contextualise the study's rationale and results through literature. Additionally, the two documents used were the National Curriculum Framework for children birth to four years (NCF) (DBE, 2015) and the Universal Design for Learning Curriculum (UDL) Guidelines (Cast, 2011).

## **2.6. Procedures**

### **2.6.1. Data collection**

This phase of the research is aimed at giving an outline of how the data was organized and coded and also gives the basic structure of the coding system. The two researchers, the student and supervisor, worked independently and collectively (Symeonidou & Mavrou, 2014) to analyse the curriculum and achieve consensus with respect to the qualitative coding of the entire South African NCF document. The aim and sub-aims were developed to assist the researchers decide on the concepts and themes that will be communicated through this analysis.

Prior to the data collection phase, a priori codes were established as there is prior knowledge of the subject matter therefore, deductive coding was used (Braun & Clarke, 2006). A data extraction protocol was developed by the researcher which was used as a guide during the data collection phase of the research. The researcher followed the steps suggested by McMillian and Schumacher (2014) on data collection for qualitative studies. These phases include planning,

beginning the data collection, basic data collection and closing data collection (McMillian & Schumacher, 2014). The planning phase involved obtaining the necessary permission to conduct the research (McMillian & Schumacher, 2014). This, the researcher achieved by being granted permission by the Humanities Ethics committee on the 30<sup>th</sup> of July 2020 (See Appendix A). The second phase included becoming oriented with the data and adjusting recording procedures (McMillian & Schumacher, 2014). During this stage, the researcher downloaded the English version of the South African NCF document and the full text representation of the UDL guidelines document from their respective websites. The researcher then read the 2 documents while adjusting the data protocol which had already been developed. Notes and comments were made on the data protocol so that recording procedures could be adjusted accordingly and this led to the third stage of the data collection phase, tentative data analysis (McMillian & Schumacher, 2014). During the tentative data analysis initial code descriptions were identified and summarised for later validation (McMillian & Schumacher, 2014). During this stage the researcher made use of the ATLAS.ti software to analyse the South African NCF documents by colour coding the document and making comments on the document to allow for themes to be identified. The fourth stage of data collection was closing the data collection stage (McMillian & Schumacher, 2014). During this stage, the researcher made final notes and summarised the data to ensure that no information was disregarded or discounted. The final stage of data collection was completing data collection (McMillian & Schumacher, 2014). This included completing active data collection and merging with formal data analysis and also constructing a meaningful way of presenting the data (McMillian & Schumacher, 2014).

### **2.6.2 Data analysis**

The process of data analysis involves evaluating the collected data formally, constructing a meaningful way of representing the data and also blending it well with the final stage of data collection (McMillian & Schumacher, 2014). In order to allow for replication and to strengthen the methodological rigour, this study followed the six-phase methodological framework proposed by Braun and Clarke (2006) on thematic analysis of qualitative data. Thematic analysis is the process through which patterns and themes are identified within qualitative data (Maguire & Delahunt, 2017). This form of data analysis is useful because it provides an easily interpretable and brief description of the emergent patterns and themes within a dataset (Braun &



Clarke, 2006). Through this methodological framework, the researcher was able to identify, analyse and report on patterns and themes within the data (Braun & Clarke, 2006). The phases of the methodological framework suggested by Braun and Clarke (2006) include; familiarisation with the data, coding, searching for themes, reviewing themes, defining and naming themes and write up.

The first phase of the methodological framework by Braun and Clarke (2006) is familiarising yourself with the data. During this phase, the researcher created a project in ATLAS.ti and chose a title for it. The NCF document and the data analysis protocol were then added to the software. Using the word list and word cloud in the software, deductive content analysis (Hsieh & Shannon, 2005) of the NCF document was explored to gather the frequency of disability related words, phrases and images. These included the following: (children with) disability/disabilities, special education or special education needs, developmental delay, barriers to learning, inclusion/inclusive as well as any specific mention of impairments such as motor. It was during this phase that the researcher immersed themselves in the data to an extent that they were familiar with the depth and breadth of the content (Braun & Clarke, 2006). The South African NCF document is an already existing and developed document; therefore, the researcher acquainted themselves with the document by thoroughly reading through it in order to understand its content and density. The second phase involved generating initial codes (Braun & Clarke, 2006) to answer the second research aim. The researcher developed codes using the UDL guidelines where the checkpoints under each guideline served as a priori codes. A coding manual (see Appendix B) was developed by the researcher detailing the steps to follow when analysing the South African NCF document so that both the student and the supervisor could follow a similar approach during the process of analysis. The steps suggested in the coding manual were adapted from Friese, Soratto & Pires (2018). The components of the South African NCF curriculum in relation to the goals, materials and assessments were evaluated in relation to the absence or presence of the a priori codes. Using the ATLAS.ti software, the researcher coded the presence of a UDL checkpoint with the POS prefix whereas the NEG prefix used to denote the absence of UDL checkpoint. The absence of the UDL checkpoint signifies a missed opportunity to include a UDL principle within the curriculum.

The third phase was searching for themes (Braun and Clarke, 2006) and this involved sorting the different codes into themes and collating all the relevant coded extracts within the

identified themes (Braun & Clarke, 2006). During this phase, the researcher needed to ensure that any text that could not be categorised initially with the initial coding system was given a new code (Hsieh & Shannon, 2005). However, text that was coded in this study was only explicit quotations used in the South African NCF. It is important to note that the themes in this research are represented by the guidelines in the UDL framework from which the codes have emerged.

The fourth phase was reviewing the themes and this involved the studying and examination of the themes that were identified in the previous phase and whether they represent the dataset (Braun & Clarke, 2013). This is the phase in which the researcher reviewed, modified and improved on the themes that were identified in the previous phase (Maguire & Delahunt, 2017). The fifth phase was defining and naming themes (Braun and Clarke, 2006) and during this phase the researcher wrote a detailed analysis of each theme (Clarke & Braun, 2013). This is where the researcher disclosed how each theme relates to the other and explained the importance of each theme in relation to the dataset (Maguire & Delahunt, 2017). In preparation of the last phase of data analysis, the researcher created a report with ATLAS.ti software. The final phase was writing up (Braun & Clarke, 2006) and during this phase, the researcher merged the narrative and the data in order to tell a coherent and persuasive report about the data and conceptualize it in relation to the literature (Clarke & Braun, 2013). The final stage of data analysis makes up the results and discussion sections of the dissertation.

The ATLAS-ti qualitative analysis software was used during the data analysis stage of the research. This software is a supporting tool for qualitative studies that provides unparalleled flexibility for the rigorous review of literature (Rodriguez, 2020). It was used to import the codes that had been identified and run the process of data analysis. In order to ensure that the software was utilized appropriately, the researcher made reference to the manual by Friese (2019) which specifies each function in the software. During the content analysis stage, the researcher began by preparing the text (the South African NCF document) that needed to be analysed and adding it to the software. Deductive qualitative analysis content was then used to develop codes. A priori codes that has been created using the UDL guidelines were imported into the software and each code was defined accordingly and this allowed for the auto code function within the software. A report was then created within the software after NCF curriculum has been analysed in preparation for writing the results of the analysis.

### **2.6.3 Trustworthiness and Credibility**

In order to ensure that trustworthiness and credibility was maintained in this study, the researcher used some of the techniques suggested by Guest et al (2012). One technique that strengthened credibility in this study, was ensuring consistent application of the data collection protocol so that there was consistency between the student and supervisor throughout the data collection phase (Guest et al., 2012). For this reason, after conducting the pilot study, the data collection protocol was reviewed and revised to ensure that it would represent the dataset. Another technique that was used is intercoder agreement; which signifies the extent to which both the student and the supervisor coded the same dataset in the same way. (Guest et al., 2012). They two researchers compared their coded data and discussed any discrepancies that needed to be resolved or redefined (Guest et al., 2012). Additionally, Guest et al. (2012) advise that in order to maintain trustworthiness, the analytical process must be transparent so that others may fairly judge the research findings. Quotes from the original documents were used as they provide a fundamental part of the narrative in thematic analysis because they exemplify the concept (Guest et al., 2012). Finally, potential biases that might have influenced the analytical process and findings were identified, recognised and reported on in order to enhance trustworthiness (Guest et al., 2014).

### **2.7 Ethical issues**

As previously mentioned, human participants were not recruited for this study therefore consent and assent was not required. However, permission from the Faculty of Humanities ethics committee was required in terms of the requirements of the M(AAC) programme before the study could commence and thus ethical clearance was granted on 30 July 2020 (Appendix A). In order to avoid plagiarism, work by other authors has been acknowledged and accredited accordingly.

## **3. RESULTS AND DISCUSSION**

### **3.1. Reliability of coding**

Information was extracted and coded using the specific coding manual developed for this study which was categorised according to the various principles and guidelines of the UDL by

the student and checks carried out by the student's supervisor. When disagreement arose, the issue was discussed so as to reach a resolution and recorded if necessary.

### 3.2. Disability related terms

The deductive content analysis in terms of frequency counts revealed that there were a variety of terms used to refer to children with disabilities in different sections of the South African NCF.

Table 2 below shows the number of times each term relating to disability was coded in the curriculum.

Table 2

*Terms relating to disability as coded in the curriculum*

<b>Explicit search terms</b>	<b>Frequency</b>
Disability/ disabilities	3/20
Children with disabilities	9
Specific disabilities/ impairments	5
Special needs	12
Disorder/s	4
Delay or developmental delays	14
Barriers to learning	5
Inclusive/inclusion and inclusivity	3

Table 2 indicates that the term *disability* was used 3 times on its own within the curriculum; twice in the glossary of terms and once under the heading *developmental delays* where it referred to a specific type of disability.

*...for example, a toddler with a physical disability may need to have activities set out as for a child who is not yet sitting, although at a level of intellectual challenge for a three-year-old...*  
 (DBE, 2015, p. 14)

The following is the definition of disability according to the NCF curriculum:

*...a disability is only one part of a child's life. Adults need to observe and talk about and promote the things children do well and the ways they are growing and changing...* (DBE, 2015, p. 77).

The disability related terms that appeared most frequently than other terms was *disability/disabilities* which was used 3 and 20 times respectively within the NCF. It most often occurred with the phrase *children with disabilities* (9). The term *special needs* was also used 12 times and occurred most often together with *children with disabilities and special needs*.

*...Children with disabilities and special needs have the right to receive attention and should be supported to enable them to develop and learn to their greatest potential.* (DBE, 2015, p.57).

There were 4 references to disorders and these referred specifically to speech and language disorders. There was less reference to *specific disabilities* (4) or *impairments* (1) and these were usually in relation to intellectual, physical or learning challenges or impairments.

The term *developmental delays* or *delay* was used 14 times, with the term *barriers to learning* (5) *inclusion, inclusive or inclusivity* used less often (3).

Within the curriculum, there were two images of children with disabilities used out of a total of 13 images with one image used twice. Both images are of children using assistive devices for mobilizing and one depicted a child using a device for the visually impaired in addition to the mobility device.

Disability according to the definition provided by WHO (2011) is said to be an umbrella term that is used to refer to impairments, activity limitations and participation restrictions that impedes on the individual's interaction with their contextual factors (environmental and personal factors). The aforementioned relating to disability or disability related terminology are not in accordance with the findings by Symeonidou and Mavrou (2014) in that, there is no consensus in the terms that refers to children with disabilities. When used, these terms are primarily in the

glossary of terms and no terms relating to disability appeared in the word cloud function in ATLAS.ti.

### 3.3. Reliability of coding

Information was extracted and coded using the specific coding manual protocol developed for this study which was categorised according to the various principles and guidelines of the UDL by the student with checks carried by the student's supervisor. When disagreement arose, the issue was discussed in order to reach a resolution and recorded if necessary.

Table 3

*Organisation of coding framework*

<u>Principle</u>	<u>Guidelines</u>	<u>Codes</u>
Principle 1: Provide Multiple Means of Representation	Guideline 1: Provide multiple ways of representation	1.1- offer ways of customizing the display of information 1.2- offer alternatives for auditory information. 1.3-offer alternatives for visual information.
	Guideline 2: Provide options for language, mathematical expression, and symbols	2.1-Clarify vocabulary and symbols 2.2- clarify syntax and structure 2.3-support decoding of text, mathematical notation and symbols 2.4- promote understanding across languages 2.5-illustrate through multiple media
	Guideline 3: Provide options for comprehension	3.1- activate or supply background knowledge. 3.2- highlight patterns, critical features, big deal, and relationships.

<u>Principle</u>	<u>Guidelines</u>	<u>Codes</u>
		<p>3.3-guide information processing, visualization, and manipulation.</p> <p>3.4- maximize transfer and generalization</p>
Principle 2: Provide Multiple Means of Expression	Guideline 4: Provide options for physical action	<p>4.1-vary the response and navigation</p> <p>4.2-optimize access to tools and assistive technologies</p>
	Guideline 5: Provide options for expression and communication	<p>5.1- use multiple media for communication</p> <p>5.2- Use multiple tools for construction and composition</p> <p>5.3- build fluencies with graduated levels of support for practice and performance.</p>
	Guideline 6: Provide options for executive functions	<p>6.1- guide appropriate goal setting</p> <p>6.2- support planning and strategy development problem, setting up prioritization, sequences, and schedules of steps.</p> <p>6.3- facilitate managing information and resources</p> <p>6.4- enhance capacity for monitoring progress.</p>
	Guideline 7: Provide options for recruiting interest	7.1- optimize individual choice and autonomy

<u>Principle</u>	<u>Guidelines</u>	<u>Codes</u>
Principle 3: Provide Multiple Means of Engagement		7.2-optimize relevance, value, and authenticity  7.3- minimize threats and distractions
	Guideline 8: Provide options for sustaining effort and persistence	8.1-heighten salience of goals and objectives  8.2-vary demands and resources to optimize challenge  8.3- foster collaborations and community  8.4- increase mastery-oriented feedback
	Guideline 9: Provide options for Self-Regulation	9.1-promote expectations and beliefs that optimize motivation  9.2-facilitate personal coping skills and strategies  9.3-develop self-assessment and reflection

### 3.4. UDL principles in the NCF

In the following section, the results are reported according to the UDL framework and an attempt has been made to comment on the extent to which each principle was adequately integrated within the South African NCF. The codes were organised according to the three UDL principles and their respective guidelines which were delineated by the following aforementioned codes in Table 3. The representation is reflective of the codes as they are used in the components of the curriculum (goals, methods, materials and assessment).

Figure 2 below illustrates the number of times that the curriculum effectively incorporated the principles of UDL within the NCF curriculum as reflected in the specific codes as well as the



number of times it has missed an opportunity to potentially incorporate a specific guideline code adequately using the UDL framework.

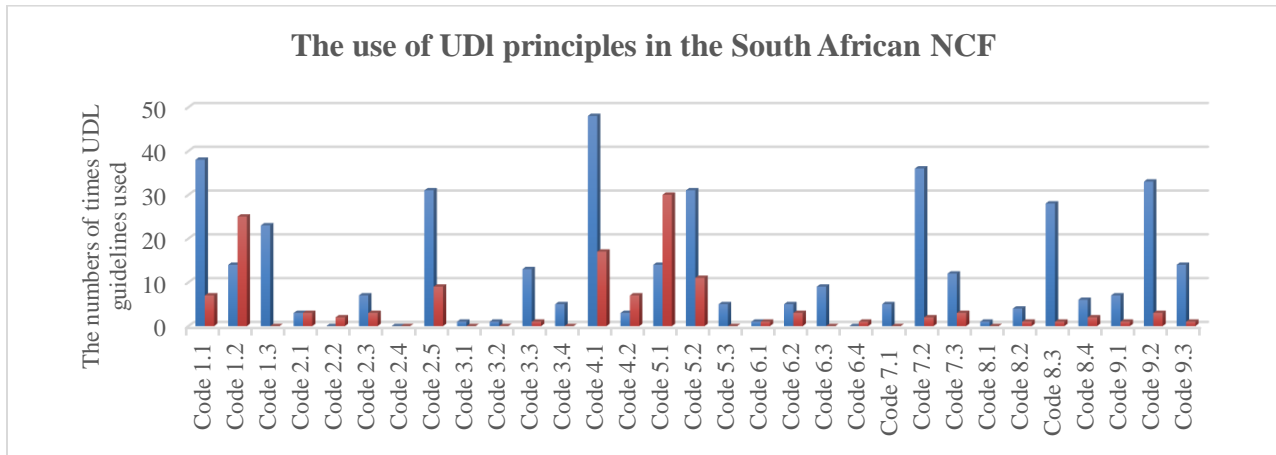


Figure 2: Representation of the UDL principles with regard to guideline codes within the NCF curriculum

The most common UDL code within the NCF was code 4.1. vary the method for response and navigation. According to Table 4, this code was used 48 times.

Table 4

Frequency of codes for the presence of the UDL guidelines from the most to least prevalent

Codes	Presence of UDL guidelines	Missed opportunities
Code 4.1	48	17
Code 1.1	38	7
Code 7.2	36	2
Code 2.1	36	2
Code 9.2	33	3
Code 2.4	33	3
Code 2.5	31	9
Code 5.2	31	11
Code 8.3	28	1
Code 6.1	28	1

<b>Codes</b>	<b>Presence of UDL guidelines</b>	<b>Missed opportunities</b>
Code 1.3	23	0
Code 1.2	14	25
Code 5.1	14	30
Code 9.3	14	1
Code 6.4	14	1
Code 3.3	13	1
Code 7.3	12	3
Code 4.2	12	3
Code 6.3	9	0
Code 2.3	7	3
Code 9.1	7	1
Code 2.2	7	1
Code 8.4	6	2
Code 8.1	6	2
Code 3.4	5	0
Code 5.3	5	0
Code 6.2	5	3
Code 7.1	5	0
Code 8.2	5	0
Code 3.2	4	1
Code 3.1	1	0

### **3.4.1 Principle 1: Provide Multiple means of Representation**

Principle 1 of the UDL framework (CAST, 2011) entails providing multiple means of representing information so as to cater for children with disabilities such as those with sensory disabilities. This essentially means that there is no one means of representation that would be optimal for all learners in the classroom (CAST, 2011). The NCF considered this principle 116 times (n=116) under the specific codes 1.1 (offer ways of customizing the display of information), code 1.2 (offer alternatives for auditory information)

and code 1.3 (offer alternatives for visual information). However, it should be noted that this large number is inclusive of the quotations that overlap within this principle. For example, the extracted data below which relates to examples of activities for adults and older children to offer while working with babies, toddlers and young children, would have been coded more than once under code 1.1 (offer ways of customizing the display of information) and code 1.2 (offer alternatives for auditory information).

*...model how to use scissors safely* (NCF: DBE, 2015, pg 62)

*Model good talking manners* (NCF: DBE, 2015, pg 46)

The term *model* in the curriculum means that the teacher or practitioner shows the children exactly what to do which ensures that the all learners have the information they need to successfully carry out a given task (Gauvreau et al., 2019).

The following example which occurs under the Communication ELDA as an example of activities adults and older children can offer to babies, toddlers and young children also appropriately illustrates how the NCF curriculum can guide ECD practitioners to effectively vary how information is displayed.

*introduce new words and demonstrate what they mean using actions and objects* (NCF: DBE, 2015, pg 44).

However, even though the curriculum did note how information can be varied in its representation, there were a number of times where this opportunity was missed within the curriculum. For example, within the Wellbeing ELDA, the following example of an activity which the ECD practitioner can present is offered.

*Talk about 'clean' and 'dirty'* (NCF: DBE, 2015, pg 21).

The term *talk* in the example above, refers to the ECD practitioner presenting information verbally which can limit access to information for a child with a disability especially a child with communication impairment. Terms such as *talk*, *speak* and *give verbal direction* are used often

throughout the curriculum which does not allow for diverse ways of representing information beyond the auditory verbal and thus fails to accommodate children with communication disabilities such as those who may have hearing impairments or receptive language difficulties.

Another example is in the Knowledge and Understanding ELDA, that is not explicit enough in ways in which the children's vocabulary may be expanded and thus again represents an opportunity missed to give guidance for children who may have language delays or impairments.

*Extend children's vocabulary* (NCF: DBE, 2015, pg 69).

Principle 1 of multiple ways of representation refers to strategies and methods that can be used by teachers within the classroom to provide instructions, guidance and support to all learners including those with disabilities (Gauvreau et al., 2019). However, within the NCF curriculum, this principle has not been well communicated so that teachers would know that each instruction would need various means of representation such as through modelling, using hands on activities and pairing the verbal instruction with a visual for example (Gauvreau et al., 2019). This gap appears to be most evident in the Communication ELDA of the NCF where in all its curriculum components, this principle was not effectively considered with many missed opportunities such as in the example below.

*Talk and listen and have conversations* (NCF: DBE, 2015, pg 44)

*...follow verbal instructions* (NCF: DBE, 2015, pg 44)

This can also be seen in Table 3, for example, where code 5.1 (use multiple media for communication) had the highest frequency of missed opportunities (30) in Principle 2: Guideline 5 (provide options for expression and communication).

### **3.4.2. Principle 2: Provide multiple means of expression**

Principle 2 of UDL framework addresses multiple means of action and expression (CAST, 2011). This means that learners will vary in ways that they navigate the learning environment and in expressing what they know within the contents of the curriculum (CAST,

2011). For example, within the communication ELDA the following developmental guideline aim/goal is given for young children under the goal of *Children speak using different styles of communication relationships*.

*...speak clearly enough to be understood even by those not familiar with the child* (NCF: DBE, 2015, pg 46)

This goal for children in the NCF does not take into account those who may have communication difficulties particularly children with Complex Communication Needs (CCN). Communication involves aided and unaided means of expression as alluded by Lund and Light (2007) and young children who may demonstrate delays in language and speech development may benefit extensively from Augmentative and Alternative Communication (AAC) which encourages multi-modal use of aided and unaided expression (Chen & Dote-Kwan, 2021). A goal such as this may therefore not be appropriate for children with CCN including children who are deaf and who may use sign language to communicate expressively. It also important to note that within the entire NCF curriculum, communication technology was mentioned once and this was not necessarily reflective on how a child might use the system but rather on its features and on ensuring its safety.

*Provide opportunities for children to see and talk about information and communication technology for example, talk about what it does and how to use it safely.* (NCF: DBE, 2015, pg 70)

Additionally, even though it was mentioned, the importance of accommodating a child who would be able to use this communication technology has not been acknowledged in either adapting the goal, the strategies for activities or any of the assessment guidelines.

The frequency of Code 4.1. which was coded the most (n=48) under principle 2, guideline 4 (Provide options for physical action). It has been recognised that children would need to be provided with both the tools and support needed for navigating their classroom

environment (CAST, 2011). Examples of where these codes appeared in the curriculum were suggested under activities to do with babies in the Wellbeing ELDA and are provided below.

*Give many opportunities to each baby each day for manipulating different types of objects, such as feeding, drawing, building equipment.* (NCF: DBE, 2015, pg 26).

*Encourage babies to grasp, pick up, hold, shake and taste, look at, listen to, smell and feel various objects.* (NCF: DBE, 2015, pg 26).

These examples of multiple means of expression in the curriculum could therefore potentially accommodate children with physical impairments as they are not only relating to the visual and auditory information but also attend to the tactile and information. This therefore affirms that that some children in the classroom could learn through touch.

### **3.4.3 Principle 3: Multiple means of engagement**

Multiple means of engagement is the third principle under the UDL framework and is said to address the why of learning (CAST, 2011). Various factors (such as personal, cultural etc.) may affect the learners' level of motivation and engagement and there is no one means of ensuring optimal engagement for all learners within the classroom (CAST, 2011). In order to support and encourage learner involvement, the learning environment must be safe, accessible, and culturally responsive to the diverse needs of the learners (Chen & Dote-Kwan, 2021). The teacher should ensure that the learning materials reflect the learners' cultures and interests (Andiema, 2016 as cited by Gauvreau et al., 2019).

Within the NCF curriculum, the need to include culturally relevant activities has been extensively communicated and acknowledged.

*Toddlers begin to...enjoy both local and indigenous food and ways of eating according to family practices* (NCF: DBE, 2015, pg 20).

*Acknowledge and celebrate events for example, birthdays, Christmas, Diwali, Eid, Ramadan, Rosh Hashanah, Easter.* (NCF: DBE, 2015, pg 40).

Under this principle, code 7.2. –Optimise relevance value and authenticity (36), code 9.2 –Facilitate coping skills and strategies (33) and code 8.3- Foster collaboration and community (28) are some of the most frequent coded UDL guidelines in the NCF.

It is therefore essential for teachers and practitioners to develop individual relationships with each of their learners in the classroom as those relationships have a lasting impact on the participation and motivation of the learners (Lohmann et al., 2019). This appears to be an aspect that is actively encouraged in the NCF which is reflected in it having the least number of missed opportunities (Figure 2).

The analysis of the South African NCF revealed that there is an explicit awareness of children with disabilities in the language and images used in the curriculum as a number of disabilities related terminology and visuals was coded.

All of the three principles of UDL were incorporated to some extent in the NCF. However, this is not consistent across the principles. The coding and in-depth reading of various goals, strategies and assessment within various ELDA's also highlighted that there are still too many opportunities or missed or silences (Philpott & Muthukishna, 2019) where UDL principles could be included and made more explicit for ECD practitioners to know how to practically differentiate the curriculum for children with disabilities. These results are different to what Mavrou and Symeondiou (2014) found in the Greek-Cypriot curriculum although that curriculum was not an early childhood curriculum but a formal school curriculum. To the authors knowledge however, the current study is one of the first attempts to deconstruct a national early childhood curriculum according to the principles of UDL.

Many countries however, such as those in Scandinavia and New Zealand for example may have longer traditions of inclusion and honouring diversity. Therefore, the focus on language of disability in their curricula might therefore not be as overt or as explicit since a human and child rights approach to disability and inclusion is already implicitly imbedded within them. However, despite this, we do know that a number of countries do still struggle with the

inclusion of children with disabilities in early childhood care and education and this may be that there is still a considerable lack of knowledge on how to practically incorporate children with varying abilities and barriers to learning in the early childhood environments (Gauvreau et al., 2019). By deconstructing the curriculum according to the principles of UDL may therefore provide a useful starting point for practitioners by creating a deeper awareness and prompt reflection on the needs of children who are differently abled.

## **4. CRITICAL EVALUATION, IMPLICATIONS AND CONCLUSIONS**

### **4.1. Critical evaluation of the study**

This study is one of the first attempts to explore the use of UDL principles by deconstructing the South African curriculum framework while considering the population of children with disabilities or special needs. It has considered whether children with varied abilities are considered when making decisions regarding access to the curriculum programmes offered in ECD programmes in South Africa. Additionally, this study has drawn upon research conducted in high-income countries, such as the study by Mavrou and Symeonidou (2014), and a comparison was made to a curriculum in a LMICs.

The use of joint coding and interrater reliability has contributed to the study rigour and thus increasing the study's trustworthiness and credibility of the results. Additionally, by using a specific coding manual developed for the purpose of this study allowed for the elimination of potential researcher bias.

The use of software to analysis data contributed to the integrity of the data obtained because the data could be arranged systematically for reporting purposes.

Limitations to this study should be noted. One of which is that the terminology used in the NCF might not have been explicit enough to qualify as a code and thus data could have been rejected or overlooked during the analysis phase.

The subjectivity and experience of the researcher pose as a potential threat to the results obtained as data could have been influenced by personal biases. Codes were developed prior to the data collection stage and this could have potentially prejudiced how data was controlled to suit the study aims and objectives.

### **4.2. Clinical implications**



It is hoped that through this study there would be heightened awareness of the needs of learners with disabilities within the Early Childhood Intervention population. There is a great need to ensure that curriculum designs and policies are inclusive of the variable needs of all learners that it is intended for. Additionally, through this study, policy developers should note that the performance of children in school can also emanate from a mismatch between the child's learning needs and the programmes offered not accommodating their needs to promote success (Odom et al., 2019).

It is also hoped that there will be more advocacy for learners who need communication technology to be assisted and integrated within curriculum streams.

This study could be applied to the Curriculum Assessment Policy Statement (CAPS) which is the curriculum that is currently being offered to learners from grades R to 12 in South Africa and the Differentiated Curriculum Assessment Policy (D-CAPS) which is intended for use of learners with severe intellectual disability within the South African context.

#### **4.3. Recommendations for further studies**

There is a great need for studies that would explore the use of UDL principles in policy development in order to understand and arrange curriculum to meet the needs of all children that it has been intended for. There should also be research done to explore how the use of Augmentative and Alternative (AAC) can influence decisions made by policy makers when planning curriculum that is meant to facilitate inclusion.

It is also recommended that this study be replicated to a greater scale, such as the African continent, so that there is a greater understanding of how countries' economic statuses and history may affect and influence curriculum decisions especially the way in which children with disabilities are included in those curricula.

#### **4.4. Conclusion**

Curricula that recognises and values the rights of all children and particularly those with varied abilities is essential for the success of children in later years and to successfully narrow the achievement gap. It is clear that the NCF does take into account the use of different terminology when referring to disability. The use of imagery also aid in the understanding of

what disability is and its mention within the curriculum. It should also be noted that the NCF does take into account the principles of UDL in its design where cultural diversity is honoured and acknowledged. However, the number of missed opportunities cannot be ignored. There remains a gap for the NCF to explicitly detail how ECD practitioners could successfully ensure that every learner is benefited by the curriculum. There is a need for the goals, methods and assessment guidelines to ensure that the NCF is adequately differentiated to cater for the needs and rights of all children that the curriculum is intended for. Communication goals should recognise that learners perceive and express their communication needs in a variety of ways. A critically deconstructed curriculum that considers the principles of UDL may provide a useful guide for practitioners to follow when differentiating curriculum that caters for the diverse needs of children who are differently abled and thus may encourage more children with disabilities to not only access ECD programmes but enjoy full participation in them as well.

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## APPENDIX A

### Ethical clearance



Faculty of Humanities  
Fakulteit Geesteswetenskappe  
Lefapha la Bomotheo



11 August 2020

Dear Ms SZ Sibiya

**Project Title:** Deconstructing the South African National Curriculum Framework: to what extent are UDL principles incorporated into the curriculum to ensure it is differentiated for children with disabilities?

**Researcher:** Ms SZ Sibiya

**Supervisor(s):** Dr AE Samuels

**Department:** CAAC

**Reference number:** 12182002 (HUM036/0619)

**Degree:** Masters

Thank you for the application that was submitted for ethical consideration.

**The Research Ethics Committee** notes that this is a literature-based study and no human subjects are involved.

The application has been **approved** on 30 July 2020 with the assumption that the document(s) are in the public domain. Data collection may therefore commence, along these guidelines.

Please note that this approval is based on the assumption that the research will be carried out along the lines laid out in the proposal. However, should the actual research depart significantly from the proposed research, a new research proposal and application for ethical clearance will have to be submitted for approval.

We wish you success with the project.

Sincerely,



**Prof Innocent Pikirayi**  
**Deputy Dean: Postgraduate Studies and Research Ethics**  
**Faculty of**  
**Humanities**  
**UNIVERSITY OF**  
**PRETORIA e-mail:**  
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Fakulteit Geesteswetenskappe  
Lefapha la Bomo

**Research Ethics Committee Members:** Prof I Pikirayi (Deputy Dean); Prof KL Harris; Mr A Bizos; Dr A-M de Beer; Dr A dos Santos; Ms KT Govinder Andrew; Dr P Gutura; Dr E Johnson; Prof D Maree; Mr A Mohamed; Dr I Noomè; Dr C Puttergill; Prof D Reyburn; Prof M Soer; Prof E Taljard; Prof V Thebe; Ms B Tsebe; Ms D Mokalapa

## APPENDIX B

### Coding manual

This coding manual is adapted from Friese, Soratto & Pires (2018) and it details steps to follow when analysing the NCF document. These steps are presented in the table below:

<b>Steps to follow for content analysis</b>	<b>Steps in ATLAS.ti</b>
Phase 1: Familiarise yourself with the data (pre-analysis).	<ul style="list-style-type: none"> <li>• Create a project in ATLAS.ti and choose a title for it.</li> <li>• Add the NCF document and the data analysis protocol.</li> <li>• Open a new memo and write the overall aims and sub-aims of the study including the research question.</li> <li>• Explore the document using word cloud and word lists. This is to gather the frequency of words used.</li> <li>• Read through the 2 added documents in order to understand the contents and depth of each document.</li> </ul>
Phase 2: Generating initial codes	<ul style="list-style-type: none"> <li>• Import the list of codes from the data analysis protocol. The UDL checkpoints will be used as codes for research aim 2.</li> <li>• Read the data (NCF document), select the data segments and code them using the imported list of codes. Link the data segments with each imported code.</li> </ul>

	<ul style="list-style-type: none"> <li>• Using the data analysis protocol, write code comments to explain what the intention is, how to use the code and what it means (operation definitions of codes).</li> <li>• The code lists can be viewed and revised in the Code Manager.</li> <li>• Create a code report to send to the other researcher for reviewing and revising.</li> </ul>
Phase 3: searching for themes	<ul style="list-style-type: none"> <li>• Create code groups for all the checkpoints that relate to one guideline. For example; guideline 1 has 4 checkpoints, therefore all the 4 checkpoints will be under one code group name titled 'guideline 1'.</li> <li>• Colour code each guideline which that relates to one principle. For example, guidelines 1-3 fall under principle 1 and will be assigned the same colour.</li> <li>• To visually see the relationship between the codes (checkpoints) and guidelines, use the network function in ATLAS.ti. This is not an automated process and therefore requires the researcher to think conceptually by linking the codes together.</li> <li>• Create a new memo if you would like to make additional notes relating to the links between codes.</li> <li>• Create a report with the memos and networks to send to the other researcher.</li> </ul>
Phase 4: Reviewing themes	<ul style="list-style-type: none"> <li>• Read through the themes and codes and quotations to gather whether they link and tell a compelling story. The quotations from the NCF need to link to the checkpoints and ultimately to the guidelines.</li> </ul>
Phase 5: Defining and naming themes	<ul style="list-style-type: none"> <li>• The themes have already been named using the UDL guidelines.</li> <li>• Define each theme using the UDL framework.</li> </ul>

<p>Phase 6: Producing the report</p>	<ul style="list-style-type: none"><li>• Using the report function in ATLAS.ti:</li><li>• Export the memos with quotations into a Word document so that they can be used in the results section of the study.</li><li>• Export networks, including the tables and graphs into the same Word document.</li><li>• Prepare a screenshot in ATLAS.ti for the methodology section to show how a coded document looks like.</li><li>• Export the code book (data analysis protocol) and comments to insert as appendices.</li></ul>
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**APPENDIX C**  
**Declaration of originality**

**UNIVERSITY OF PRETORIA**  
**DECLARATION OF ORIGINALITY**

This document must be signed and submitted with every essay, report, project, assignment, dissertation and/or thesis.

Full names of student: Sabelo Zinhle Sibiya

Student number: 12182002

**Declaration**

4. I understand what plagiarism is and am aware of the University's policy in this regard.
5. I declare that this dissertation is my own original work. Where other people's work has been used (either from a printed source, Internet or any other source), this has been properly acknowledged and referenced in accordance with departmental requirements.
6. I have not used work previously produced by another student or any other person to hand in as my own.
7. I have not allowed, and will not allow, anyone to copy my work with the intention of passing it off as his or her own work.

SIGNATURE OF STUDENT: 

SIGNATURE OF SUPERVISOR: 

## APPENDIX D

### Plagiarism report



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**Decoding the South African National Curriculum Framework: to what extent are UDL principles incorporated into the curriculum to ensure it is differentiated for children with disabilities?**

by

SZ (Sabelo) Sibiya

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a dissertation submitted to the Faculty of Humanities, in partial fulfillment of the requirements for the degree

of

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FACULTY OF HUMANITIES

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