TEACHER READINESS FOR CURRICULUM DIFFERENTIATION IN TEACHING LEARNERS WITH VISUAL IMPAIRMENT

by

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Submitted in partial fulfilment of the requirements for the degree

MAGISTER EDUCATIONIS
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DECLARATION OF ORIGINALITY

I, Nombali Priscilla Ngele, student number, 20210486, declare that this dissertation that I hereby submit for the degree Magister Educationis in Educational Psychology at the University of Pretoria is my work and has not previously been submitted by me for a degree at this or any other tertiary institution.

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I, the undersigned, hereby declare that the master's dissertation titled **Teacher Readiness for Curriculum Differentiation in Teaching Learners with Visual Impairment** by **Nombali Priscilla Ngele** has been edited.

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Abstract

Teachers need to be empowered with knowledge, skills, and values to enable them to motivate, stimulate, and develop the full potential of learners, including those with visual impairments. The fundamental problem is that teachers frequently view themselves as not having sufficient and relevant skills and experiences to teach learners with visual impairments.

The study seeks to assess the readiness and preparations of teachers to distinguish the curriculum by teaching their learners with visual impairment. This qualitative study is framed by Vygotsky's socio-cultural theory and a Participatory Reflection and Action (PRA). Purposive sampling was utilized to identify and select teachers who possess rich information to be able to answer the research questions. Teachers from two Special Schools in Gauteng province and two Special Schools from Limpopo province participated in the research. Data was collected through focus group discussions, observations, posters, and interviews.

The responses were documented on flip charts, field notes, and in the researcher's diary. The collected data was analysed through thematic inductive analysis; interpretivism guided the interpretation of results. The study revealed that although educators are trying their best to differentiate and adapt the curriculum and the instructions to accommodate students' differences, they still face challenges such as not being appropriately and adequately prepared to teach learners with visual impairments. The researcher concludes the study by recommending that regular workshops, on-site training, and awareness campaigns be conducted. More research should be conducted on the knowledge, attitude, and perceptions of teachers teaching learners with visual impairments.

Keywords

Teachers; inclusive education; Special Schools; curriculum differentiation.

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List of Abbreviations

DoE	Department of Education
FSS	Full-Service School
SS	Special School
EWP6	Education White Paper 6
CAPS	Curriculum and Assessment Policy Statement
SIAS	Screening Identification Assessment and Support
CD	Curriculum Differentiation
IE	Inclusive Education
PRA	Participatory Reflection and Action
HPCSA	Health Professions Council of South Africa
ZPD	Zone of Proximal Development
AAC	Augmented and Alternative Communication
HOD	Head of Department
SMT	School Management Team
SBST	School-Based Support Team
LWVI	Learners with visual impairment

CHAPTER 1: INTRODUCTION AND ORIENTATION

1.1 INTRODUCTION

Since South Africa became a democratic country in 1994, ensuring access, participation, acceptance, and achievement of all learners, including learners with visual impairment in education have been a priority of the post-apartheid education system (Department of Education, 2001). As a result, special schools have been set up by the government as resource centres for inclusion (DoE, 2001). Full-Service Schools (FSS) accommodate learners with low to medium levels of support needs (Oswald, 2010). Special Schools (SS) accommodate learners with high levels of support needs, including visually impaired learners (DoE, 2001).

Learners with visual impairment have the same academic, developmental goals and equal cognitive ability as their sighted peers (World Vision, 2007). These learners differ in the sense that they require materials in alternative formats such as Braille, enlarged font, and adaptive equipment, such as talking computers or magnification devices (Gilson, 2011). Thus, teachers' expertise is needed to implement the above strategies and distinguish the curriculum to respond to the different needs of learners.

Some learners are visually impaired who do not have a reading medium that allows them to keep up in class (Ngubane-Mokiwa, 2013). Hence, teacher readiness for curriculum differentiation is vital. The learners who are visually impaired are denied the opportunity to be taught in Braille thus denied an opportunity to learn successfully like their peers who are in the same class. Today's classes are more diverse than a few decades ago (Logan, 2012). Therefore, teacher readiness to embrace the diverse needs of learners is vital.

There are also visually impaired learners with additional and severe disabilities. Visually-impaired learners with multiple disabilities require modification to the curriculum and support in addition to adapted material (Landsberg, 2015). This study established

teacher competency in programs such as Braille reading, cane travel, orientation and mobility, and the use of adaptive technology for learners with visual impairment.

1.2 RATIONALE OF THE STUDY

Few studies have examined the readiness of teachers in special schools to teach learners with visual impairment (Majoko, 2017; Mahlo, 2015; UNESCO, 2012; Lynch, 2011; DoE, 2001). This study is expected to add to the limited literature based on the subject in South Africa. Learners with visual impairment have fundamental rights to quality education (Majoko, 2017; Mahlo, 2015; Department of Education, 2011). The failure of the system to teach Braille to learners with visual impairment denies them entry into satisfying jobs and professions (Hertberg-Davis, 2009). The shortage of specialised teachers who can teach visually impaired learners, and the lack of appropriate skills and knowledge of how to teach such learners is also a challenge (Roger, 2007).

The Government of South Africa adopted several policies and passed legislation that requires education for all, including learners with visual impairment. These include policies such as the Children's Rights Act (Act No. 38 of 2005); Education White Paper 6 (DoE, 2001); Responding to recommendations for learner diversity in the classroom (DoE, 2011); Curriculum and Assessment Policy Statement (CAPS); and Screening Identification Assessment and Support (SIAS) (DoE, 2014).

The above-mentioned policies made it imperative for the education system to change to accommodate the full range of learning needs. The policies include strategies for instructional and curriculum transformation (DoE, 2001).

They have made an impact on the education system. However, there are still challenges faced by the DoE, such as lack of resources, over-population, negative attitudes, and lack of parental involvement, to name but a few (Engelbrecht, 2015; Mahlo, 2015; Maguvhe, 2015).

The above-mentioned policies came with the introduction of FSS for learners that need a low level of support with learning challenges and converted SS to Resource Centres. This study shows the progress that the country has made to realise its policies and legislation.

The present study took into consideration the four pillars, namely social significance, policy intervention, new methodology/theory, and research. The social significance of this study is that if learners with visual impairment can receive quality education, the community will accept them socially, job opportunities will be available and they will be employable. Learners need support to maximise their potential. New policies and initiatives like Screening Identification Assessment and Support (SIAS) and National Curriculum and Assessment Policy Statement (CAPS) attempt to mitigate the challenges in the teaching and learning environment.

Furthermore, there is a growing need for policy reforms to concentrate on effective implementation of inclusive education for all community (UNESCO, 2013). International policies such as Article 24 of the United Nations convention on the rights of education for persons with disabilities (UN, 2006) and the Salamanca statement and framework for action (UNESCO,1994) advocate inclusive education to ensure education for all children, including children with special educational needs.

Human rights issues in education were strongly influenced by the development of the inclusive education system (Hay, Smith & Paulsen, 2001). However, based on international/studies in resource-rich countries like Canada and US, there is an indication that policies lack implementation which is also experienced in developed countries such as Britain (Wearmouth, 2000).

This is also applicable for South Africa, with insufficiently trained educators (Mahlo, 2015). Wearmouth (2000) states that the South African policy documentation on inclusive education seems that the empowerment of educators is once again ignored. This ensures that as new policies are being introduced, the training of teachers should be taken seriously.

Amato (2013) reports that there are common factors that teachers find challenging in the teaching environment. One of the issues is that they believe they are not effective instructors for learners with visual impairment. For example, the increase in the use of technology is a threat to teachers (Kapperman, 2002). Therefore, teachers need to be well prepared and accommodate the demands of blind learners (Tomlinson, 2008).

This study forms part of a broader visual disability research project focusing on the needs, aspirations and strengths of teachers who teach visually disabled learners. The analysis could contribute to the development and completion of the qualification

proposed (Advanced Diploma in Visual Impairment Studies) and this is part of the bigger project. The aim for the research is to analyse the skills, abilities, awareness and attitude of teachers with regard to curriculum differentiation (CD)

1.3 THE OBJECTIVE OF THE STUDY

The aim of this qualitative paper is to evaluate whether teachers differentiate and change the curriculum to accommodate the level of visually impaired learners. The researcher attempted to decide whether teachers focus solely on visually disabled learners, or whether they understand that there are learners with multiple disabilities that need to be accommodated as well. Teachers are expected to be knowledgeable and able to distinguish the program and adapt it to meet the varied needs of all their learners.

It further explores the skills and knowledge that teachers already have in teaching learners with visual impairment. The teaching and learning environment in SS and FSS take into consideration the challenges faced by both teachers and learners.

Differentiated teaching in this research relates to the effort to address the varying needs of visually disabled learners. In addition to standard curriculum subjects, visually impaired learners must master the advanced abilities of visually impaired learners, such as the use of adaptive resources and materials in tactile or expanded fonts (Castellano, 2004).

1.4 THE RESEARCH QUESTIONS

Issue in the primary research that was driven by the current study:

- What are the impressions of curriculum separation of teachers of visually disabled learners?

Secondary research questions that have been answered in response to the question above.

- What instruction in curriculum differentiation do teachers receive?
- What training do teachers receive in curriculum differentiation?
- How adequate is the training that teachers receive in curriculum differentiation to teach learners with visual impairment?

1.5 CONCEPT CLARIFICATION

1.5.1 Inclusive education

Inclusive education ensures that children with disabilities attend school together with their peers while also receiving adapted instruction and the support they need to develop their capacity and succeed in class (Landsberg, 2015) Regardless of factors such as intellectual, social, emotional and physical conditions, learners should be accommodated in regular schools and the provision of a meaningful learning environment (Landsberg, 2015). In the present study, inclusive education means the inclusion of learners with visual impairment in the same class as other learners.

1.5.2 Visual impairment

Visual impairment refers to significant loss of vision (Landsberg, 2015). Landsberg (2015) adds that the level of visual impairment ranges from severe short-sightedness to blindness. In this study visual impairment refers to learners that are partially sighted, blind and those with extreme light sensitivity.

1.5.3 Curriculum differentiation (CD)

CD is a strategic plan that involves modification, conversion and augmentation of methodology, instructional and evaluation strategies, curriculum content, putting an emphasis on learner abilities, interests and background (DoE, 2001). In this study, CD refers to the strategy that is used by the teacher to simplify the content, activities, assessment and the instructions to accommodate learners with visual impairment.

1.5.4 Braille

Braille is a special way of communication and learning for visually disabled people to read and write (Moodley, 2004). People with visual impairment must learn to read and write using Braille. It must be taught by a trained person (Webster et al, 2013). Braille has six dots read by using sense of touch with the cushion of the dominant forefinger

(Webster, 2013). In this study, Braille refers to an assistive device that is used by a learner who is blind or whose vision is severely impaired. Braille is used for reading and writing as well as an assistive tool to access to the curriculum.

1.5.5 Teachers

DoE's South African Norms and Standards (2000) illustrates a teacher's multidimensional role in the classroom. A teacher is defined as an individual who transfers information and encourages learning while taking on other roles (Landsberg, 2008). An instructor is the facilitator of instruction, curriculum delivery and the classroom manager in the present research.

1.5.6 Full-service school (FSS)

FSS refers to educational institutions which are mainstream that provides education that is of quality to all learners (Department of Education, 2011). The main aim of these schools is to strive to provide education that is of quality, easily accessible and a guarantee in social justice. In this study, FSS is a conventional school that accommodates all learners, including learners with learning barriers, vulnerable learners and learners with different difficulties.

1.5.7 Special school (SS)

According to Landsberg (2015) SS are for all learners who require high-intensity support. SS cater exclusively for learners with disabilities. In addition, South African SS are becoming resource centres for the provision of expert staff, transferring support in respect of CD, assessment and teaching methods to other mainstream and FSS (Department of Education, 2001; Landsberg, 2016).

In this research study SS are recognised as those schools that cater for learners with barriers to learning and have the resources in place to provide specialised guidance and support to meet the specific needs of such learners. SS are recognised as having and providing professional and expert knowledge and skills relating to the implementation of inclusive education policy for learners who are visually impaired.

1.6 WORKING ASSUMPTIONS

An assumption is a belief that is made up without proper insight and without which the research project would be meaningless (Leedy & Ormrod, 2005). Leedy and Ormrod (2005) maintain that assumptions are usually self-evident to such an extent that the researcher may consider them unnecessary to mention. An assumption is an unexamined belief; it is the researcher's inferences and called conclusions (Guba, 1994).

The working assumptions for the present study are as follows:

1. If teachers do not have the necessary knowledge, skills and competencies on CD, they cannot effectively teach learners with visual impairment.
2. Adequate capacity building should empower teachers to accommodate diversity and effectively handle learners with diverse needs.
3. Teachers trained in CD will be prepared for the implementation of CD and they are likely to accommodate diversity, including learners with visual impairment.

1.7 PARADIGMATIC PERSPECTIVE

1.7.1 Theoretical framework

Vygotsky's sociocultural theory is the theoretical structure followed in this analysis (Vygotsky, 1978). One of the foundations of constructivism is Vygotsky's theory. It proposes three key themes: social contact, educated adults and the field of proximal development. Moreover, his theory emphasizes the key role of cognition development and believes that the community plays an essential part in the process of making sense. Vygotsky's theory underlines the importance of culture and social interaction in cognitive development (Donald, 2014). He believes that learning is more important when learners interact with a competent source or with a knowledgeable person.

Vygotsky's theory is relevant to this study in that it deals with important aspects in the education and development of learners, such as the role of the social context, language, mediation and the zone of proximity (Donald, 2014).

This theoretical framework is relevant because the teacher is a mediator that guides learners in gaining knowledge and skills (Vygotsky, 1978). However, it is imperative to

equip teachers with relevant knowledge, skills and competencies for them to be effective in teaching learners with visual impairment.

In addition, teaching and learning develop from continuous social interaction between the teacher and the learner (Vygotsky, 1978). Teachers are expected to understand their own as well as the learners' developmental issues (Donald, 2014). In this study, the teacher was expected to be knowledgeable and qualified in how to differentiate the curriculum in the educational environment.

This study recognizes the limitations of Vygotsky's theory, such as the vagueness of the proximity zone and his lack of attention to developmental issues. However, it ensures that the child's learning skills, learning styles and learning interests are taken into account by encouraging participants to conduct a needs analysis from time to time.

1.7.2 Meta-theoretical paradigm

Interpretivism was the paradigm that guided the study. This paradigm has been used to determine how teachers are prepared for curriculum differentiation, especially when teaching visually impaired learners (Bertram & Christiansen, 2014). The purpose of the interpretive paradigm is to understand how people make sense of their environment and to understand the social world (Guba, 1994). This paradigm was chosen because it does not predict but rather prescribes and tries to understand how people perceive their world as well as how they make meaning of a particular action (Creswell, 2014). Interpretivists believe that there is no single truth or reality about the world. Rather, reality is created by individuals in a group and needs to be interpreted (Creswell, 2014).

The advantage of this paradigm is that it helps the researcher to understand participants' experiences, including challenges in their social interaction and the environment (Bertram & Christiansen, 2014). It gives the researcher an understanding of the perceptions, opinions as well as the attitudes of the participants. The participants' viewpoints and perceptions are regarded as significant and worth sharing (Bertram & Christiansen, 2014). The researcher is not interested in cause and effect relationships; instead, the researcher is concerned with the participants' interpretation and their narratives of the world (Coolican, 2004). Some of the challenges are that the researcher may influence and empathise with the participants and may struggle to keep to the fixed boundaries. Social construction of reality can be affected by lies or fabrications (Creswell, 2014). Lack of cooperation by participants could also be a challenge.

The ontological assumption in qualitative research is that there is no single truth or reality (Sefotho, 2015). Reality is created in the social and cultural interactions between the researcher and the participants (Creswell, 2014). The assumption in this study is that well-trained, skilled and competent teachers may be able to teach visually impaired learners and to adapt and differentiate the curriculum according to the diverse needs of learners (Coolican, 2004).

Teachers narrated their experiences and interpreted CD in their own perspective, in their natural settings or comfort zone (Creswell, 2014). The epistemological assumption of interpretivism is that social reality is created by multiplicity because different people interpret issues differently (Bertram & Christiansen, 2014). The researcher did not aim at predicting what the participants would do but rather observed, understood and made sense of and gave meaning to their narrations or stories (Creswell, 2014).

1.7.3 Methodological paradigm

The methodical approach to this study was qualitative research methodology. A qualitative study is described as the bridge between the researcher's philosophical view and the method of data collection (Bertram & Christiansen, 2014). One of the features of qualitative research methodology is that it relies on concepts such as accounts, stories and autobiographies. In this study, teachers could narrate their experiences in the classroom, which was their natural setting where teaching and learning took place (Coolican, 2004).

A qualitative research methodology was appropriate for the current study in that it permitted for an in-depth inquiry while seeking to uncover and describe meaning (Bertram & Christiansen, 2014). A qualitative research methodology was used for its open-ended questioning, which allowed for explorative enquiry. This led to an increase in construction of new knowledge on the topic (Creswell, 2014).

The advantage of the qualitative research approach was that it gave a detailed view of the participants' experiences regarding the phenomenon being studied (Creswell, 2014). The researcher was able to discover what the needs and expectations of the teachers were in the interviews and discussions. The researcher concentrated on the meaning of actions in a social context, not in isolation. Participants were comfortable because the process was conducted in their own environment or comfort zone.

In terms of challenges, the researcher experienced her influence on the participants due to her own perspectives and biases. The negative attitude of other teachers might have interfered with the research. However, this was further explored in the researcher's reflexivity in Chapter 3 as the researcher recorded her own perceptions in her research diary. This methodology takes much time because of interviews and observations that are utilised, unlike quantitative research. Qualitative research has been criticised for its emphasis on meaning and there is an argument that not all qualitative research is interpretive in nature (Donald, 2014).

To overcome the challenges outlined above, the researcher should stay as neutral as possible. As a researcher, my contribution may influence participants' perceptions; as a result, I guarded against and acknowledged such. Moreover, I exercised my listening skills by paying attention and not interrupting the participants.

1.8 RESEARCH PROCESS

1.8.1 Research design

A case study research design was used where a Participatory Reflection and Action (PRA) approach was followed. A research design is described as a plan to collect and analyse data systematically or a plan to study and conduct a research problem (Maree, 2016); it is a blueprint that clarifies and justifies the type of the study to be undertaken (Bertram & Christiansen, 2014). A PRA approach is the way to learn from and with community members to understand the complexities and the dimensions of a subject (Ferreira, 2007). It relies on partnership and is enhanced by community knowledge. A case study is described as the concept of some kind taking place in a circumscribed context (Yin, 2009).

A PRA approach was chosen because it allowed for dialogue within smaller groups where members were able to participate constructively (Maree, 2016). A descriptive case study design was valuable in this study in that it had an in-depth focus on the cases and the desire to cover a broader range of complex conditions while covering a wide range of topics to be dealt with in a given case study (Yin, 2009). This approach was also important in the study in that it was aligned with a programme that had already been approved as part of the visual impairment project.

One of the advantages of this design was that it described the concept and the actual meaning in which it took place (Guba, 1994). The study has played an important role in equipping teachers with the relevant skills, knowledge and skills needed to be able to teach visually impaired learners effectively.

A challenge that the researcher faced in this choice was using more than one case study, which might “dilute” the importance and meaning of cases (Zucker, 2009). A high degree of unreliability can be found in a single case study. No two cases can be found to be the same; as a result, many studies are unreplaceable.

Some of the strategies that were utilised to overcome the above challenges included intensive workshops where educators were capacitated so that they had a clearer understanding of the purpose of the meeting as well as of the reasons why they were participating in the research.

1.8.2 Sampling

The sampling method of the study was for sampling purposes. Sampling design has been used to search for a specific sample for a researcher with a specific purpose in mind (Maree, 2016). For the purpose of sampling, a sample is chosen for a specific purpose (Bertram & Christiansen, 2014). Bertram and Christiansen (2014) indicate that objective sampling may be called a sampling criterion.

Sampling in this study depended mostly on the population and sampling of the existing project (The development of an Advanced Diploma in Education in Visual Impairment Studies). This is ongoing research to do with the study of learners with visual impairment, with the purpose of adding on to the existing comprehension on this topic. The project aims at selecting five provinces for the sample to be representative, where two FSS and two SS in each province have already been identified to make comparison and collect data.

The sampling strategy that was employed in this study was regarded as appropriate for several reasons, including the fact that it was selected with the purpose of establishing the readiness of teachers for curriculum differentiation, particularly when teaching learners with visual impairment. The sample was chosen strategically with the purpose of aligning it with the broader project, which is in the process of developing and finalising the proposed qualification (Advanced Diploma in Education).

The advantages of this strategy were that the sample was widespread and covered the majority of provinces (Ferreira, 2012).

Teachers from different provinces freely raised their views and challenges that they faced in their everyday interaction with learners. The needs, expectations and strengths of educators from all the selected FSS and SS might be known because of the narratives that they presented in the focus group interviews.

Potential challenges in the selection of this sampling strategy was the fact that the sample might not have been fairly represented. Some teachers were not free and open in their responses. Educators might have hidden the reality taking place in the classrooms, pretending that things were well on the ground. There might have been communication breakdowns amongst the school communities − the message might not be well cascaded from the principal to the relevant participants.

Strategies that were utilised in this study to overcome challenges were advocacy and awareness campaigns. The researcher familiarised the participants with the aim of the research and had to remind the principals, the district officers and the entire Department of Education of the dates of the meetings.

1.8.3 Data collection and documentation

For this current study data collection followed the Participatory Reflection and Action (PRA)-approach, where observation, interviews, field notes, focus group discussions, posters and photographs were utilized (Ferreira, 2012). The PRA-based approach includes participatory mapping, diagraming and modeling supported by continuous reflection, accompanied by action which, in turn, contributes to reflection (Maree, 2006).

The researcher conducted PRA-based workshops and discussions in small groups of teachers, encouraging them to reflect on their current situation. This included gathering their views and perceptions of teacher readiness for curriculum differentiation in teaching learners with visual impairment (Ferreira & Ebersohn, 2012). Teachers were given the opportunity to reflect on their experiences, challenges, strengths and expectations when teaching learners with visual impairment.

Following the PRA approach, data was collected and recorded in documents such as the researcher's diary, posters, photographs, reflective journals and field notes (Maree,

2012). Some of the information was displayed on colorful charts on which teachers wrote their responses. This visualization promoted active participation. Focus group interviews were documented in field notes and verbatim transcripts. Observations of the participants were documented in the field notes and the researcher's diary. Action research workshops have been presented in the form of images and visual data (Maree, 2012).

The PRA approach was relevant in this study because it relied on concrete, visual and colorful activities, which were also applicable to our workshops (Maree, 2016). It was also important in that it made use of a bottom-up approach, which allowed teachers to be equal partners in the study (Ferreira, 2012).

1.8.4 Data analysis and interpretation

The proposed data analysis for this study was thematic inductive analysis, while an interpretive approach guided the interpretation of results (Ferreira, 2012). Inductive reasoning works from specific to broader generalisation and theories. Thematic inductive analysis is known as a “bottom-up approach” (Bertram & Christiansen, 2014, p. 204). Data analysis is explained as a process where the researcher hopes to turn raw data into nuggets of pure gold (Briggs, Coleman & Morrison, 2012).

In the present study, data analysis was done implementing the data that was collected from member checking discussions/PRA workshops that were conducted at schools in Gauteng and Limpopo province. Some of data that I analysed was secondary data that had been collected by the larger team, as my study formed part of an existing project. This research focused on the needs, expectations and strengths of educators who taught learners with visual impairments.

Due to the underlying principle of the PRA approach, participants were consulted in workshop sessions to elaborate or change and confirm the analysis conducted by the team (Ferreira, 2012; Maree, 2016).

Six stages of a qualitative data analysis plan were followed to guide the data analysis process systematically throughout the project (Briggs, 2012). These included defining and identifying, reporting and writing up research, collecting and storing data, theory building and testing, data reduction and sampling, as well as structuring and coding data.

1.9 ETHICAL CONSIDERATIONS

Ethical issues pertaining to this study were dealt with through the normal University of Pretoria procedure, starting by applying to the Ethics Committee for the permission to conduct the study (UP 17/06/07 Ferreira 17-003). Maree (2013) indicates that ethical principles are aimed at protecting the rights of the participants and the researcher. As a researcher, I was expected to apply for ethical approval before I commenced gathering data.

Researchers in South Africa are guided by and are expected to follow the code of Conduct of the South African Health Professionals Council (HPCSA, 2008). Therefore, this study adhered to the above-mentioned ethical principles (Maree, 2013). Since the study involved teachers and their environment, it was important to apply for permission from the DoE and schools where the research was conducted.

The following ethical principles discussed in more detail in Chapter three have been taken into account and strictly adhered to: informed consent, trust and the prevention of deception, protection from harm, privacy, confidentiality and anonymity.

1.10 OUTLINE OF CHAPTERS

CHAPTER 1: INTRODUCTION AND GUIDELINES

This chapter provided an introductory direction, objectives of the study and rationale for research of this nature. Key concepts applicable to the study were explained, the questions of primary and secondary research were formulated. I have briefly introduced the research paradigm, methodological choices, and research design. The chapter concludes by providing a brief that refer to the ethical guidelines I followed.

CHAPTER 2: LITERATURE REVIEW

I explored the literature related to the subject in Chapter 2. I am focusing on the theoretical framework for curriculum differentiation and inclusive education. I am looking at the challenges faced by teachers in implementing curriculum differentiation and the experiences of learners with vision impairment in the educational environment. Inclusive education and CD policies are also outlined. I will therefore end the chapter with a detailed explanation of the framework and principles.

CHAPTER 3: RESEARCH PROCESS

In this third chapter, I laid out information that focuses on the design of the research and the methodology on which I relied. I justify and explain the process of collecting, documenting and analysing and interpreting data. I shall give the rationales for these decisions and reach the conclusion by explaining the standard criteria and moral concerns of the research.

CHAPTER 4: RESEARCH RESULTS AND FINDINGS

In Chapter 4, I present the findings of the research on the basis of the data collected during the focus group discussions involving teachers. I will report the findings of the themes and sub-themes I outlined throughout course of the qualitative analysis. Therefore, I will correspond the results to the published papers as described in Chapter 2.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

The concluding chapter is chapter 5 with findings that relate to chapter one's research question. I am referring these results to the existing literature and to the purpose of this research. The chapter further discusses the limitations of the research and reflects on the prospect of contribution to the study. It concludes by making exhortations for subsequent research, development and retraining in this field.

1.11 CONCLUSION

This chapter presents a rundown of all chapters to allow me to follow a systematic plan. I have outlined the rationale for conducting the study. The research objective has been clearly outlined. The theoretical framework, research methodology and the research design were clarified. I provided the ethical considerations adhered to with a view to enhancing the rigour of the study. I came to this conclusion by providing an overview of all the chapters.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

Chapter 2 begins by looking at visual impairment in greater detail and its prevalence internationally and nationally. The focus then turns to the training that teachers received on CD and its adequacy. Policies for inclusive education and CD were examined in detail as well as the implication thereof. Challenges that teachers are facing as they implement were looked at closely. Experiences of learners with visual impairment were also revealed. I reached the conclusion by describing the theoretical framework for the study.

2.1.1 Visual impairment

There were an estimated 253 million people with visual impairment worldwide in 2018; 36 million were blind and 217 million had moderate to severe visual impairment. People that have distance visual impairment are estimated at 3,45% of whom 0,49% are blind and 2,95% have moderate to severe visual impairment (http://atlas:aph.org.gvtmaps). Fifty-five per cent of visually impaired individuals are women, and 89% live in low and middle-income countries (Communities Eye Health, 2017; Thylefors, 1995).

The exact prevalence of visual impairment is difficult to obtain due to the often-hidden nature of visual impairment in special schools. Some students with visual impairments have additional co-existing impairments and are therefore classified as having an alternative disability category.

Visual impairment is a major challenge in South Africa and globally. Prevalence statistics show the number of visually impaired learners who are experiencing barriers in regards to learning and who may not have access to education that accommodates the needs of learners who are visually disabled (Global blindness and visual impairments, 2015); it is estimated that 597 593 learners with disabilities have access to education (Human Rights Watch, 2017). Human Rights Watch further estimates that 250 000 of these learners are dropouts and have some form of visual impairment. Children's rights to basic education are thus negated as it is required and stipulated in the constitution of the country as well as the major education policies in South Africa (Human Rights Watch, 2017; Naidoo et al., 2015). It has been revealed that only 6 000 learners are enrolled in special schools while 12 000 leaners with visual impairment are still enrolled in

mainstream schools (Govender, 2018). This negatively impacts the implementation of the inclusive education policy (Naidoo, 2015).

The USA Department of Health and Human Services reported 2.6 million people suffering from visual impairment by 2015 (HHS, 2016, Varma et al., 2016).

The State must provide free appropriate education for both disabled and able-bode alike (Sukhraj-Ely, 2008). Advocates of inclusive education suggest that learners with disabilities will benefit both in learning and social skills (Savolainen et al., 2021).

Hay, Smith and Paulsen (2001) states that, the readiness of teachers means time which can be interpreted as the "state of readiness" of teachers for inclusive education. They also note that the successful implementation of inclusive education involves teachers with the necessary knowledge, skills and support to accommodate a wide range of diversity among learners in an inclusive classroom (Smith & Paulsen, 2001). This section examines the literature on teacher readiness to teach visually impaired learners. The literature review is structured around the secondary research questions of the study and shows the research gaps that the study seeks to fill.

Teacher readiness is an uncomplicated thought process ready to indulge with learning material for new ways. Preparation is to move out of the usual environment by taking untrodden teaching paths to facilitate learning (Hay, Smith & Paulsen, 2001). Readiness is a condition of being ready and willing to help others.

In several countries like South Africa teachers undergo pre-service preparation in universities and teachers' colleges that may include or exclude training in teaching learners with visual impairment (Morris & Sharma, 2010). In Australia the focus of pre-service teacher training is on typically developing learners (Morris & Sharma, 2010). As a result, in Australia pre-service teacher training lacks specialised training in teaching learners with visual impairment (Morris & Sharma, 2010).

In the USA pre-service teachers train in special education, including teaching learners with visual impairment (Oswald, 2010). In Zimbabwe, pre-service teachers are exposed to all disability categories, including teaching learners who are blind; hence they are ready to teach visually impaired learners (Tomlinson, 2008). This study has established the content of pre-service teacher training in South Africa with a specific focus on teaching learners with visual impairment.

2.2 CURRICULUM DIFFERENTIATION

2.2.1 Policy on curriculum differentiation and inclusive education

It was discovered that many educators understood the support process as meaning that children with learning disabilities should attend regular schools (McKenzie, Kelly and Shanda, 2018). One of the unfortunate consequences is that educators have come to view levels of support as associated with certain school placement, despite repeated claims to the contrary with the SIAS policy (DoE, 2014).

The Department of Education issued a policy called the Education White Paper 6 which responded to the previous apartheid regime of learning disabilities and support services in education and training (EWP6).

Education White Paper 6 (EPW6) compels the Government to provide access to education to all learners, including those with disabilities and those who are experiencing barriers to learning (Naicker, 2000). The main aim of the paper is to bring support to learners rather than taking learners to where the support is (Lebona, 2013). The policy guides the role and functions of teachers and officials in an inclusive support system (Bornman & Donohue, 2013). Principles and values set out in the Constitution of the country and EPW6 on education and training include human rights, equal access, participation, social justice and social integration for all learners (Motala, 2007).

Curriculum in general and in teaching learners with visual challenges in particular is delivered in the context of inclusive education (UNESCO, 2013; DoE, 2010). Inclusive education recognises and respects individual differences existing in learners (UNESCO, 2013). “Curriculum differentiation is the process of modifying or adapting the curriculum according to the different ability levels of the learners in the classroom”. It is a strategy that can be used to provide significant learning experience (Tomlinson, 2003). In addition, differentiation takes into account the differences between learners and corresponds to the curriculum context, teaching and assessment methods for learning styles and learning needs. Curriculum differentiation is a modified way for learners to teach, based on their strengths and weaknesses.

Differentiated instruction needs continuous and on-going professional development where patience, effort, time and energy is important; it is a teaching philosophy based on the position that teachers should adapt instruction to suit learner differences

(Tomlinson, 2003). Specific strategies that can facilitate learning and achievement for learners with visual impairment include vocabulary, enhancement of text processing strategy and real-world problem-solving strategies (Margo, 2006).

Accommodation and inclusion require teachers to differentiate their classrooms, including resources relevant for learners with visual impairment (Finson, 1997). Tutoring material, activities and instruction may be differentiated by verbal elaboration and should match differential learning needs for learners with visual impairment who require additional support. For quality learning, classroom instruction may include different approaches and strategies to address learners' diverse needs, interests and ability (Tomlinson, 2008).

A number of researchers have discovered that the majority of teachers perceive themselves to have inadequate knowledge of assistive technology (Margo, 2006; Kumar, 2001). It has been indicated that teachers do not feel competent to teach learners with visual impairment; they consider themselves to be novices in using assistive technology (Edward & Lewis, 1998). The lack of pre-service training in assistive technology has a detrimental effect on teachers (Margo, 2006). There are minimal studies on teacher readiness in special schools for teaching learners with visual impairment (Ngubane-Mokiwa, 2013). Moreover, there are minimal research studies on how to cater for blind learners that have multiple disabilities. To achieve improved outcomes, teachers must possess knowledge and skills to differentiate curriculums, and continuous training on this aspect is necessary (Richards & Rodgerrs ,2014). In-service training is an essential component in the delivery of quality education, and teachers must receive

2.2.2 Knowledge and training received by educators

Several universities in the country provide teachers with pre-service and in-service training in responding to learner diversity (Oswald, 2007). For instance, the University of South Africa offers an honours degree in inclusive education while the University of Johannesburg offers an honours degree in remedial education.

In Zimbabwe, pre-service teachers are exposed to the basics of teaching learners who are blind during their training (Majoko, 2013). Similarly, in Scotland every pre-service trainee needs to be competent in Braille before he or she can be certified as a teacher

(Florian, 2012). In the same vein, Tomlinson (2003) found that pre-service teachers in Kenya are taught all disability categories. Inversely, in India, pre-service teachers are not exposed to training in basic disability categories, including blindness. This study explores the situation in South Africa in view of inconsistent previous study findings.

Amato (2013) reported that there are common factors that teachers are confronted by in their teaching environments. One of the issues is that they believe they are not effective instructors for learners that are blind (Tomlinson, 2008). There is a lack of confidence in teachers teaching learners with visual impairment. Teachers lack knowledge regarding areas where to get updated training to refresh their knowledge (Amato, 2013). There is a lack of sufficient time to teach learners who are blind due to curricular demand. The increase in the use of technology is a threat to teachers when teaching learners with visual impairment (Kapperman, 2000).

In his South African study, Ngubani-Mokiwa, (2013) discovered that there is an inappropriate and a lack of preparedness in the academic community to with learners with visual impairment. Australian parents are worried about the poor quality of teaching of their children with visual impairment (Morris & Sharma, 2010; Brown & Packer, 2013).

Teachers in Australia feel that they are inadequately trained to teach learners who are blind (Brown, 2013). Therefore, Australian teachers are supported by visiting teachers. Tertiary institutions lack the necessary skills or empirical experience; academic curriculum designers do not design a curriculum that is flexible enough (Ngubani-Mokiwa, 2013).

2.3 POLICY ON INCLUSIVE EDUCATION AND CIRRICULUM DIFFERENTIATION

Education White Paper 6 (EPW6) compels the Government to provide access to education for all learners who have a disability and those with barriers to learning (Naicker, 2000). The main aim is to bring support to leaners rather than take the learners to where the support is (Lebona, 2013). It also guides the role and functions of teacher and officials in the inclusive support system (Donohue & Bornman, 2014). Principles and values are set out in the Constitution and the White Paper on Education and Training, including human rights and global justice for all learners.

2.3.1 Difficulties affecting educators

The implementation of any new education policy involves teachers as key players, including Education White Paper 6, SIAS policy and so on. The level of readiness of teachers therefore plays a key role in the planning and implementation of inclusive education (Hay, Smith & Paulsen, 2001).

There are minimal studies on teacher readiness in special schools for teaching learners with visual impairment (Ngubani-Mokiwa, 2013). Studies indicate that there are minimal academic perceptions of, attitudes to and knowledge of teaching learners with visual impairment; there are minimal research studies on how to cater for blind learners who have multiple disabilities (Ngubani-Mokiwa, 2013; Ackerman & Prozesky, 2000).

Previous studies reveal that tertiary institutions are internationally criticised because of their shortcomings. For example, Mpofu and Shumba (2012) reveal that in Zimbabwe the mode of learning delivery excludes and disregards the learning needs of blind learners. Learners who are partially sighted tend to switch between using and not using ICT assistive technology.

Society, including some teachers, have negative attitudes and there is a deficiency of proper aid in the education and employment system (Dale, 2010). Limited time for teacher preparation programmes is evident. Most researchers indicate that assistive technology is not used by teachers because of the poor or non-existent knowledge of assistive technology.

In Africa, several studies have examined the readiness of teachers to teach learners that are blind (Health, 2017). However, the findings of these studies are inconsistent. In Zimbabwe, teachers report they lack expertise in Braille (Majoko, 2017). Brian (2016) found that Americans are good at Braille. On contrary, (Health, 2017) attains that Zambian teacher lack management of blind learners behavioural skills.

In South Africa, seemingly a few studies have examined teachers' readiness to teach learners that are blind. Maguvhe (2010) established that in teachers in Durban lack skills to use the Perkins Braille.

2.4 LEARNERS WITH VISUAL IMPAIRMENT

2.4.1 Experiences of learners with visual impairment

Learners with visual impairment lack specific literacy skills needed for mastering learning content (Cawley, 2001). This shortcoming or is a noteworthy problem because majority of learners with visual impairment receive curriculum instructions in a classroom where textbooks are used predominantly. For learners, including those with visual impairment, to access the curriculum is part of their elementary right to basic education (UNESCO, 2013). Therefore, the Department of Education and teachers are expected to guarantee this right (DoE, 2001). Visual impairment is a visual condition that impacts the individual's ability to complete daily activities successfully. Learners with visual impairment are children or youth that experience impairment of the visual systems that negatively impact their ability to learn (Cawley, 2001).

As Bray and McClaskey (2014, p. 168) put it, "Learners-centred environments offer active and collaborative learning where learners can generate questions, organize inquiry projects, and monitor their product and progress."

Learners with impaired vision lack motivation and academic support in curriculum strategies; there is a lack of tools for learner empowerment (Kumar, 2001). Most subjects rely heavily on visual instruction, and many concepts are graphically presented; they cannot be explored by touching (Maguvhe, 2015). It therefore difficult for visually impaired learners who are part of a regular class to grasp the concept. Apprentices with visual impairment have no visual input and therefore need to use other senses, such as touching and hearing, to master concepts (Kumar, 2001).

Most learners with visual impairment do not take subjects such as mathematics and science because they have the impression that these subjects are difficult to them (Fraser, 2008). The fundamental problem is mainly teachers themselves do not have sufficient skills or experience to teach visually impaired learners (Fraser, 2008).

The inadequate resources, educators that are insufficiently prepared, experiments and graphs are some of the drawbacks encountered when studying certain subjects (Kumar, 2001). It has also been revealed that learners with visual impairment have no choice to improve their circumstances because the environment fails to assist them optimally (Fraser, 2008).

It is the duty of the Department of Education and teachers to ensure that every child's right to education is guaranteed (Guba, 1994) and that the curriculum is not only attainable but also inclusive and accommodative (Republic of South Africa, 1996b; Geldenhuys & Weavers, 2013).

Learners with visual impairment may require additional support and practice to internalise and comprehend the relevant curriculum (Margo, 2006). They need much adaptation, application and generalisation of relevant skills and concepts (DoE, 2011; Republic of South Africa, 1996b). The outplacement of learners to alternative settings to access a specialised support programme should be the last resort (DOE, 2014).

Teaching learners with visual impairments in an educational environment requires subject-specific variability procedures to ascertain that curriculum is attainable to learners. (Cawley, 2001). These strategies are guided by the principles underlying distinction and depend on learner preparedness, equity and lesson plan (Marishane, 2015). Learners with learning challenges have made meaningful gains in reading comprehension and decoding skills through the systematic use of the Universal Design for Learning framework (Cook & Rau, 2018)

The South African constitution in which the Bill of Rights serves as a cornerstone of democracy proclaims the democratic value of human dignity, equality and freedom (Republic of South Africa, 1996b). Section 9(3) of the Bill of Rights directs the attention to promoting the equality of individuals regardless of disability (Republic of South Africa, 1996b). In Section 29(1) it is emphasised that all individuals have rights to basic education.

2.4.2 Strategies to differentiate the curriculum for learners with visual impairment

The policy outlines and details specific strategies that teachers could use to include learners who are visually impaired. Learners with visual impairment need specialised intervention and support to access learning materials and to be able to access and demonstrate knowledge and skills at a level equal to their peers. (Department of Basic Education, Republic of South Africa, 2010b; Sahin & Yorek, 2009).

2.4.3.1 Assistive technology

Information and communication technology is the principal resource in assisting learners with visual impairments (Mokiwa & Phasha, 2012). Assistive technology devices that can be used in the classroom include screen-magnifying software, speech synthesisers, screen readers, and computer software that can change the size and colour of the font to enable a visually impaired learner to see more clearly.

2.4.3.1.1 Screen magnifiers

A screen magnifier is a type of software that enlarges the print and other text on the screen of a computer. This helps to make tasks such as reading and writing for learners with low vision easier and to enable individuals with visual impairment to navigate between different tasks on a computer (Mulloy et al., 2014).

2.4.3.1.2 Speech synthesisers

Speech synthesisers read text aloud for learners with visual impairment. Speech synthesisers enable learners to use their auditory skills to take in the information that is presented to them. Speech synthesisers can be utilised by learners who are either blind or have low vision (Campos, Goncalves, & De Araujo, 2017).

2.4.3.1.3 Screen readers

Screen readers are programs that allow an individual with visual impairment to access text that is written on the screen of a computer through speech synthesizers. The screen reader reads out loud what is written on the computer screen for the learner and is therefore appropriate for learners who are blind and for those who have low vision (Taylor, 2016).

2.4.3.2 Braille

Braille is a system that assists learners with visual impairment to read and write through the use of touch (Njue, Aura, & Komen, 2014). The use of braille helps learners to gain important skills such as reading and writing. Without the use of braille learners with visual impairment and those who have progressive blindness would otherwise not have any other medium to enable reading and writing. This would in effect lead to exclusion in practices in the classroom, and the principles of inclusive education policy would not be fulfilled (Roth & Fee, 2011).

To incorporate braille in the classroom teachers must also be literate in braille and able to teach learners how to read and write in braille (Fish-Hodgson & Khumalo, 2015a; Waizowski, 2012). However, it was found that teachers and learners with visual impairment in the classroom experienced challenges because they were not adequately trained in the use of braille (Sikanku, 2018).

2.4.3.3 Adapting written texts

According to the guidelines on adaptations for learners with visual impairment (Department of Basic Education, 2013), teachers may adapt materials by increasing the font, making the text bold, adding colour, adjusting the space between words, and increasing the contrast. However, the adaptations that are made depending on the learners' specific visual acuity and their preferences (Department of Basic Education, Republic of South Africa, 2010b; Mastropieri & Scruggs, 2010).

For learners with visual impairments, teachers are advised not to write notes on the chalkboard but rather they should prepare notes in advance, using the appropriate adaptations for the learners (Department of Basic Education, Republic of South Africa, 2010b). Furthermore, teachers may also alter the lines on writing paper by making them bolder and thicker so that a learner who is visually impaired could see the writing (Department of Basic Education, Republic of South Africa, 2010b).

2.5 THEORETICAL FRAMEWORK: COGNITIVE DEVELOPMENT THEORY

As stated in Chapter 1, the theoretical perspective is the socio-cultural theory of Vygotsky. Vygotsky emphasizes the importance of culture and social interconnection in cognitive development (Donald, 2014). He suggested that language is more meaningful when learners respond with a more knowledgeable person or a competent peer (Vygotsky, 1978). Vygotsky's theory is relevant in this study in that it deals with three important aspects in the education and development of learners, namely the role of social context, language and mediation (Donald, 2014).

Sociocultural theory uses important concepts such as the zone of proximal development (ZPD) and scaffolding, which are essential in assisting learners to unfold their potential (Donald, 2014). Teachers need to stimulate and guide learners to use what is familiar to them in grappling with what is unfamiliar in their ZPD (Donald, 2014). Language plays a central role in Vygotsky's theory, particularly in cognitive development because it is always used in social interaction (Kozulin, 2003).

Vygotsky's sociocultural theory is important in this study because it specifies that children's intellect /mental processes relies on the presence of mediating instruments in the child's interaction with the environment (Vygotsky, 1978). It further suggests that the child can be given a task that is higher than his or her expertise, but within the zone of proximal development and then be provided with support so that the child can achieve (Kozulin, 2003).

This is relevant in this study because the teacher is a mediator who guides the learners in acquiring knowledge and skills (Vygotsky, 1978). Thus it is vitally important to equip teachers with relevant knowledge, skills and competencies to be effective in teaching learners with visual impairment.

In addition, teaching and learning develop from continuous social interactivity between the teacher and the learner. The teacher is expected to understand her/his own as well as the learner's developmental issues (Donald, 2014). Therefore, in this study, the

teacher is expected to be knowledgeable and skilled on how to adapt the curriculum in the teaching learning environment.

This framework was selected because it is relevant in that it focuses on the concepts (mediation, language and thought, social interaction and zone of proximal development) that are imperative in teaching and learning, including the cognitive development of the learner (Donald 2010). The principle of ZPD allows one to evaluate the ability of the learner to learn from the interaction with the teacher or more competent peer (Kozulin, 2003). Individual learners vary in their physical, cognitive, emotional and other aspects of development (Donald, 2010).

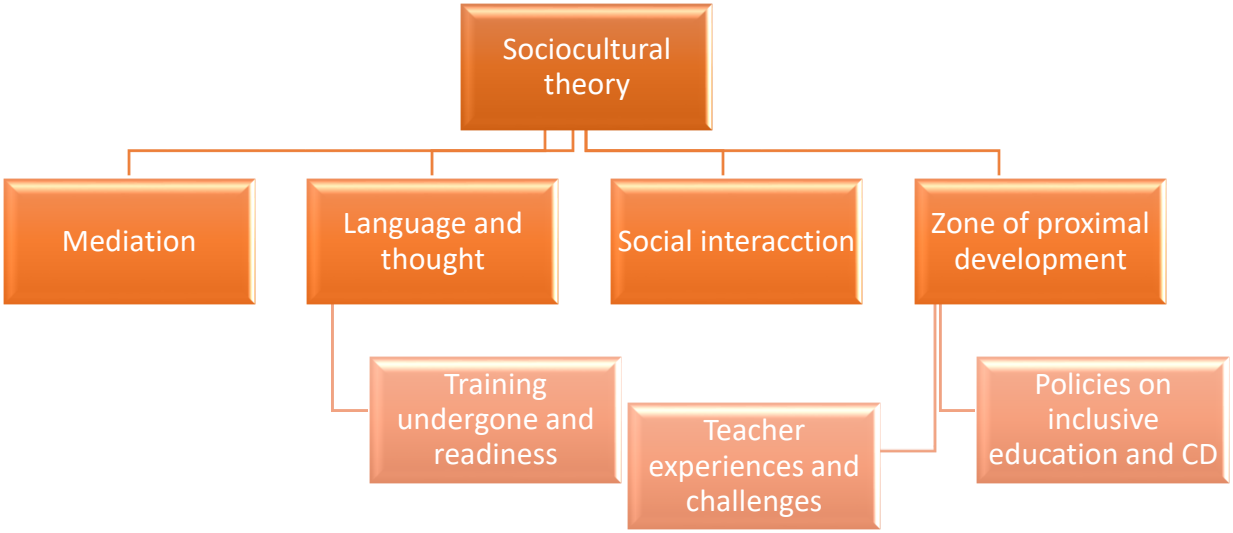


Figure 1: Relationship between the theoretical framework and the current study

2.5.1 Underlying principles of Vygotsky

Vygotsky's theory of cognitive development depends on a number of principles that are discussed briefly; one is the zone of proximal development (ZPD) that relates to where teaching and learning take place. The ZPD is a critical space where a child is not able to understand something on his or her own but has the potential to do so through the proximal interaction with another experienced person (Donald, 2010).

Social interactivity plays a vital role in the process of cognitive development. It is vital in this study because teaching and learning, including orientation and mobility instruction cannot take place without the interaction between the teacher and the learner (Kozulin, 2003). Teachers continuously need to stimulate and guide learners to use what is familiar to them in grappling with what is unfamiliar (Creswell, 2014). There are visually impaired learners who have other learning barriers or multiple disabilities (Kozulin, 2003). These learners need to be accommodated and supported by a teacher who is skilled, knowledgeable and prepared for curriculum differentiation.

Language is the second aspect of this theory; it is important because learners with visual impairment depend much on audio or on listening to supplement their vision (Coolican, 2004). For every lesson or activity, the teacher needs to adapt and differentiate by orally describing what is written on the board or in a picture to cater for learners with visual impairment. Therefore, teacher readiness for curriculum differentiation is imperative (Kozulin, 2003). Language plays a central role in Vygotsky's theory, particularly in cognitive development because it is always used in social interaction (Donald, 2010).

Mediation, according to Vygotsky, is an engine that drives learning and the development of learners, including those with visual impairment (Donald, 2010). His concept of the zone of proximal development (ZPD) is vital for mediation where learners are guided to unfold their potential.

2.5.2 Limitations of Vygotsky's theory

ZPD is criticized for being ambiguous and not presenting an accurate representation of the teaching approach of learners or their level of ability. It doesn't explain the development process as well as how development is taking place (Lui & Matthews, 2005). It also pays no attention to the role of the individual and focusses on the social or collective role of the individual. It has been stated that it does not take gender into account. Vygotsky's theory uses informal methods of research and focuses more on language and literature (Chaiklin, 2003). It does not recognize gifted learners as prodigies which may not require social interaction with a more knowledgeable peer.

Vygotsky's theory is supposed to apply to all cultures and abilities. Vygotsky asserted that the mind is not considered separately from the group (Lui & Matthews, 2005).

2.6 CONCLUSION

In Chapter 2, I based on the literature review, focusing on the issues encountered by teachers in the implementation of curriculum differentiation. I have explained in depth the experience of learners in the teaching and learning environment as well as inclusive education and visual impairment. The chapter was concluded by explaining the theoretical framework and the principles underpinning the study.

I explain the paradigmatic perspective of the study in the succeeding chapter. I am focusing on justifying the methodological changes I have made, and I am referring them to the research questions that have guided my study. I outline the research design, data assembly and documentation as well as the analysis and elucidation of the data.

CHAPTER 3: RESEARCH PROCESS

3.1 INTRODUCTION

I discussed the existing literature pertinent to this study in the previous chapter. The challenges faced by both teachers and learners have been outlined. Inclusive education and CD policies have been discussed in depth.

In this section, I will talk about the cycle of exploration that I have followed. I portray the paradigmatic point of view that I have picked and the plan of the exploration, likewise, give nitty gritty clarification of the age of information, the documentation just as the investigation and translation of the information. I will close the part with a conversation of the quality measures and the moral contemplations appropriate to this examination. All through the examination, the methodological decision is identified with the exploration questions and the reason for the investigation.

3.2 PARADIGMATIC PERSPECTIVE

In the preceding chapter, I talked the selected framework for the present study. In this section, I discuss the selected epistemological as well as the methodological paradigms I relied on.

3.2.1 Epistemological paradigm

The research methodology that was utilised in the present study is qualitative research; the paradigm that guided the study is interpretivism. An interpretive paradigm was used to determine how prepared teachers are for the implementation of curriculum differentiation, particularly when teaching learners with visual impairment (Bertram & Christiansen, 2014). The reason for using an interpretive paradigm was to explore how people make sense of their environment and to understand the social world (Guba, 1994). I chose interpretivism because it does not predict but rather describes and tries to understand how people perceive their world and how they make meaning of a particular action (Creswell, 2014). Interpretivism proclaims that there is no sole truth or reality about the world; rather, individuals in a group create reality and reality needs to be interpreted (Creswell, 2014). Reality is used to discover the underlying meaning

of events and activities. Interpretivists believe results are created and not found (Bertram & Christiansen, 2014).

3.2.2 Advantages and potential challenges

The advantage of using this paradigm was that it helped me to understand participants' experiences, including challenges in their social interaction and in their environment (Bertram & Christiansen, 2014). It gave me an understanding of the perceptions, opinions as well as the attitude of the participants. Participants' views and perceptions are significant (Bertram & Christiansen, 2014). I was not interested in a cause and effect relationship; instead, I was concerned with the participants' interpretation and narratives of their teaching and learning world (Coolican, 2004).

Some of the challenges were that, as a researcher, I might influence participants. I usually struggle to keep to fixed boundaries. The social construction of reality might be affected by lies or fabrication by participants (Creswell, 2014). Participants' reluctance and lack of cooperation were also challenging.

3.2.3 Methodological approach

The methodological approach that was followed in this study was qualitative because it allowed for an in-depth inquiry and sought to uncover and describe meaning obtained from participants (Maree, 2012). Qualitative research acknowledges that there is no single truth but rather multiple realities (Creswell, 2014).

A qualitative study is closely associated with interpretivism as it aims to understand the complex world (Maree, 2012). Human experiences and the behaviour of those involved in the situation at hand are important (Creswell, 2014). One of the characteristics of qualitative research is that it relies on words/narratives and it involves meaning based on data analysis (Bertram & Christiansen, 2014). In the present study, teachers narrated their experiences in the classroom that was the natural setting where teaching and learning took place. The researcher observed teachers while they were narrating their experiences in differentiating and adapting the curriculum.

3.2.4 Advantages and challenges

The advantage of a qualitative research approach is that it gives a detailed view of the participants' experiences regarding the phenomenon being studied (Creswell, 2014). The researcher might be able to discover what the needs and expectations of the teachers are through interviews and discussions (Coolican, 2004). The rationale for implementing an interpretive paradigm was to determine how participants made sense of their environment and the meaning of actions in a social context, not in isolation. Participants were comfortable because the process was conducted in their environment or comfort zone (Kozulin, 2003).

Some of the challenges were that the researcher might influence the participants' views and perspectives by her biases. The negative attitude of other teachers might interfere with the research (Creswell, 2014). Unlike in quantitative research, this methodology took much time because of interviews and observations that were utilised. Some of the challenges in qualitative research are that it is criticised for its emphasis on meaning and there is an argument that not all qualitative research is interpretive in nature (Donald, 2014).

Some of the strategies to overcome the above challenges were that I stayed as neutral as possible (Coolican, 2004). I made sure that I did not interfere with discussions and I avoided underscoring any ideas. I practised and kept on improving my listening skills by nodding my head to show that I was present.

3.3 RESEARCH DESIGN

As expressed in Chapter 1, I used a graphic contextual investigation plan in which a Participatory Reflection and Action (PRA) approach was followed. An examination configuration is portrayed as an arrangement to gather and dissect information deliberately (Maree, 2013). A contextual investigation is portrayed as a cycle of experimental enquiry that centres around a wonder with regards to reality (Yin, 2016). The objective of the exploration configuration is to permit the analyst to envision what the significant examination choices are probably going to be to augment the exactness of the investigation. The exploration configuration is "a by and large definite

arrangement or system for the assortment, investigated and deciphered" (Creswell, 2007, p. 27).

PRA is the way to learn from and with community members to understand the complexity and the dimensions of a subject (Ferreira, 2007). This design relies on partnership and is enhanced by community knowledge. In the present study, the PRA design gave way to exploring the ways in which teachers perceived CD and their readiness for implementation (Ferreira, 2012). The case study furnished me with the opportunity to bring about data and to scrutinize what the data means (Zaidah, 2007).

The design of the case study is advantageous because it allows one to understand the research in depth. I have checked and collected data as an active participant in the PRA member. The rationale behind the design of the case study was informed both by the purpose of the study and by the research question. The phenomenon is not singled out by the study design from its context. The study design rather explores a case as it transpires in its distinctive state of affairs (Zaidah, 2007).

3.4 RESEARCH METHODOLOGY

3.4.1 Selection of participants

As shown in Chapter 1, the testing methodology continued in the current examination was purposive inspecting. Purposive inspecting is utilized by the specialist searching for a particular example in light of a particular objective (Maree, 2010).

In the present study, the criteria for purposive participant selection depended mostly on the population and sampling of the existing project (The development of an Advanced Diploma in Education for visually impaired studies), which is ongoing research in the field of learners with visual impairment with the purpose of building on to the existing knowledge. I managed to interact with educators from two SSs in Limpopo and two SSs in Gauteng during member checking/PRA workshops.

These schools had already been identified by the team for comparison and to collect data. Some of data that I analysed was secondary data that had already been collected by the team. The following table provides an overview of the participants. For data

analysis I identified themes and coded provinces and schools that were visited for PRA workshops, data collection and member checking as shown in table 1.

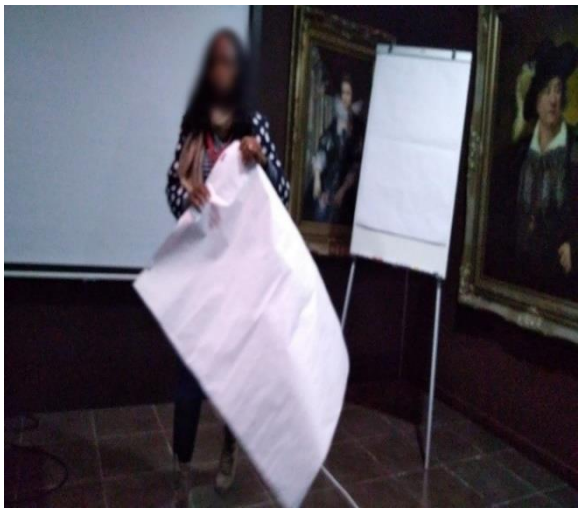
Province	Codes	Name of school	Age group of participants					Number of participants
			20-30	31-40	41-50	51-60	61-70	
Limpopo	L001	School A		3	10	3		16
	L001	School B			4	6		10
Gauteng	G002	School C		3		5	2	10
	G002	School D	1	3	3			7
								43

Table 1: Participants from Special Schools in Gauteng and Limpopo

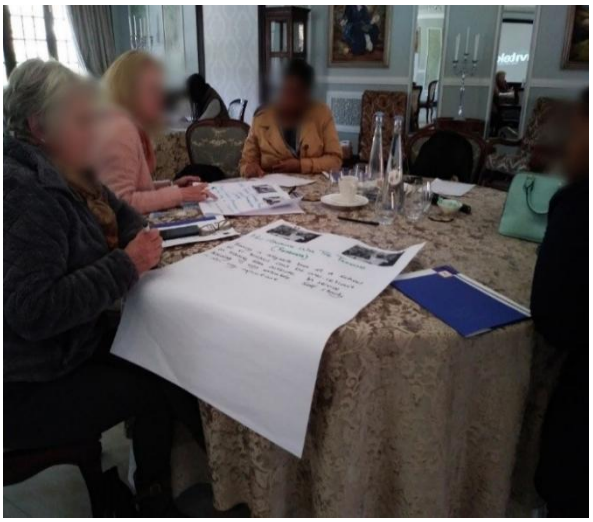
3.4.2 Data collection and documentation

3.4.2.1 PRA-directed workshops

McMillan and Schumacher (1997) demonstrated that the size of test ought to be corresponded with the nature and targets of the examination issue and the information assortment procedure. After the significant distinguishing proof and determination of examination destinations and members, I utilized various information assortment and documentation techniques, for example, centre gathering meetings, perception and field notes.

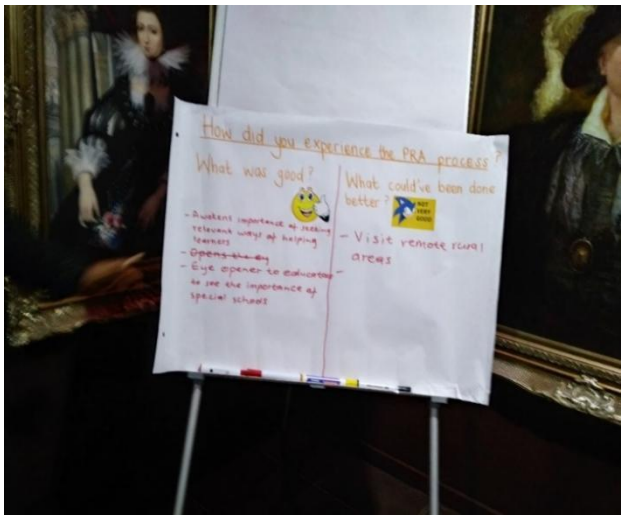


Photograph 1: PRA-directed workshops workshops



Photograph 2: PRA-directed

PRA-directed workshops were used for data collection during PRA workshops, where small groups of teachers were provided with charts and encouraged to reflect on their experiences, challenges and strength in the present situation. Pictures 3.1 and 3.2 are examples of the presentation by teachers where they presented their views and perceptions of their readiness for the implementation of curriculum differentiation.



Photograph 3: Presentations by participants in a PRA workshop

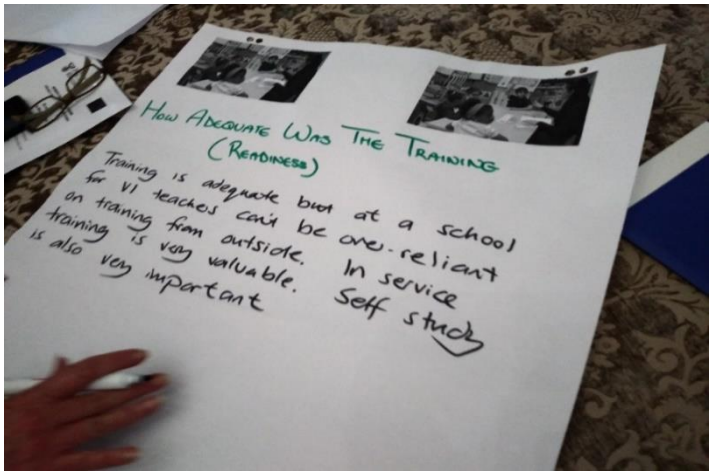
3.4.2.2 Observation

I used observation as one of the data collection methods. I observed teachers while PRA-based workshops were being facilitated. As I was an observer, I provided clarity where participants were confused. Observation means the researcher is studying the participants as they interact in the workshop (Maree, 2016). I made sure that my contribution did not dominate or influence participants' perceptions while I was clarifying some issues.

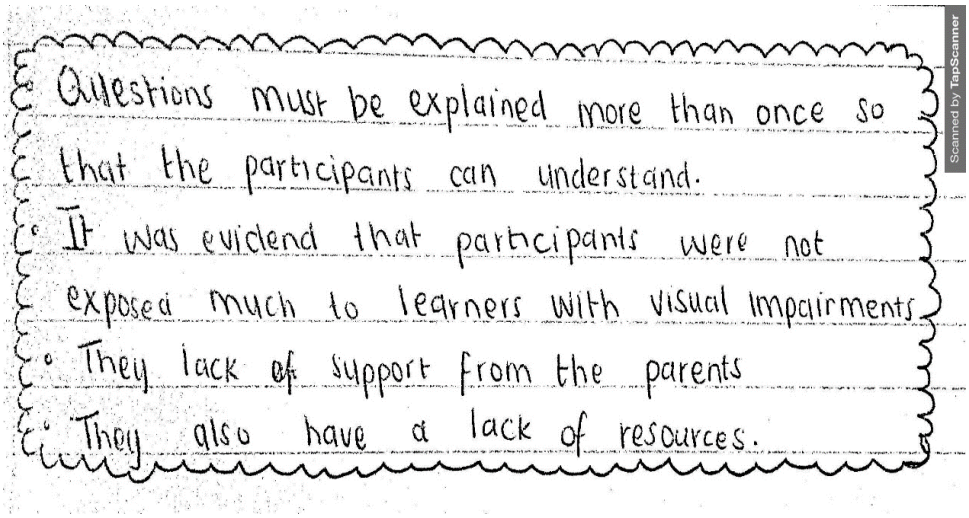
Photograph 4: Presentations by participants in a PRA workshop

3.4.2.3 Field notes and research diary

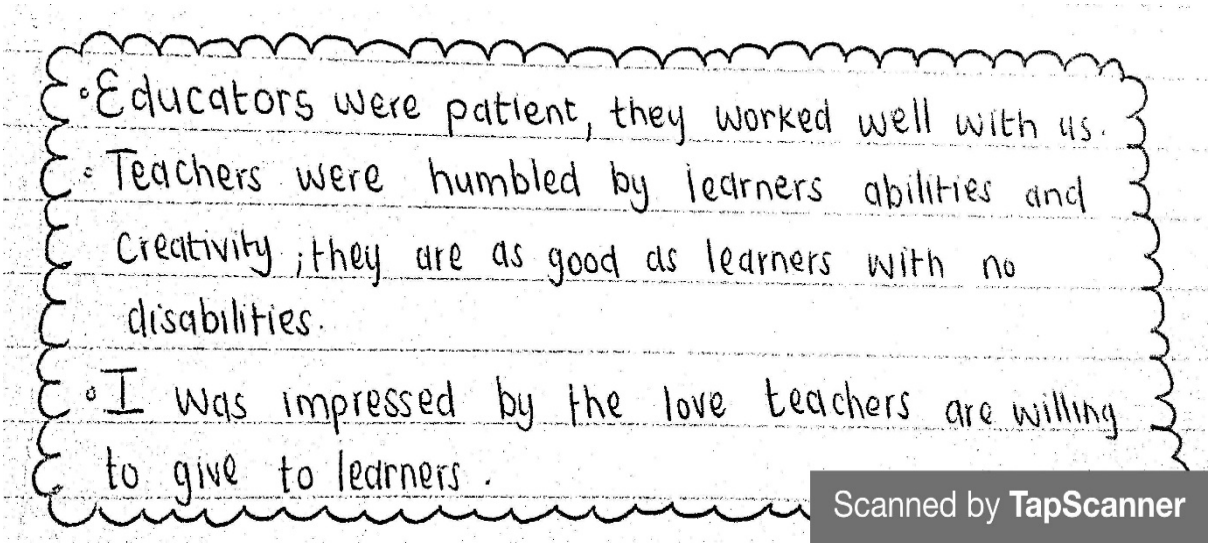
My observations were recorded in a field notebook as part of data documentation. I was able to record and capture the comments and contributions made by teachers from the identified SS during PRA workshops in Limpopo and Gauteng.



Photograph 5: Excerpt from my research diary on challenges teachers face



Photograph 6: Excerpt from my research diary on challenges teachers face



Photograph 7: Observation and note taking

3.5 DATA ANALYSIS AND INTERPRETATION

The thematic inductive analysis was the method of analysis chosen for this study. Thematic analysis looks for themes that are important in the description of the phenomenon (Creswell, 2012). The process involved identifying themes through the repetitive reading of data. It is a form of pattern recognition in the data, and emerging themes become the category for analysis (Rice & Ezzy, 1999).

The data analysis approach accompanied the research questions by enabling codes to emerge instantly from the analytic coding of the data. Coding is the process of classifying research participants' responses into meaningful categories. A code of high standard is one that apprehends the qualitative affluence of this phenomenon (Boyatzis, 1998). A template was developed based on the research questions and theoretical framework following data collection from SS from two provinces, through observations, interview transcripts and focus group interviews.

The study followed a systematic process from the particular to the common, involving various level analysis described by Maree (2016). The process was integrative and reflexive through rereading previous phases of the procedure before undertaking

further investigation to ensure developing themes were based on the initial data (Maree, 2016).

According to Wellman (2005), the analysis of data is applicable to both qualitative and quantitative research although the techniques differ. Data from the qualitative interviews, observations and focus group interviews was grouped into themes and according to the research questions, following the techniques stipulated by Maree (2016).

Content analysis was used to analyse data from a few research questions as it produced a comparatively systematic, extensive summary of the data set (Wellman et al., 2005). I systematically reviewed the data for recurring instances identified across data sets and thematically grouped together (Leedy & Omrod, 2005).

The above-mentioned categories were used to create templates upon which the gathered data was presented. However, these categories and information patterns could be revised, recycled, readjusted, rephrased and modified through repeated interaction. This was created so that they fitted the gathered evidence to become meaningful and achieve a higher level of accuracy (Neuman, 2006).

As mentioned in Chapter 1, some of the data that I analysed was data that had previously been collected by a team because the present study is part of an existing project on the needs, expectations and strengths of teachers teaching learners with visual impairments. To adhere to the underlying principle of the PRA approach, participants were consulted during member checking sessions to verify information and for them to elaborate, change and confirm the analysis conducted by the team (Maree, 2016; Ferreira, 2012).

The first two steps of the study had already been done by the team. Due to the fact that the data was so dense and rich, I could not use all the transcribed data in the present study. Thus, I had to winnow the data and I focused on the data that was relevant to my research, assumptions and to the purpose of the study (Creswell, 2014). The data that was not relevant to the present study was discarded because in qualitative research, the effect of this procedure is to cluster data into a compact number of things (Creswell, 2014).

The advantages of using a PRA approach are that participants display feelings of pride and self-confidence. They may start believing in themselves. They get an opportunity to raise their views and frustrations (Ferreira, 2012). Their opinions contribute positively, and they may believe in their ability to facilitate change in their communities (Maree, 2016). The participants in my research felt comfortable as they were treated as equal partners and the bottom-up strategy made them feel confident. A PRA approach made teachers reflect freely on their perceptions.

The first encountered challenge was the language used to conduct the PRA; participants struggled to express their thoughts because English was their second language. The second challenge was the inclusion of a group of participants that might struggle with power and imbalances; amongst the groups there were principals and teachers that could make other participants not feel free to give their inputs (Yin, 2009).

Intensive capacity building and continuous social interaction form a relevant strategy to address challenges encountered in data analysis. A thorough explanation of concepts is important to empower teachers in expanding their knowledge. A PRA-related strategy to-do-it-yourself activity is also relevant (Maree, 2016).

3.6 QUALITY CRITERIA

In order to ensure the rigor of the qualitative methodology, I have abided to the following quality criteria relevant to the research:

3.6.1 Credibility

In research design, credibility is described as the ability to be reliable and consistent in data and data analysis. This suggests that the researcher provides a sufficient presentation of the construction of findings for a phenomenon (Seale, 2000). Creditability could be equivalent to the validity of how research discoveries are equivalent to the real world (Smith & Ragan, 2005).

In this study, credibility was enhanced by running PRA workshop sessions and enable participants to confirm and report on discovering as representative findings of their encounters (Smith & Ragan, 2005). This study furthermore observed the credibility of the research process through continuous colloquiums where participants validated

how I represented the generated and surveyed data correlated to the reviews of educators (Creswell, 2007).

3.6.2 Adaptability

Adaptability in examination configuration is lined up with outer legitimacy in quantitative exploration (Seale, 2000). It concerns the chance of the discoveries of the exploration being applied in an alternate setting. Adaptability alludes to the chance of summing up discoveries (Maxwell, 2003).

In the present study, in order to maintain transferability, I present a detailed description of the experience of educators in their interactions with visually impaired learners (McMillan & Schumacher, 2010). (McMillan & Schumacher, 2010). (McMillan & Schumacher, 2010). In my analysis and interpretation, I include documents as a series of confirmation that could lead the reader to see how the ending has been reached (Maxwell, 2003). It is vital that I elaborate on the research technique, context as well as generalizations presented in the study so that the reader could determine the transferability of the findings (Seale, 2000).

3.6.3 Dependability

Reliability of descriptive study is significant in comparison to reliability and emphasises on the degree to which the researcher precisely reports the discoveries of the study (Merriam, 2000).

In this examination, I have been pursuing dependability by revealing in detail and utilizing thorough exploration rehearses (Guba and Lincoln, 1989). I revealed the cycle of the examination in detail so future scientists that might need to rehash the work may do as such. Steadfastness can be achieved through examining, which comprises of the specialist's administrative work of the information, strategies and choices taken during the investigation, just as the end result of the examination (Seale, 2000).

3.6.4 Confirmability

Validity is defined as the degree to which study results can be confirmed or agreed on by many (Seale, 2000). Seale (2000) adds that conformability is the result which other readers can prove the results of the research based on an idea and experiences of the respondents. It relates to objective reporting in qualitative research and involves the degree to which the researcher is cognisant of and can describe the subjectivity or partisanship of individuals. Seal (1999) illustrates that confirmability can be accomplished through surveying, which consists of the researcher's validation of the data, strategies and resolutions taken during the study and the final results. In this study, I therefore provide description of the data and the results of the research. I am also trying to provide the findings that capture the experience of the participating educators. Direct quotations from educators to support my analysis of the findings are an attempt to minimize my errors and are included (Mertens, 1998).

3.6.5 Validity:

Validity refers to the achievement of a stern view of the different outlooks, values and principles of participants (Mertens, 1998). The validity of qualitative research is that the research precisely reflects the actuality and ideas of the participants as well as their experiences. It also makes reference to the fairness of the depiction of the various realities (Seale, 2000).

In PRA, legitimacy refers to the capability of the researcher to let participants express their perception freely (Seale, 2000). In the present study, authenticity is evident as data was generated with participants in trying to address real-world challenges. I used methodologies that empowered participants to understand the ontology authenticity, assisted them to appreciate others' perspectives and empowered them to take the required measures to engage in action (Mertens, 2005).

3.7 ETHICAL CONSIDERATIONS

While I was engaged in this research, I abided to the ethical guidelines recommended by the University of Pretoria's Ethics Committee (2002). A researcher should make certain that participants entirely comprehend what the study entails. They are therefore able to voluntarily make a rigorously reasoned verdict about their participation (Maree, 2013). Ethical principles are aimed at protecting the rights of the participants and the researcher. As a researcher, I was expected to apply for ethical clearance before I commenced with data collection (Creswell, 2009).

3.7.1 Informed consent

As mentioned in Chapter 1, research participants were informed of the research procedure and participated voluntarily. Accurate and complete information was provided to the participants to ensure that the details of the study were fully understood (Creswell, 2009). The participants were enlightened of their right to retract from the study at any time they wished to do so. They were also given the opportunity to ask questions in order to broaden their understanding.

In the present study, as it is part of a broader visual impairment project, informed consent had already been obtained from schools for their participation. However, educators/stakeholders were once more informed in PRA workshops about the nature of the part of my study. Educators were reminded of their voluntary participation and their right to repudiate the consent they had given prior.

3.7.2 Trust and avoiding deception

Deception of participants is possible when the researcher is not honest and withholds information from the participants (Robin & Babbie, 2008) when the participants are not supplied with details on the true essence of the study and the possible outcomes (Rubin & Babbie, 2008).

In the current examination, the partaking instructors were not deluded by the sort of information they required. They were unmistakably related to the substance and

reason for the examination. I didn't retain any data from the members about my examination. The relationship of trust between the members and me was set up during our cooperation.

3.7.3 Protection from harm

Participants were protected and no harm was inflicted during the study. Should there be a likelihood of any sort of harm, the researcher was expected to announce this from the beginning to allow participants a chance to consent or to reject participation. In the case of possible emotional reactions being triggered, I would use De Vos's (2005) suggestions for assessing and minimising emotional reactions and referral to counselling services if required.

3.7.4 Privacy, confidentiality and anonymity

Members reserve the option to choose to whom their data might be uncovered and how. They likewise expect that the data they reveal be kept hidden and their reactions treated secretly (De Vos, 2005). Security is alluded to as the component of individual protection, while secrecy demonstrates the treatment of data in a secret way.

Secrecy implies and guarantees the members that their personality won't be uncovered to any individual (Creswell, 2003). Classification can be viewed as an augmentation of security (De Vos, 2005). Members were guaranteed in this examination that their personality would stay mysterious and that aliases be utilized. Notes, pictures and records would be kept in a protected spot to guarantee privacy.

It is the responsibility of a researcher, when explaining consent, to make sure that they established whether participants wanted their identities to be made known in the publication of the findings (Guerriero & Dallari, 2008). A researcher must guarantee anonymity, in compliance with the ethical standard of confidentiality, by ensuring that all information provided by participants is kept safely (Banegas & Villacañas de Castro, 2015; Fouka & Mantzorou, 2011; Lewis, 2003).

During the course of the data-collection process, all the data that were collected were kept in a safe place to maintain the principle of confidentiality. A trusting relationship had been established between the participants and I by following the principles of

strictly professional conduct throughout the research process, thus making the participants feel comfortable to express themselves freely, and trust that I would handle the information in a confidential manner (Gibson, Benson, & Brand, 2013). An additional part of preserving the confidentiality of the data generated was that only my supervisors and

I where aware of the source of the information that was provided (Whiting & Vickers, 2010). The names that were used for data collecting were not participant's real names but pseudo names.

The limits of confidentiality were also explained to participants. They were made aware of the necessity to break confidentially or disclosure should it be necessary to do so. For instance, concrete signs when there is suicidal intent, planned violence or harm to other people and to self.

The researcher insured that the faces of participant were blurred to protect their identity. Also the names used in the research were not participants real name but they were pseudo names.

It should be noted that data collection of the study was conducted before the covid-19 pandemic. However, as the study continued covid-19 protocols where adhered to as required by regulation. They were online interactions between the researcher and the supervise whenever there was a need.

3.8 CONCLUSION

In Chapter 3, I gave an itemized portrayal of the examination approach. Examination strategy is a significant part of an exploration project as it considers and clarifies the need of exploration strategies and procedures (Welman et al., 2005). I talked about the examination plan, determination of members and the strategy for information assortment. For an examination to be thorough and dependable, it is significant for the specialist to use various systems.

CHAPTER 4: RESEARCH RESULTS AND DISCUSSION OF FINDINGS

4.1 INTRODUCTION

The examination philosophy utilized in this exploration was introduced in Chapter 3. In this part, I present the aftereffects of exploration as subjects and sub-topics. Two topics and their sub-subjects arose out of the investigation of the information. Inductive topical information investigation was utilized to recognize subjects and sub-topics that rose up out of PRA-based workshops. I close the part by providing details regarding the aftereffects of the investigation.

4.2 RESULTS OF THE STUDY

The results of the study relate to teacher readiness for curriculum differentiation in teaching learners with visual impairment. This section provides a detailed explanation of the specific themes and sub-themes that emerged from the data.

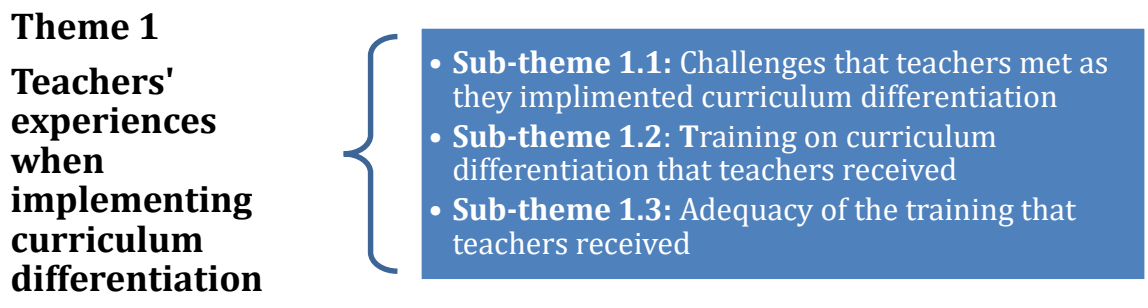


Figure 2: Visual representation of theme 1 and sub themes

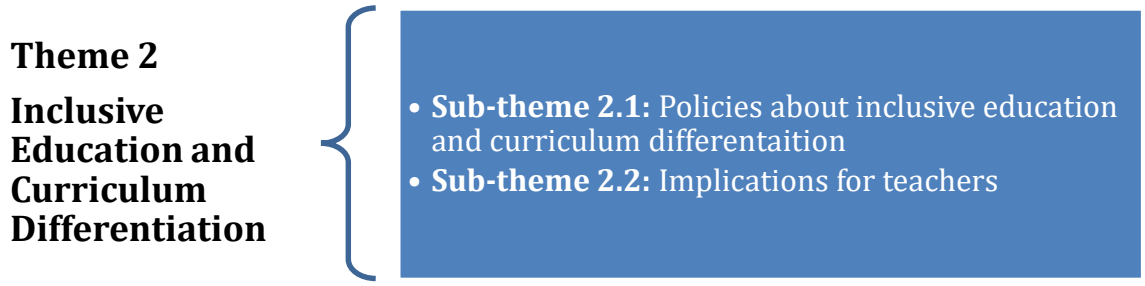


Figure 3: Visual representation of theme 2 and sub themes

Table 2 illustrates the abbreviations that were used when quoting from the different data sources and referring to the relevant participants. I used extracts from raw material from four participants in special schools. Two of the participants represented teachers from Gauteng province (GP) (Nolitha from School A and Melusi from School B). The other two represented teachers from Limpopo province (Lim) (Mpho from School C and Naledi from School D). There were two PRA-based workshops, numbered PRA 1 and PRA 2. In both the PRA workshops the researcher made notes in the diaries that are abbreviated as RD 1 and RD 2. The participant characteristics appear in Table 2.

Participants' preferred pseudonyms	PRA-based workshop	School's abbreviation	Province code	Research Diary
Nolitha	PRA Workshop – PRA 1	School A (SA)	Gauteng (GP)	RD 1
Melusi		School B (SB)		
Mpho	PRA Workshop – PRA 2	School C (SC)	Limpopo (Lim)	RD 2
Naledi		School D (SD)		

Table 2: Participant characteristics and data collection methods from provinces, schools and participants

4.3 THEME 1: TEACHERS' EXPERIENCES WHEN IMPLEMENTING CURRICULUM DIFFERENTIATION TO LEARNERS WITH VISUAL IMPAIREMENT

Theme one focuses on the experiences of teachers in curriculum differentiation (CD) as they teach learners with visual impairment. This theme includes challenges that teachers face when they implement CD, the training that teachers received and how adequate they found their training.

Three sub-themes were identified for Theme 1. Table 3 captures the inclusion and exclusion criteria I used to identify Theme 1 and its sub-themes.

Theme/sub-theme	Inclusion criteria	Exclusion criteria
Sub-theme 1.1 Challenges that teachers face when they implement curriculum differentiation	Data related to challenges faced by teachers	Any data not displaying challenges faced by teachers
Sub-theme 1.2 Training that teachers received on curriculum differentiation	Data that is relevant to the capacity building of teachers	Any data not relevant to capacity building for teachers
Sub-theme 1.3 Adequacy of the training that teachers received	Data that is relevant to the adequacy of the training for teachers	Any data that is not relevant to the training of teachers

Table 3:Inclusion and exclusion criteria for Theme 1 and its sub-themes

4.3.1 Sub-theme 1.1: Challenges that teachers face when they implement CD

Sub-theme 1.1 discusses some of the challenges identified by participants in implementing CD. Most of the research findings in this section were derived from PRA-based workshops, observation and interviews. Below is a list indicating the various challenges reported by the participants in this study:

- Lack of knowledge and understanding of various eye conditions.
- Incompetent teachers regarding assistive technology and Braille.
- Lack of support from parents, departmental officials, school-based support teams and all relevant stakeholders.

Regarding the challenges that teachers face in the implementation of CD a participant from school A responded as follows[1]:

[1] Responses are provided verbatim and have not been edited.

We do not understand various eye conditions, and how to help learners with newly acquired blindness to cope with and accept their new condition (Nolitha, SA, GP).

Another participant from school C added the following:

How to accommodate and differentiate instructions for eye conditions that come with new learners and their behavioural effects, because different eye conditions require different assessments and intervention.

Moreover, participants from school C and school D shared the same sentiments as the previous participant about how to deal with new learners with multiple disabilities from mainstream schools:

We do not know how to deal with new learners that come from mainstream with visual impairment. We also do not know how to deal with challenges of visual impairment, physical as well as multiple disabled learners (Mpho, SC and Naledi, SD).

In response to the question on the incompetency in using assistive technology and Braille two participants indicated their frustrations in that they were still struggling to learn Braille and use the assistive devices:

We lack knowledge about different technologies/ assistive devices available for blind/ multiple disabled learners. We are also struggling with computer Braille, Augmented and Alternative Communication (ACC) different sports codes and classification of learns for sports codes (Nolitha, SA and Naledi, SD).

Participants expressed themselves in the following manner regarding lack of support from parents and relevant stakeholders:

We do not get the right amount of support from parent. Even when they are called to meetings their attendance is poor (Naledi, SD).

Another participant from school A elaborated as follows on the issue of the lack of support:

The there is a lack of understanding by district officials on the practical implications of inclusive education. Lack of support from NGO's supporting structures such as OTs, nurses, etc. (Mpho Lim, SC and Melusi, GP, SB).

Melusi, Nolitha, Mpho and Naledi agreed about the following:

The CAPS document does not accommodate learners with disabilities or their challenges to learning.

They underscored the following:

There is a lack of resources and we are inadequately trained to deal with disabilities and to cater for learner's needs.

4.3.2 Sub-theme 1.2: Training received by teachers in CD

Participants were asked to share their acquired knowledge, understanding and skills from the trainings they received. They were also asked to expatiate on the impact and adequacy of the trainings. The following are themes that were identified

- Capacity-building and formal and informal training
- Curriculum differentiation offered in higher education
- Training in screening, identification, assessment and support (SIAS)
- On-going in-service training

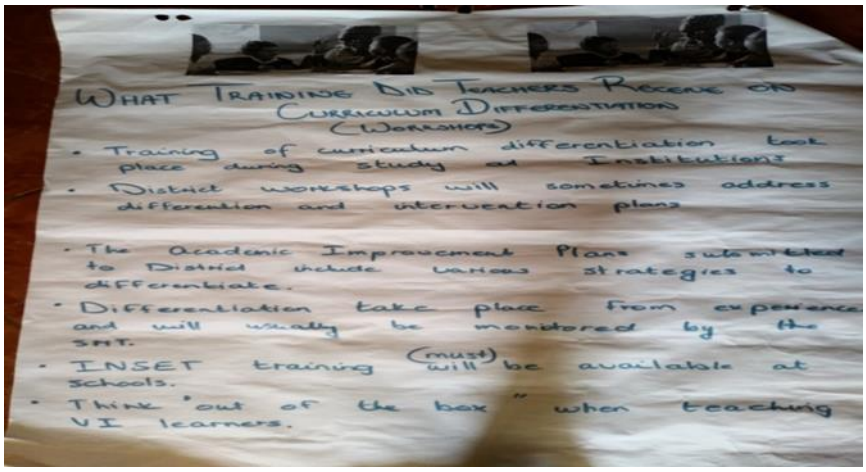
Two participants from Limpopo and Gauteng expressed serious concerns regarding a need for capacity building in assessment:

We are generally not adequately capacitated on different assessment techniques, including formal and informal assessment (Melusi SB and Mpho SC).

Nolitha from SA, GP elaborated on what the previous participants said and proceeded to add an example:

*Various methods and strategies to identify learners' challenges, as well as screening, assessment and support (SIAS) as required by the policy (*Nolitha SA, GP)

This is a photograph of one of the workshops reflecting the experiences of training received by teachers:



Photograph 8: PRA workshop in Limpopo

One participant highlighted that curriculum differentiation is offered by most institutions of higher education:

> *We received training on Curriculum Differentiation from different institutions when we were studying, undergone ordinary training at colleges and varsities. Since educators are lifelong learners, had undergone training and graduated* (Melusi GP, SB).

In contrast participants concurred that they had received training on SIAS, even though they were still learning:

> *The only training, we received so far is Screening, Identification, Assessment and Support (SIAS) and we are still toddlers trying to acclimatise ourselves with the SIAS policy* (Melusi, SA).

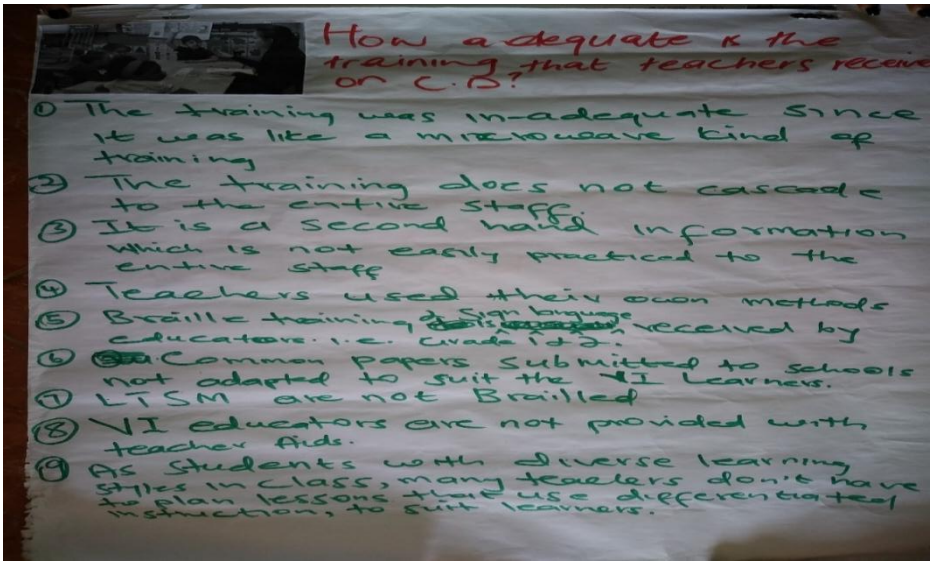
> *SIAS training has been offered SBTS and learners are being screened on arrivals and are placed in grades according to their levels* Mpho (Lim, SC).

However, teachers noted that they had been receiving on-going training and mentorship in various areas of their development, such as the adaptation of question papers:

> *We sometimes receive in-service training after class visits, monitoring and moderation. Workshops at the school on adaptation of question papers for different phases and grades* (Nolitha, GP, SA).

A participant added the following:

INSET training must be available at schools and thinking out of the box when you are teaching learners with visual impairment (Naledi, Lim, SD).



Photograph 9: PRA workshop in Gauteng

4.3.3 Sub-theme 1.3: Adequacy of the training that teachers received

This sub-theme relates to the adequacy of training received and workshops that teachers attended in connection with the adaptation and differentiated instructions when teaching learners with visual impairment.

Below is a list indicating their various viewpoints regarding the adequacy of their training:

- Second-hand knowledge offered as training
- Time allocated to specific training sessions
- Training as a generalist and not a specialised teacher

Participants were adamant in stating that the training they received was not adequate and was second-hand information:

> *The training that we received is like second-hand information because one teacher from the workshop is expected to come back and train other teachers. Only a few teachers were selected to receive braille training* (Naledi SD, GP).

One participant stated that in some cases teachers relied on their own knowledge where the knowledge was either not clear or insufficient:

> *Training was inadequate since it was a microwave type of training. In most cases training does not cascade to the entire staff, it is second-hand information which is not easily practiced. Teachers practiced their own methods (*Nolitha GP, SA)*.*

Participants from Limpopo were in agreement that they were not content with the training received:

> *So far, we have only managed to provide time concession to some of our learners* (Mpho SC Lim, Naledi SD, Lim).

Nolitha and Melusi from Gauteng indicated training was not adequate because not enough time was allocated:

> *Most of the trainings are conducted only three hours in a day which is not adequate for teachers to gain the sufficient knowledge* (Nolitha, SA and Melusi, SB)*.*

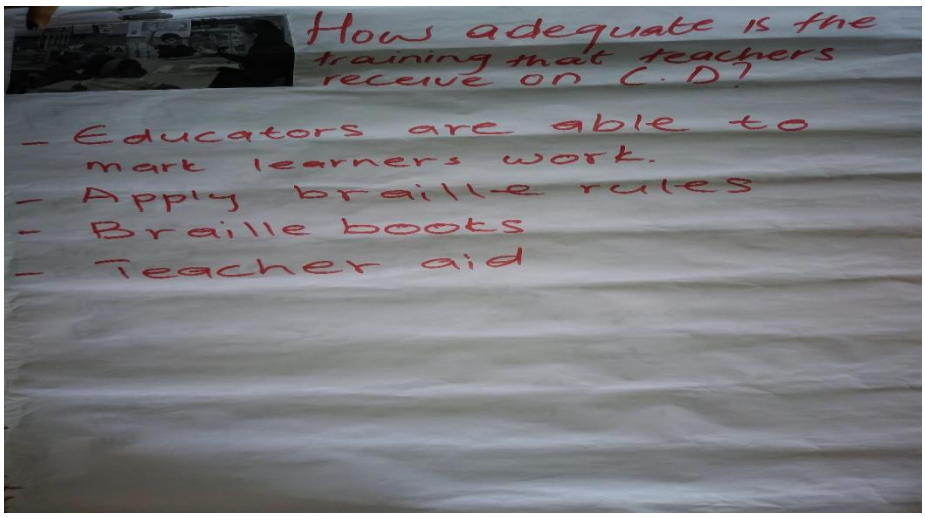
Both participants from GP expressed their views as follows:

> *Self-study is also very important; the field is continually changing so frequent adaptations are required. Teachers must realise that they are required to harness creativity in finding solutions, making adaptations and differentiation* (Nolitha, GP, SA; Melusi, GP, SB).

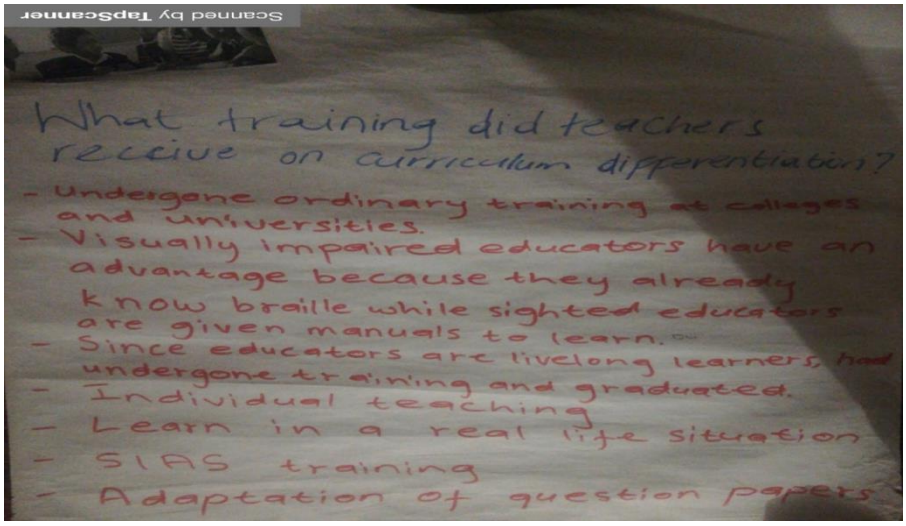
These responses addressed the nature and depth of the training. Both participants from Gauteng stated the following:

All educators received training on adaptation and differentiations during their graduate studies but in general they are not specific to a certain impairment. The extent of departmental workshops is only regarding SIAS-document (Nolitha, GP, SA). *The department has an annual Inclusive Education Focus week, but they have to separate educators according to grades, it is too general* (Melusi, GP, SB).

Photograph 10: PRA workshop in Gauteng



Photograph 11: PRA workshop in Limpopo



4.3.4 Discussion of results of Theme 1

This study found that teachers have diverse experiences in teaching learners with visual impairment because of the challenges they encounter. Similarly, existing literature reveals that teachers are not adequately trained to use assistive technology to teach learners with visual impairment (Ngubane-Mokiwa, 2013). This limitation stems from the notion of educators that the workshops they attended were like information-sharing sessions rather than in-depth training. In fact, the findings of this study, similar to previous studies, underscore the need for more on-going training to boost their confidence (Department of Education, 2011).

The participants involved in this study indicated, like those in previous studies, that they felt incompetent to differentiate activities for learners with visual impairment (Fraser, 2008). The general feeling of incompetency found amongst the participants in this study was caused by a lack of adequate and specialised training to teach learners with visual impairment.

Additionally, the discoveries demonstrate that a portion of the educators were not prepared in speculations and methods of reasoning of comprehensive schooling during their expert preparing. Indeed, the investigation echoes existing exploration showing the requirement for nonstop in-administration preparing in educational program separation (Oswald, 2010). The members demonstrated that there is an absence of trust in showing students with visual debilitation just as not realizing where to get refreshed preparing to invigorate their insight (Amato, 2013). Ngubani-Mokiwa (2013) additionally found that the scholastic local area is improperly set up to manage students with visual weakness.

This obliges teachers to use other teaching methods that match how they receive and process information. Research shows that learners with visual impairment learn better through touch, smell and auditory learning styles (Marishane, 2015).

Guba (1994) who contends that learners with visual impairment have a right to quality education reiterates this as part of this finding.

4.4 THEME 2: INCLUSIVE EDUCATION AND CURRICULUM DIFFERENTIATION

This segment reports the outcomes identified with arrangements on the connection between comprehensive instruction and CD. As indicated by Education White Paper 6 (Department of Education, 2001), each kid can learn and each youngster needs uphold. Along these lines, CD is one of the systems that radiates from this order. The accompanying two sub-subjects were distinguished for this topic:

Theme/sub-theme	Inclusion criteria	Exclusion data
Sub-theme 2.1: Policies about inclusive education and CD	Data related to inclusive education and CD policies	Any data that is not related to inclusive education and CD policies
Sub-theme 2.2: Implications for teachers	Data related to the implications of the policy for teachers	Any data that is not linked to the implications of the policy for teachers

Table 4:Inclusion and exclusion criteria for Theme 2 and its sub-themes

4.4.1 Sub-theme 2.1: Policies on inclusive education and CD

This subtheme examined the way in which teachers understand and comply to policies that are guiding the realisation of inclusive education and CD. Educators had to highlight their understanding, implementation and adherence to these inclusive education policies.

The Following topics emerged as part of subtheme 2.1.

- Equal education opportunities for all learners
- Schools to be resourced
- Classrooms should be conducive and accessible

Equal education opportunities

Equal education opportunities for all learners imply that there ought to be correspondence of chance in instruction, where everybody has reasonable and equivalent admittance to decent quality education, irrespective of social foundation such as race, sexual orientation or religion, and where individuals may progress in training as per their endeavours and capacity, liberated from any type of segregation.

Mpho from Limpopo shared the sentiment of Naledi's comment regarding equal education:

> *Equal rights for all learners irrespective of all disabilities, gender and race. Learner's learning pace is at the centre of this policy. They learn better when they are taught in accordance to how they receive and respond to knowledge and information* (Mpho, SC, Lim).

Naledi added the following:

> *Multiple learning styles should be taken into consideration in order to accommodate and maximize learner's full potential. The policy says that learners can succeed if given the opportunity and support they need, learners should not be separated from others due to disabilities, limitations and challenges* (Naledi Lim, SD).

A participant from Gauteng commented as follows:

> *This implies that learners should be viewed as half full beings rather than empty glasses so that they can reach their full potential in learning centres. Similarly, learners should be given the platform to fully express themselves given multiple opportunities. This policy encourages and advocates for equal education opportunities within schools* (Melusi, SB, GP).

The following responses answer the question on the equipment needed by visually impaired learners:

Melusi (SB, GP) stated the following:

> *Schools should be provided with assistive devices such as talking calculators, speech (JAWS) device, magnifying glasses the government was silent and*

shying away from this reality for some time until the Education White Paper 6 was introduced and incorporated in schools in order to respond to learner's needs and situations.

Nolitha (SA, GP) stated the following:

Also, Education White Paper 6 encourages intervention not categorization, these learner's needs should be catered for in an inclusive environment. Special Schools should be well resourced by the department in order to support Full-service Schools and Mainstream Schools to achieve this mandate to a great extent.

Classrooms should be conducive to learning and accessible to all learners to create content that is clear, concise and accessibility-checked. Participants stated the following:

The policy also encourages that classrooms must be conducive and accommodative to learners with visual impairment. Ramps, rails and canes should be available to be utilised by learners to access classrooms and other buildings within the school. Classrooms should be in good condition in order to prioritise learner's safety and child safeguarding at all the times (Mpho, SC and Naledi, SD).

Embracing cultural differences

Educators should understand that learners are from diverse cultural backgrounds and they need to accommodate different cultures.

Nolitha (GP, SA) in answering the question on policies noted the following:

In supporting learners, the policy indicated that, one has to consider their culture, religion, socio-economic status, language and medical conditions. Different cultures and religions should be embraced and respected as the policy advocates for fair treatment regardless of individual differences.

Mpho (SC, Limp) expressed the following point of view:

Learners should be treated with dignity and fairness irrespective of their socio-economic background. Learners should not be categorized and labelled based on their languages and medical conditions. Support and scaffolding should be implemented to maximize learner's potential within the school environment.

4.4.2 Sub-theme 2.2: Implications for teachers

White Paper 6 policy has far-reaching implications for teachers as visually impaired learners' needs are situational. The needs of such learners' demands sacrifices and compromises from educators.

Below is a list of implications the teachers referred to in this study:

- Concession and accommodation
- Differentiation and adaptation
- Flexibility and curriculum design

Concession and accommodation

In answering the question on the implications of policy participants responded as follows:

> *We usually apply for learners for accommodation and concession which can result in learner receiving extra time, scribes, readers, planning aids etc. The assessment will be tailored according to the learner's specific needs* (Melusi, SB, GP)**.**

Mpho added the following:

> *Policy states that educators should accommodate and be tolerant to all. The implication is that schools are under-resourced and overcrowded. There is limited time to implement differential learning and support learners at a given time. Equally, they have to focus on learner's strength and promote acceptance (Mpho Lim SC). This seems to be challenging as they are teaching in multicultural classrooms where learners present different needs. Educators are then expected to ensure they grant learners concessions and amanuensis to afford them*

adequate time for task completion. This calls for educators to be knowledgeable and be fully equipped (Naledi Limp, SD).

Differentiation and adaptation

In response to the question on differentiation and adaptation of the curriculum participants responded as follows:

> *This requires us to be patient and flexible when teaching and assessing learners. Learners' prior knowledge should be embraced to promote flexibility. We are also expected to cater for learners' needs by providing extra support through remedial lessons and scaffolding* (Mpho, SC Lim and Naledi SD).

Participants from Gauteng elaborated as follows:

> *During scaffolding, learners recognise their existing knowledge and use it as tool to navigate the world and relate with presented content. We are therefore put in a position where they are expected to be creative and promote learner-centred learning. In this fashion, learners with different emotional, social, physical, language and learning challenges are catered for to a great extent* (Melusi GP, SA and Nolitha, GP, SB).

Flexibility and curriculum design

Flexibility and curriculum design relates to a teacher's willingness to change exercises and adapt them to suit the level of the learner.

Nolitha, Melusi, Mpho and Naledi agreed:

> *Flexibility is paramount in differential teaching. The policy states that we should be adequately trained for them to be able to respond to learners needs. They should be in a position to trim and restructure the curriculum as CAPS document does not accommodate learners with disabilities as it is time-based. This implicates that we should design their own curriculum that is in line with CAPS requirements.*

Nolitha and Melusi added:

This is solely because learners do not have the same learning abilities.

Mpho and Naledi supported the above statement:

> *Claiming that some of the learners do not have the innate ability to learn in normal formal schooling. As a result, we should refer some learners to resort to vocational schools.*

4.4.3 Discussion derived from Theme 2

Both inclusive education and CD respond to the diverse needs of all learners by increasing participation and reducing exclusion within education (UNESCO, 2013). The benefit of inclusion for learners with disabilities, among others, is the fact that these learners cultivate a positive attitude of themselves and of other people (Tomlinson, 2003).

This study found that educators are knowledgeable about EWP6 policy and CD guidelines (Department of Education, 2001). However, the main challenge is that they are inappropriately trained to respond to learners' challenges, such as a need for special resources, technology and functional Braille systems. Similarly, the existing literature states that most researchers indicate that assistive technology is not used by teachers because of the poor or non-existent knowledge of assistive technology (Dale 2010; Tomlinson, 2003)

The participants mentioned that there is lack of support from HODs and district officials. As a result, they feel overwhelmed and incompetent. This is further corroborated by a study conducted where participants responded in that they are insufficiently prepared to give lessons to learners with visual impairment (Kumar, 2001).

4.5 CONCLUSION

This chapter discusses the results on the basis of the themes and sub-themes that appeared throughout data collection. Results from the study have been discussed and analysed in accordance with existing literature and are intended to answer the research questions. Existing literature reveals that educators are aware of and knowledgeable about policies advocating inclusive education. However, gaps exist in teacher training. The majority of educators feel overwhelmed and incompetent in teaching learners with visual impairment (Kumar, 2001). They struggle in using assistive technology and Braille systems to help these learners.

CHAPTER 5: FINDINGS, RECOMMENDATIONS & CONCLUSIONS

5.1 INTRODUCTION

This section, provides a precis of the findings, outline contributions, limitation of the study and make exhortations for future research. The presentation of the findings was guided by the primary research questions, the secondary research questions and the aim of the study, which is to explore the willingness of teachers to teach visually impaired learners.

5.2 OVERVIEW OF PREVIOUS CHAPTERS

Chapter 1 provided the outline of the study in Chapter 1. The purpose of Chapter 1 was to introduce a study and to explain the background and rationale for this research. Key concepts that contextualize the research have been defined. The primary and secondary research questions that guided the study have been formulated. An outline of the study design and research methodology used in the study was presented. I concluded the chapter by outlining methods for data analysis, quality criteria and ethical considerations.

Chapter 2 explored present literature associated to the research topic. I focused on teacher experiences and the challenges they face when they implement curriculum differentiation. The encounters of learners with visual impairment in the learning environment were outlined. The chapter explicated the theoretical framework and the principles that guided the study in detail. Policies on inclusive education and curriculum differentiation were investigated.

In Chapter 3 the system utilized in this examination was talked about. An itemized portrayal of the examination cycle, zeroing in on the exploration worldview, the examination plan and the subjective methodology, has been given. The part clarified the testing systems and the cycle of information assortment, documentation, information examination and understanding. I clarified how the members were chosen;

the part closed by examining quality standards and moral contemplations and systems that I used to upgrade the thoroughness of the examination.

The results and findings of the study were presented in Chapter 4. The results were discussed in regards to the themes and sub-themes that came up during the analysis and interpretation of the data. Three themes and sub-themes were identified, and the results presentation included quotations from my field notes and PRA workshops. The results were related to the present literature as discussed in Chapter 2.

I gave the responses to the key exploration question and the auxiliary examination inquiries in Chapter 5. I likewise sketched out the expected commitment of the investigation and mirrored the impediments of the examination. I finished up the part by making suggestions for additional exploration regarding the matter.

5.3 CONCLUSIONS AND SUMMARY OF FINDINGS

In this section, I shall present the conclusions drawn from the findings as well as the themes identified in Chapter 4. I also show how these themes contribute to answering the research questions formulated in Chapter 1. A summary of the findings of the study is provided to answer secondary research questions. Table 5 is a visual presentation of topics and related research issues.

Theme	**Research questions**
1. Teacher experiences of CD	• What are teachers' experiences in differentiating for learners with visual impairment? • How ready are teachers for curriculum differentiation?
2. Training received to implement CD for learners with visual impairment	• How adequate is the training that teachers received in curriculum differentiation to teach these learners?

3. Inclusive education and curriculum enrichment policies	• What training did teachers receive in curriculum differentiation?

Table 5: Visual presentation of themes and related research questions

5.3.1 Primary research question

- **What are teachers' experiences in teaching learners with visual impairment?**

In Theme 1 participants indicated that they encountered different obstacles in the operation of CD implementation because information from workshops was not effectively cascaded to the entire staff. They further indicated that it was second-hand information. Participants used their own methods based their own experiences. The study revealed that common correspondence from the district office delivered to schools had not been adapted to suit the diverse needs of learners with visual impairment. LTSM was not available to cater for learners with visual impairment.

Teachers with visual impairment were not provided with appropriate resources or instructional media. It was revealed that teachers struggled on how to plan a lesson to cater for the diverse learning styles of learners with visual impairment. The teacher-learner ratio was also a challenge because some schools were overcrowded and understaffed. This made it difficult for teachers to be flexible and to attend to the individual learning needs and learning styles of learners.

Participants expressed the opinion that congested classrooms that were not well furnished were not conducive to the implementation of curriculum differentiation. The broad curriculum coverage, extensive syllabus, pace setters and many tasks to be covered in a year made it difficult for teachers to implement curriculum differentiation and did not allow space for individual attention as well as for implementing different teaching methods.

5.3.2 Secondary research question 1

- **What training did teachers receive in CD?**

In Theme 3 the study revealed that participants did not receive specific training in curriculum differentiation. Most of the participants indicated that they received training on SIAS policy. However, they felt they were still inexperienced and that they were still acclimatising themselves regarding issues of inclusive education and curriculum differentiation. They mentioned that some of the training that they received were in the format of in-service training after class visits, monitoring and moderation by the school management team (SMT).

Participants mentioned that they attended departmental workshops for different grades, phases and subjects to address differentiation and intervention strategies. Some participants indicated that there was no specific training on CD received. They mentioned that they individually attended normal training at colleges and universities. They also received training in basic sign language after which they were expected to go back to their schools and apply the skills.

School management teams also received training on SIAS policy and learners were screened on arrival and placed in grades according to their academic levels. The study revealed that schools' academic improvement plans included quarterly intervention strategies. Some participants used differentiation according to their own experiences. They indicated that there was an annual inclusive education focus week and they separated learners according to grades and subjects.

5.3.3 Secondary research question 2

- **How adequate is the training that teachers received**?

In Theme 2 most of the participants indicated that training was not adequate, and it was not cascaded to all the teachers. They could not rely on external training only; hence in-service training and self-study were regarded as very valuable. They indicated that training was not adequate because the duration of training was too limited. It is not always possible to train all teachers at the same time. The few teachers that attended the training were to go back to school to disseminate already distorted information that was to their colleagues. They believed that training received in the

departmental workshops focused on the SIAS document only. They mentioned that the annual training provided by the unions such as NAPTOSA was a one-day symposium and not comprehensively covered. Training provided in the annual inclusive education focus week was often vague and too general. Participants believed more training was required. The research findings revealed that teachers thought the in-service training, monitoring, moderation and class visits by SMT were mostly effective as these were on grassroots level.

5.4 RELEVANCE OF SOCIOCULTURAL THEORY IN THIS RESEARCH

According to Vygotsky, the cognitive as well as the learning process occur at a social level and are later internalised in the way the individual thinks (Abrie, Blom, & Fraser, 2016). This simply means that sociocultural theory looks at the context in which the thinking and learning of the individual occur for us to understand the way in which a learner thinks and learns (Turuk, 2008; Fernandez, Wegerif, Mercer & Rojas-Drummond, 2002).

Sociocultural theory states that the classroom environment in which there is interaction between the teacher and the learner provides the opportunity for the learner to create meaning and understanding, particularly when interacting with a skilled knowledgeable teacher (Kozulin, 2003; Doolittle, 1997; Ryu & Lombardi, 2015). Furthermore, the role of the educator in the study hall is to give direction to the students to empower them to make significance of the specific circumstance (Siyepu, 2013). One of the notable standards of sociocultural hypothesis and ZPD includes platform and intercession. The information and ramifications of comprehensive schooling relate well to the subject of instructor comprehension and usage of the arrangement. This was upheld by members when they demonstrated that they gave most extreme help and made a solid just as steady climate.

The findings of the study indicate that teachers engaged in the mediation process by adapting and differentiating learning materials to suit the needs of learners with visual impairment (Abrie, 2016). The socio-cultural aspect relates to the different types of assistive device, differentiated instruction and adaptation of resources, such as tactile

materials, use of Braille, Braille printers as well as the enlargement of font size (Turuk, 2008).

Principles of socio-cultural theory	**Emerging themes and sub-themes**
Social interaction	Theme 1: Teacher as an implementer of inclusive education Sub-theme 1.1: Teachers as a support system for the learner Sub-theme 1.2: Teachers' personal values in implementing inclusive education
Cultural, historical and social mediation	Theme 2: Adaptations made to learning material Sub-theme 2.3: Resources required for making adaptations
Zone of Proximal Development scaffolding	Theme 2: Adaptations made to learning material Sub-theme 2.1: Instructional adaptations
Language and thoughts	No occurrences in data

Table 6: Underlying principles of sociocultural theory, emerging themes and sub-themes

5.5 POSSIBLE CONTRIBUTION OF THE STUDY

This study aims at assisting Special Schools (SS) and Full-Service Schools (FSS) to identify challenges and gaps in the implementation of CD as well as coming up with strategies to support teachers.

Simultaneously, educators will recognize their own provisos and they will get top to bottom information on CD. There are different approaches to improve and create guidance to help instructors that can't adapt to comprehensive schooling issues. The discoveries of the investigation may serve to educate policymakers and help program creators to create intercession techniques that help educators in showing students with visual impairment. The study may reinforce teachers' teaching skills as well as identify what their training needs are. The discoveries of the study may contribute to the existing literature on inclusive education and CD in the inclusive classroom.

This study may provide information on how prepared and ready teachers are to implement CD, particularly in teaching learners with visual impairment in SS and FSS. This study may extend the breadth and depth, attitude, skills and understanding regarding challenges in the implementation of CD that may assist and support inclusive education in the SS and FSS when implementing CD; it may contribute to teaching practice in mainstream schools in that it may raise awareness of the value of CD when teaching learners with visual impairment as a support instrument.

This study adds to and elaborates on existing definitions by describing the implementation of CD in schools. It also explicates the relationship between CD and Vygotsky's theory of cognitive development. It further informs the theory on the implementation of CD and teacher readiness. A trusting relationship between learners and teachers can be established and be strengthened. The study also serves as a trigger for additional research in the discipline of CD. Eventually, the whole process of the study was a positive experience and my research skills as a qualitative researcher improved and developed.

5.6 LIMITATIONS OF THE STUDY

This study focused on teacher readiness for CD in teaching learners with visual impairment. Therefore, the study cannot be generalised to all the fields of inclusive education in visual impairment. The important issue that I encountered during the research process, and which I had little control over, is that I could not go to the schools identified and interview the teachers. Therefore, I relied on the analysis of secondary data, field notes, member checks and existing literature.

Another limitation is that this study cannot be reproduced because the conditions under which the research was conducted cannot be replicated in a study in a different setting. The study focused on learners with visual impairment only without considering visually impaired learners with other disabilities, such as cognitive/intellectual and behavioural challenges.

The study concentrated on the readiness of teachers who teach learners with visual impairment only. It involved only a few SS and FSS from the five provinces. Due to the size of the sample the research results do not give a reflection of all the SS and FSS in all provinces. It is therefore crucial and necessary that further studies in other provinces, SS and FSS be conducted to determine teacher readiness in the implementation of CD and inclusive education in general.

5.7 RECOMMENDATIONS

5.7.1 Recommendations for training

- Training in different eye conditions, medical conditions, how to identify and cater for such conditions.
- Post requirements in schools should be reviewed to provide for a better teacher-learner ratio and human resources that are relevant, qualified and willing to embrace learner diversity.
- Smaller classes are a prerequisite for effective implementation and how to manage inclusive education.

- The SMT of schools should be trained on how to manage inclusive education and differentiated instruction, the environment and the culture of inclusive schools.
- Ongoing training for educators on how to support LWVI as well as the implementation of differentiated instruction is imperative.
- Negative perceptions, attitude of teachers and low self-esteem need to be addressed by regular in-service training, and awareness campaigns that include motivational speakers.
- Formal training on inclusive education should be included in the curriculum of the university and training colleges.
- Training in both formal and informal assessment, including different types of concessions should be obligatory.
- Ongoing training on how to design a lesson plan, activities, implement relevant assistive devices and design assessment plans to accommodate diversity should be mandatory.

5.7.2 Recommendations for practice

- Learners that are visually impaired should be motivated to participate in the same ventures such as sports, Maths Olympiads and technological activities as all other learners in the mainstream schools.
- Implement the SIAS policy and various strategies on how to identify and support various visual impairment.
- School buildings should be accessible and more inclusive education friendly.
- Learners' needs and contributions should be encouraged and acknowledged by the decision-making bodies.

5.7.3 Recommendations for future research

- In the view of the narrow sphere of this field a more comprehensive study that will give more understanding into the study is recommended.
- Further studies related to the implementation of CD when teaching learners with visual impairment are necessary.

- The study findings could be researched by mixed methods and a quantitative study to obtain in-depth information.
- A comparative study on the implementation of CD in mainstream schools and full-service schools can be conducted.
- An explanatory study on the impact and effectiveness of CD in schools can be considered.
- A descriptive study on how the SBST in FSS and SS manage and monitor the implementation.
- Case study research to accomplish teachers' perceptions and attitude to the implementation of CD.
- Case study research on the experiences, views and needs of learners with visual impairment.

5.8 CONCLUSION

Different views and experiences of teachers in various studies revealed that teachers in the SS and FSS are not ready or well prepared to differentiate instructions for learners with visual impairment. The study revealed that teachers are not yet confident to implement CD. Learners experience challenges in that they are not able to maximise their potential due to the limitations that they face. Some learners' needs are not taken into consideration.

The investigation further uncovered that the educational system in South Africa faces difficulties that incorporate ineffectively prepared and performing instructors; absence of local area inclusion and parental help; helpless control by training specialists; helpless help for educators and low degrees of responsibility. Schools need to separate the educational program and utilize an assortment of approaches when arranging instruction for the outwardly debilitated (DoE, 2010).

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Appendix A
Approval to Conduct Research

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Education

Ethics Committee

09 March 2018

Ms Nombali Ngele

Dear Ms Ngele

REFERENCE: UP 17/06/01 Ferreira 18-001

This letter serves to confirm that your application was carefully considered by the Faculty of Education Ethics Committee. The final decision of the Ethics Committee is that your application has been **approved** and you may now start with your data collection. The decision covers the entire research process and not only the days that data will be collected. The approval is valid for two years for a Masters and three for Doctorate.

The approval by the Ethics Committee is subject to the following conditions being met:

1. The research will be conducted as stipulated on the application form submitted to the Ethics Committee with the supporting documents.
2. Proof of how you adhered to the Department of Basic Education (DBE) policy for research must be submitted where relevant.
3. In the event that the research protocol changed for whatever reason the Ethics Committee must be notified thereof by submitting an amendment to the application (Section E), together with all the supporting documentation that will be used for data collection namely; questionnaires, interview schedules and observation schedules, for further approval before data can be collected. Noncompliance implies that the Committee's approval is null and void. The changes may include the following but are not limited to:
    - Change of investigator,
    - Research methods any other aspect therefore and,
    - Participants
    - Sites

The Ethics Committee of the Faculty of Education does not accept any liability for research misconduct, of whatsoever nature, committed by the researcher(s) in the implementation of the approved protocol.

Upon completion of your research you will need to submit the following documentations to the Ethics Committee for your Clearance Certificate:

- Integrated Declaration Form (Form D08),
- Initial Ethics Approval letter and,
- Approval of Title.

Please quote the reference number **UP 17/06/01 Ferreira 18-001** in any communication with the Ethics Committee.

Best wishes

_____

Prof Liesel Ebersöhn
Chair: Ethics Committee

Faculty of Education

Appendix B
Title Approval

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Education

4 September 2020

STUDENT NO: 20210486

Ms N Ngele

APPROVAL OF TITLE: MINI-DISSERTATION

DEGREE: MEd

I have pleasure in informing you that the following has been approved:

TITLE: Teacher readiness for curriculum differentiation in teaching learners with visual impairment

SUPERVISOR: Prof M Sefotho

The requirements for dissertations are listed in the General Information and Regulations of the University. Consult Regulations which are related to mini-dissertations and the assessment thereof.

Summarised guidelines for the submission and technical details of dissertations, a checklist as well as a “Notice of Submission” are attached. Kindly note that your written “Notice of Submission” should reach the Student Administration three months prior to submission.

Your registration as a student must be renewed annually before 28 February until you have complied with all the requirements for the degree. You will only be entitled to the guidance of your supervisor if annual proof of registration is submitted.

Yours sincerely

B Swarts

for DEAN
FACULTY OF EDUCATION

Appendix C
Informed Consent Form

CONSENT LETTER

Dear Educator

Background:
You are invited to participate in a research study by the University of Pretoria, Department of Educational Psychology. Before you decide to participate in this study, it is important that you understand why the research is being conducted and what your participation will involve. Please take the time to read the following information and ask for clarity you may need.

Purpose of the study:
The purpose of this study is to explore educator's needs, experiences and expectations in terms of the implementation of inclusive education policy, more specifically in support of learners who are visually impaired. The findings of the study will be used to develop a postgraduate diploma in visual impairment studies, in support of teacher training in the field of inclusive education policy implementation.

Research activities:
If you decide to participate you will be expected to participate in two participatory workshops of 2–3 hours each, presented after hours at your school over two days, towards the end of 2017 or beginning of 2018. In addition, you may be requested to allow classroom observation to take place in your class during one morning. Throughout, the research team will be making field notes, taking photographs, making audio-recordings, and observing all activities.

In addition to these activities you will be invited to take part in a colloquium in 2018 in order to discuss the developed module content and share any additional information and ideas you would like to add. Observation, field notes, recordings and photographs will once again form part of this activity. If needed, you may be invited to participate in a follow-up interview.

Benefits of participation:
Your contributions will ultimately inform the development of a postgraduate qualification which will benefit teachers in future. The discussions that you participate in may also be of value and provide you with ideas to implement in class.

Risks:
No risks are foreseen however in the case of any such unfortunate event, we will deal with it in a professional and confidential manner.

Confidentiality and anonymity:
All information obtained will be dealt with in a confidential way and you and your schools identity will be protected. Even though recordings will be made and photographs taken, your face will be disguised except if you opt for it to be shown. All recordings will be transcribed and identities protected by using pseudonyms when reporting on the data. No information or identities will be disclosed to anyone outside the research team.

Voluntary participation:
Your participation in this study is voluntary. It is up to you to decide whether or not to take part. If you decide to take part, you are still free to withdraw from the study at any time and without giving a reason.

Compensation:
There is no monetary compensation to you for your participation in this study.

Consent

By signing this consent form, I confirm that I have read and understood the information and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time without giving a reason and without cost. I therefore voluntarily agree to take part in this study.

Full name of participant .....
Signature .....
Date .....
Consent to take pictures and show my face **YES/NO**
Researcher's signature .....

Appendix D
Transcribed Posters from PRA Workshops

Poster 1

How adequate was the training (Readiness)?

- All educators receive training on adaptation and differentiations during their graduate studies but in general (not specific to a certain impairment).
- The extent of departmental workshops regards the SIAS-document only.
- Unions like Naptosa have an annual one-day symposium (Not comprehensively covered).
- The Department has an annual inclusive education focus week, but they have to separate educators according to grades (It is too general).
- The rest is in-service training and monitoring and moderation activities by management (class visits, etc.).
- Department should receive more training.

Poster 2

How adequate was the training (Readiness)?

- Training is adequate but at a school for VI teacher can't be one-reliant on training from outside. In service training is very valuable. Self-study is also very important.
- The field is continually changing, so frequent adaptations are required.
- Teachers must realise that they are required to harness creativity in finding solutions, making adaptations and differentiating.

Poster 3

How adequate was the training that teachers received in CD?

- The training was inadequate since it was like a micro weave kind of training.
- The training does not cascade to the entire staff.
- It is second-hand information which is not easily practised by the entire staff.
- Teachers used their own methods.
-Braille training and sign language received by educators that is Grade 1 and 2.
-Common papers submitted to schools not adapted to suit the VI learners.
- LTSM is not available in Braille.
- VI educators are not provided with teaching media.
- As there are learners with diverse learning styles in class many teachers don't have to plan lessons that use differentiated instruction to suit learners.

Poster 4

How adequate is the training that teachers received in CD?

- Educators are all able to mark learners' books.
- Apply Braille rules.
- Braille books.

Poster 5

How adequate is the training that teachers received in CD?

- Training is not always adequate because of the following factors.
- Periods of the training are not always enough; in most instances teachers are just confused microwaved and come back to school to be more confused.
- Teacher-learner ratio in some schools are large while they are under-staffed. The learners are so many it is difficult to be flexible to teach all of the learners with different curriculum styles and different learning styles.
- Congested classroom that are in most cases not well furnished are not conducive to practise CD.

- Broad curriculum coverage, the pace setter and syllabus is in most cases so long teachers are working around the clock to cover it when in most of the cases it does not leave any space for individual attention yet alone applying different teaching methods. Lack of LTSM – most of the schools do not have enough LTSM so even if the teacher may be skilled it is sometimes very difficult to deliver due to lack of equipment such as laboratories and well-equipped libraries.
- Lack of finance from the Government. The Government is working on a strict budget; it is always difficult to train all teachers at the same time. Only a few teachers are trained to go back to schools to teach and disseminate information to other colleagues, which is distorted most of the time.

Poster 5

What training did teachers receive in CD?

- Some full-service schools do not have deaf or visually impaired learners.
- Your acquired sign language training skills fade when you do not apply them. The only training, we have received so far is that is (SIAS) but like I said earlier on we are still toddlers acclimatising ourselves with (SIAS) strategies.
- So far, we have only managed to provide only time concession to some of our learners.
- Some of the basic training on SIAS has helped us in improving our disciplinary committee and as a boarding school we are also trying to help some of our learners with minor social problems.
- Through scheduled discussion we are so far trying to group our learners according to merit and try to give them remedial lessons

Poster 6

What training did teachers receive in Curriculum Differentiation?

- Undergone ordinary training at colleges and universities.
- Visually impaired educators have an advantage because they already know Braille while sighted educators are given manuals to learn.
- Since educators are lifelong learners, had undergone training and graduated.

    - Individual teaching.
    - Learn in a real-life situation.
    - SIAS training.
- Adaptation of question papers.

- **Poster 7**

  What training did teachers receive?

  - Training in CD took place during study at institutions.
  - District workshops will sometimes address differentiation and intervention plans.
  - The academic improvement plan submitted to districts include various strategies to differentiate.
  - Differentiation takes place from experiences and will usually be monitored by the SMT.
  - INSET training must be available at schools.
  - Think out of the box when teaching visually impaired learners.

Poster 8

What training did teachers receive in CD?

- In-service training after class visits, monitoring, moderation.
- Workshops at the school in different phases, grades, etc.
- Departmental workshops.

Poster 9

What training did teachers receive in CD?

- There is no specific training in regard to CD.
- SIAS training has been offered to SBST (school-based support team).
- Learners are being screened; on arrival they are placed in grades in terms of their level.

Appendix E
Sample of coding of transcribed data

INCLUSIVE EDUCATION: 1

What are the implications for teachers?	What does the policy say?
• Learners with serious learning barriers cannot be included, e.g. CP and deaf learners. • Deaf-blind cannot be included. • A disabled learner with speech barrier slows down the progress in class.	• Everyone must be included in education regardless of: • Age, disabilities, colour, HIV status, religion etc.
• Blind learners cannot be included due to lack of resources, inadequately trained educators. • Having different disabilities (visually, hearing and physical impaired) in one school creates confusion and lack of specialisation for teachers.	• Acknowledging that everyone can learn. • Everyone needs support, not only disabled people. • Uncovering and minimising learning barrier.

INCLUSIVE EDUCATION: 2

What are the implications for teachers?

- Inadequate training to deal with all disabilities.
- Lack of resources to cater for all learners' needs.
- CAPS document does not accommodate learners with disabilities or their challenges to learning.
- Lack of support from the Department of Education and lack of understanding by officials on the practical implications of inclusive education.
- Lack of support from NGO's supporting structures (OT, nurse, etc.).

What does the policy say?

- States that educators should be trained to deal with learners that have multiple disabilities.
- Individual disabilities must also be met.
- Educators should be skilled and well equipped to deal with special challenges.
- All schools should be full-serviced ones.
- Diversity-cases should range from the very extreme to the mildest cases.
- Government should provide training and support.
- All learners with disabilities should be respected and treated fairly and included in the school despite a disability.

INCLUSIVE EDUCATION: 3

What are the implications for teachers

- **No response**

What does the policy say?

- According to White Paper 6 all learners have a right to equal education.
- All learners must be educated irrespective of their disability, culture, religion, gender, economic status.
- Learners should not be discriminated against because of their language.
- All learners need support at some stage.
- Learners should not be discriminated against because of their medical conditions or cognitive level.
- Learning should be learner centred.
- Educators should accommodate each leaner in accordance with his/her learning style.
- Special skills are to accommodate learners requiring a high level of support.

INCLUSIVE EDUCATON: 4

What are the implications for teachers?

- Accommodate learners-be tolerant to all (inclusive).
- Incorporate all learners in lessons.
- Do not focus on specific barriers that learners have, but overcome issues.
- Concessions (e.g. give more time to complete tasks).
- Teachers should know about background and culture of learners.
- Need to cater for needs of all learners/ scaffolding and straddling.
- Need to teach other learners to accept one another in class.
- Be able to deal with multicultural classes.
- Be skilled to teach in an inclusive environment.

What does the policy say?

- Equal rights to all learners.
- Irrespective of disabilities, gender, race etc.
- No discrimination.
- Education is for all.
- Mainstreaming.

INCLUSIVE EDUCATION: 5

What are the implications for teachers?

- Not all learners are capable of learning.
- Some learners are good at vocational skills.
- It is not easy to teach each learner at own pace because the curriculum has policy with a teaching plan which guides the pace.

What does policy say?

- All learners are able to learn.
- Learners are allowed to learn at their own pace.
- Learners' needs are taken into consideration.
- All learners should be catered for (e.g. ramps, white canes, etc.).
- Educators should be able to cater for intellectual or multi-intelligences.
- Teachers should be aware of the learners' social environment.
- Each learner needs individual attention.
- Availability of resources, to cater for all.

INCLUSIVE EDUCATION: 6

What are the implications for teachers?

- Proper assessment.
- Apply for time concession.
- Teachers need to follow and design their own programmes
- Intervention by therapists.
- Parent involvement is essential.

What does policy say?

- Classroom must be conducive and accommodate learners with different disabilities.
- School infrastructure should meet various needs of learners.
- Teachers must have knowledge of various disabilities.
- Teachers are allowed to design their own programme from the curriculum.
- Relevant teaching and learning material, e.g. Braille, computers, devices, etc.

INCLUSIVE EDUCATION: 7

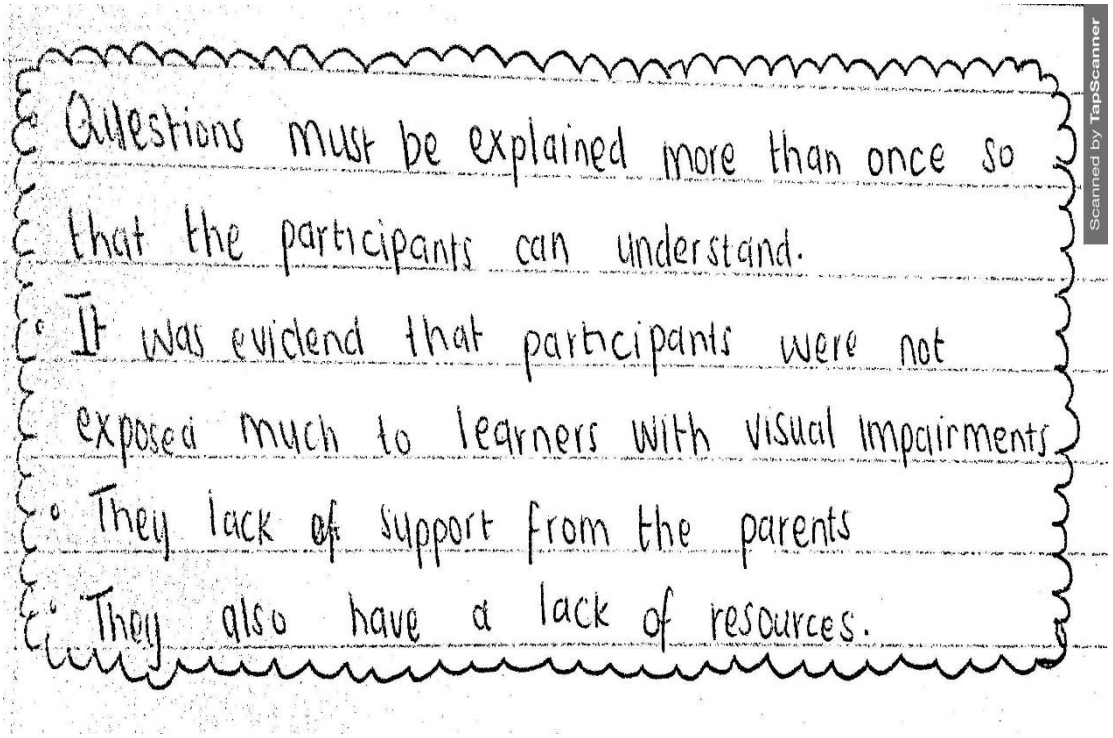
What are the implications for teachers?

- Mainstream: must be skilled to handle learners with multiple disabilities/abilities.
- Reskilled - otherwise disabled learners' needs will not be met.
- Workshop -multi-disabilities.

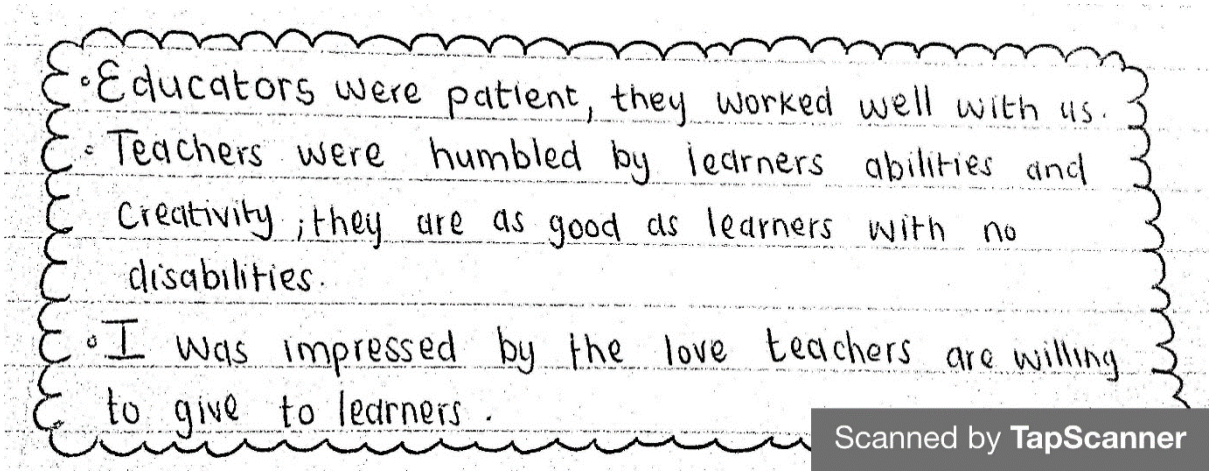
What does policy say?

- All leaners can succeed if given opportunity and support.
- Learners should not be separated according to disability; limitations/ challenges WP6-encourages integration, not categorisation.
- These learners' needs should be catered for in this inclusive environment − full service of schools.
- Schools to support mainstream schools.

Appendix F
Examples from Field Notes Diary



- Questions must be explained more than once so that the participants can understand.
- It was evident that participants were not exposed much to learners with visual impairments
- They lack of support from the parents
- They also have a lack of resources.



- Educators were patient, they worked well with us.
- Teachers were humbled by learners abilities and creativity ; they are as good as learners with no disabilities.
- I was impressed by the love teachers are willing to give to learners.

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