INCLUSION CHALLENGES FACED BY LEARNERS WITH PHYSICAL IMPAIRMENTS IN MAMELODI EAST PRIMARY SCHOOLS

BY

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I declare that the above dissertation is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that I submitted the dissertation to originality checking software and that it falls within the accepted requirements for originality.

I further declare that I have not previously submitted this work, or part of it, for examination at Unisa for another qualification or at any other higher education institution.

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DEDICATION

I dedicate this study to Almighty God Jesus Christ of Nasereth for giving me wisdom, understanding, knowledge, grace and strength (PSALM 23:1) the journey was not easy but worth it, and to my children (Obakeng, Kearabilwe and Kgaogelo) for contributing to who I am today and for instilling in me the importance of hope and faith in life.

To my late parents, Mr. Abram Moruwa Sekhwela and Mrs. Salphina Moore Sekhwela for instilling the love of education in me from early age and I am proud of you, may your souls rest in erternal peace.

To my sisters and brothers: for inspiring me to strive for my goal.

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ABSTRACT

The study: inclusion challenges faced by learners with physical impairments in Mamelodi East Primary schools, aims to highlight acceleration of education opportunities for LWPI in inclusive settings in order to transform the education system and meet the UN goal of education for all. The constitution of the Republic of South Africa (RSA, 1996) guarantee every learner the right to education.

The methodology used in the study is qualitative study that employed interviews, observations and documents analysis as instruments of data collection. The study was conducted in four primary schools situated in Mamelodi East in Tshwane South District in Gauteng with 20 participants. Thematic analysis was used to analyse data (Braun and Clarke, 2013).

Creswell's method of data analysis was adopted. The findings revealed that the following were factors affecting learners with physical impairments: poor infrastructures in schools, unqualified teachers, lack of resources, inaccessible/unavailable LTSM and lack of assistive devices and technologies. Some of the proposed recommendations include: that the Department of Basic Education need to see to it that they train teachers in inclusive education; revamp the schools to accommodate LWPI; provide schools with adequate resources and assistive devices and technologies in order to ensure that LWPI enjoy the same rights to education as others without disability.

Key words: inclusive education, barriers, inclusive schools, physical impairments, assistive devices and technologies, education opportunities, intervention, discrimination, inclusion, barriers to learning

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AAD	Augmentive Alternative Devices
ACRWC	The African Charter on the Rights and Welfare of the Child
ADHD	Attention Deficient Hypertension Disorder
AIDS	Acquired Immune Deficiency Syndrome
ATP	Annual Teaching Plan
BRFSS	Behavioural Risk Factor Surveillance System
CAPS	National Curriculum Assessment Policy Statement
CDG	Children Dependency Grant
CPRD	Convention on the Rights of Persons with Disabilities
CVD	Cardiovascular Disease
DAP	Disability Awareness Program
DBE	Department of Basic Education (post 2009)
DBST	District-Based Support Team
DICAG	Disabled Children "s Action Group
DoE	Department of Education (before 2009)
DSD	Department of Social Development
DWCPD	Department of Women, Children and People with Disabilities
EWP6	Education White Paper: Special Needs *Education*, Building an Inclusive *Education* and Training System
FAS	Foetal Alcohol Syndrome
FSS	Full- Service School
GHS	Globally Harmonised System
HIV	Human Immune Virus
HOD	Head of Department
ICF	International Classification of Functioning, Disability and Health
IPV	Inactivated Polio Virus
KAK	Kids Are Kids
LMIC	Low- and middle –income countries
LOLT	Language of learning and teaching
LSPID	Learners with severe profound intellectual disability
LSE	Learner support educator

LSEN	Learner with special education needs
LTSM	Learning teaching support materials
LWPI	Learners with physical impairments
MMWR	Morbidity and mortality weekly report
NCESS	National committee on education support services
NCSNET	National commission on special needs in education and training
NDA	National Disability Authority
NGO	Non-Government Organisation
NINDS	National Institute of neurological Disorder and stroke
OECD	Organisation for Economic Cooperation and Development
OPV	Weakened Polio Virus
PDR	Purchase for Development Rights
RSA	Republic of South Africa
SBST	School based support team
SDG	Sustainable Development Goals
SACE	South African Council for Educators
SETA	Sector Education and Training Authority
SGB	School Governing Body
SIAS	Screening, Identification, Assessment and Support
SMT	School management team
SPID	Severe physical intellectual disability
STATSA	Statistics South Africa
TB	Tuberculosis
TIA	Transient ischemic Attack
UK	United Kingdom
UN	United Nations
UNCRC	United Nation convention on the Rights of the child
UNCRPD	United convention on the Rights of persons with disability
UNESCO	United Nation Educational Scientific and Cultural Organisation
UNICEF	United National Children's Fund
UPIAS	Union of Physically Impaired Against Segregation
USA	United State of America
WHO	World Health Organisation

CHAPTER 1: Orientation of the study

1.1 INTRODUCTION AND BACKGROUND

The Salamanca statement (United Nation, 1994:6) mandates that "all children regardless of their physical, social, intellectual, emotional or other condition have a right to education". Inclusive education calls for equal opportunities and accessibility to resources, services, and responsibility. Winter (2010:10) has asserted that the underlying idea of inclusive education is that all children have the right to be educated in the mainstream, regardless of any special need or impairment, including physical impairment (McMillian and Schoeman, 2016:20). The United Nation Educational Scientific, and Cultural Organisation (UNESCO) (2008:18) supports this stance, stating that in inclusive education, each person has the right to access education, irrespective of physical impairments.

Learners with physical impairments experience many challenges, including mobility, psychosocial problems, untrained teachers in inclusive education, buildings and the physical environment and lack of professional health workers to assist them. The researcher works in one of the primary schools in Mamelodi East Township, where learners experiencing physical impairments face many challenges. These challenges become barriers to their learning. The researcher has five years' experience working as an educator, and she holds an honours degree in Inclusive Education.

This study focuses on learners experiencing physical impairments where a quarter century later, Education White Paper 6: Special Needs *Education*, Building an Inclusive *Education* and Training System (EWP6) (Department of Education (DoE), 2001) has failed to materialised, because LWPI are not receiving quality education as others. Further, EWP6 has failed to materialised because of the following reasons : (1) people do not understand the concept inclusion, (2) lack of adequate human and material resources, (3) rigid curriculum and instruction, (4) poor inclusive education infrustructure, (5) unmanageable classrooms due to their big sizes, (6) utilisation of improper teaching and assessment strategies, (7) lack of support structures, (8) negative attitudes towards learners with physical impairments, (9) unqualified or poorly trained inclusive education personnel, (10) in-service training workshops characterised by theory and not practice Engelbrect (2015).

Furthermore, the researcher is aware of the fact that school buildings and school surroundings are not conducive to learning, and that classrooms are not big enough to accommodate learners with physical impairments. Doorways, handles, bathrooms, and learners' desks are not adapted to accommodate learners with physical impairments. Learners with physical impairments are stigmatised and called names. This study highlight acceleration of education opportunities for LWPI in inclusive settings in order to transform the education system and meet the UN goal of education for all.

The study is about the inclusion challenges faced by learners with physical impairments which is broadly defined by Landsberg, Kruger and Swart, (2011), physical impairments include "physical disorders or conditions, anatomical loss affecting one or more of the following body systems: neurological, musculoskeletal, respiratory including speech, cardiovascular and digestive". Physical impairments are understood here to refer to a limitation to a person's physical functioning, mobility, stamina, and development of fine motor and gross motor skills. The study is aligned to the above definition of physical impairment.

The rationale for the study is based on the observation made while working in a relevant school that learners experiencing physical impairments are exposed to several challenges. Examples are mobility and physical surroundings, lack of professional health workers, teachers who are not trained in inclusive education, lack of adequate LTSM materials and lack of support from the District-Based Support Team (DBST). In addition, the school is not designed to accommodate learners with physical impairments and has not been upgraded according to the EWP6 policy. According to the policy all schools need to be inclusively built to accommodate all learners including LWPI.

1.2. STATEMENT OF THE PROBLEM

The Constitution of the Republic of South Africa (RSA, 1994) guarantees every learner the right to education. It further identifies people with disabilities as one of those groups previously most disadvantaged in terms of education, where learners with physical impairments are not benefiting from inclusive education despite measures to redress this situation. Inclusive Education calls for equal opportunities and accessibility to resources, services and responsibilities (Brown, 2014:4). Though inclusive education policy is intended to facilitate this process and ensure that issues of disabilities are approached from a human rights perspective, learners with physical impairments (LWPI) in Mamelodi East do not enjoy education that accommodates their needs.

1.3. AIM OF THE STUDY

The aim of this study is to highlight the prodigious importance of accelerating education opportunities for learners with physical impairments in inclusive education settings, in order to transform the education system and meet the UN goal of education for all.

1.4. OBJECTIVES OF THE STUDY

By conducting this research, the researcher wants to achieve the following:

- Identify measures and processes necessary to facilitate the acceleration of education opportunities to learners with physical impairments in inclusive settings;
- Determine how stakeholders such as teachers, parents, the Department of Basic Education (DBE), create a teaching and learning environment that is free of discrimination especially to learners with physical impairments;
- Identify intervention mechanisms that can be used to address the challenges of learners with physical impairments in inclusive settings; and
- Highlight assistive devices and /or other accommodation measures which are used by teachers to assist and assess LWPI during teaching and learning.

1.5. RESEARCH QUESTIONS

The researcher employed below-listed questions to gather data:

1.5.1 Main Research Question

How can educational opportunities for learners with physical impairments be accelerated through inclusive education?

1.5.2 Sub-Questions

- How can stakeholders such as teachers, parents and the Department of Basic Education, create a teaching learning environment that is free of discrimination, especially for LWPI?
- Which intervention mechanisms can be used to address the challenges of LWPI in inclusive education settings?
- Which assistive devices and / or other accommodation measures are used by teachers to assist and assess LWPI?

1.6. LITERATURE REVIEW

The study will be guided by the theory of social model of disability developed by Barnes and Oliver (2004), and it will be discussed in details in chapter 3.

1.6.1 Definition of Physical Impairments

The World Health Organization (WHO) (2011:4) defines physical impairments as conditions or structures that impede or prevent the movement or progress of another object in its intended directions. Physical impairments are known to have a detrimental and handicapping effect on the mobility of learners with physical impairments. A physical impairment may be understood as a limitation in one's physical functioning, caused by either a malformation or deformity, or a missing or weak body part. Kauffman and Hallahan (1997:325) define a physical impairment as a condition that pertains to total or partial loss of a person's bodily functions, whose physical limitations or health problem predominantly interfere with one's day-to-day activities, to such an extent that special services, training, equipment and facilities are required.

In addition, if there are no proper systems put in place, learners with physical impairments will remain dysfunctional, due to barriers found in the environment. Barriers can be regarded as obstacles or anything that prevents progress, or make it difficult for someone to achieve something (WHO, 2011:4). Furthermore, in their various forms, barriers can be social, physical, infrastructural, or architectural factors, which prevent a learner's smooth inclusion in a regular school.

On the other hand, the WHO (2011:4) defines physical impairments as any impairment that limits the functioning of limbs or fine or gross motor skills. According to the WHO, the term 'barriers' is an umbrella term, covering impairments, limitations on activity, and restrictions to participation. To expand on this, an impairment is a problem in a body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task; and restrictions to participation would be encountered when a learner cannot take part in a physical activity such as a sport. The WHO states that 300 million people live with physical impairments and that, since 2005, these have seen an 18% increase. According to Kauffman and Hallahan (1997) people regard learners with physical impairments as being unable to learn-; i.e., that they have mental barriers as well, – which is clearly not so in every case.

In addition, in most cases, emphasis is normally on what these learners cannot do, rather than on what they are capable of doing. Those presumptions make learners with physical

impairments (LWPI) develop feelings of inferiority. According to WHO (2011), schools need to ensure that learners can independently move around within the school premises and classrooms. Independent movement can only take place if the environment is not only least restrictive, but must also guarantee independence for learners experiencing physical impairments.

1.6.2 The Prevalence of Physical Impairments

According to the Department of Social Development (DSD), the Department of Women, Children and People with Disabilities (DWCPD) and UNICEF (2012:5), children with disabilities in South Africa do not yet have a standard/nationally accepted measuring tool in line with the ICF. Estimates of child disability prevalence are therefore not directly comparable due to different definitions of disabilities and methods of data collection. Measuring children with physical impairments is much more difficult than measuring adults with physical impairments. While adults have relative stable characteristics, children go through a natural development process as they grow, learning how to talk, walk, read, and write. The lack of measurement of children's physical disabilities is illustrated by the fact that fewer than one in 10 public hospitals in the country provide some form of infant hearing screening, and less than 1% provide universal screening, for example.

1.6.3 South African Statistics

According to South African Statistics Agency (Stats SA) (2018: online), South Africa's midyear population is estimated to have increased to 57, 73 million in 2018, representing an overall increase of 1,55% between 2017 and 2018.

1.6.3.1 Disability prevalence by province

According to Stats SA (2011: online), there is a national disability prevalence rate of 7,5percent. Provincial variations showed that both Free State and Eastern Cape have the highest proportion of persons with disabilities (3, 1%) followed by North West and Northern Cape (3, 0% and 3, 1%, respectively). The Western Cape and Gauteng provinces showed the lowest percentage of persons with disabilities (2, 0%), respectively. Later findings are not available at the present time because these statistics came out of the 2011 census and the next census will only take place in 2021.

The following table shows people with physical impairments by province:

Table 1.1: Percentage of people with physical impairments per province

Province	People with Physical Impairments	
	Severe difficulty %	Mild difficulty %
Western Cape	0,9	2,0
Eastern Cape	1,2	3,1
Northern Cape	1,5	3,0
Free State	1,1	2,9
KwaZulu-Natal	1,1	2,8
North West	1,1	3,1
Gauteng	0,7	2,0
Mpumalanga	0,9	2,4
Limpopo	0,9	2,4
South Africa	1,0	2,5

Source: (Stats SA, 2011: online)

1.6.3.2 Disability prevalence by gender

The results of the 2011 census show that gender variations in school attendance were marginal, with males depicting slightly higher proportions compared to females (Stats SA, 2011: online).

Table 1.2: Level of disabilities of children with physical impairments attending primary schools

Types and degree of difficulty	Boys	Girls
Physical impairments	Mild 90.7	Mild 90.4
	Severe 68.1	Severe 70.2

Source: (Stats -SA, 2011: online)

The degree of disability measure showed that females had the highest percentages of persons experiencing mild and severe disabilities across all types of disabilities except for communication, while both boys and girls had the same proportion of persons who had experienced mild disabilities.

1.6.3.3 Disability prevalence by population group

Table 3 shows that the white population group had the highest proportion of persons with mild and severe disabilities (3,3% and 1,1%, respectively), followed by the Indian/Asian population group (2,8% and 0,9 %, respectively), the black African population group (2,5 % and 0,9 %, respectively) and the coloured population group (2,1% and 1%, respectively).

Table 1.3: Distribution of persons aged five years and older by degree of disability

	Learners with physical impairments	
Population group	**Severe disability**	**Mild disability**
Black African	0,9	2,5
Coloured	1	2,1
India or Asian	0,9	2,8
White	1,1	3,3
Total	1	2,5

Source: (Stats SA, 2011: online)

1.6.3.4 World statistics

According to the World Bank (2019a: online), about one billion people, i.e. 1/5 of the world's population, are disabled. The global disability prevalence is higher than previous WHO estimates. About 200 million people have a significant physical or mental disability, including about 5% of children, according to a new report prepared jointly by WHO and the World Bank (2019b: xi).

1.6.4 Disabilities in Developing Countries

According to the WHO (2011:4), persons with disabilities on average as a group, are more likely to experience adverse socio-economic outcomes than persons without disabilities. Disability prevalence tends to be higher in developing countries. About 80% of the people living with physical impairments (LWPI) live in developing countries. Accessibility continues to be a serious challenge for people with disabilities, but there are many more obstacles they face apart from physical impairments. Categories of disability include those with visual, hearing, mental and physical impairments.

1.6.5 Inequities in Access to Services

The impact of inadequate living conditions is particularly negative for children with impairments. According to Stats SA (2007), children with impairments are less likely to have access to adequate housing, water, and sanitation than their non-disabled peers. Children with impairments are more likely to live in traditional dwellings and informal settlements than their non-disabled counterparts. Overcrowded living conditions and outside toilets place enormous stress on children with impairments and their families.

1.6.6 Types of Physical Impairments

According to Landsberg et. al., (2016:329) physical impairments may include "traumatic paraplegia, quadriplegia, spina bifida, hemiplegia, muscular dystrophy, and post poliomyelitis". These conditions are defined below:

- Paraplegia is the inability to move the lower limbs and an absence of sensation in the lower half of the body.
- Quadriplegia involves the inability to move all four limbs.
- Hemiplegia is a complete paralysis of half of the body. It effects the face, arm or leg of one side of the body.
- Post- poliomyelitis (polio) is an acute illness and highly infectious disease resulting in physical impairment that commences with acute flaccid paralysis.
- Muscular dystrophy is a group of hereditary diseases. It is a neuromuscular disease causing the progressive weakening of the muscles. It tends to run in families and is usually transferred from mother to child (Landsberg et al., 2016:334).
- Spina bifida, also called spinal fissure, is a multifactorial genetic abnormality. It is one of the most common abnormalities with which a body may be born (National Institute of Neurological Disorders and Stroke [NINDS], 2013: online). Spinal bifida is a congenital deviation of the neural tube, namely, the spinal cord, with the spinal column, which normally surrounds and protects it.

1.6.7 Causes of Physical Impairments

Various causes of physical impairments may include the following:

- Accidents: vehicle accidents, falls from heights, sport injuries, shooting accidents, genetic causes, diseases, physical abuse and hereditary conditions (Landsberg et al., 2016:332). Car accidents can cause physical impairments, for example where a mother is involved in an accident during pregnancy or a child is involved, this can lead to physical impairments that relate to the circumstances and the severity of the accident involved including paralysis caused by spinal cord trauma, complete or partial limb amputation, or traumatic brain injury.

- Hereditary conditions are caused by damage caused to the foetus before birth through disease such as genital herpes, viral infections, medication or illicit drugs taken by the mother (Landsberg et al., 2016:328).
- Diseases – a chronic illness such as polio and German measles can cause deformities. Polio can cause paralysis and leads to permanent disability. The virus also affects the muscles that help people to breathe.
- Physical abuse can cause physical impairments, for example, where a mother has been physically abused during pregnancy or a child has been beaten on the body by a heavy object like a hammer, chair, pot, or bricks. The effects of physical abuse can last for a lifetime and can include brain damage and may result in disability.
- Chromosomal and genetic causes are hereditary conditions resulting from defects in one or both parent's chromosomes or genes. Several genetic defects are believed to contribute to arrange of physical disability, such as muscular dystrophy, sickle cell anaemia, haemophilia, and cystic fibrosis.
- Traumatic brain injury is caused by severe trauma to the head that results in lasting physical and cognitive impairments.

1.6.8 Education Barriers faced by Learners with Physical Impairments.

According to Minor (2016), barriers to education can take a variety of forms. They can be physical, technological, systemic, financial, or attitudinal, or they can arise from an education provider's failure to make available a needed accommodation in a timely manner.

1.6.8.1 Physical in accessibility.

According to the Ontario Human Rights Commission (n.d.: online), LWPI encounter educational barriers such as lack of ramps or elevators in multi-level school buildings, heavy doors-, in accessible washrooms, and inaccessible transportation to and from school.

1.6.8.2 Negative attitudes and stereotypes.

LWPI continue to face negative attitudes and stereotypes in the education system. According to Ontario Human Commission (n.d.: online), lack of knowledge about sensitivity to barrier issues on the part of some educators, staff, and learners can make it difficult for learners with physical impairments to access educational services. In the researcher's experience, most teachers do not have knowledge about barriers to learning.

1.6.8.3 Accessibility

According to Ontario Human Rights Commission (n.d.: online), learners with physical impairments cannot learn in an inclusive classroom if they cannot enter the room, let alone the school buildings. Some schools are still inaccessible to learners in wheelchairs, or to those who use other mobility aids, and need ramps, paved pathways, and lifts to get in and around the buildings. Accessibility goes beyond the physical infrastructure of passageways, stairs, and ramps to recreational areas, paved pathways, and door handles. Teachers should also be flexible in ensuring that LWPI have access to learning and can demonstrate knowledge and understanding.

1.6.8.4 Co-operation

According to UNESCO (2008:2), lack of communication among administrators, teachers, specialists, staff, parents and learners open communication and coordinated planning between general education teachers and special education staff are essential for inclusive education to work. In addition, time is needed for teachers and specialists to meet and create well-constructed plans to identify and implement modification, accommodations in the curriculum or assessments and specific goals for individual learners. Collaboration must also exist among the staff, teachers and parents to meet learners' needs and facilitate learning at home.

1.6.9 Environmental Challenges faced by Learners With Physical Impairments

Environmental challenges that LWPI face include a physical environment that is not accessible for learners to move freely to their classrooms, retarding the mobility of learners in their classrooms. The physical environment needs to be accessible, with a removal of hindrances to allow or promote independent movement for learners using wheelchairs and crutches. The desks in the classrooms need to be adapted for learners to allow them to sit properly with the right posture (Landsberg et al., 2016:336).

In addition, classrooms need to be arranged so that learners can have enough space to move freely without any obstacles. Classrooms with steps are problematic for LWPI, where; schools need to have ramps to accommodate learners with mobility impairments. Furthermore, surfaces need to be rough rather than smooth, so that wheelchairs and crutches can find traction. The bathrooms and doorways should be broad enough to accommodate wheelchairs. The schools need to have sickbays for learners who need to rest during school hours. According to

Landsberg et al. (2016:336), the classrooms need to be large enough to accommodate learners using wheelchairs, crutches, and callipers.

1.6.10 Psychosocial Challenges faced by Learners With Physical Impairments

According to Landsberg et al. (2016), learners with physical impairments face the challenge of making friends at school, because they as well as others may see themselves as different. Other learners may isolate them, and do not want to involve them in school activities. Landsberg et al. (2016:335) state that LWPI have a poor self-image, which results in the formation of a negative self-concept, and feelings of inferiority.

1.6.11 Support Services for Learners With Physical Impairments

Learners with physical impairments need the following services:

- occupational therapy
- counselling sessions; and
- pastoral sessions.

They need transportation. In addition, they also require devices for mobility, such as wheelchairs, crutches, and callipers. According to the policy on Screening, Identification, Assessment and Support (SIAS) (DBE, 2014:15-16), five support services needed to support learners experiencing physical impairments are:

- specialist support staff (nurses, therapist and doctors);
- assistive devices specialists, equipment, teaching and learning support materials;
- curriculum differentiation to meet the individual needs of learners;
- environmental access (once off and that necessarily on going); and
- district based support teams that are well trained to support educators so that educators inturn support learners.

1.7. RESEARCH METHODOLOGY

The data will be collected by both a literature study and an empirical investigation. The empirical investigation is outlined below.

1.7.1 Research Paradigm

The study is embedded in an interpretive paradigm. Thomas (2010:86) defines an interpretive paradigm as something that is concerned with understanding the world from the subjective experience of individuals. He indicates that as far as a paradigm is concerned, it uses meaning (versus measurement) oriented methodologies, such as interviewing or observation, that rely on a subjective relationship between the researcher and subjects.

The interpretive approach in qualitative research is a form of social inquiry that focuses on the way people interpret and make sense of their experiences and the world in which they live (Creswell & Poth, 2017). The basis of qualitative research reality lies in the interpretive approach to social reality and in the description of the lived experience of human beings.

A research paradigm is informed by philosophical assumptions about three aspects (Creswell & Poth, 2017), namely:

- Ontology, or the nature of reality. The reality in our schools refers to the physical impairments that learners are experiencing on daily basis.
- Epistemology, or ways of knowing. The knowledge about the physical impairments in the schools refers to learners with physical impairments who are facing many challenges in terms of mobility, psychosocial problems, as well as environmental, and educational challenges.
- Axiology refers to the ethics and value system. The researcher's ethical approach is to treat the participants with respect and not to harm them in any way. While collecting data the researcher will try not to harm the participants, and he or she will always be ethical when asking questions, observing, or taking photographs (Patton, 2002).

1.7.2 Research Methodology

According to Cohen, Manion and Morrison (2000:44-45), methodology refers to the various approaches used to gather the data which will be used as "a basis for inference and interpretation and for explanation and prediction". Cohen et al. (2000:4) state that the aim of methodology is "to help to promote an understanding of, not only the product of scientific inquiry, but the actual process itself". Thus, the research methodology is a process during which specific tools in answering the research questions as well as gathering and analysing the data are required to solve a specific problem. The study used a qualitative research approach. The researcher used the qualitative method for the purposes of this study, because the study aimed

to explore phenomena in depth. The researcher decided to use a basic qualitative research design because she wanted to investigate inclusive challenges faced by learners with physical impairments. Basic qualitative research design attempts to "uncover the participants' experiences and the meaning thereof, while taking into account practices and processes that subscribe to perceptions related to the phenomenon" (Webster, 2009: 22-24, 38).

In qualitative research, the data are presented in the form of a "narration with words" (McMillan & Schumacher, 2001:15). The data were collected in order to determine how learners, teachers and other stakeholders understand and view physical impairments. The research is intended to provide an in-depth knowledge of the challenges faced by learners with inclusive challenges, namely, physical impairments at various schools. The researcher focused on the emerging findings from the participants' beliefs, opinions, attitudes and the ideas.

1.7.3 Research Methods and Approach

The research methods that were used in this research included interviews, document analysis, and observations. In this exploratory, qualitative research study, the researcher interacted with the participants in their natural setting. This approach is phenomenological in nature.

Nieuwenhuis (2007:55) maintains that qualitative research acknowledges an interactive relationship between the researcher and the participants, the participants' environment and their construction of experiences. In a qualitative study, the researcher presumes that the world is made up of people with their own understanding of concepts, attitudes, values and belief systems (Maree, 2007:58). In order to investigate the inclusive challenges faced by learners with physical impairments, the study explores the teachers' experiences by means semi-structured interviews.

According to Sick (1998:8-9), the following are features of a good qualitative study:

- the study focuses on the field;
- the study relies on the researcher as an instrument;
- the study is interpretative;
- the language usage and the voice are of utmost importance;
- the study is particular in nature; and
- the study is believable and trustworthy.

1.7.4 Sampling and selection of participants

The research took place in five selected inclusion education primary schools in Mamelodi East.

According to Melville and Goddard (1996:29), sampling refers to a group from the population under study and which is the subject of the research because it is often neither practical nor possible to study an entire population. The anticipated initial total number of participants was 25. The selection of the participants began with identifying the profiles of those persons and determining who has knowledge of the topic under investigation. To conduct this investigation, the researcher selected teachers, HODs, principals and other stakeholders to participate. The research sample from the selected schools consisted of five Post Level 1 educators with one educator selected from each research site. The educators must teach in the Foundation Phase (Grades R-3) and Intermediate Phase (Grades 4-6). These five educators must at least have three years' teaching experience in the specific school phase. Apart from the educators, five Heads of Department were selected from the research sites. The five selected HODs must have at least five years' experience in their position. The five principals of the selected research sites completed the research samples. Finally, five learners and five parents from five selected inclusive education schools were selected to participate in an interview. Due to covid 19, the number of participants were reduced to 20 participants.

1.8. DATA COLLECTION

Data collection refers to the process of gathering data about the phenomenon under investigation. Thus, the data collection strategy refers to the way in which the researcher gathers the information, according to McMillan and Schumacher (2001:39). The data collection strategy, through interviews, document analysis and observations, enabled the researcher to understand the phenomenon of LWPI in schools.

Creswell (2005:202) lists the following steps involved in the data collection process in a qualitative research study:

- selection of participants and site identification for the research;
- gaining access to the data;
- determining the date to be collected; and
- developing data collection forms and using ethical considerations in administering the research.

In order to collect rich data from the participants, a series of interviews in the form of open - ended and in-depth interviews were conducted.

1.9. DATA ANALYSIS AND INTERPRETATION

According to Cohen et al. (2007:86-87), data analysis involves the reduction and interpretation of data. For the purposes of this study, the researcher reduced the body of data which had been obtained from the participants by coding the data. Thematic data analysis was employed for this study. The data generated by the participants was structured into a manageable format before it was analysed. In structuring the data, the researcher took into account what Creswell (2009:183) has noted regarding the structuring of qualitative data for analysis purpose and analysed each participants response.

1.10. TRUSTWORTHINESS, CREDIBILITY, TRANSFERABILITY, CONFIRMABILITY AND DEPENDABILITY

1.10.1 Trustworthiness and Credibility

Bell (2004:139) indicates that there is always a sense of bias that may dilute the trustworthiness and the credibility of research, because the researcher is a human being, who may influence the participants' responses. In order to ensure the credibility and trustworthiness of the research findings, it is essential that the researcher audio-records all the interviews, transcribes them verbatim, and ensures that participants verify the transcribed data. According to Maree (2007:113), trustworthiness is regarded as the most important procedural aspect in the qualitative research method, and involves checking the credibility of the findings that are deduced from the data analysed.

1.10.2 Transferability

The concept of transferability refers to the degree to which the research results may be generalised to the wider population (Cohen et al., 2007:109). Readers ought to be able to generalise the findings to any situation similar to the situation to which the findings refer. Sufficient rich data provided by the researcher assists the reader to use the research findings to determine whether the study is transferable. Lincoln and Guba (1985:316) state that the researcher must not provide the paradigm for transferability, but that readers must create it through their conclusions.

1.10.3 Confirmability

According to Anney (2014:279), confirmability refers to the fact that findings from the research may be authenticated by other researchers in the field. Confirmability dispels the notion that the research findings are things created by the inquirer's mind that have been processed from the raw data gathered. This means that the researcher will be impartial and objective in reporting what the participants articulate.

1.10.4 Dependability

According to Anney (2014:280), dependability means that the outcome of the research will remain unchanged over a period of time, so that if another researcher were to embark on a similar study, they will produce similar findings. In this instance, the researcher will keep the documents for auditing if the need arises.

1.11. ETHICAL CONSIDERATIONS

The process of collecting data started as soon as the researcher's ethical application was approved by the ethical committee of the University of South Africa. The study was directed by the ethical guidelines, which formed the standards according to which both the researcher's and where the participants' conduct is evaluated. These ethical guidelines formed the basis of the research interaction between the researcher and the research participants throughout the study.

Melville and Goddard (1996:113) consider ethical issues to include a morally acceptable research topic, as well as morally acceptable methods of researching a particular topic. Cohen et al. (2000:56) state that ethics is a "matter of principled sensitivity to the right of others". Ethics says that, while truth is good, respect for human dignity, and respect for human nature is important. The following ethical considerations guided this study.

1.11.1 Voluntary Participation

The principle of voluntary participation requires that the research participants not to be forced to participate in the research study (Trochim, 2001:24). Accordingly, the participants were informed that their participation in the research was voluntary, and that they might withdraw at any time should they wish to do so (Creswell & Plano Clark, 2007:298).

1.11.2 Informed Consent

The researcher should give prospective participants a letter of consent in which the research procedures and processes are described in detail. The participants should be given the opportunity to read through the letters of consent, and to request the researcher for further clarity. The prospective participants ought to be given a chance to familiarise themselves with the contents of the informed consent form before committing themselves to participate in the research study (Creswell & Plano Clark, 2007:298). Farnharm and Pilmlott (1995:47) define informed consent as the knowledge of participants that they have the right to exercise their choice, free from manipulation, so as to engage in a particular study. Trochim (2001:24) further argues that informed consent means that the participants must be informed about the procedures and the risks involved in the research study.

The participants were informed about the intention of the research and the effects this might have on them (Weideman & Kruger, 1994:172). In this study, the participants were informed of the researcher's intentions, and they were also assured that their names would not be mentioned, and the sites selected would not be named as measures to ensure their anonymity in the study. In addition, the participants were assured that they would not be harmed in any way, nor would they be exposed to physical or psychological harm during the study.

1.11.3 Anonymity, Confidentiality and Privacy

Confidentiality, anonymity, and privacy are concepts that protect the privacy of the research participants, meaning that information that would identify them will not be divulged to any person (Trochim, 2001:24). The researcher ought to protect the participants by not using their names, or the names of the institutions to which they were attached. Creswell (2009:88-90) argues that the anonymity of research participants in social research must be respected. Thus, the researcher used pseudonyms for both the participants and the institutions. Personal information, transcripts and audio-tapes was kept by the researcher in a locked safe. Furthermore, the settings and participants would not be identifiable in print.

After completion of the research project, the findings would be available to the Department of Basic Education (DBE). The research project is important because it would inform the schools, learners, parents and the DBE about the inclusive challenges experienced by LWPI. The study would also contribute to the body of knowledge in the field of inclusive education.

1.11.4 Beneficence

According to Landsberg et al. (2016:39), beneficence requires not only protecting individuals from harm, but also acting in their best interests and securing their wellbeing. The researcher ought to prioritise the participants'interests and wellbeing.

1.11.5 Justice

Justice presumes the following obligations to treat all people equally, fairly, and impartially. No person should be exploited, and each individual should be treated justly and fairly (Landsberg et al., 2016:39).

1.12. SCOPE AND LIMITATION

According to Punch (2006:69) the fact that the study focused on specifically selected individual participants from five schools in a particular location means that it is not possible to generalise the findings of the research to other provinces, districts and school situations. In view of the fact that the study involved interviews, some of the participants (parents, teachers, and learners) could fall sick, not come to the interviews, become sceptical, and refuse to give more information about their schools. The participants might also withdraw from the interviews. Furthermore, time itself might not be on the researcher's side, because some participants might not arrive at the interview, or some might withdraw without notifying the researcher.

In addition, the researcher might also find it difficult to gain access to various institutions as some school principals might refuse the researcher access to the school premises.

1.13. SIGNIFICANCE OF THE STUDY

The study aims to advocate for the provision of quality education for learners experiencing physical impairments. These can only happen if the environment is less restrictive, teachers are properly trained to accommodate them, resources are made available to these learners and support structures are also in place.

In addition, the study aims to influence DBE in collaboration with the Department of Public Works to build ramps at schools, so as to improve the buildings to be wheelchair-friendly and to improve mobility to and in the classrooms.

Furthermore, the research aims to influence the DBE to transform schools to full-service schools so that they can cater for a range of barriers. The researcher hopes to influence the

school governing bodies (SGB) to collaborate with different organisations, companies, and sponsors to work together to improve the school buildings and environment in Mamelodi East primary schools.

Furthermore, the study would contain a rich description of the settings and the participants' quotes, supported by explanations from the researcher, elaborating on the challenges experienced by learners with physical impairments. Maree (2007:301) supports the notion that a rich description of the school setting enhances the researcher's explanation of the experience of the phenomenon under discussion. The recommendations would include recommendations for educators, principals, deputy principals, parents, learners, the SGB and the DBE.

The study also aims to enlighten the DBE as to the need to train teachers on inclusive education so that they have the requisite skills to teach diverse classes. It aims to influence the policy and underscore the purposes of implementation. In addition, people at the top (such as district officials and principals) would have to be willing and ready to implement the policy and render unwavering support to teachers at schools.

1.14. DEFINITION OF TERMS

- **Barriers:** The Free Encyclopaedia (2011: online) defines barriers as an obstacle or anything that prevents progress or makes it difficult for someone to achieve something.

- **Barriers to learning**: Bennet (2003:303) defines barriers to learning as a broad term that covers a variety of conditions whose defining characteristic is a significant impairment of intellectual functioning. A barrier to learning is not considered a mental illness as such, with its own unique signs and symptoms. It is a term for identifying groups of people who need social support and special educational service to carry out the normal tasks of everyday living (Sebastian, 2002:2). According to the Department of Education (2005:10), the concept "barriers to learning" refers to all the "systematic, societal, pedagogic and intrinsic factors that impede learning and development".

- **Inclusion**: Wilkens (1997:4) defines inclusion as an educational philosophy which underpins outcomes-based education. It implies a flexible, accessible curriculum and learning support strategies, open schools (which welcome a diversity of learners) and support services where these seem to be necessary. It means equal education for all.

- **Inclusive education**: The Centre for Studies on Inclusive Education (2018: online) define inclusive education as the process of increasing the participation of learners in, and

reducing their exclusion from the cultures, curriculum and communities of local schools. In the Zimbabwean context, inclusive education involves the identification and minimisation or elimination of barriers to learners' participation in traditional settings, (schools, homes, communities and workplace) and the maximisation of resources to support learning participation (Mutepfa, Mpofu & Chataika, 2007:342). In Australia, the term inclusive education typically refers to the participation of learners with disabilities in regular or mainstream schools, and classroom (Van Kraayenoord, 2007:390).

- **Inclusive schools**: UNESCO (1994:6) defines inclusive schools as schools that accommodate all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions.

- **Physical impairments**: The Free Encyclopaedia (2011: online) defines physical impairments as conditions or structure, that impede or prevent the movement or progress of another object in its intended direction.

- **Physical impairments**: Landsberg et al., refer physical impairments to a limitation to a personal physical functioning, mobility, stamina, and development of fine motor and gross motor skills.

1.15. SUMMARY AND CONCLUSION

In this chapter, the introduction and background of the study, the statement of the problem, the aim of the study, the study objectives and research questions were discussed. The chapter also introduced the literature review, the methodology used, scope and limitations of the study as well as the significance of the study. Stats SA (2018) highlights the prevalence of LWPI in South Africa by gender, provinces and population groups. The study used a qualitative research approach.

1.16. OUTLINES OF CHAPTERS

The study comprised of five chapters organised as follows.

Chapter 1 as the orientation chapter, discusses the introduction and background of the study, the statement of the problem, the aim of the study, the study objectives, research questions. The chapter also introduces the literature review, the methodology used, scope and limitations of the study as well as the significance of the study.

Chapter 2 provides the literature review on the inclusion challenges faced by learners with physical impairments.

Chapter 3 presents the research design and methodology used in the study. The chapter also justifies the research design that is used for the sampling procedure utilised in the study. In addition, the chapter describes the data collection instruments and discusses the issues of trustworthiness, transferability, dependability, and conformability. It also discusses ethical considerations.

Chapter 4 presents the interpretation of the data collection and the presentation of the results.

Chapter 5 contains a summary of the study itself as well as the main findings. The chapter also offers recommendations on ways in which to curb inclusion challenges faced by learners with physical impairments. In addition, it addresses the limitations of the study and makes recommendations for further studies.

CHAPTER 2: LITERATURE REVIEW

2.1. INTRODUCTION.

Chapter 1 provided the background to and the context of the study, its purpose and significance. This chapter presents the literature review on the nature and meaning of the problem being investigated.

2.1.1. What is Literature Review?

A literature review is a scholarly paper that includes the current knowledge including substantive findings, as well as theoretical and methodological contributions to a particular topic. Literature review summarises and synthesises the existing scholarly research on a particular topic.

2.1.2. The importance of the literature review.

- The purpose of literature review is to help the researcher to determine whether other scholars have investigated the research problem the researcher is interested in and what body of knowledge is available on it (De Vos et al., 2002:263). The literature review also serves other purpose in research. The knowledge gained from the literature review aids in stating the significance of the problem, developing the research design and relating the results of the study to prior knowledge (Mc Millan & Schumacher, 2006:75-76).

According to McMillan and Schumacher (2014:72), a review of the literature enables the researcher to do the following:
- define and limit the problem;
- place the study in an historical perspective;
- avoid unintentional and unnecessary replication;
- select promising methods and measures;
- relate the findings to previous knowledge;
- suggest further research; and

- develop research hypotheses.

According to De Vos et al. (2005:263), the literature study ought to indicate the researcher has identified some gaps in previous research, and that the proposed study would fill a demonstrated need. Though general challenges of physical impairments are highly documented in print and electronic media bytes, policy briefs and other publications, what could be missing are specific experiences of LWPI in Mamelodi East primary schools. The literature review would therefore explore the existing research findings with a view to answer the research questions.

According to Ashley Crossman (2017), a literature review is a paper, or a part of a larger research paper, that reviews the critical points of current knowledge on a particular topic. She furthermore state that it includes substantive findings as well as theoretical and methodological contributions that others bring to the subject. A literature review is an investigation that involves extensive reading of the findings of other researchers on the research topic in question (De Vos, Strydom, and Fouche & Delport 2002:65). Accordingly, the review of the relevant literature should help the researcher to answer the following questions:

- What is already known about either the issue in particular or in general?
- Which theories are used and discussed in the area of the study?
- What concepts are still unanswered?
- What has not yet been studied? (Flick, 2006:56).

For this study, certain challenges are noted to be faced by learners experiencing physical impairments. The literature on the inclusive challenges in primary schools therefore receives attention here.

2.2 TYPES OF PHYSICAL IMPAIRMENTS.

According to Harrington (2017), physical impairments can prevent a person from doing certain things in life that might make them uncomfortable, or make them feel pain. Physical impairments are frustrating and debilitating for someone who just wants to live a normal life and do normal things, such as exercise, athletics and aerobics. Such impairments can strongly influence which exercise a person can safely perform.

Landsberg et al. (2016:329-335) have, mentioned the following types of physical impairments: traumatic paraplegia, quadriplegia, hemiplegia, spina bifida, muscular dystrophy, and hypokalaemia.

2.2.1 Paraplegia

Paraplegia refers to the ability to move the lower limbs and an absence of sensation in the lower half of the body (Landsberg, et al., 2016:332). Paraplegia is an impairment in the motor or sensory function of the lower extremities. The word paraplegia derives from the Greek word half-stricken, referring to its effect on half the body. It is usually caused by spinal cord injury or a congenital condition that affects the neural (brain) elements of the spinal canal. The area of the spinal canal that is affected in paraplegia is either the thoracic, lumbar, or sacral regions (Smith, 2020). Paraplegia refer to a paralysis in which function is impeded below the waist. Paraplegia is a paralysis of the legs and the lower part of the body.

Paraplegia often involves loss of sensation (of pain, temperature, vibration, and position) as well as loss of motion. It may also include the paralysis of the bladder or bowel. Paraplegia may be caused by injury to or disease of the lower spinal cord or peripheral nerves or by such brain disorders as cerebral palsy. Some paraplegics are able to walk with the aid of braces and crutches.

2.2.2 Hemiplegia.

Hemiplegia refers to a complete paralysis of half of the body. It affects the face, arm or leg of one side of the body. It is also the paralysis of the muscles of the lower face, arm, and leg on one side of the body (Britannica). The most common cause of hemiplegia is stroke, which damages the corticospinal tracts in one hemisphere of the brain. Damage to the left hemisphere of the right-handed person may result in aphasia. Hemiplegia is also caused by trauma, such as spinal cord injury, brain tumours, and brain infections. Hemiplegia is treated by addressing the cause and forms of therapy to recover motor function. Motor function in a hemiparesis limb may be improved with physical therapy and mirror therapy (Britannica). In severe cases surgery is used to correct neurological damage.

2.2.3 Hypokalaemia

Hypokalaemia paralysis (often referred to as familial paralysis) is caused by mutations in the calcium channel gene on the chromosome 1. It generally begins late in childhood or adolescence. The onset of paralysis occurs most frequently at night during sleep. The attacks may take from several minutes to several hours to develop. Weakness in the legs is the first sign of onset, followed by weakness in the arms. Attacks may come at intervals of days, months, and years (Webster: 2017).

2.2.4 Quadriplegia.

Quadriplegia, also known as tetraplegia, is a paralysis caused by illness or injury that results in the partial or total loss of the use of all four limbs and torso, whereas paraplegia is similar but does not affect the arms (Landsberg, et al., 2016:332). The loss is usually sensory and motor in nature, which means that both sensation and control are lost. The paralysis may be flaccid or spastic, for example a car accident can cause quadriplegia. According to Keanne (2013), quadriplegia can also be caused by car accident (37%), falls (30%), violence (28%), sports and recreational activities (9%).

Webster (2017), defines quadriplegia as paralysis that affect both arms and legs as a result of spinal cord injury or disease in the region of the neck. She further state that, quadriplegia is caused by damage to the brain or the spinal cord at a high level. The injury, which is known as a lesion, causes victims to lose partial or total function of all four limbs, the arms and the legs. Typical cause of this damage is trauma such as (traffic collision, diving in to the shallow water, a fall, a sport injury), or disease such as (transverse myelitis, quiiillain-barre syndrome, polio). The symptoms of quadriplegia are loss or impairment in controlling bowel and bladder, sexual function, digestion, and breathing.

According to Landsberg et al. (2016:332-333), there are challenges connected with quadriplegia that may include the following:

- Psychological aspects: before accidents, these children were doing fine, and were both active and mobile. They were also involved in different activities, with positive goals. The most challenging aspect is their morale is that they also lack motivation to partake in different programmes and activities. They always mourn the loss of their body part.
- Pain: they also experience pain and the so-called after pain in a part of the body.

- Mobility: quadriplegia cause a loss of mobility and they need to make use of wheelchairs to move around. They also require occupational therapy as well as physiotherapy to assist them with mobility. With the help of therapy, they can often walk with the aid of crutches, callipers, and leg braces.

- Loss of sensation in the affected limbs: they often experience pressure sores and burns in the affected limbs, because they cannot move their body part and they don't feel their body. They also develop sores in the affected limbs, because they take a long time sleeping, or sitting in one position.

- Incontinence: they also need catheters to assist them to empty their bladder. In most cases bladder infections and kidney stones often occur because they cannot take themselves to the bathroom.

2.2.5 Muscular dystrophy.

Muscular dystrophy refers to a group of hereditary diseases and it is also a neuromuscular disease causing the progressive weakening of the muscles. It tends to run in families and is usually transferred from mother to child (particularly to a son) Landsberg et al. (2016:334-335). Duchene muscular dystrophy, usually occurs in boys between the ages of three to six years of age. It is characterised by the enlargement of muscles caused by a defective gene for dystrphin. The disease involves rapid progression of muscle degeneration that occurs early in life. According to Landsberg et al. (2016:335), the initial sign of the disease may include an awkward swaying walking pattern, as well as difficulty when climbing stairs (gross motor sing) where rising from a sitting position is difficult and getting up after a fall is also difficult. Deformities of the back scoliosis in 95% of cases and pot belly occur. There is no known cure for Duchene muscular dystrophy.

2.2.6 Spina bifida.

Spina bifida also called spinal fissure, is a multifactorial genetic abnormalities with which a baby may be born with (National Institute of Neurological Disorders and Stroke (NINDS), 2013). Spina bifida is a congenital deviation of the neural tube, namely, the spinal cord with spina column, which normally surrounds and protects it (Culatta, 2003:216). Spina bifida is a neurological abnormality, which may permanently affect many other systems of the body. With spina bifida, one or more of the vertebrates of the vertebral column is not completely formed.

Spina bifida literally translates from the Latin as "vertebra in two parts". The cause of spina bifida is unknown, and there is no cure. Spina bifida manifests itself in three forms, namely spina bifida meningocele, spina bifida myelomenigocele, and spina bifida.

2.2.6.1 Spina bifida meningocele.

According to Landsberg et al., (2016:329), spina bifida meningocele is a less common form of this condition, and the sac that forms consists only of the cerebrospinal fluid and the membrane that covers the spinal cord.

2.2.6.2 Spina bifida myelomeningocele.

Myelomeningocele occurs more often, and is of a serious nature. The sac contains part of the spinal cord, but the membrane surrounding the sac may be complete or broken (Landsberg et al, 2016:330). In this case, the spinal cord is vulnerable to injury and infection.

2.2.6.3 Spina bifida occultta

Spina bifida occulta appears in five to 25% of the population. It is the mildest and most common form of spina bifida (NINDS, 2013:2). It affects girls more than boys. No bulge occurs at the opening in the spinal column. Strong membranes usually develop in this area. The opening is only revealed by a dimple or a tuft of hair in the area on the back.

2.3 CAUSES OF PHYSICAL IMPAIRMENTS.

Causes of physical impairments can include the following: vehicle accident, fall from heights, sport injuries, shooting accident, chronic illness, genetic and hereditary causes, physical abuse, stroke, disease and trauma (Landsberg et al., 2016:332).

2.3.1 Vehicle accidents.

 Vehicle accidents can cause physical impairments, i.e. where a mother had been involved in an accident during pregnancy, could lead to physical impairments that relate to the circumstances and the severity of the accident involved, including paralysis caused by spinal cord trauma, complete or partial limb amputation, or traumatic brain injury. The child can also

be involved in a car accident whereby he or she was travelling with the family or going to school or crossing a busy road, getting hit by a car, and losing a limb, paraplegic or quadriplegic requiring a wheelchair, crutches, or braces for mobility.

Car accidents can also cause traumatic brain injury to the child where, during an accident, closed-head injuries comprise brain damage as a result of the brain bouncing against the skull due to rapid acceleration and deceleration in accidents (Landsberg et al., 2016:332). After such accidents they lose morale, motivation, confidence, personality, self-esteem, self-concept, and mobility. During car accidents some people may endure hearing loss, or loss of eyesight.

2.3.2 Hereditary and Genetic causes.

Hereditary is any disease caused by an abnormality in the genetic makeup of an individual. Hereditary disease, also known as inherited disease or genetic disorders, are diseases that are passed on from one generation to another through defective genes (Conrad, 2019). Such diseases are transmitted in the same family. Hereditary conditions are caused by damage caused to the foetus before birth through disease such as genital herpes, viral infections, medication, or illicit drugs taken by the mother during pregnancy (Landsberg et al., 2016:328). When the mother was consuming alcohol during pregnancy, this might affect the development of the foetus, damages the organs, or cause deformities to the foetus, where the child would be born suffering from foetal alcohol syndrome (FAS).

Hereditary can also manifest in the families of one parent having a history of disabilities i.e., whereby a father, mother, uncle and aunt all experience disabilities. Hereditary can also manifest in the genes of both parents caused by one or more abnormalities in the genome (Conrad, 2019). It can be caused by a mutation in a single gene or multiple genes or by a chromosomal abnormality. In some cases, one generation of the family may only be the carrier of the defective gene, and the next generation may become affected by the disease. The chromosome in humans are responsible for passing the traits from one parent to the offspring. According to Conrad (2019), there are thousands of genes on the pair of chromosomes X and Y, each gene being a carrier of certain genetic 'traits.

A child inherits a copy of gene from each parent, and if either one or both copies of genes are mutated, then the offspring is at risk of inherited disease. There are numerous genetic diseases and disorders that are passed from the parent to the offspring:

- Autosomal Dominant Disease. The offspring inherits a copy of normal gene and mutant gene from its parents. Either of the parents may often suffer from a disease and thus the abnormal gene is passed on to the child. The abnormal gene tends to dominate the normal gene and the child has a 50% chance of inheriting the disease.
- Autosomal Recessive Disease. According to (Conrad, 2019), these diseases occur when both parents carry a defective trait in their genes, which is then passed on to the offspring. The defective gene is usually transferred during the process of fertilisation. The chances of the child developing the disease is 25% if both parents are the carriers of the defective genes.
- Gender Linked Disease. There are two sex chromosomes X and Y in the genes. Males have an X and Y =XY chromosomes, whereas females have both the chromosomes are X =XX. Gender related diseases are attributable to either of the sex chromosome. In the X linked dominant disorder, the father passes on the defective gene to his daughter. In case the mother carriers the faulty X gene, both the son and the daughter are liable to inherit the disease.
- Polygene Disorders. According to Conrad (2019), polygenic disorder occurs due to the influence of multiple genes. The main risk factor in this disorder is a family history of these diseases. These diseases are also influenced by environmental, factors i.e. breast cancer, obesity, and heart disease.

Several genetic defects are believed to contribute to arrange of physical impairments, such as muscular dystrophy, sickle cell anaemia, haemophilia, and cystic fibrosis (Heller, 2009, Heller, Mezei & Schwaman, 2009).

2.3.3 Stroke.

A stroke is a medical condition resulting in poor blood flow to the brain, which results in cell death. There are two main types of stroke, namely: ischemic, due to lack of blood flow, and haemorrhagic, due to bleeding. Both results in parts of the brain not functioning properly (Keane, 2003). The symptoms of a stroke include an inability to move or feel on one side of the body. A stroke may occur when blood flow is interrupted to a given part of

the brain. Without blood to supply oxygen and nutrients and to remove waste products, brain cells quickly begin to die. Depending on the region of the brain affected, a stroke may cause paralysis, speech impairment, loss of memory and reasoning ability, or the onset of a coma. A stroke is sometimes called a brain attack. A stroke can cause physical impairment to a person, where it affects one side of the body, and the person cannot move his or her hand or leg.

According to (Keane, 2003), there are four types of stroke, namely:
- Cerebral thrombosis and cerebral embolism, caused by blood clots that block an artery supplying the brain, either in the brain itself or the neck. These unfortunately account for 70-80% of all strokes.
- Subarachnoid haemorrhage and intra cerebral haemorrhaging, occur when a blood vessel bursts in or around the brain.
- Cerebral thrombosis, occur when a blood clot, or thrombus, forms within the brain itself, blocking the flow of blood through the affected vessels. Cerebral thrombosis occurs most often at night and early in the morning.
- Transient ischemic attack (TIA), referred to as a mini-stroke, causes blood flow to be temporarily interrupted.

A stroke can cause physical impairment in cases where one side of the body is affected, and the child is unable to write or walk properly. Furthermore, stroke can also affect the mobility of the learner.

2.3.4 Physical abuse.

Physical abuse refers to any intentional act causing injury or trauma to another person by way of bodily contact (Gluck, 2012). In most cases, children are the victims of physical abuse, but adults can also be victims of it, as in cases of domestic violence or workplace aggression. Gluck (2012), defines physical abuse as non-accidental injury resulting from hitting, whipping, beating, kicking, biting, or anything that harms a child's body. Children in physically abusive situations often have unexplained broken bones, bruise marks in the shape of an object such as a belt or hand, or burn marks from cigarettes on exposed areas or on the genitalia.

According to Gluck (2012), the effects of physical abuse may last a lifetime and can include brain damage and hearing and vision loss, resulting in disability. Even less severe injuries can lead to the abused child developing severe emotional, behavioural, or learning problems. Injuries to a child's growing brain can result in cognitive delays and severe emotional issues, problems that could adversely affect his or her quality of life forever. She further states that, some effects of child physical abuse may manifest in high-risk behaviours, such as excessive promiscuity. Children who develop depression and anxiety due to their abusive past often turn to smoking, alcohol, and illicit drug use, and other unhealthy, dangerous behaviours to cope with their emotional and psychological scars.

In addition, the effects of child physical abuse can include seizures, permanent blindness or deafness, paralysis, mental and developmental delays, and, of course, death ,(Gluck,2012). The symptoms of physical abuse include the following:

- bruises, broken or fractured bones from biting and hitting;
- burns or scalds;
- swelling;
- seizures and breathing problems;
- being extremely sleepy or unconscious;
- unusual behaviour, such as being irritable or not feeding properly;
- fractures and vomiting.

The World Health Organisation (WHO) distinguishes four types of child maltreatment, namely: physical abuse, emotional abuse (psychological), sexual abuse, and neglect. According to WHO, physical abuse is when someone hurts or harms a child or young person on purpose. It includes, hitting with hands or objects, slapping and punching, burning and scalding, biting and scratching. According to the New York State Office of children and Family services, physical abuse is non – accidental use of force that results in bodily injury, pain, or impairment. This includes being slapped, burned, cut, bruised or improperly physically restrained. Physical abuse can also affect a child emotionally after any physical wounds have healed. The psychological and emotional effects that a can suffer after physical abuse include the following:

- eating disorders;
- inability to concentrate (including ADHD);

- depression;
- sleep issues or insomnia;
- excessive sleepiness, excessive hostility towards others, even friends and family; and
- sleep pane.

Physically abused children also develop psychological disturbances, and they are always quiet. They are more likely to have low self-esteem, deal with excessive rear and anxiety, and act out aggressively toward their siblings and peers. Children who have been abused physically, don't cope well at school, and are often sleepy, tired, dirty, or lonely. Physical abuse also affects the child socially whereby a child finds it difficult to form long-lasting appropriate friendships. They also lack the ability to trust others and cannot communicate naturally as other children can. Physical abuse can cause physical impairment, for example where a mother has been physically abused during pregnancy or a child has been heavily beaten.

2.3.5 Chronic illness and diseases.

Chronic illness is a human condition or disease that is persistent or otherwise long-lasting in its effects or a disease that comes with time and require medication on a monthly basis (Bernell and Howard, 2016). The term chronic is often applied when the course of the disease lasts for more than three months. Common chronic diseases include: arthritis, asthma, cancer, chronic obstructive pulmonary disease, diabetes and acquired immunodeficiency syndrome. According to US National Centre for Health Statistics, chronic disease generally cannot be prevented by vaccines or cured by medication, but is a life time disease that require medical attention. Bernell and Howard (2016) note that, chronic illness is a condition that last a year or more and requires ongoing medical attention, limiting activities of daily living.

According to Wikipedia, a chronic condition is a human health condition that is persistent or long-lasting in its effects, or a disease that proceeds over time. According to the WHO chronic diseases are the leading causes of death and disability worldwide. The World Health Report 2002 entitled: Reading the Risks, Promoting Health Life, indicates that mortality, morbidity and disability attributed to the major chronic diseases currently account for almost 60% of all death, and 43% of the global burden of disease. By 2020 their contribution is expected to rise to 73% of all deaths, and 60% of the global burden of disease.

Moreover, 79% of the deaths attributed to these diseases occur in the developing countries. According to the WHO, four of the most prominent chronic diseases are, cardiovascular diseases (CVD), cancer, type 2 diabetes, and chronic pulmonary diseases are linked by common and preventable biological risk factors. Chronic illness refers to a broad range of chronic and complex health conditions across the spectrum of illness, including mental illness, trauma, disability, and genetic disorders. It is also leading to a gradual deterioration of health and loss of independence and premature mortality. The Department of Health ought to raise awareness of chronic communicable diseases to the parents on how to take care of their children, including how to prepare a healthy diet, and undertake healthy exercise. Chronic disease can cause physical impairments to the child's whereby the child is sick, cannot attend school, or cannot partake in certain school activities due to his or her condition. In addition, parents ought to alert the teachers early about the medical condition of their children, and inform the teacher when the child is going to check-up, so that the teacher can have time with the child to catch-up on the curriculum.

Diseases such as polio, German measles and rubella can cause deformities. Polio can cause paralysis, and leads to permanent disability. This virus also affects the muscles that help people to breath.

2.3.6 Sport injuries.

Injuries or genetics may inhibit physical abilities. Arthritis, back pain, knee discomfort, and shoulder injuries are barriers to participating in physical activities. Sport injuries are commonly caused by overuse, direct impact, or the application of force that is greater than the body part can structurally withstand. There are two kinds of sport injuries, namely:

- Acute injury, which is an injury that occurs suddenly, such as a sprained ankle caused by an awkward landing.
- Chronic injury – caused by repeated over use of muscle groups or joints. Poor technique and structural abnormalities can also contribute to the development of chronic injuries.

  Types of sport injuries that can cause physical impairments include the following:
- Ankle sprain-symptoms includes pain, swelling, and stiffness;
- Bruises – a blow can cause small bleeds in to the skin;

- Groin strain – symptoms includes pain and swelling; and
- Knee joint injuries-symptoms includes pain, swelling and stiffness where the ligaments, tendons, or cartilage can be affected.

Sports injuries where a learner had a broken bones or knee discomfort can cause a physical impairment to a learner where a learner need to use crutches for mobility. Some sport injuries can cause permanent damage and disability. To prevent injuries the learner needs to warm up thoroughly before activities, wear appropriate foot wear, use good form and technique, drink plenty if liquid before and after activity (Wolfe, 2011).

2.3.7 Post poliomyelitis.

Post poliomyelitis is an acute illness and highly infectious disease which results in physical impairment that commences with acute flaccid paralysis (Landsberg et al., 2016:334). It is also an infectious disease caused by the polio virus. According to the World Health Organisation (WHO), poliomyelitis is a highly infectious viral disease that mainly affects young children. The virus is transmitted through contaminated food and water, and multiples in the intestines, where it can invade the nervous system more broadly. According to Landsberg et al. (2016:334), it is a neurotropic viral infection, which damages the motor cells of the spinal cord and brain stem.

Poliomyelitis includes new weakness, fatigue and pain, either generalised to limited to the parts that were affected by the post poliomyelitis. Bruno (2002) notes that, the symptoms of polio include progressive muscle and joint weakness and pain, general fatigue, and exhaustion with minimal activity, muscle atrophy, breathing or swallowing problems, sleep-related breathing disorders, and a decreased tolerance of cold temperature. Post-polio was once one of the major diseases affecting learners, but preventative medical treatment in the form of the vaccines has made it rare (Cullata et al., 2003:219). There are two types of vaccines for this disease, viz: an inactivated polio virus (IPV) given by injection, and a weakened polio virus (OPV), given orally. The WHO has recommended that all children be fully vaccinated against polio.

2.4.8. Traumatic brain injury.

Traumatic brain injury is caused by severe trauma to the head that results in lasting physical and cognitive impairment. Open-head injuries are the result of direct external trauma to the brain. Associated difficulties with traumatic brain injury might include chronic fatigue, pain,

epilepsy, memory impairment, paralysis and poor balance, emotional problems, vision, speech and hearing difficulties (Culatta et al., 2003:217).

2.4 THE PREVALENCE OF PHYSICAL IMPAIRMENTS THE WORLD OVER.

Disability in Europe is higher with 5, 8% of the Romanian population having a long-term disability. There are over 10 million disabled people in Russia. The UK has the second highest prevalence of disability, with 27, 2% of the population having a long-standing health problem or disability. Disabled people in the world in 2019, there are currently more than two billion disabled people in the world, constituting 37,5% of the world's population. At the national level, Native Americans have the highest disability rate among working-age adults at 16%, followed by black people at 11%, white people at 9%, Hispanic people at 7% and Asian people at four percent. Yet, disability rates by race and ethnicity also vary greatly among metro areas (StatsSA, 2018).

- There were nearly 40 million Americans with a disability in 2015, representing 12, 6% of the civilian non-institutionalised population, according to the US census bureau. Currently around 10% of the world's population, or roughly 650 million people, live with disability. In most OECD countries, females have higher rates of disability than do males. The World Bank estimates that 20% of the world's poorest people have some kinds of disability, and tend to be regarded in their own communities as the most disadvantaged. People with disabilities have generally poorer health, lower education achievements, fewer economic opportunities, and higher rates of poverty than people without disabilities. According to Worlds Statistics, even in high-income countries, 20-40% of people with disabilities lack the help they require to engage in everyday activities. In the USA, 70% of adults with disabilities rely on family and friends for assistance with daily activities. According to (2011 World Report in Disability), there are three broad health conditions associated with disability, namely :

- infectious diseases such as HIV and AIDS, TB, measles and poliomyelitis;
- non-communicable chronic diseases, such as cancer and mental disorders; and
- injuries caused by violence and road traffic accidents.

According to the WHO, about 15% of the world's population lives with some form of disability, of whom 2-4% experience significant difficulties in functioning. The global

disability prevalence is higher than previous WHO estimates, which dates from the 1970s and suggested a figure of around 10 percent. This global estimate for disability is on the rise due to population ageing, and the rapid spread of chronic diseases, as well as improvements in the methodologies used to measure disability. Impairments to full social and economic inclusion of persons with disabilities include inaccessible physical environments and transportation, the unavailability of assistive devices, and technologies, on-adapted means of communication, gaps in service delivery, and discriminatory prejudice and stigma in society.

The Morbidity and Mortality Weekly Report (MMWR) 2013 Report is based on a Behavioural Risk Factor Surveillance System (BRFSS) that allow respondents to identify specific functional types of disability, such as mobility, cognition, vision, and self-care. According to the report, over 53 million adults living in communities in the United States have a disability. Furthermore, higher percentages are generally found in Southern States, where the lowest are mostly in mid-western and Rocky Mountain States. It further states that disability was more commonly reported by women, older people, and racial and ethnic minority groups.

The following main findings were found:

- One in five adults, over 53 million people in the US, have a disability of one form or another, ranging from one in six (16,4%) in Minnesota to nearly one in three (31, 5% Alabama).
- The most common functional disability type was mobility, reported by about one in eight adults.
- Women were more likely to report a disability when compared to men, (24, 4% versus 19, 8%).
- Across all states, disabilities in mobility and cognition were the most frequently reported types. State-level prevalence of each disability type ranged from 2,7% to 8,1 % (vision), 6,9% to 16,8% (cognition) ,8,5% to 20,7% (mobility),1,9% to 6,2% (self-care) and 4,2% to 10,8% (independent living). A higher prevalence of any disability was generally seen among adults living in states in the South and among women (24,4%) compared with men (19,8%), where prevalence of any disability in mobility were higher among older age groups,(Elizabeth A, 2015).

- Overall, 22, 2% of US adults (53,316 persons) reported disability. Disability in mobility was the most frequently reported type (13, 0%), followed by disability in cognition (10, 6%), independent living (6, 5%), vision (4, 6%), and self-care (3, 6%). Disability prevalence has been shown to increase with age. According to Daniel Mont (2007), disability prevalence rates from around the world vary dramatically, from under 1% in Kenya and Bangladesh, to 20% in New Zealand.

According to Stats SA (2011), states party to the UNCRPD have undertaken "to ensure and promote the full realisation of all human rights and fundamental freedoms for all persons with disabilities without discrimination of any kind on the basis of disability.

The ICF and the UNCRPD reflects a paradigm shift away from a medical or welfare response to disability, towards a human-rights approach. The rights-based approach emphasis respect, support, and celebration of such diversity by creating conditions that allow for meaningful participation by a wide range of people, including adults and children with disabilities. Promoting and protecting the rights of people with disabilities is not limited to the provision of disability-related services: but includes introducing measures to change attitude and practice that stigmatise and marginalise people with disabilities. It requires putting in place legislation and policies that remove barriers to the exercising of rights, providing programmes, awareness and social support to change the way community operates, and gives adults and children with disabilities the opportunity to participate fully in society.

The WHO (2011), stipulates the following to support learners with physical impairments in developing countries:

- to use learners' own words, language, material and personal context-be clear about activity purpose and how it relates to the skills need of the learner;
- be aware of our own attitudes and views and how they can unintentionally influence learners;
- work thoroughly on any emotional issues that create a barrier before learning can take place;
- if working with learners from a different minority ethnic group, remember that their ethnicity is an important aspect of their identity;
- encourage learners to ask for help, show that this is acceptable and is not a sign of failure;

- listen closely to what learners say, always respond to the content of what someone is saying and don't be misled by the style of delivery;

- encourage learners to be creative, engaged and enable them to expand their ideas and thinking. Collaborative working with their peers, along with teaching and support staff, will enable them to demonstrate and build on their skills, experience, and achievements;

- avoid being too directive-some people with learning disabilities may say what they think you want to hear;

- observe what works for a particular learner and what does not;

- make both written and spoken information clear and use unambiguous terms, follow plain English guidelines;

- the structure of the curriculum and timetable ought to acknowledge learners' abilities and vulnerabilities; and

- learners also need support with reading, writing or comprehension. Ensure that text-to-speech is available throughout the organisation. This means that any learner can listen to text on a computer than struggle to read and/or understand.

2.5. DISABILITY WORLD STATISTICS.

According to the World Bank (2019a), about one billion people, or approximately 1/5 of the world's population are disabled, where the global disability prevalence is higher than previous WHO estimates. About 200 million people have a significant physical or mental disability, including about 5% of children, according to a new report prepared jointly by the WHO and the World Bank (2019: xi). One-fifth of the estimated global total, or between 110 million and 190 million people, experience significant disabilities. Persons with a disability are more likely to experience adverse socioeconomic outcomes than those without disabilities, such as those with less education, poorer health outcomes, lower levels of employment, and higher poverty rates. Barriers to full social and economic inclusion of persons with disabilities include inaccessible physical environments and transportation, the unavailability of assistive devices and technologies, non-adapted means of communication, gaps in service delivery, and discriminatory prejudice and stigma in society. Despite the fact that education is a universal human right, being denied access to school is common for the worlds 93 to 150 million children with disabilities. In some of the world's poorest countries, up to 95% of children with disabilities are out of school. Learners with disabilities have a lower attendance rate and are

more likely to be out of school before completing primary education. A combination of discrimination, lack of training in inclusive teaching methods among teachers, and a lack of accessible schools leave this group uniquely vulnerable to being denied right to education.

Global awareness of disability-inclusive development is increasing. The United Nations Convention on the Rights of Persons with Disabilities (CRPD), promotes the full integration of persons with disabilities in society. The CRPD specifically references the importance of international development in addressing the rights of persons with disabilities.

2.6. DISABILITY IN DEVELOPING COUNTRIES.

According to the WHO (2011:4), persons with disabilities are on average as group more likely to experience adverse socio-economic outcomes than those without disabilities. Disability prevalence tends to be higher in developing countries. About 80% of the people living with physical impairments (LWPI) live in developing countries. Accessibility continues to be a barrier for people with disabilities, but there are many more obstacles they face apart from physical impairment. Categories of disabilities include those with visual, hearing, mental and physical impairments. Fifteen (15%) of the world population experience some form of disability.

According to the World Health Survey (2011), the countries that are studied amongst the forty countries are: Malawi, Zimbabwe, Zambia, Burkina Faso, Ghana, Kenya, Mauritius, Bangladesh, Pakistan, Brazil, the Philippines, Mexico, Paraguay, Lao PDR, and the Dominican Republic. When it comes to education, most of the evidence suggests that children with disabilities tend to have lower school attendance rates. An analysis of 14 house hold surveys in 13 developing countries in Africa, Latin America, and Southern Asia (Filmer, 2008) found that in all these countries, children with disabilities 6-17 years of age were less likely to start school or to be enrolled at the time of the survey. Similar results were found in) Malawi), Loeb et al. (2008) (SA), (2008) (Eastern Europe), (2003a), Zimbabwe, Eide and Kamari (2009) (Mozambique), and World Bank (2009) (India).

Regarding access to health-care, the literature on disparities across disability status in developing countries is very limited. The World Bank (2009) and et al. (2010) show that individuals with disabilities have reduced access to health-care in India and urban Sierra Leone, respectively. A cross-country study of 13 developing countries (Filmer, 2008) found that in a majority of countries, disability in adulthood is associated with a higher probability of poverty,

although this association disappears in a lot of countries when controls for schooling are included.

According to the World Health Survey (2011), the following statistics were found. Burkina Faso and Malawi show a higher percentages of disability. In Burkina Faso, disability prevalence is higher for women, when compared to men (9, 0% versus 6, 8%). In Ghana, disability prevalence rates are higher for women (10,6%) compared to men (6,2%). Individuals with disabilities have significantly lower educational attainment. In Kenya, disability prevalence rates are higher in rural (6,9%) than in urban (3,0%) areas. Disability prevalence for women is approximately double that of men at (6,8 % versus 3,7 %, respectively). In Malawi disability prevalence rates are higher in rural (14, 1%) than in urban areas (7,5%). Disability prevalence for women is higher compared to that of men (13,5% versus 12,4% respectively). In Mauritius prevalence rates are higher in rural areas (12,3%) than in urban areas (10,1%), as are rates for women compared to men (13, 9% versus 9,0%). Age and gender characteristics differ across disability status.

In Zambia, disability prevalence is higher in rural (6,6%) than in urban areas (4,3%), and rates for women are double (7,5%) that of men (4,0%). Zimbabwe disability rates are higher in rural (12,9%) than urban (7,5%) areas. Disability prevalence for women is higher (12,9%) than that of men (9,0%). In Pakistan, disability prevalence rates in rural areas are half those in urban areas at 4,5% versus 9,0%, respectively. Prevalence rates for women are triple than those of men at 9, 1% versus 3, 0%, respectively. Bangladesh has a higher rate in rural and urban areas, at17,3% and,12,9%, respectively. It is more than double among women than men 22,9% versus 9,9%, respectively. Lao PDR prevalence rates in rural and urban areas are close 3,2% versus 2,7% respectively, as are rates for females and males at (3,5% versus 2,7%, respectively). In Brazil, prevalence in rural areas is higher than in urban areas (16,3% versus 12,8%), as are rates for women and men (16,4% versus 11,1 %, respectively). In Mexico, disability prevalence in rural is closer than urban (5,1% versus 5,4% respectively), as rates for women are higher (6,5% versus 4,0%, respectively). In Paraguay, prevalence in rural areas is 7,1% and in urban areas is 6,7%, and for women rates are higher than for men (9,6% versus 4,0%, respectively).

Table 2.1: People with physical impairments in developing countries

	Countries	Females	Males	Rural	Urban	Percentages %
1	Bangladesh	22,9%	9,9%	17,3%	12,9%	16,21
2	Burkina faso	9.0 %	6,8%	8,12%	7,16%	7,95%
3	Brazil	16,4%	11,1%	16,3%	12,8%	13,45%
4	Dominica Republic	11,2%	6,3%	7,82%	9,32%	8,72%
5	Ghana	10,6%	6,2%	8,2%	8,65%	8,41%
6	Kenya	6,8%	3,7%	6,9%	3,0%	5,30%
7	Loa P DR	3,5%	2,7%	3,2%	2,7%	3,08%
8	Malawi	13,5%	12,4%	14,1%	7,5%	12,97%
9	Mauritius	13,9%	9.0%	12,3%	10,1%	11,43%
10	Mexico	6,5%	4,0%	5,1%	5,4%	5,30%
11	Pakistan	9,1%	3,0%	4,5%	9,0%	5,99%
12	Paraguay	9,7%	4,0%	7,1%	6,7%	6,87%
13	Philippines	9,3%	7,7%	9,8%	7,7%	8,49%
14	Zambian	7,5%	4%	6,6%	4,3%	5,78%
15	Zimbabwean	12,9%	9,0%	12,9%	7,5%	10,98%

Source: World Health Survey (2011).

Marchildon (2018), states the following five facts about living with disabilities in the developing countries:

1. 80% of people living with a disability live in developing countries. An estimated one billion people, that is, -15% of the world, live with disabilities, according to the WHO. Accessibility continues to be a barrier for people with disabilities.

2. 90% of children living with a disability in developing countries are not in school. About 264 million children are out of school due to barriers like conflict and violence, gender

equality, and poverty. If a child lives with disability in the developing country, access to education becomes even less likely. SDG4 looks to ensure inclusive and equitable quality education for all, which means that by 2030 all children should have equal access to education no matter of gender, race, or disability.

3. Women and girls with disabilities are more vulnerable to abuse. Women and girls face countless barriers around the world due to gender inequality. In 2004, a study about women and girls with disabilities in Orissa, India, revealed that almost all of them had been beaten at home, 25% of respondents with intellectual disabilities had been raped and 6% had been forcibly sterilised.

4. Poor people are more likely to have a disability, since disability and poverty are linked. Developing a disability could have social and economic impacts that lead to barriers to education, employment and earnings, which can therefore lead to poverty. Poverty can result in disability, as poor people cannot always access good health care, good food or secure living conditions, which can result in disabilities.

5. Only 45 countries in the world have anti-discrimination and other disability specific laws. Initiatives and laws have been put in place to protect and support people with disabilities in some parts of the world, but that is not the case with other countries everywhere. Some countries, like Australia, Canada, New Zealand, or the US, have anti-discrimination laws that make it illegal to make employment decisions based on someone's disability, and other countries have included anti-discrimination clauses in legislation, according to the World Report on Disability.

The study, Disability Gaps in Educational Attainment and Literacy, found that primary school completion or children with disability in 19 developing countries is just 48%, and that as many as 3 in 10 children with disabilities have never been in school, (2017). According to the World Statistics, 90% of children with disabilities in developing countries do not attend school, as noted by UNESCO in the OECD countries in higher education.

2.7 SOUTH AFRICAN STATISTICS OF PHYSICAL IMPAIRMENTS.

According to the Department of Social Development (DSD), the Department of Women, Children and People with Disabilities (DWCPD) and UNICEF (2012:5), children with disabilities in South Africa do not yet have a standard/nationally accepted measuring tool in line with the ICF. Estimates of child disability prevalence are therefore not directly comparable due to different definition of disabilities and varied methods of data collection. Measuring

children with physical impairments is much more difficult than measuring adults with physical impairments. While adults have relatively stable characteristics, children go through a normal development process as they grow, learning how to talk, walk, read, and write. The lack of measurement of children's physical disabilities is illustrated by the fact that fewer than one in ten (10) public hospitals in the country provide some form of infant hearing screening and less than 1% provide universal screening, for example.

According to Stats SA (2018), South Africa's midyear population is estimated to have increased to 57, 73 million in 2018, representing an overall increase of 1, 55% between 2017 and 2018. In Johannesburg, an estimated half a million children with disabilities have been shut out of South African education system. According to Stats SA (2019: online) South Africa's midyear population is estimated to have increased to 58, 78 million. The main purpose of Stats SA to the education system is to provide quality education for learners so that they will be able to meaningfully contribute to and participate in that society throughout their lives (Education White Paper 6, 2011). South African, learners have a right to be educated in an inclusive classroom, as is acknowledged in the constitution of the Republic of South Africa. The National disability prevalence rate is 7,5% in South Africa. Disability is more prevalent among females, when compared to males, at (8, 3% and 6, 5%, respectively (Stats SA 2011). Persons with disability increase with age.

The prevalence of a specific type of disability shows that 11% of persons aged five and older had seeing difficulties, 4, 2% had cognitive difficulties (remembering /concentration), 3, 6% had hearing difficulties, and about 2% had communication, self-care and walking difficulties.

2.7.1 Disability prevalence by province.

According to Stats SA (2011), findings show a national disability prevalence rate of 7,5%. Provincial variations showed that both the Free State and the Eastern Cape have the highest proportion of persons with disabilities (3,1%), followed by North West and Northern Cape (3,0% and 3,1%, respectively). The Western Cape and Gauteng Province showed the lowest percentage of persons with disabilities (2, 0%), respectively.

While the broad measure shows a disability prevalence of more than 20% in the Free State and Northern Cape provinces in both census 2011 and community survey 2016, the UN

recommended measure show prevalence of about 11 percent. The severe measure for Free State and Northern Cape reflected stagnant disability prevalence of about approximately 7% for the Free State at both enumeration years, while for Northern Cape it was 7, 1% and 6, 0% respectively for both enumeration years. Later findings are not available at the present time, because these statistics came out of the 2011 census, and the next census will take place only in 2021. See the table below.

Table 2.2: Percentage of people with physical impairments by province.

People with Physical Impairments		
Province	**Severe disability %**	**Mild disability %**
Western Cape	0,9	2,0
Eastern Cape	1,2	3,1
Northern Cape	1,5	3,0
Free State	1,1	2,9
KwaZulu-Natal	1,1	2,8
North West	1,1	3,1
Gauteng	0,7	2,0
Mpumalanga	0,9	2,4
Limpopo	0,9	2,4
South Africa	1,0	2,5

Source: (Stats SA, 2011: online)

2.7.2 Disability prevalence by gender.

The results of the 2011 census show that gender variations in school attendance were marginal, with males depicting slightly higher proportions compared to females (Stats SA, 2011: online). Trend analysis showed slightly upward trend in disability prevalence for females (from 8,3% in 2011 to 8,9% in 2016), as can be expected given the longevity. Male children were more likely than their female's peers to have disability (2, 6% versus 2, 3%).

Table 2.3: Level of disabilities of children with physical impairments attending primary schools.

Types and degree of disability	Boys	Girls
Physical impairments	Mild 90.7	Mild 90.4
	Severe 68.1	Severe 70.2

Source: (Stats SA, 2011: online)

In both Census 2011 and Community survey 2016, females' disability prevalence was four percentage points higher than that of males. Research shows that women often have a higher prevalence of disability compared to men due to various behavioural and socio demographic factors.

The degree of disability measure showed that females had the highest percentages of persons experiencing mild and severe disabilities across all types of disabilities except for communication, while boys and girls had the same proportion of persons who had experienced mild disabilities.

2.7.3 Disability prevalence by population group.

Table 3 shows that white population group had the highest proportion of persons with mild and severe disabilities (3, 3% and 1, 1%, respectively), followed by the Indian/Asian population group (2, 8% and 0, 9%, respectively), the black African population group (2,5 and 0, 9%, respectively) and the coloured group (2, 1% and 1%, respectively). There are noticeable population group variations for both census 2011 and census 2016 data sets. The white population group recorded the highest proportion of persons with disabilities, probably due to a higher proportion of the elderly population associated with this population group. In the case of the country in question, virtually all socially linked indicators such as economy, education, fertility and mortality vary by population group. Not only does disability add to the risk of poverty add to the risk of disability.

Table 2.4: Distribution of persons aged five years and older by degree of disability.

Learners with physical impairments		
Population group	**Severe disability**	**Mild disability**
Black African	0,9	2,5
Coloured	1	2,1
India or Asian	0,9	2,8
White	1,1	3,3
Total	1	2,5

Source: (Stats SA, 2011: online)

Figure 2.1 Prevalence of disability by population group. **Source***: Statistics South Africa*

2.7.4 Disability prevalence by age.

The prevalence of disability appears unusually high for young children, with 28% of children in the age group of 0-4 years, and 10% in the age group of 5-9 years classified as disabled.

Table 2.5: shows the disability prevalence by age.

Age Group	With Physical Impairments	Without Physical Impairments
0-4 Years	7,5	99,2
5-9 years	10,8	89,3
10-14 years	4,1	95,5
15-17 Years	2,6	97,4
Total	7,5	92,5

Source: (Stats SA, 2011: online)

2.7.5 Disability prevalence by place of residence (geography type).

Generally, persons with disabilities were more prevalent in non-urban areas compared to urban areas in both census 2011 and community survey 2016. Whilst the broad measure and severe disability measure showed downward trend in disability prevalence in both urban and non-urban areas, the UN disability measure showed increase in disability prevalence in urban areas from (6,3% in census 2011 to 7,2% in community survey 2016). This findings is in line with the massive urbanisation in the case of the country in question, where the population residing in urban areas increased from 54% in 1996 to 64% in 2016, translating to 10% increase over twenty years.
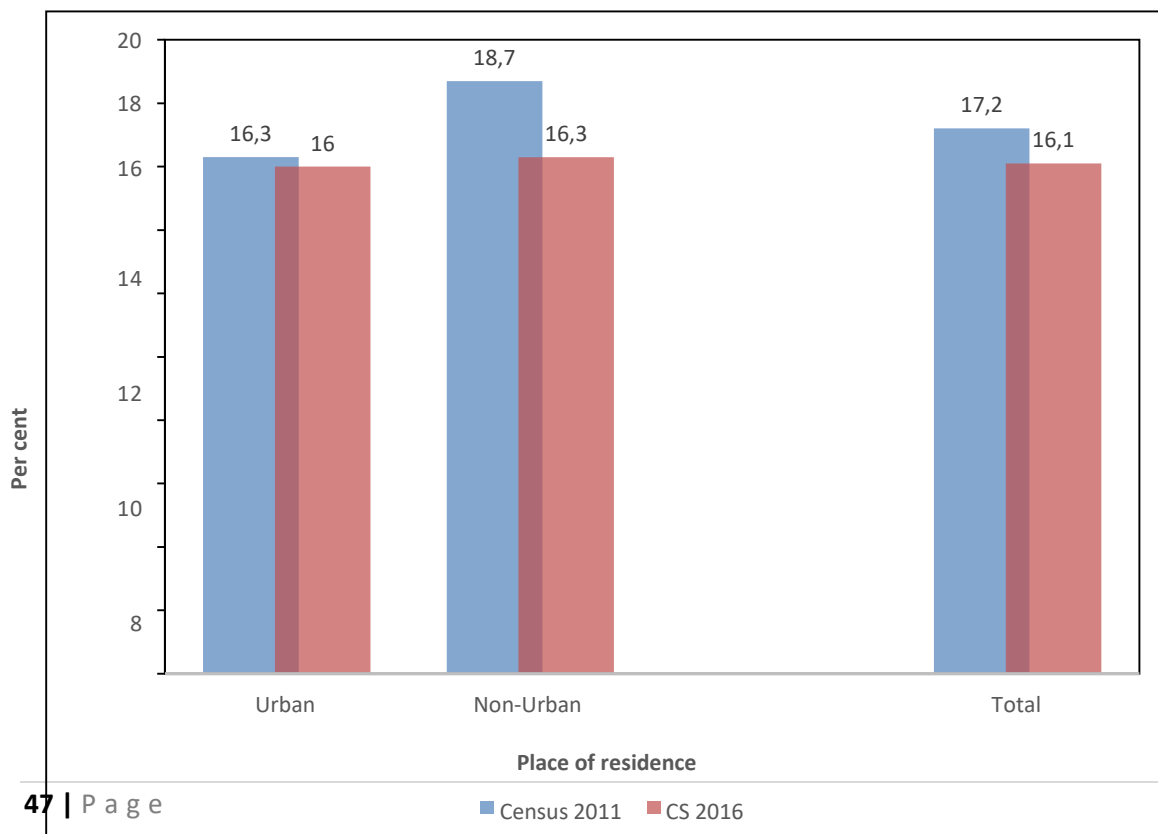
Figure 2: Disability prevalence by place of residence (geography type) Source: Statistics South Africa Note: Non-urban areas constitute traditional and farm areas.

2.8. INEQUITIES IN ACCESS TO SERVICES.

The impact of inadequate living conditions is particularly negative for children with disabilities. According to Stats SA (2011), children with disabilities are less likely to have access to adequate housing, water, health services, educational status, income levels, and sanitation than their non-disabled peers. Children with disabilities are more likely to live in traditional dwellings and informal settlements than their non-disabled counterparts. Overcrowded living conditions and outside toilets place enormous stress on children with disabilities and their families. The country's inclusive education programme has enabled the expansion of facilities for children with disabilities in public ordinary (mainstream) schools. The number of full-service schools (FSSs) that is schools that are equipped to support a range of disabilities, has grown from 30 in 2008/09 to 513 in 2010/11. Currently, some 110 300 learners with disabilities are attending ordinary public schools.

2.8.1. Poverty and access to an adequate standard of living.

The right of every child with a disability to an adequate standard of living is recognised in the South African Constitution, as well as by the UNCRC, ACRWC, and the UNCRPD. A World Bank analysis of 14 household surveys in developing countries, including Stats SA GHS (2005), found that children with disabilities do not live in systematically wealthier or poorer households than their non-disabled counterparts. About 57% of children with disabilities live in permanent houses (house or brick structure) compared to 62% of non-disabled children, where 9, 7% of the disabled children live in an informal settlements. The impact of inadequate living conditions is particularly negative for children with disabilities.

2.8.2. Access to education.

Every child in the Republic of South Africa has the right to education irrespective of gender, race, colour, religion, or disability (SA Constitution). The country's inclusive education programme has enabled the expansion of facilities for children with disabilities in public ordinary (mainstream) schools. In addition, 423 special needs schools nationwide are catering for approximately 105 000 learners. Nonetheless, survey evidence suggests that children with disabilities are substantially less likely to attend school than their non-disabled peers.

Furthermore, among those children with disabilities who do get access to schooling, drop-out rates are higher than for those who are not disabled.

Findings from the annual GHS between 2002 and 2008 consistently indicate that children with reported disabilities are 2, 5% times more likely to be ill or injured than their non-disabled peers. Research coordinated by the Department of Social Development in Mpumalanga, in deep rural areas in Ehlanzeni, Nkangala, and Gert Sibande Districts, found that only 42% of the children with disabilities identified were receiving rehabilitation, and only 33% had the assistive devices they required. Some 59% reported that the caregiver did not know how to apply for an assistive device. According to data from Stats SA community survey of 2007, children with disabilities are more likely to be orphaned than their non-disabled peers. One in four children with disabilities nationwide has lost one or both parents compared to one in five among the non-disabled.

2.8.3. Access to health service.

According to (McIntyre, Thhiede, & Biirch, 2009), access dimensions include: the availability (or physical access); affordability (or financial access); and acceptability (or cultural access) of health services. The availability dimension of access deals with whether the appropriate health services are available in the right place, and at the right time, to meet the needs of the people with disabilities. Affordability concerns the degree of fit between the full costs of using health care services and an individual's ability to pay in the context of the household budget and other demands on that budget. Acceptability is concerned with the fit between provider and patient attitudes towards and expectations of each other. Beliefs and perceptions also influence acceptability.

2.8.4. Early learning and education.

Section 29 of the South African Constitution indicates that all children are guaranteed the right to a basic education and to further education which state, through reasonable measures, must take progressively available and accessible. According to the UN Convection on the Rights of the Child (UNCRC) and the Convention on the Rights of Persons with Disabilities (UNCRPD), children with disabilities have the same rights to education as all other children, and shall enjoy this right without any discrimination and on the basis of equal opportunity. No child should stay at home and miss out on their education due to disability.

Children with disabilities are prone to particular types of abuse, where: physically disabled children in particular are at an increased risk of sexual abuse. A study by the Disabled Children's Action Group (DICAG) found significant gaps in the child justice systems in dealing with cases that involved children with disabilities.

2.8.5. Health and rehabilitation.

The UNCRC requires government to ensure that children with disabilities enjoy the highest attainable standard of health and access to facilities for the treatment of illness and rehabilitation of health. This study argues that children with disabilities should have access to health care services, physiotherapist, psychologist and assistive devices. In addition, a study of 156 disabled children in a peri-urban township in Orange Farm, Gauteng, only a quarter 26% of children in need of rehabilitation received such services, of the 233 assistive devices required, only 64% had been issued. In the context of limited information, the study assessed the provision of key services that aim to enhance social participation of children with disabilities. These include the CDG (Child Dependency Grant), assistive devices, rehabilitation services, early child development services, inclusive education, and access to health facilities. Overall, the CDG is found to be a positive tool for reaching large number of children with disabilities and their families with income support. Situation Analysis 2001-2011 emphasise the social participation of children with disabilities. According to the Department of Social Development, children with disabilities need to receive child dependency grant on a monthly basis to fulfil their needs.

2.9. CHALLENGES FACED BY LEARNERS WITH PHYSICAL IMPAIRMENTS.

Learners with physical impairments face the following challenges in their daily lives: educational, environmental, and psychosocial challenges.

2.9.1. Educational barriers faced by learners with physical impairments.

According to Minor (2016), barriers to education can take a variety of forms. They can be physical, technological, systematic, financial, or attitudinal, or they can arise from an education provider's failure to make available a needed accommodation in a timely manner.
The following appeared to be the main barriers to educational services for learners with physical impairments, (UNESCO: 2008).

2.9.1.1 Physical inaccessibility.

According to Ontario Human Rights Commission (n.d.), LWPI, encounter educational barriers such as a lack of ramps or elevators in multi-level school buildings, heavy doors, inaccessible washrooms, and /or inaccessible transportation to and from school.

2.9.1.2. Accessibility.

UNESCO (2008) notes that, a learner with physical disability cannot learn in an inclusive classroom if he/she cannot enter the room, let alone the school building. Some schools are still inaccessible to learners in wheelchairs, crutches, or to those other mobility aides and need ramps, paved pathways, to manoeuvre in and around buildings. Accessibility can go beyond passage ways, stairs, and ramps, to library, recreational areas, school halls, bathrooms, paved pathways, and door handles. In addition, classrooms need to be large enough, with open space to accommodate learners using assistive technologies devices, as well as other furniture to meet individual's needs. Teachers should also be flexible in ensuring that LWPI have access to learning, and can demonstrate knowledge and understanding.

In a school where a researcher is working, LWPI experience massive challenges with mobility. The school surroundings are unfriendly to these learners, due to unevenness, or debris hampering the mobility of the learners to the classrooms. School grounds are inaccessible for learners and they restrict independent movement. The furniture in classrooms need to be adapted in order to accommodate learners with LWPI.

According to National Commission on Special Needs in Education and Training (NCSNET) and the National Committee on Education Support Services (NCESS), one of the most significant barriers to learning remains the inability of learners to access the educational provision that does exist and their inability to access other services, which contribute to the learning process. In most instances, the inability to access education provision results from inadequate or non-existent services and facilities, which are key to participation in the learning process. For example, in many poor communities, learners are unable to reach centres of learning, because there are no transport facilities available to learners, or the roads are so poorly developed and maintained that centres cannot be reached.

Lack of access to other services, such as welfare and communication services, also affect the learning process, and lead to learning breakdown or exclusion. While inadequate transport

remains, a key element preventing access to education, other basic services, such as access to clinics, also impinges on the learning process.

2.9.1.3. *Negative attitude and stereotypes.*

LWPI continue to face negative attitudes and stereotypes in the education system. The Ontario Human Commission (n.d.) state that a, lack of knowledge about sensitivity to barrier issues on the part of some educators, staff, and learners can make it difficult for learners with impairments to access educational services equally. In the researcher's experience, most teachers do not have knowledge or understanding of, barriers to learning. Societal norms often are the biggest barrier to inclusion. Negative attitudes of teachers to resist the accommodation of learners with disabilities, and learning issues need to come to an end by attending inclusion training workshops. Section 9 of the constitution of the Republic of South Africa prohibits unfair discrimination on the basis of disability. Discrimination on such grounds is presumed to be unfair, unless it has been shown to be otherwise. It further allows for positive measures to be taken to promote the achievement of equality for categories of persons previously disadvantaged by unfair discrimination, which includes people with disabilities.

Prejudice against those with differences can leads to discrimination which inhibits the education process (UNESCO: 2008). Negative and harmful attitude towards differences in our society remains a critical barrier to learning. For the most part, negative attitudes towards different learners manifest themselves in the labelling of learners. Sometimes these labels are simply negative associations between the learner and the system such as:'' drop outs'', repeaters, or slow learners.

According to NCSNET and NCESS, sometimes learners are placed in a particular learning environment, merely because they are labelled as belonging to a category of learners for which a particular kind of educational placement exists. Because the placement has occurred through the attachment of the label, rather than through an appropriate assessment of the educational needs of the learner, or what is required by the system to meet the needs of learners, the placement may not only be inappropriate to the learners needs, but it may also result in the learner being marginalised and discriminated.

Very often teachers fear the inclusion of a child with a disability in their classroom, and respond negatively to their attendance. Negative attitudes towards disability are picked up quickly by the other children, who further alienate the disabled learner. Many parents of the LWPI find it difficult to accept their disabled children.

2.9.1.4. Co-operation.

According to UNESCO (2008:2), a lack of communication among administrators, teachers, specialists, staff, parents, and learners create a barrier to learners. Open communication and coordinated planning between general education teachers and special education staff are essential for inclusive education to work. In addition, time is needed for teachers and specialists to meet and create well-constructed plans to identify and implement modification, accommodations in the curriculum or assessments and specific goals for individual learners. Collaboration must also exist among the staff, teachers, parents to meet learner's needs and facilitate learning at homes and monitor progress.

Parents need to be open to the teachers about the learners' development. They also need to work hand in hand with the teacher to assist learners to progress to the best of their abilities.

2.9.1.5. Teachers.

Teachers who are not trained or who are unwilling or unenthusiastic about working with LWPI are a drawback/barrier to the learner and successful inclusion (UNESCO: 2008). Teachers should also be flexible regarding the way in which learners learn, and demonstrate knowledge and understanding. In addition, written work should be limited if the learner does not complete a task. Furthermore, extra time is needed for the learners to complete a task. According to the researcher's point of view, teachers must be professional at all times and accommodate all learners equally without favouritism. Training often fails short of real effectiveness, and instructors/facilitators already straining under large workloads may resent the added duties coming up with different approaches for the same lessons.

A teacher who always shouts at a learner he/she is a barrier to that learner for successful learning. Teachers who always compare a learner with his/her peers or tell the learner about his/her performance in front of the class presents, a barrier to that learner.

2.9.1.6. *Language and Communication.*

According to Torreno (2008), many learners are expected to learn while being obliged to use a language that is new and unfamiliar to them. This is a barrier to successful learning, because the learner does not understand the language and let alone to communicate/speak. In addition, a learner who falters in the language of communication will face discrimination and low expectations in class. For example, an isiZulu child who has to be taught in SePedi in school and comes from isiZulu speaking background, may well not understand how to speak, write, and read in SePedi, and the language may be a constant barrier.

Teaching and learning for many learners take place through a language not their own. This leads to linguistic difficulties, which contributes to learning breakdown. Communication is essential for learning in both formal and informal contexts.

2.9.1.7. *Curriculum.*

According to UNESCO (2008), a rigid curriculum that does not allow for experimentation or the use of different teaching methods can be an enormous barrier to inclusion and LWPI. Implementation of a universal design for learning can be a remedy for stagnant coursework. In addition, a teaching plan that does not recognise different learner's abilities and learning styles hinders the school experience for all learners, even those not traditionally recognised as having physical impairments. Teachers in a classroom must incorporate a variety of teaching methods in order to cater for all learning abilities. This would benefit even those learners who would be placed in a traditional classroom, as this increases their engagement in the learning process.Teachers in a classroom must also differentiate assessments so as to accommodate all learners 'abilities. According to UNESCO (2008), inclusive classroom encourages open and frank dialogue about differences as well as a respect for those with different abilities, cultural backgrounds and needs.

The curriculum is central to teaching and learning that takes place in schools. However, it is one of the most significant barriers to learning, and consequently excludes many learners. Barriers to learning arise from various aspects of the curriculum, such as the content, the medium of instruction (LOLT), classroom organisation, methodology of teaching, pace of teaching, learner and teacher-support materials (LTSM), and assessments (Department of Education,2015:109).

The curriculum is central to the teaching and learning that takes place in schools. A curriculum is comprehensive in scope and complex in practice. It includes issues such as subject matter, pedagogy, assessment/evaluation and related resources involved in the organisation, delivery and articulation of education programmes. However, one of the most significant barriers to learning to many learners is curriculum. Barriers to learning arise from the different aspects of the curriculum, such as:

- the content (i.e. what is taught and how is taught);
- the methodology and process in teaching;
- the language or medium of instruction;
- how the classroom is organised and managed;
- the pace of teaching and the time available to complete the curriculum;
- the learning materials (LTSM) and the equipment that is used; and
- how learning is assessed (methods of assessments), (Department of Education 2005:109).

Some learners are excluded from certain aspects of the curriculum as a result of ignorance or prejudice i.e., LWPI are often prevented from playing sport or are not given opportunities to do so, due to their disability. Assessment processes are often inflexible, and designed to only assess particular kinds of knowledge and aspects of learning, such as the amount of skills or information that can be memorised, rather than the learner's abilities, understanding', and knowledge of the concepts learned.

2.9.1.8. Socio-economic factors.

According to Torreno (2008), areas that are traditionally poor and those with higher than average unemployment rates tends to have schools that reflect that environment, such as run-down facilities. Learners who are unable to afford basic necessities such as stationary (pencils, ruler, eraser etc.), and other barriers to the learning process. A learner who does not have a pencil and borrows from the classmates, may experience a social or logistical barrier. Poor health services, poverty, violence, under-development and other social factors can create educational barriers for the learner.

2.9.1.9. Accommodation process.

According to UNESCO (2008), the accommodation process is not always provided in a timely manner, is often insufficient, and sometimes not provided at all. Schools may not inform the parents about accommodation of the learner, and the accommodation process including the documents required. Some schools do not do follow up and they also do not follow the correct procedure when applying for an accommodation. At the elementary levels, other difficulties include-: delays at many stages of the accommodation process, a large backlog in the processing of claims for special education funding, long waiting lists for professional assessments, and delays in the process of special education programmes and services.

2.9.1.10. Organization of the education system.

Centralised education systems are rarely conducive to positive change and initiative (UNESCO: 2008). Decisions come from the school's executive, whose initiatives focus on employee's compliance, more than they do on quality learning. The high-level authorities, even when coming to schools, do not bother to go to the classrooms to see those learners and ask the teacher how he/she is coping. In addition, this education system causes a barrier for learners where the top levels of the organisation have little or no idea at all about the realities teachers face on a daily basis. In the school where the researcher is working, there are learners with physical impairments and other disabilities, when the school called the top levels of organisation to come and assist, they do not go to the classroom, let alone to call that learners and see them, they just end up in the principal's office and go. They don't even bother to call the teacher and talk and give assistance. The principal will decide if he/she disseminates information or not and most of the time they don't.

2.9.2. Environmental challenges.

Environmental challenges for LWPI include a physical environment that is not accessible for learners to move freely to their classrooms, retarding the mobility of the learner in the classroom. The physical environment needs to be accessible, with a removal of hindrances to allow independent movement for learners using wheelchairs and crutches. The desks in the classrooms need to be adapted in order for learners to sit properly with the right posture (Landsberg et al., 2016:336). In addition, classrooms need to be arranged so that learners are granted enough space to move freely without any obstacles. The colour of the classroom needs

to be welcoming and motivating to the learners. External distraction such as noises, smell and temperature need to be monitored. The sound quality of the instructor during the lesson need to be audible, neither loud nor soft. The quality of lighting in the classroom is also important, neither too bright, nor too dim. Classroom with steps are problematic for LWPI, and a school needs to have ramps to accommodate learners with mobility impairments. Furthermore, surfaces need to be rough, rather than smooth such that wheelchairs and crutches are able to grip. The bathrooms and doorways should be broad enough to accommodate wheelchairs. In addition, the schools need to have sick bays for learners who need to rest during school hours. According to (Landsberg et al., 2016:336), the classroom needs to be big enough to accommodate LWPI.

According to (Wiman et al. 2002), an estimated 84, 7% of persons with disabilities reported environmental barriers, which include: social isolation, trouble in obtaining resources, information, accommodation, equality, transportation and attitude of the people towards them. The more the environmental barriers are reduced, the more a person with physical impairment will be able to participate in social, educational and vocational aspects of life.

Whiteneck (2004), has categorised environmental barriers as including, accessibility, accommodation, resource availability, social support and equality. Accessibility is defined in terms of physical access as well as accessibility of transportation (Whiteneck et al., 2004). Accommodation refers to those aspects of the environment that either restrict or facilitate an individual's ability to participate in a given activity. Some people do not allow those with disabilities to partake in the functions, such as for example to be a programme director, due to their disability. Resource availability is referred to as the availability and provision of services and resources necessary for a particular disability. These may include medical care, as well as personal assistant services.

Social support is defined as those attitudes that encourage community integration to flourish. Social support may be provided by family and friends, employers and teachers, neighbours and peers, and community members. Equality refers to the degree to which the policies and regulations of government and institutions ensure equal opportunities for persons with disabilities, such as financial disincentives and legislative mandates (Whiteneck et al., 2004). Analysis of accessibility among wheelchair users revealed that the maximum 52% perceived barriers in transportation on a daily basis. Furthermore, uneven roads surfaces and unpaved and

poorly maintained sidewalks have made it difficult for wheelchair users to travel from one place to another.

Venter et al. (2002), suggest that vehicle design of the public transportation system, such as high-floor buses, and surfaces like uneven roads and steep slopes, created barriers for persons with disabilities. A maximum number of LWPI (41%) perceived that barriers to be caused by the design and layout of their homes and community on daily basis. Their perception was based on the lack of railings, and disabled friendly toilets at home, as well as a lack of lifts and ramps in their community. According to the researcher, most of the LWPI are from lower socio-economic groups, and could probably not afford to make the changes and modifications necessary for their individual needs, particularly those who reside in squatter camps. Furthermore, schools need to modify their school environment by putting up ramps and, railings, and constructing disabled friendly toilets. In most of the schools in Mamelodi East, the design and layout of the schools are not modified to accommodate disabled learners.

2.9.3 Psychosocial challenges.

According to Landsberg et al. (2016), learners experiencing physical impairments faced the challenges of making friends at school and in the community because they see themselves as different from others. In addition, other learners isolate them, they do not want to involve them in social activities. Most of the time they are lonely. Landsberg et al. (2016:335), state that LWPI have a poor self-image, which result in the formation of negative self-concept, and feelings of inferiority.

2.10. SUPPORT SERVICES FOR LEARNERS WITH PHYSICAL IMPAIRMENTS.

According to the National Commission on Special Needs in Education and Training (NCSNET) and National Committee on Education Support Services (NCESS), support services required by learners experiencing physical impairments include all human and other resources that provide support to individual learners and to all aspects of the system. While these services attempt to minimise and remove barriers to learning and development, they also focus on the prevention of these barriers and on the development of a supportive learning environment for all learners.

Support required by learners may include:

- teaching and learning support materials LTSM (including particular teaching and learning intervention-i.e. academic development programmes, enrichment programmes);

- the provision of assistive devices (example, specialised communication devices;

- appropriate information technology and brailing facilities);

- general and career guidance and counselling;

- various forms of therapeutic support (medical, psychological, occupational, speech, physiotherapist);

- nutritional programmes;

- social interventions;

- parental support;

- teacher training and support;

- organisation development;

- curriculum development (differentiation to meet the individual needs of learners);

- initial and on-going training, orientation, mentorship and guidance;

- transportation services (to transport learners where they need to go);

- pastoral sessions (they need the word of God, prayers, encouragements and they also need to hear what God is saying about them); and

- in addition, they also need the assistive devices for mobility such as, wheelchairs, crutches, and callipers.

Support can and should also be provided by members of the learning community, such as (learners, parents, educators) and other community resources, including communication facilitators, volunteers, peer- counsellors, community workers, traditional healers, community-based rehabilitation workers, welfare organisations, disabled people's organisations and religious organisations.

According to the policy on screening, identification, assessment and support (SIAS) (DBE, 2014:15-16), five support services needed to support learners experiencing physical impairments are:

- specialist support services (nurses, doctors, therapists,);

- assistive devices specialists, equipment, teaching and learning;

- curriculum differentiation to meet the individual needs of learners (which includes adjustments and accommodations in assessment),

- environmental access (once off and that necessarily ongoing; and
- district based support teams (DBST) can be trained to support educators better.

2.11. SUMMARY.

This literature review on learners with physical impairments highlighted the most important factors pertaining to the challenges of inclusive education learners constantly face in mainstream schools. It is evident that negative attitudes, stereotypes, discrimination and curriculum have a significant impact on the LWPI. The literature also contains information about the causes of physical impairments that contribute to learners' inclusive education challenges. It also highlighted the South African statistics, world statistics, disability in developing countries, and the support services for LWPI.

The methodology design on how to collect data will be explored in the next chapter.

CHAPTER 3 RESEARCH METHODOLOGY

3.1 INTRODUCTION.

The preceding chapter provided a review of literature to this study. The focus of this chapter is on the description and discussion of the research design and methodology used to collect data on the inclusion challenges faced by learners with physical impairments in Mamelodi East Primary Schools Township. This study gathered data by using a qualitative approach to investigate the challenges faced by LWPI. The discussion in the chapter is structured around the research design, population and sampling, location, research approach, data collection, and data analysis. Ethical considerations and the measures to provide trustworthiness are also discussed.

All research is based on underlying philosophical assumptions about what constitutes valid research, and which research method is/are appropriate for the development of knowledge in a given study. The interpretative paradigm was identified for the framework of the study. The research design for this study is a descriptive and interpretive that is analysed through qualitative methods. Participant observation, documents analysis, and face-to-face interviews were used as data collection methods. Furthermore, the justification for each of the data collection methods used in the study was discussed. Qualitative methods (i.e. interviews) are best for describing, interpreting, contextualising and gaining in-depth insight into specific concepts or phenomena.

3.2. THEORETICAL FRAMEWORK.

Theories are developed by researchers to explain phenomena, draw connections, and make predictions. They are based on existing knowledge, observations, and ideas. A theoretical framework is a set of broad ideas or principles that is a mapped network of interrelated or interlinked concepts. The study is based on the theory of social model of disability developed in by Barnes and Oliver (2004). The social model of disability proposed that what makes someone disabled is not their medical condition, but the attitudes and structure of society. This study rests on this social model of disability, with the rationale that if society does not accept the persons with disabilities the way they are, they disabled them even further. Additionally, the negative attitude of teachers at schools and discrimination made them even worse, because they view school as a place of learning rather than discriminating.

The social model of disability notes that it is society that disables and impairs people. The theory provides a helpful framework for those families who experience significant emotional distress, demonstrating that the disability is socially constructed by a society that marginalises and excludes them. Disability is not a disease, but a disablement that limits the person from participating in normal daily activities. Society makes it a disease by having negative attitudes towards a person with disabilities. The social model emerged from the intellectual and political arguments of the Union of Physically Impaired Against Segregation (UPIAS).

According to their policy statement, the aim of the UPIAS (1974: online) was "to replace segregated facilities with opportunities for people with disabilities to participate fully in society, to live independently, to undertake productive work and to have full control over their own lives. The policy statement defined people with disabilities as an oppressed group, and highlights barriers that they experience in the physical environment.

3.2.1. Key elements of the social model of disability.

The social model of disability identifies systematic barriers, negative attitudes, and exclusion by society (purposively or inadvertently), which means society is the main contributing factor in disabling people. The social model of disability argues that disability is caused by the way society is organised, rather than by a person's impairment. The social model of disability demonstrates that the problems people with disabilities face are the result of social oppression, and exclusion, not their individual deficits. Furthermore, they also experience problem of negative attitude and discrimination. This places the moral responsibility on society to remove the burdens that have been imposed, so as to enable people to participate.

Since 2004, services, buildings and public transport have been required to be accessible to persons with disabilities, and most statutory and voluntary organisations have adopted the social model approach. "Models are ways of translating ideas into practice and the ideas underpinning the social model was that of externally imposed restriction" (Oliver, 2004:19). Social model thinking mandates removal of barriers, anti-discrimination legislation, independent living, and other responses to social oppression.

3.2.2. Strength of the social model.

As demonstrated internationally, disability activism and civil rights are not possible without adopting the social model ideology. The social model is simple, memorable and effective, each of which is a key requirement of a political ideology. The benefits of the social model are:

- it is effective politically in building the social movement of people with disabilities;
- it offers a straight forward way of distinguishing allies from enemies; and
- by identifying social barriers which should be removed, it has been instrumentally effective in the liberation of people with disabilities.

If we accept this interpretation, it is obvious and clear that, if society changes, or there are significant changes in society, then the disability model can also change. The theory is relevant here, where it is noted that LWPI experienced negative attitudes and discrimination from the society and teachers at schools.

3.3. METHODOLOGY.

The data had been collected through a literature review and an empirical investigation. The empirical investigation is outlined below.

3.3.1. Research paradigm.

A research paradigm refers to a pattern and a set of beliefs and assumptions about the reality or worldview (Mosia, 2017). It is important in addressing beliefs about the nature of reality (ontology), the relationship between the knower and what is known (epistemology), and how data is collected (methodology) as the fundamental assumptions about faith (Galetuke, 2017). A methodology is a systematic, theoretical analysis of the methods applied to a field of study. It comprises the theoretical analysis of the body of methods and principles associated with a branch of knowledge. Typically, it encompasses concepts such as paradigm, theoretical model, phases, and quantitative or qualitative techniques. Research can be defined as an activity that involves finding out, in a more or less systematic way, things you did not know" (Walliman and Walliman,2011:7). Methodology refers to the philosophical framework within which the research is conducted or the foundation upon which the research is based.

The study is embedded in an interpretive (constructive) paradigm. Thomas (2010:86) defines an interpretive paradigm as something that is concerned with understanding the world from the subjective experience of individuals. He indicates that, as far as a paradigm is concerned, it uses meaning oriented methodologies (versus quantification), such as interviewing or observation that rely on a subjective relationship between the researchers and subjects. Paradigm refers to a set of theories, assumptions, and ideas that contribute towards a worldview or create the framework from which we operate daily. In addition, it refers to a standard, perspective, or a set of ideas, or a way of looking at something.

The interpretive approach in qualitative research is a form of social enquiry that focuses on the way in which people interpret and make sense of their experiences, and the world in which they live (Creswell & Poth, 2017). The basis of qualitative research lies in the interpretive approach to social reality, and in the description of the lived experience of human beings. Research paradigm is informed by philosophical assumptions about three things (Creswell& Poth, 2017), namely: ontology, epistemology, and axiology. The researcher chose interpretive paradigm in order to understand the inclusive challenges faced by learners with physical impairments and culture, and to recognise that they do not just potentially see the world differently to us, but experience it differently too. In interpretive research, there is no single reality or truth, and for that reason, reality needs to be interpreted, where the interpretive research uses qualitative research methods to reach those multiple realities.

3.3.1.1. Ontology.

Ontology refers to that branch of philosophy concerned with the assumptions we make in order to believe that something makes sense or is real, or the very nature or essence of the social phenomenon we are investigating (Galetuke, 2017). Ontology examines the underlying belief system of the researcher about the nature of being and existence. In addition, it also helps the researcher to conceptualise the nature of reality and what the researcher believe can be known about that reality. Ontology is essential to a paradigm because it helps to provide an understanding of the things that constitute the world, as it is known. The reality in Mamelodi East primary schools is that LWPI are experiencing inclusive education challenges on a daily basis, for example there are no ramps, untrained teachers, rocky surroundings and old buildings that are not wheelchair friendly.

According to Galetuke (2017), ontology refers to the nature of our beliefs about reality. Ontology is also concerned with the fundamental existence and the sense of the way things are. It involves an enquiry into being, existing, and properties of being. Plato argued that all nouns denote existing entities. Others argued that nouns do not always mean entities but collections of events, objects as well as entities. There are two key dichotomies in ontology:

- universals and particulars mean things common to many and things specific to one entity; and
- abstract and concrete mean vague and distinct entities, respectively.

3.3.1.2. Epistemology.

Epistemology stems from the Greek, meaning knowledge. According to Gall, Gall, & Borg, 2003:13, 9, Galetuke; 2017)," epistemology refers to the branch of philosophy that studies the nature of knowledge and the process by which knowledge is acquired and validated. It is concerned with "the nature and norms (of knowledge), how it can be acquired and how it is communicated to other human beings" (Cohen, Manion, & Morrison, 2007:7). It is the epistemological question that lead a researcher to debate "the possibility and desirability of objectivity, subjectivity, (Patton 2002:134).

In research, epistemology is used to describe the way in which researchers come to know something, how researchers know a truth or reality, or as McDonald (2011) put it, what counts as knowledge within the world. It is concerned with the very bases of knowledge, that is, its nature, and forms, and how it can be acquired, and how it can be communicated to other human beings. Epistemology meanwhile examines perceived knowledge and its working.

According to the Scottish philosopher James Ferrier, there are three concepts that together characterise epistemology, namely: knowledge, belief, and truth.

- knowledge that i.e. it is known that Jane is a person with a disability;
- knowledge how i.e. Jane was born with a disability; and''
- acquaintance knowledge example', I know my friend Jane."

Epistemology refers to the research of philosophy concerned with how individuals determine what is true. According to De Vos (2002:214), epistemology refers to the relationship of researchers to reality, and the road that they will follow in the search of the truth.

Linguistic epistemology refers to the way of knowing reality (truth) through the spoken words (linguistic or lingual), i.e. using words to describe a specific experience. The present study required teachers and learners to describe their experiences of inclusive education challenges they faced in Mamelodi East primary schools. LWPI made the researcher opt for the open unstructured qualitative interview to investigate the study. What the researcher knows is that LWPI and teachers are faced with inclusive education challenges in Mamelodi East primary schools.

3.3.1.3. Axiology.

Axiology, derives from the Greek word (axia, "value, worth" and oyia, logia). Axiology refers to the philosophical study of value. According to Barnes (2018), axiology derives from the French axiolgie, and Greek axia, which means to value. Axiology affects why you are learning (motivations, desired outcomes), what once is learning in real life (dominant cultural practices) and even how you learn (factual learning versus learn by doing). Axiology is a branch of philosophy that studies judgments about the values. It specifically engaged with assessment of the role of a researcher's own value on all stages of the research process. Furthermore, it also refers to the aims of the research.

In addition, it focuses on what the researcher values in the research project. Axiology understands the researcher to be value bound, where the researcher is part of what is being researched, and cannot be separated, and so will be subjective. In axiology, data is collected in small samples through in-depth qualitative investigation.

Axiology further refers to the ethical issues that need to be considered when planning a research project. It considers a philosophical approach to making decisions of value or the right decision (Finnis). It also involves defining, evaluating, and understanding concepts of right and wrong behavior relating to the research. Furthermore, it considers what value the researchers ought to attribute to the different aspects of their research, the participants, the data and the audience to which the researchers ought to report the findings.

The researcher ought to ensure that she considers the regard for human value for every participant that would be involved in the research project. This consideration is facilitated by the following questions:

- What values will you live by or be guided by as you conduct your research?
- What ought to be done to respect all participants rights?
- What are the moral issues and characteristics that need to be considered?
- Which cultural, intercultural and moral issues arise and how will the researcher address them?
- How shall the researcher secure the good-will of participants?
- How shall the researcher conduct the research in a socially just, respectful, and peaceful manner?
- How shall the researcher avoid or minimize risk or harm, whether it will be physical, psychological, legal, social and economic (ARC, 2015).

Axiology refers to an ethics and value system. The researcher's ethical approach was to treat the participants with respect, and not to harm them in any way. While collecting data the researcher would try not to harm the participants, and would always be ethical when asking questions, observing, or taking photographs (Patton, 2002).

3.4. METHODOLOGY.

The data has been collected both in a desktop study and empirical investigation.

3.4.1. What is Research Methodology?

According to Cohen, Manion and Morrison (2000:44-45), methodology refers to the various approaches used to gather the data which will be used as"a basis for inference and interpretation and for explanation and prediction". Cohen et al. (2000:4) state that the aim of the methodology is "to help to promote an understanding of, not only the product of scientific inquiry, but the actual process itself". Thus, research methodology is a process during which specific tools in answering the research questions as well as gathering and analysing the data is required to solve a specific problem. The study used a qualitative research approach. A qualitative research approach was chosen as the methodology because this approach reinforces an understanding and interpretation of meaning, as well as intentions underlying human interaction. Data was collected using in-depth interviews.

The researcher used the qualitative method for the purposes of this study because the study aimed to explore phenomena in depth. This study was guided by the following research questions:

- How can educational opportunities for LWPI be accelerated through inclusive education?
- How can stakeholders such as teachers, parents and Department of Basic Education, create a teaching learning environment that is free of discrimination especially for LWPI?
- Which intervention mechanisms can be used to address the challenges of LWPI in Inclusive settings?
- Which assistive devices and /or other accommodation measures are used by teachers to assist and assess LWPI?

The data were collected in order to determine how learners, teachers, and other stakeholders understand and view physical impairments. Furthermore, the data were collected to ascertain the educational needs of learners experiencing physical impairments in inclusive schools in Mamelodi East Township. The researcher intended to provide an in-depth knowledge of the challenges faced by learners experiencing inclusion education challenges, namely, physical impairments at various schools. The researcher focused on the emerging findings from the participant's beliefs, opinions, attitudes, and ideas.

O'Leary (2004:85) describes methodology as the framework associated with a particular set of paradigmatic assumptions that will use to conduct research. Allan and Randy (2005) insist that when conducting research, the methodology should meet the following two criteria:

- The methodology should be the most appropriate to achieve objectives of the research; where
- it should be made possible to replicate the methodology used in other researches of the same nature.

McCombes (2019) describe methodology as a method that the researcher use to conduct or gather a research. The methodology or methods explains what the researcher did and how, and it also allow readers to evaluate the reliability and validity of the research. It should include:

- the type of the research the researcher did;
- how the researcher collected data;
- how the researcher analysed data;

- any tools or materials the researcher used in the research; and
- the researcher's rationale for choosing these methods.

McCombes (2019) also differentiates between methodology and methods. Methods are specific tools and procedures the researcher use to collect and analyse data (i.e. experiments, survey and statistical tests), while methodology refers to the overarching strategy and rationale of the research project. It involves studying the methods used in the researcher's field and the theories or principles behind them in order to develop an approach that matches the researcher's objectives. According to Polit and Hungler (2004:233), methodology refers to ways of obtaining, organising, and analysing data. For Burns and Grove (2003:488), methodology includes the design, setting, sample, methodological limitations, and the data collection and analysis techniques in a study.

Henning (2004:36) describes methodology as the coherent group of methods that complement one another, and that have the ability to fit to deliver data and findings that will reflect the research questions and suit the researcher purpose. According to Halloway (2005:293), methodology refers to a framework of theories and principles on which methods and procedures are based.

3.4.2. The Research Methodology / Design.

According to Mohlouoa (2014), research design is defined as the logic, procedure or master plan that sheds light on how research ought to be conducted. In this study, the researcher adopted a case study design, which Creswell (2014), says is usually used in qualitative research. It is used to understand the phenomenon in-depth, regardless of number of sites or participants in the study.

The researcher decided to use a basic qualitative research design in order to investigate inclusive challenges faced by learners experiencing physical impairments. Basic qualitative research design attempts to "uncover the participants experiences and meaning thereof, while taking in to account practices and processes that subscribe to perceptions related to the phenomenon" (Webster 2009:22-24, 38). In qualitative research, the data are presented in the form of a "narration with words" (McMillan & Schumacher, 2001:15).

The study uses a qualitative research method. Qualitative research is a scientific method of observation used to gather non-numerical data, while focusing on meaning-making. This often occurs through case study, personal experience, and life story, interviews, along with

observational, historical, interactional, and visual texts. Qualitative research answers questions related to why or how a certain phenomenon may occur, rather than how often it occurs. Qualitative research is characterised by its aims, which relate to understanding some aspect of social life, and its methods which (in general) generate words, rather than numbers, as data for analysis. It also captures some aspects of social or psychological life and putting an organising framework on the messiness of real life (Braun & Clarke, 2013).

Qualitative research is naturalistic, it studies the everyday life of different groups of people and communities in their natural setting, and it is particularly useful to scrutinising educational settings and processes. In addition, it involves an interpretive, naturalistic approach to its subject matter, in its efforts to make sense of, or to interpret phenomena in terms of the meaning people bring to them. According to Domegan and Fleming (2007) qualitative research aims to explore and to discover issues relevant to the problem at hand, where very little is known about the problem.

Qualitative research is a situated activity that locates the observer in the world. It consists of a sets of interpretive, material practices that makes the world visible. These practices transform the world, turning it into a series of representations, including interviews, conversations, field notes, photographs, recordings and memos to the self. At this level, qualitative research involves an interpretive, naturalistic, approach to the world. This means that qualitative researchers study things in their natural setting, attempting to make sense of, or to interpret, and phenomena in terms of the meanings people bring to them (Denzin & Lincoln, 2005:3).

In qualitative research, different knowledge claims, enquiry strategies, and data collection methods and analyses are employed (Creswell, 2003). Qualitative data sources include observation and participants' observation, interviews and questionnaires, documents analysis and texts, and the researcher's impressions and reactions (Myers, 2009). Qualitative research refers to inductive, holistic, emic, subjective and process-oriented methods used to understand, interpret, describe and develop a theory on a phenomenon or setting. It is a systematic, subjective approach used to describe life experiences and give the meaning (Burns & Grove, 2003:356). Furthermore, it is mostly associated with words, language, and experiences rather than measurements, statistics, and numerical figures. Researchers who use qualitative research adapt a person-cantered and holistic perspective to understand the human experience, without focusing on specific concepts. Regarding the generation of knowledge, qualitative research is characterised as developmental and dynamic, and does not use formal structured instruments

(Halloway, 2005: 4-6). It involves the systematic collection and analysis of subjective narrative data in an organised and intuitive fashion to identify the characteristics and the significance of human experience (Holloway, 2005:47-51). Qualitative research adopts a person-cantered and holistic perspectives. It develops an understanding of people's opinions about their lives and the lives of others. It also helps the researcher to generate an in-depth account that will present a lively picture of the research participant's reality (Holloway, 2005:5).

In qualitative research, the researcher is required to be a good listener, honest, friendly, non-judgmental and flexible. When working with LWPI, the researcher did not pressurise them in to describing the experience and challenges they faced in their lives, but allowed them ample time to respond in a way they felt suitable.

Qualitative research is characterised by the following attributes:

- it is effective in obtaining culturally specific information about the values, opinions, behaviours, and social contexts of particular populations;
- it seeks to understand a given research problem or topic from the perspectives of the local population it involves;
- uses an inductive form of reasoning: develops concepts, insights and understanding from patterns in the data;
- uses the emic perspective of inquiry: derives meaning from the participants perspectives;
- regards reality as subjective;
- uses concepts in the form of themes, motifs and categories;
- is ideographic: aims to understand the meaning that people attach to everyday life;
- captures and discovers meaning once the researcher becomes immersed in the data;
- considers that the whole is always more than the sum of its parts;
- Seeks to understand phenomena;
- uses words as the basis for analysing rather than numerical data;
- presents data in the form of words, quotes from documents, and transcripts.
- analyses data by extracting themes;
- uses a holistic unit of analysis, concentrating on the relationship between elements, concepts; and

- determines observations according to the information-richness of settings, and modifies types of observations to enrich understanding. (Burns and Grove, 2003:357).

According to Burns and Grove (2003:374), the advantages of qualitative research in this study is that:

- Qualitative research constitutes a means to understand human emotions such as rejection, pain, anger, powerlessness, and caring.
- Abstract thinking processes are used to develop research findings, from which meaning and theoretical implications emerge.
- The research design is flexible and unique and involves throughout the research processes.

3.5. RESEARCH APPROACH.

The study used a qualitative research approach to investigate the inclusive challenges faced by LWPI. Morgan (2014:47) regards qualitative research as typically subjective, inductive, and contextual. This is because a qualitative approach allows the researcher to interact with participants and narrate the story of participants in their own words (Nieuwenhuis, 2016). A qualitative research approach is situated at the heart of this research topic, because it allows the researcher to study things in the natural settings rather than in controlled situations. Nieuwenhuis (2016) further highlights that qualitative research refers to "methodology which allows the researcher to understand the social and cultural contexts and processes that can shape human behavior patterns".

The research methods and approach that were used in this research study included interviews, observation, and document analysis. In this exploratory, qualitative research study, the researcher interacted with participants in their natural settings. This approach is a phenomenological one. The purpose of a phenomenological approach is to describe and interpret experiences of participants regarding a particular event in order to understand the participants meaning ascribed to that events (McMillan and Schumacher 2014:372).

Nieuwehuis (2007:67-97) maintains that qualitative research acknowledges an interactive relationship between the researcher and the participants, the participants environment, and their construction of experiences. In a qualitative study, the researcher presumes that the world is made up of people with their own understanding of concepts, attitudes, values, and belief

systems (Maree, 2007:58). In order to investigate the inclusion challenges faced by LWPI, the study explores a teachers' experiences by means of semi-structured interviews.

According to Sick (1998:8-9), the following are features of a good qualitative study:
- focuses on the field;
- relies on the researchers as an instrument;
- is interpretative;
- the language usage and the voice are of utmost importance;
- is particular in nature, and
- is believable and trustworthy.

3.6. LOCATION/RESEARCH SITE.

Location refers to the physical space where the research is going to take place. The study will be conducted at Mamelodi East township primary schools.

3.7. SAMPLING.

Non-probability sampling, known as purposive sampling (also known as purposeful sampling) was used in this research study. Sample is a subset from the large pool or population (Maphoke, 2017). Maree and Van der Westhuizen (2014) note that selection is done with particular purpose in mind.

Sampling refers to the process used to select a portion of the population for the study (Maree, 2010:79.Kahn 2006 :248), According to Melville and Goddard (1996:29), sampling refers to a group from the population under study and which is the subject of the research because it is often neither practical nor possible to study an entire population. Furthermore, sampling is a process whereby a researcher chooses the participants for the research project. Sampling is the section of a subset (a statistical sample) of individuals from within a statistical population taken in order to estimate characteristics of the whole population. In addition, sampling is the act, process, or technique of selecting a suitable sample, or a representative part of a population for the purpose of determining parameters or characteristics of the whole population.

Sampling is widely used by the researchers in market research such that they do not need to research the entire population to collect actionable insights. It is also a time-convenient and cost-effective method and hence forms the basis of any research design. The concept of sample

arises from the inability of the researchers to test all the individuals in a given population. The sample must be representative of the population from which it was drawn, and it must have good size to warrant statistical analysis.

A sample is a group of people who take part in the research project or investigation. There are two types of sampling methods in research, namely probability sampling and non-probability sampling. For the purpose of the study, non-probability sampling was chosen and under non-probability sampling, purposive sampling was chosen. Purposive sampling is a non-probability sampling method that occurs when elements selected for the sample are chosen by the judgment of the research. Researchers often believe that they can obtain a representative sample by using a sound judgment, which would result in saving time and money.

In non-probability sampling, members of the population do not have an equal chance of being selected (McMillan & Schumacher 2014:149-150). The researcher chose the individuals that would participate in the study. Purposive sampling is defined as a sampling technique in which the researcher selects samples based on the subjective judgment of the researcher rather than random selection. It is a less stringent method. This sampling method depends heavily on the expertise of the researchers and is carried out by observation. This type of sampling involves the researchers using their judgment to select a sample that is most useful to the purpose of the research. In this way, the researcher wants to gain detailed knowledge about a specific phenomenon, rather than make statistical inferences. An effective purposive sampling must have a clear criteria and rationale for inclusion.

In purposive sampling personal judgment needs to be used to choose cases that help answer research questions or achieve research objectives. Purposive sampling can be divided into the following six categories:

- typical case;
- extreme/deviant case;
- critical case;
- heterogeneous/maximum variation sampling;
- homogeneous sampling; and
- theoretical sampling.

Purposive sampling is meanwhile characterised by the following advantages:

- purposive sampling is one of the most cost-effective and time-effective sampling method available;

It is effective in exploring anthropological situations where the discovery of meaning can benefit from an intuitive approach;

- It is less expensive;

- statistical manipulations are much easier with smaller data sets, and it is easier to avoid human error when inputting and analysing the data; and

- sampling can actually be more accurate than studying an entire population, because it affords the researcher a lot more control over the subjects. (McMillan & Schumacher, 2014: 152-154.)

Purposive sampling has the following disadvantages:

- vulnerability to errors in judgment by research;

- low level of reliability and high levels of bias; and

- inability to generalise research findings. (McMillan & Schumacher, 2014:154).

3.8. POPULATION.

Population includes all elements that meet certain criteria for inclusion in a study (Burns & Grove, 2003: 43).

Population refers to a group of persons, objects, or items from which samples are taken for measurements. It is also a total group of individuals from which the sample might be drawn. Population is a set of units that researchers are interested in studying and these units ought to have at least one common characteristic. The units could be people, cases, organisations, or institution. According to McMillan and Schumacher (2014:143), population refers to a group of elements or cases, whether individuals, objects, or events, that conform to specific criteria and to which researchers intend to generalise the results of the research. They further state that this group is also referred to as the target population.

The participants were drawn from Tshwane South District, from four schools. Initialy the researcher targeted 25 participants (from five schools), but due to covid 19 it was reduced to 20 participants. The participants comprise four principals, four departmental heads, four educators, four parents and four learners, each participant from one school. The total number of participants is 20.

Table 3.1 Number of the participants.

Principals	4
Departmental Heads	4
Educators	4
Learners	4
Parents	4

The schools were identified because they were primary schools, and they admitted learners with physical impairments. The two primary schools are mainstream, the 3rd one is a special school and the 4th one is a full service school which according to White paper 6 is a resource center which has to support the two mainstream inclusive schools. The primary schools were chosen because the researcher is a primary school teacher who on daily basis observe the challenges that LWPI encounter in primary schools and this necessitated this research study.

3.8.1 Description of the participating schools and participants analysis.

Each of the four schools is located in Mamelodi East Township. The first two schools are mainstream, the third is a school for learners with special needs, and the fourth is a full-service school. All schools are included in Circuit Five. The children originated from adjacent residences and a nearby informal settlement. Every school teacher is African. In all schools, the African language is the language of teaching and instruction (LOLT). All schools from Grade R through the seventh grade participate in the National School Nutrition Programme and are designated fee-free. Currently, the learners enrolled in all four institutions are African.

3.8.1.1 School 1.

School 1 is located in Quintile 3, which has the greatest poverty score based on the surrounding neighborhood and infrastructure. This quintile 3 schools receive greater financing from the Department of Education's budget, as well as the National School Nutrition Programme, for which they are not required to pay. This school is a special school in a township setting. Autism is present among learners with physical and learning difficulties at this school.

3.8.1.2 School 2.

This institution is Quintile 1 on the basis of the community around the school and the school's infrastructure. Quintile 1 schools are regarded as the worst in terms of financial allocation. Schools in this category receive higher departmental financial support and are exempted from

fees under the National School Nutrition Programme. School 2 is a comprehensive institution in a community bordered by informal settlements. The DBE renovated the school's building structure, which is now brand-new. The school begins in Grade R and ends in Grade 7.

3.8.1.3 School 3.

School 3 falls within Quintile 4 category. In Quintile 4, schools are considered less impoverished and are fee-paying institutions and do not participate in the National School Nutrition Programme. This school is a public institution housed in an aging structure inside the township. The school begins in Grade R and ends in Grade 7.

3.8.1.4 School 4.

This school is in Quintile 4 and is considered to have a lower level of poverty. It is a fee-paying school that does not participate in the School Nutrition Programme. This public school is located in a township adjacent to informal settlements. The school's Grades R through 7 are housed in an aging structure and are located in a very old building.

3.8.2 Participants Analysis.

The four schools that the researcher visited to collect data were ranked by quintile, and the following pseudonyms were created:

School 1, School 2, School 3, and School 4. Each school's case was determined by inspecting and analyzing each school's documents pertaining to learners' inclusive education challenges. Principal 1a, Principal 2b, Principal 3c, and Principal 4d are the names of the principals. The names of the departmental heads were HD 1a, HD 2b, HD 3c, and HD 4d. Learners were assigned the following pseudonyms: Learner 1a, Learner 2b, Learner 3c, and Learner 4d. Parent 1a, Parent 2b, Parent 3c, and Parent 4d were identified as the parents. Therefore, the data from each school was compiled using data from observations, document analysis, and interviews.

3.9. DATA COLLECTION.

Data collection is a process of gathering the desirable information carefully, with least possible distortion, so that the analysis may provide answers that are credible and stand to logic (Jupp, 2006; McMillan and Schumacher, 2014:369). It is also defined as a process of gathering and measuring information on targeted variables in an established system, which then enables one to answer relevant questions and evaluate outcomes. In addition, it also refers to the process of

gathering data about the phenomenon under investigation. Thus, the data collection strategy refers to the way in which the researcher gathers information (McMillan and Schumacher, 2001:39). The data collection strategy, through interviews, documents analysis and field observations, enabled the researcher to understand the phenomenon of physical impairments in schools (McMillan and Schumacher, 2014:369). In qualitative research, there are five major methods of gathering data, namely: observations, interviews, document review, questionnaires and use of audio-visual materials (McMillan and Schumacher, 2014:369). For the purposes of this study, the researcher used only three methods to collect data. Creswell (2005: 202) lists the following steps involved in the data collection process in a qualitative research study:

- selection of participants and site identification for the research;
- gaining access to the data;
- determining the data to be collected; and
- developing data collection forms and using ethical considerations in administering the research.

In order to collect rich data from the participants, a series of interviews in the form of open and in-depth interviews were conducted. Data collection methods are classified in two categories, namely qualitative data and quantitative data. For the purpose of this study, the researcher chose qualitative data. In qualitative data, data can be conveyed in the form of words, descriptions of situations, events, people, interactions, and observed behaviors, direct quotations from people, and excerpts or entire passage from documents, correspondence, records and case studies" (Patton, 2002:324).

Qualitative data are mostly non-numerical and usually descriptive or nominal in nature. Qualitative data have the following attributes:

- they tend to be open-ended and have less structured protocol (i.e. a researcher may change the data collection strategy by adding, refining, or dropping techniques);
- they rely more heavily on interactive interviews, participants may be interviewed several times to follow up on a particular issue, clarify concepts, or check the reliability of data; and
- they use the triangulation to increase the credibility of their findings (i.e. researchers rely on multiple data collection methods to check the authenticity of their results).

Data collection techniques that were employed for this study are:

- interviews,
- documents analysis; and

- field observations.

3.9.1. Field Observations.

Observation is a way for the researcher to see and hear what is occurring naturally in the research site (McMillan and Schumacher, 2014: 376).

Observation is defined as "the systematic description of events, behaviours, and artefacts in the social setting chosen for the study" (Marshall & Rossman, 1989). The researcher observes the behaviour of participants and records the results of these observations. The observations took place during school hours for the duration of thirty minutes. Observation method is roped by the researcher to develop an overall understanding of the phenomena being investigated, in the most objective and accurate way possible (De Walt and De Walt, 2002). For example, in an interview method, the participants may become conscious of their responses being monitored. They may give responses that may deviate from what they may do in real life, as they want to portray themselves in a favourable light. On the contrary, observation method allows for noting people's behaviour when they are not aware of it (Cargan, 2007). Observation methods allow the researcher to look for non-verbal cues about feelings, check the pattern of interaction, observe how participants interact, and also record the time they spend in different activities (Schmuck, 1997).

Observation technique have the following characteristics:

- observations are systematically recorded, often using an observation check list;
- data are analysed using both quantitative and qualitative data analysis methods;
- observations are guided by the research questions.

For this reason, the observation is conscious and planned. They differ from casual everyday observations of behaviour, which are often casual, selective, and inaccurate. (McMillan & Schumacher, 2014: 228).

Observation research methods refer to a more specific method of collecting information that is very different from interviews or questionnaires (McMillan and Schumacher, 2014:224). As a technique for gathering information, the observational method relies on a researchers seeing and hearing things and recording these observations, rather than relying on subjects self-report responses to questions or statements. According to McMillan and Schumacher (2014:376), observation is a way for the researcher to see and hear what is occurring naturally at the

research site. By observing naturally occurring behaviour over many hours and days, the researcher hopes to obtain a rich understanding of the phenomenon being studied. Typically, the nature of observation is comprehensive, in the sense that it is continuous and open to whatever may be significant. It facilitates a deep understanding of the context and the participant's behaviour, which allows collection of a more complete set of data to reflect the importance of the effect of the context. The steps that are followed when conducting qualitative observation are as follows:

- select site;
- determine role;
- gain entry;
- initial observation;
- revise role;
- detailed observation; and
- exit field (McMillan and Schumacher, 2014:376).

The researcher would observe learners in the classroom, their movements, how they interact with their peers, behaviours and learning, during break time, and during physical education period. The researcher would also observe their lesson in the classroom, how they learn; and the challenges they experienced in the classroom during the lesson and also the teacher's challenges would be observed. In addition, the researcher would also observe the curriculum, teaching methods and intervention strategies applied to accommodate the learning needs of all learners. The observation was recorded by using the checklist. Once the study is completed the records would be kept in a safe locker for the period of five years.

3.9.2. Documents Analysis.

Documents analysis can provide background information and broad coverage of data, and is therefore helpful in contextualising one's research within its subjects or field (Bowen, 2009). Documents analysis is a type of qualitative research in which documents are reviewed by the analyst in order to assess an appraisal theme. Furthermore, it is a form of qualitative research in which documents are interpreted by the researcher to give voice and meaning regarding an assessment topic (Bowen, 2009). Analysing documents incorporates coding content into themes similar to how focus group or interview transcripts are analysed (Bowen, 2009).

There are three primary types of documents according to O Leary (2014):

- public records: the official, ongoing records of an organization's activities, i.e. include students' transcripts, annual reports, policy manuals, students' handbooks, strategic plans and syllabi;
- personal documents: first person accounts of an individual's actions 'experiences, and beliefs, i.e. include calendars, e mails, duty logs, incident report and journals; and
- physical evidence: physical objects found within the study setting (often called artefacts), i.e. include flyers, posters, agendas, handbooks and training materials.

Documents analysis have the following advantages:

- documents analysis is an efficient and effective way of gathering data because documents are manageable and practical resources;
- documents are commonplace and come in a variety of forms, making documents a very accessible and reliable source of data;
- obtaining and analysing documents is often far most cost efficient and time efficient than conducting your own research or experiment (Bowen, 2009); and
- documents are stable" non-reactive" data sources, meaning that they can be read and reviewed multiple times and remain unchanged by the researchers influence or research process (Bowen, 2009).

For the purpose of the study, the researcher analysed the following documents: Inclusive Education White Paper 6, SIAS policy document, curriculum differentiation policy document, admission policy school policy, and SBST policy.

Regarding curriculum differentiation, the researcher checked whether the teaching methods, content, curriculum and curriculum differentiation were adapted to accommodate all learners learning styles and abilities. When it comes to school policy and admission policy, the researcher checked what the school policy said about LWPI. The researcher also checked the SBST programme to determine if schools had any and whether it they were functional. With regards to SIAS policy, the researcher checked if the teachers were attending SIAS

programmes, and if schools managed and supported teaching and learning processes for learners who experience barriers to learning within the framework of the National Curriculum Statement Grade R-12. The researcher also reviewed Education White Paper 6 (2001) as it outlines how discriminatory practices and imbalances of the past can be corrected and the principles of inclusion promoted, by focusing on overcoming barriers in the system p .17).

According to O' Leary (2014) the researcher should consider two major issues when beginning documents analysis.

- The first issue is the issue of bias, both in the author and creator of the document, and the researcher as well. The researcher must consider the subjectivity of the author and the personal biases she may be bringing to the research. Bowen adds that the researcher must also evaluate the original purpose of the document such as the targeted audience (2009).
- O' Leary's second major concern is the "unwilling" evidence, or latent content of the document. A latent document refers to the style, tone, agenda, facts, or opinions that exists in the documents. Bowen adds that documents ought to be assessed for their completeness, in other words, how selective or comprehensive their data is (2009).

O'Leary (2014) summarised the important major issues as follows:
- gather relevant texts;
- develop an organisation and management scheme;
- make copies of the originals for annotation;
- assess authenticity of documents;
- explore documents agenda and biases;
- explore background information (i.e. tone, style, purpose);
- ask questions about the documents (i.e. who produced it? why? when? type of data); and
- explore content.

3.9.3. Interviews.

Nieuwenhuis (2016) correctly observes that as naturalistic conversation between an interviewer and participants, interviews provide rich description of practices and experiences from the participant's perspectives.

Interview refers to structured and unstructured verbal communication between the researcher and the participants, in which information is presented to the researcher. In this study, the data was gathered by interviewing research participants in a quite environment, free from disturbances, where they felt safe. Interviews are methods of gathering information through oral questions, using a set of preplanned core questions. According to Shneiderman & Plaisant, (2005), interviews can be highly productive, since the interviewer can pursue specific issues of concern that may lead to focused and constructive suggestions.

According to De Vos et al. (2002:300), interviews are regarded as a primary source of data collection. McMillan and Schumacher (2001), further state that the way in which individuals perceive and make sense of the world is extremely important in an interview. The main advantages of interview method of data collection (Genise, 2005 and Shneiderman and Plaisant 2005) are that:

- they are good at obtaining detailed information;
- few participants are needed to gather rich and detailed data; and
- direct contact (face-to-face) with the users often lead to specific, constructive suggestions.

According to Burns & Grove, (2003:285) and, De Vos (2002:302), interviews have the following advantages:

- Interviews allow the collection of data from participants unable and unlikely to complete questionnaires, such as those who's reading, writing, and ability to express themselves is marginal.
- Interviewing is a flexible technique that allows the researcher to explore greater depth of meaning than can be obtained with any other technique.
- Interpersonal skills can be used to facilitate co-operation and elicit more information.
- There is a higher response rate to interviews than questionnaires, leading to a complete description of the phenomenon under study by the participants.

Depending on the need and design, interviews can be structured, unstructured or semi - structured with individuals. For the purpose of the study, the researcher used semi-structured interviews.

Through the interviews the teachers, learners, and parents shared their individual views in response to questions the researcher posed to them. The tape recorder was kept in order to record everything the researcher had observed during the process of collecting the data. The researcher also noted down the feelings, reactions, body language, and experiences from the participants. Semi-structured interviews allowed the participants to express their opinion and be open to share their experiences. Though interviews are often considered the best data collection methods, their complexities are often underestimated (Pervez and Kjell, 2002). Thus, an interview is a research method which is used in order to elicit desired answers. The researcher decided to use the interview as a research instrument tool for the following purposes:

- the opportunity for probing;
- the need to acquire personal data; and
- the envisaged positive response (Kajournboon, 2010:3).

The researcher interviewed 20 participants who all provided rich data through their personal experiences.

3.9.3.1. Semi-structured interviews.

A semi-structured interview is more open and allows the researcher or the participants to divert, if an idea is to pursue in more detail. In a semi-structured interview, the researcher proceeds with a general outline of themes, which can be further expanded when needed. The questions can be asked to different participants in different ways, keeping in view the desired context. This method of interviews has both structured and unstructured features and therefore are both closed and open questions. As a result, it has the advantage of both structured and unstructured methods. In order to be consistent with all participants, the interviewer has a set of pre-planned core questions for guidance such that the same areas are covered with each interviewee. As the interview progresses, the interviewee is given an opportunity to elaborate or to provide relevant information if he/she opts to do so. In semi-structured interviews participants are allowed to express their views and opinions.

Semi-structured interview takes a more open-ended approach. The goal of a semi-structured interview is to recognise patterns in participants' interactions and to determine how the

participants feel about a given phenomenon. A semi-structured interview has the following advantages:

- it encourages two-way communication;
- it allows participants time to open up about sensitive issues;
- it provides qualitative data to compare to previous and future data;
- it allows for open-ended participation from participants for more in-depth information;
- the interviewer can prepare questions before hand to help guide the conversation and keep participants on topic; and
- and it provides an opportunity so that interviewers can learn answers to questions and the reasons behind the answers. (McMillan & Schumacher, 2014: 381).

While semi-structured interviews are a great way to delve deeper into information issues, this type of methodology is not without its disadvantages.

The limitations of semi-structured are as follows:

- it is time-consuming to sit down with participants and conduct an open-ended interview;
- it requires extensive resources;
- it can be challenging to find an interviewer with the right amount of training to conduct the interview properly;
- it requires more interviewees to draw conclusions and make comparisons; and
- it is possible to write long leading questions, and that could bias the interview. (McMillan & Schumacher, 2014:381.)

3.10. DATA ANALYSIS AND INTERPRETATION.

According to Mohlouoa (2014:60), data analysis is the process whereby a great amount of data is broken down into handy themes, patterns, trends and relationships in order to analyse, summarise, and interpret them. The data was analysed using thematic analysis method. According to Braun & Clarke, (2013) thematic analysis is a method for systematically, identifying, organising, and offering insight into, patterns of meaning (themes) across a dataset. Thematic analysis is a descriptive, narrative methodology that systematically reduces data

collected in a flexible way that dovetails with other data analysis methods. According to Braun & Clarke (2013) they are six steps for thematic data analysis:

- researchers familiarize themselves with collected data ;
- a search for themes ;
- review of emerging themes ;
- the definition, and categorising themes;
- presentation of findings and
- producing the report .

Similarly, data were analysed by following the thematic data analysis steps suggested by Leedy and Ormrod (2010). Firstly, the researcher arranged specific facts about the participants in a logical order and identified the categories of data. As a result, it was much easier for the researcher to cluster data into meaningful groups. This was followed by examining specific data for specific meaning and the meaning was then analysed in relation to the research problem. The next step was to make an overall analysis and draw up generalizations (Kayumbu, 2017:56). The last step was to make conclusions and recommendations from the gathered data. After the data had been collected, the researcher started the process by listening to the recorded data before transcribing the information. Some participants answered the questions in sepedi and the resecher translated the answers in English.

The researcher also checked the themes against extracts of data which were generated. This was followed by grouping a number of potential themes together for a broad theme (Nene, 2017:52). The researcher then formulated four major themes. The themes directly responded to the research objectives of the study.

The data was inductive in nature. The purpose for using an inductive data analysis are to: (1) condense extensive and varied raw text data into a brief, summary format, (2) establish clear links between the research objectives and the summary findings derived from the raw data and (3) develop the model or theory about the underlying structure of experiences or processes which are evident in the raw data, (Thomas, 2014). According to Bingham &Witkowsky (2022) inductive analysis is a more emergent strategy, where the researcher reads through the data and allows codes to emerge/names concepts as they emerge. Gabriel (2013) defines inductive approach as concerned with the generation of new theory emerging from the data. The qualitative data analysis process is not straightforward and it requires a researcher to understand how to make sense of the data presented (Mouton, 2014).

Qualitative data analysis can be described as the process of making sense from research participants views and opinions of situations, corresponding patterns, themes, categories and regular similarities (Cohen et al., 2007:461). Nieuwenhuis (2007:99-100) notes that, qualitative data analysis is an ongoing process implying that data collection, processing, analysis and reporting are intertwined, and not necessarily a successive process. Le Compote and Schensul (1999) have, defined data analysis as the process a researcher used to reduce data to a story and its interpretation. Data analysis is a process of reducing large amount of collected data to make sense of them. Patton (2002) indicates that three things occur during analysis, namely: data are organised, data are reduced through summarisation and categorisation, and patterns and themes in the data are identified and linked.

Analysis of qualitative data research notes begins in the field, at the time of observation, interviews, documents analysis, as the researcher identifies the problem and concepts that appear likely to help to understand the situation. Reading notes or transcripts is an important step in the analytic process. According to Cohen et al. (2007: 86-87), data analysis involves the reduction and interpretation of data. For the purpose of this study, the researcher reduced the body of data which had been obtained from the participants and the documents review by coding the data into categories. The data generated by the participants was structured into a manageable format before being analysed. In structuring the data, the researcher took into consideration what Creswell (2009:183) said regarding the structuring of qualitative data for analysis purpose and analysed each participants response.

Qualitative data analysis is primarily an inductive process of organizing data into categories and identifying patterns and relationships among the categories (McMillan and Schumacher, 2014:395). McMillan and Schumacher (2014:397), stated the following steps in analysing qualitative data:

- collect data;
- organise data;
- transcribe data into segments;
- code data;
- describe data;
- categories data; and
- develop patterns.

In order for the researcher to avoid drawing preliminary conclusions and influencing the type of data collected, the researcher began the data analysis during the interviewing and observation process and was backed up by an extensive literature review on inclusive education challenges faced by LWPI. According to McMillan and Schumacher (2014:397-408), the following are the basic elements required to analyse qualitative data:

- codes: identifying concepts from raw data through multiple coding processes;
- categories: linking codes to create a unit or a category;
- patterns: identifying repeated units (a pattern) from categories; and
- themes: creating a theme that represents similar patterns.

Interpretive researchers attempt to derive their data through direct interaction with the phenomenon being studied. Bogdan and Biklen (2003) define qualitative data analysis as working with data, organising them, breaking them into manageable units, coding them, synthesising them, and searching for patterns. The aim of qualitative data is to discover patterns, concepts, themes, and meaning. Data analysis is a mechanism for reducing and organising data to produce findings that require interpretation by the researcher (Burns & Grove, 2003:479). Data analysis is a challenging and a creative process characterised by an intimate relationship of the researcher with the participants and the data generated (De Vos, 2002:339). Marshall and Rossman (1989:150) describe data as the process of bringing order, structure, and meaning to the mass of collected data. It is described as messy, ambiguous, and time-consuming, but a creative and fascinating process.

The following are the techniques for qualitative data analysis:

- documentation of the data and the process of data collection;
- organisation and categorisation of the data into concepts;
- connection of the data to show how one concept may influence another;
- corroboration and legitimisation, by evaluating alternative explanations disconfirming evidence and searching for negative cases; and
- representing the account (reporting the findings).

3.10.1. Trustworthiness and credibility.

Bell (2004:139) indicates that there is always a sense of bias that may dilute the trust worthiness and the credibility of research because the researcher is a human being who may influence the participant's response. In order to ensure the credibility and trustworthiness of the research findings, it is essential that the researcher audio-records all the interviews, transcribing them verbatim and ensuring that participants verify the transcribed data. Credibility in qualitative research means the confidence of the data. In addition, credibility in research is an assessment of whether or not the research findings represent a "credible" conceptual interpretation of the data drawn from the participants' original data in terms of quality and credibility. According to Maree (2007:113) trustworthiness is regarded as the most procedural aspect in the qualitative method, and involves checking the credibility of the findings that are deduced from the analysed data. Credibility is also concerned with how confident the qualitative researcher is in the truth of the research study's findings. Streubert Speziale and Carpenter, (2003:364), describe trustworthiness as establishing the validity and reliability of qualitative research. Qualitative research is trustworthy when it accurately represents the experiences of the study participants. Credibility is demonstrated when participants recognize the reported research findings as their own experiences (Streubert Speziale & Carpenter, 2003:38). To ensure credibility, the researcher must make sure that participants are identified and described accurately (Holloway 2005:8).

3.10.2. Transferability.

According to Mohlouoa (2014:63), transferability refers to the degree to which the research findings can be transferred to other settings and contexts.

The concept of transferability refers to the degree to which the research results may be generalised to the wider population (Cohen et al., 2002:109). Readers should be able to generalise the findings to any situation similar to the situation to which the findings refer. In addition, if the specifics are comparable, the original research would be deemed more credible. Transferability refers to the degree to which the research can be transferred to other contexts. Sufficient rich data provided by the researcher assists the reader in using the research findings to determine whether or not the study is transferable. Lincoln and Guba (1985:316) state that the researcher must not provide the paradigm for transferability, but that readers must create it through their conclusions.

Lincoln and Guba note that "as the naturalist cannot specify the external validity of an enquiry, she can only give a thick description essential to enable interested in making transfer to reach a conclusion about whether a transfer can be contemplated as a possibility". Transferability is also called "fittingness "since it determines whether the findings fit in or are transferable to similar situations (Streubert Speziale & Carpenter, 2003:39).

3.10.3. Dependability.

According to Selepe (2016:39), a dependable study ought to provide an opportunity to be audited. According to Anney (2014:280), dependability means that the outcome of the research will remain unchanged over a period of time so that if another researcher were to embark on a similar study, they would produce similar findings. In this instance, the researcher will keep the documents for auditing if the need arises. Furthermore, dependability refers to the extent to which the study could be repeated by other researchers, where the findings could be consistent. In other words, if a person wanted to replicate the study, they ought to have enough information from the research report to do so, and to obtain similar findings as the previous study.

3.10.4. Confirmability.

"This is a process to establish whether the researcher has been bias during the research process" (Anney, 2014:279).
According to Anney (2014:279), confirmability refers to the fact that findings from the research could be authenticated by other researchers in the field. Confirmability dispel the idea that the research findings are things created by the inquirers mind, but have been processed from raw data. This means that the researcher will be impartial and objective in reporting what the participants articulate. Confirmability refers to the degree to which the outcomes could be confirmed or corroborated by other people. A crucial criterion for confirm ability is the degree to which the investigator confesses their own predispositions.

3.11. ETHICAL CONSIDERATIONS.

It is everybody's fundamental right to be treated in an ethical manner (Maree and Van der Westhuizen, 2014).
Creswell (2003) states that a researcher has an obligation to respect the rights, needs, values, and desires of the informants. The researcher should adhere to the ethical considerations

because she had a moral obligation to strictly consider the rights of the research participants who were expected to provide knowledge to the study (Streubert Speziale & Carpenter 2003:314). The researcher considered it very important to always establish respect between her and research participants and to respect them as autonomous beings, thereby enabling them to make sound decisions (Burns & Grove, 2003:65; Streubert Speziale & Carpenter, 2003:314). The researcher should adhere to ethical guidelines by protecting the dignity and confidentiality of research participants.

The study was directed by the ethical guidelines, which form the standards according to which both the researchers and the participant's conducts are evaluated. These ethical guidelines formed the basis of the research interaction between the researcher and the research participants throughout the research project. According to Melville and Goddard (1996:113), ethical issues need to be considered, in terms of a morally acceptable research topic as well as morally acceptable methods of researching a particular topic. Cohen et al. (2003:56) state that ethics is a matter of principled sensitivity to the rights of others. Ethics notes that, while truth is good, respect for human dignity and nature is important. Thus, ethics deal primarily with what is right or wrong, and what is good and bad.

The following ethical measures were taken into account for this study:

3.11.1. Institutional approval.

The permission to conduct the research was requested from University of South Africa. The Ethical Clearance Certificate was granted in this regard.

3.11.2. Voluntary participation and informed consent.

Voluntary participation means that research participants cannot be compelled, coerced, or required to participate. No-one should be forced to participate in research study (McMillan and Schumacher, 2014:130). The researcher made it clear to the research participants that the research study was only for academic purposes and that their participation in it was absolutely voluntary, where no-one was forced to participate, and were free to withdraw at any time should they wish to do so. Informed consent is achieved by providing subjects with an explanation of the research, an opportunity to terminate their participation at any time with no penalty, and full disclosure of any risks associated with the study (McMillan and Schumacher, 2014:130).

Consent is usually obtained by asking subjects (or parents of the minor subjects) to sign a form that indicates understanding of the research and consent to participate in the study (McMillan and Schumacher, 2014:130). The researcher informed the participants (teachers, parents, and learners) of the purpose, nature, data collection methods, and extent of the research prior to commencement. The researcher obtained their informed consent in writing in the format given in the appendices. According to Booyse et al. (2011:35), the researcher cannot oblige the participants to continue to provide data or information on the basis of the initial agreement to participate.

3.11.3. Anonymity and confidentiality.

Anonymity means that the researcher cannot disclose the identity of research participants. Confidentiality means that no one has access to individual data or the names of the participants except the researcher (s) and that the subjects will not know or see the data before they participate (McMillan and Schumacher, 2014:133-134; Maree and Van der Westhuizen, 2014). The researcher ensured that the confidentiality and anonymity of the participants by the removal of any identifying characteristics before widespread dissemination of information. The researcher made it clear that the participants' names would not be used for any other purposes, nor would information be shared that reveals their identity in any way. In other words, the researcher did not use their real names or the names of the institution to which they were attached. Creswell (2009:88-90) argues that the anonymity of research participants in social research must be respected and thus, the researcher used pseudonyms for both the participants and institutions.

According to Booyse et al. (2011), anonymity means that those studying or reading the research results will not be able to establish the identity of the research participants on the basis of his /her responses.

3.11.4. Respect for human dignity.

All human beings possess equal interest, worth and therefore ought to be accorded the highest respect and care, regardless of age, gender, socio economic status, health conditions, ethnic origin, political ideas and religion. The researcher should make it to the point that she always respects the dignity of the research participants.

3.11.5. Beneficence and justice.

According to Landsberg et al. (2016:39), beneficence requires not only protecting individuals from harm, but also acting in their best interests and securing their wellbeing. The researcher ought to put the participant's interests and wellbeing at heart throughout the study. Justice presumes the following obligations to treat all people equally, fairly, and impartially. No person should be exploited, and each individual ought to be treated justly and fairly (Landsberg et al., 2016:39).

3.11.6. Avoiding deception.

The researcher made it clear to the participants that participating in the research study is voluntary and there will be no payment or reimbursement of some sort. According to McMillan and Schumacher, (2014:131) deception refers to when the researcher does not inform the participants about the nature and purpose of the study (participants do not know what is being studied). For the purpose of this study, the researcher informed the participants about the nature and the purpose of the research study. The researcher should generally be open and honest with participants about all aspects of the study (McMillan and Schumacher, 2014:129).

3.11.7. Protection from harm.

The researcher assured the participants that they would not be harmed in any way, nor would they be exposed to physical or psychological harm during the research project. McMillan and Schumacher (2014:131) note that, research should never result in physical or mental discomfort, harm, or injury to the participants. The researcher ensured that the participants were protected from covid_19 by maintaining social distancing, sanitising hands and always wearing facial mask. The researcher further protected her participants by not asking things related to information that could have resulted in embarrassment or danger to home life, school performance, friendships, and the like as well as direct negative consequences. The researcher needs to carefully anticipate such risks, and do whatever is required to minimise them, (McMillan and Schumacher, 2014:131).

3.12. SUMMARY.

This chapter explained the research methodology and the research design applied in the study. Furthermore, the chapter discussed the theoretical framework, research paradigm, location and

population, sampling procedures, research approach, data collection and data analysis, as well as ethical issues. The next chapter will present data analysis and data interpretation with reference to literature review.

CHAPTER 4: DATA PRESENTATION AND ANALYSIS

"Educators hold the keys to a door yet to be opened."

4.1 INTRODUCTION.

The preceding chapter examined the research methods utilised for this study. There are five major data collection methods used in qualitative research: observation, interviews, questionnaires, documents analysis, and the use of audiovisual resources (McMillan and Schumacher, 2014: 369). Documents analysis, interviews, and observations were used to collect data for this study. This chapter discussed the presentation and interpretation of data gathered from interviews, documents analysis, and observations. Using a qualitative methodology, the data were analysed and interpreted. According to Nieuwenhuis (2016:100), there must be a connection between paradigms, research design methods, and data analysis. Through documents analysis, observations, and interviews, data were collected. Interview transcripts were typed and categorised. According to Webster and Tisdell (2016), qualitative data are susceptible to ambiguity and require themes for clarity and effective interpretation. Patton (2015) affirms that data analysis methods concentrate on organising and classifying data for the objectives of analysis and reducing findings into themes by coding data for discussion.

Examining the data collection in the research field in depth allowed for a clear grasp of the acquired data segmented into several themes and sub-themes (Creswell: 2015). Although McMillan and Schumacher (2014) advocate for a comprehensive approach to data analysis and presentation, Creswell (2014) suggests that literature-related exploratory questions should be considered throughout data analysis. As a result, Ryan: (2015) indicate that qualitative research data explains experiences, enhances comprehension of complex happenings, and permits participants to express their respective perspectives. The data were analysed and interpreted using the Creswell approach, which is described in Chapter 3. Before presenting and evaluating the results, it is crucial to provide a brief summary of each participant's background. Using the information gathered from the interviews, a profile of the twenty participants was constructed.

Due to Covid-19, telephone interviews were undertaken, but other participants chose face-to-face interviews, and all Covid-19 protocols were followed. To analyse is to classify, organize, modify, and summarise data in order to answer research questions, but to interpret is to explain and discover meaning (De Vos et al., 2005:218). The objective of analysis is to reduce data to

an understandable format so that the relationships between research problems can be examined, tested, and conclusions drawn (De Vos et al., 2005:218). In contrast, interpretation use the results of analysis, make inferences applicable to the researched relationships, and form conclusions regarding these relationships (De Vos et al., 2005:218). This research involved participants from four schools; the researcher interviewed one principal, one department head, one teacher, one parent, and one learner from each school. All interviews were conducted during school hours. Interviews were scheduled at the discretion of the different school principals. All of the participating schools were located in the Circuit Five Tshwane South District of Gauteng Province.

The primary objective of this research, as stated in Chapter 1, is the following:

➢ To highlight the prodigious importance of accelerating education opportunities for LWPI in inclusive settings in order to transform the education system and meet the United Nation (UN) goal of education for all.

As stated in Chapter 1, the primary research question and sub-questions that guide this study are as follows:

Main Research Question:

How can educational opportunities for learners with physical impairments be accelerated through inclusive education?

Sub-Questions:

- How can stakeholders such as teachers, parents and the Department of Basic Education, create a teaching learning environment that is free of discrimination, especially for LWPI?
- Which intervention mechanisms can be used to address the challenges of LWPI in inclusive education settings?
- Which assistive devices and / or other accommodation measures are used by teachers to assist and assess LWPI?

4.2 DATA ANALYSIS OF THE PARTICIPANTS.

4.2.1 Interviews with the principals ,departmental heads ,teachers ,parents and learners.

Prior to the interviews, the questions were distributed to all the participants so that they could prepare their content in advance. However, the researcher modified the interview questions to demonstrate sensitivity to the individual and the school setting.

4.2.2 Information on principals, departmental heads, teachers, parents and learners.

Table 4.1 Particulars pertaining to principals and their schools.

School 1	School 2	School 3	School 4
Principal 1a	Principal 2b	Principal 3c	Principal 4d
Age: 46 Race: Gender: Male	Age: 52 Race: African Gender: Female	Age: 56 Race: African Gender: male	Age: 61 Race: African Gender: Female
No. of learners in school: 394	No. of learners in school: 1298	No. of learners in school: 1200	No. of learners in school: 789
Average numbers of learners in classroom: less than 20	Average numbers of learners in classroom: 48	Average numbers of learners in classroom: 46	Average numbers of learners in classroom: less than 55
Years of teaching experience: 16	Years of teaching experience: 27	Years of teaching experience: 30	Years of teaching experience: 40
Years as a principal: 6 years	Years as a principal: 7 years	Years as a principal: 2 years	Years as a principal: 8 years
No. of GDE posts:36	No. of GDE posts: 41	No. of GDE posts: 46	No. of GDE posts: 19
Years in school: 6	Years in school: 7	Years in school: 2	Years in school: 8
Grade teaching: 5	Grade teaching: 7	Grade teaching: 4	Grade teaching: none
Subjects teaching: Natural Science.	Subjects teaching: English and LO	Subjects teaching: FAL	Subjects teaching: None
Highest qualifications: B.Ed. honors and currently studying LLB.	Highest qualifications: B.Ed. honors in Education management,	Highest qualifications: B.Ed. honors in Education Management.	Highest qualifications: Diploma in PTC.

	Advanced diploma in remedial education.		
Other roles in school: Teacher Ex-officio in the finance committee and SGB. School LoLT: English	Other roles in school: Teacher School LolT: English.	Other roles in school: Teacher School LoLT: Sepedi.	Other roles in school: SGB Ex-office and motivator. School LoLT: Sepedi.
Years in school: 6	Years in school: 7	Years in school: 2	Years in school: 40
School quintile: 3	School quintile: 1	School quintile: 4	School quintile: 4
No. of SGB posts: none	No. of SGB posts: none	No. of SGB posts: none	No. of SGB posts: none

Table 4.2 Teachers' biographical information

School 1	School 2	School 3	School 4
Teacher 1a	Teacher 2 b	Teacher 3c	Teacher 4d
Age: 45	Age: 51	Age: 49	Age: 54
Race: African	Race: African	Race: African	Race: African
Gender: female	Gender: female	Gender: female	Gender: female
Years of teaching experience: 15	Years of teaching experience: 6	Years of teaching experience: 15	Years of teaching experience: 14
Position held at school: Teacher	Position held at school: Teacher	Position held at school: Teacher	Position held at school: Teacher
Years at school: 6	Years at school: 6	Years at school: 15	Years at school: 11
Years in position: 6	Years in position: 6	Years in position: 15	Years in position: 11
Number of learners in classroom: 9	Number of learners in classroom: 48	Number of learners in classroom: 46	Number of learners in classroom: 30
Grade currently teaching: SPID Class	Grade currently teaching: 5 and 6	Grade currently teaching: 4-7	Grade currently teaching: 1

Subjects teaching: Life skills for living, communication, spatial development, numeracy.	Subjects teaching: Grade 5 Natural Science and isiZulu and Grade 6 Life skills.	Subjects teaching: FAL and Natural Science	Subjects teaching: Sepedi, Life Skills, Mathematics, FAL English.
Highest qualifications: Diploma, Ace and currently studying Diploma in Management.	Highest qualifications: B Administration and PGCE.	Highest qualifications: B.Ed. Honors in Education Management, Law and Special Needs Policy.	Highest qualifications: B.Ed. Honors in Inclusive Education.
Other roles: SBST Secretary, LTSM member. SAT member. Member of sports.	Other roles: Member of SBST	Other roles: Sport coordinator. SBST member. SAT member.	Other roles: SBST Coordinator. Member of LTSM.

Departmental heads biographical information.

Table 4.3 Departmental heads biographical information.
Departmental Heads.

School 1	School 2	School 3	School 4
HD 1a	**HD 2b**	**HD 3c**	**HD 4d**
Age:27	Age: 51	Age: 50	Age: 63
Race: African	Race: African	Race: African	Race: African
Gender: female	Gender: Female	Gender: Female	Gender: Female
Years of teaching experience: 10 years	Years of teaching experience: 27	Years of teaching experience: 16	Years of teaching experience: 41
Position held in school: Departmental	Position held in school: Departmental head	Position held in school:	Position held in school: Departmental head

Head		Departmental head	
Years at school: 1 year	Years at school: 5	Years at school: 16	Years at school: 40
Highest qualifications: Honors in inclusive education.	Highest qualifications: B.Ed. Honors, currently studying Masters in MBA	Highest qualifications: B.Ed. Honors in Education Management.	Highest qualifications: B.Ed. Honors in Inclusive Education.
No. of learners in classroom: 48	No. of learners in classroom: 12	No. of learners in classroom: 46	No. of learners in classroom: 56
Grade (s) currently teaching: 6 and 7	Grade (s) currently teaching: 5	Grade (s) currently teaching: 1	Grade (s) currently teaching: 2
Subjects teaching: Grade 6 Social science and FAL. Grade7 Life Orientation and Creative Arts.	Subjects teaching: FAL, hair dressing, and nail technology.	Subjects teaching: Sepedi, Life Skills, M, and FAL English.	Subjects teaching: Sepedi, Mathematics, Life Skills, and English FAL.
Other roles: SBST coordinator.	Other roles: Fundraising coordinator, SBST coordinator, SGB Secretary, Cultural Committee	Other roles: SBST member, sports master, rummies instructor, NSNP Coordinator, SMT subscriber and Traditional dance coordinator.	Other roles: LTSM coordinator, SBST member, SAT member, Grade 7 prefect coordinator.
Years in the position: 1	Years in the position: 3	Years in the position: 3	Years in the position: 8

Table 4.4 Parents biographical information.

School 1	School 2	School 3	School 4
Parent 1a	Parent 2b	Parent 3c	Parent 4d
Age: 38	Age: 48	Age: 34	Age: 25
Race: African	Race: African	Race: African	Race: African
Gender: female	Gender: female	Gender: female	Gender: female
Other role in school: SGB member at the school. SGB treasurer.	Other role in school: none.	Other role in school: none.	Other role in school: none.
No. of children: 1	No. of children: 3	No. of children:2	No. of children:2

Table 4.5. Learner's biographical information.

School 1	School:2	School:3	School: 4
Learner 1a	Learner 2b	Learner 3c	Learner 4d
Age: 9	Age:12	Age: 12	Age:8
Race: African	Race: African	Race: African	Race: African
Gender: female	Gender: male	Gender: female	Gender: male
Grade: SPID class	Grade: 5	Grade: 6	Grade:1
Subjects: life skills Language (communication) Numeracy	Subjects: All	Subjects: All Fal, Sepedi, Mathematics Natural science, social Science, and life skills.	Subjects: Sepedi. Mathematics English (FAL) Life skills.
Years in grade:2 Years in school: 3	Years in grade:1 Years in school: 6	Years in grade:1 Years in school: 7	Years in grade: 2 Years in school: 2

4.3 THEMES

The study have six themes, with the first four based on the research questions and the last two based on observations and documents analysis.

4.3.1 Generation of themes.

In this study, the researcher adopted thematic analysis for data analysis. Braun and Clarke (2013), Kipfer (2015) indicate that thematic analysis is a qualitative analytic method used to identify, analyze and report themes (patterns) within data, especially due to its flexibility.

In this research, the data collected through interviews have been analyzed by following the guidelines recommended by Leedy amd Ormrod (2010). Firstly, the researcher started by re-reading the data several times to identify points of interest. The researcher arranged specific facts in a logical order and identified the categories of data. This was followed by examining specific data for specific meaning, and the meaning was then analyzed in relation to the research problem.

The researcher carefully searched for patterns by combining initial codes to over-reaching themes. The next step was to make an overall analysis and draw up generalisations (Kayumbu, 2017:56). The last step was to make conclusion and recommendations from the gathered data.

4.3.2 Semi-structured interviews with principals, departmental heads, teachers, parents and learners.

4.3.2.1. THEME: 1 Acceleration of education opportunities for LWPI through inclusive education.

Education opportunities are one of the sustainable development goals that must be met for a society to be considered sustainable (Marta, Luis, and Lina, 2020). According to Jackson (2015), inclusive education can provide the following benefits for all children:

➢ can participate in their community, feel a sense of belonging, and are better equipped for life;

➢ different learning strategies can be developed to accommodate the varying levels of motivation among children;

➢ successful attempts at inclusion can foster the growth of a child's strengths and talents;

➢ children can work on their individual goals while collaborating with classmates;

➢ Inclusive education encourages parental involvement in the education and school activities of their children;

➢ promotes a culture of belonging and respect and offers a learning opportunity about acceptance of individual differences; and

➤ supports all children with opportunities in developing friendships that provide growth and role models.

Principal 1a shared a same sentiment with the above statement of Jackson (2015), he stated that in his role as a school principal, he guided staff and ensured that the curriculum was effectively implemented for the benefit of the majority of physically disabled learners. He also stated that he interacts with various stakeholders and that they have a job placement committee for learners who are leaving the institution. Principal 1a uttered those words because, most of LWPI finds it difficult to reach grade 12, and they needs skills from early age. Furthermore, he mentioned that they collaborate with companies such as Pick n Pay, where the majority of their graduates are employed. Principal 1a noted that, in order to improve educational opportunities for LWPI, their learners have severe intellectual disabilities and are therefore unsuitable for mainstream schools and goals. In addition, he stated that they can learn most effectively when given a skills-based project rather than an academic assignment. Additionally, he stated that 99% of their learners require skills development. Principal 2b stated that as the school's administrator, she was able to ensure that all stakeholders transformed LWPI's educational opportunities (Landsberg et al., 2016). Principal 4d stated that as a mainstream school, there is nothing they can do because the Department of Education does not provide the necessary infrastructure, curriculum, or resources to accommodate these learners, their teachers, or their parents within the mainstream framework.

Learning opportunities should be accelerated for LWPI, where Principal 1a mentioned that skills development would be most readily accelerated at a special school. Further, he stated that if schools are equipped with workshops, teachers should be trained as artisans in order to assist learners in achieving their goals (Dede, Ketelhut, Whitehouse, Breit & McCloskey, 2009; McCarthy, 2005). In addition, he stated that the SETA should support and formalise this type of system through accreditation, even if this is the case. Principal 2b stated that they do not have the resources to support LWPI in schools and are willing to assist, but lack government funding.

Regarding accelerated learning opportunities for LWPI, Principal 2b noted that LWPI must be given the same opportunities as their able-bodied counterparts, emphasising that all learners can learn, albeit at different rates and in different ways. Therefore, all necessary learning and support materials must be made available to ensure that these learners are adequately supported to reach their full potential. It demonstrated, from the researcher's perspective, that schools lack

resources to support LWPI. In addition, the school should identify the various learning abilities of learners and, once identified, provide the necessary resources.

On the other hand, principal 2b agreed with principal 1a on the statement of implementing effective curriculum to ensure that the needs of all learners including those of LWPI are met. He further mentioned that according to the constitution of the Republic of South Africa, every child has the right to receive an education (RSA, 1994). In addition, she emphasised that White Paper No. 6 asserts that "every child has the right to an education regardless of disability, race, language, religion, etc."

In supporting sentiments held by principals above, of offering equal education for all, parent 2b argued that "workshops can assist them in accelariting teaching and learning opportunities for LWPI, but it is extremely challenging for them to accept their children at home. She further stated that teachers can be trained on how to handle LWPI, as parents, they need their assistance.

The learner 2b concurred that "he encountered obstacles at school, due to his disability (poor functioning right hand), the learner disagreed with the above participants, he stated that he was bullied and called names at school. This finding is corroborated by (Peters, 2002).

Learner 3c supported learner 2b statement, he mentioned that learners swore at her and called her ugly in the classroom. She also mentioned that she had mobility issues at school, where the terrain was rocky with scattered bricks. The view of learners being called names is also held by (Landsberg et al., 2016).

Learner 2b suggested that, if the school takes serious measures to discipline those learners who bully and call others derogatory names at school, and punishes them severely, it could serve as an example for those who intend to follow in their footsteps. In addition, he emphasized that if the schools were to have a disciplinary committee whose sole responsibility is discipline, the committee members could be parents. Learner 2b agreed with parent 1a on the statement of schools to raise awareness for LWPI to educate the community, (Nairo-Redmond et al., 2017, Campos et al., 2014).

Parent 1a stated that the seducation system should not be a one-size-fits-all model because it fails to meet the needs of certain or numerous learners. The majority of these learners do not use their hands and comprehend, but they will be able to adapt to the fourth industrial revolution

with the aid of technology. Steven Hawking for instance, was able to communicate and interact with others by utilizing technology. This is an example of how LWPI could benefit from accelerated learning opportunities. She further mentioned that awareness to the community about LWPI is needed. Learner 2b agreed with parent 1a.

Teacher 4d mentioned that in order to facilitate these learners'educational opportunities , teachers require training and knowledge about these learners in order to understand their disability ,how they learn , their needs resulting from physical impairments, and the type of support they require in order to facilitate their education opportunities (Landsberg et al.,2016:335-336).

The findings from the above verbatim quotes of the participants revealed that the schools need to raise awareness of LWPI to the society at large.

4.3.2.2. THEME 2 How stakeholders could create a conducive learning environment for LWPI.

It is primarily the responsibility of the school and the community to include all learners in education without discrimination. Structures and practices must be in place to ensure that everyone, regardless of gender, race, ability, culture, or socioeconomic standing, has access to an effective education. Education White Paper 6 on Special Needs Education: Building an Inclusive Education and Training System (2001: 17) describes how past discriminatory practices and imbalances can be rectified and the principles of inclusion promoted by focusing on overcoming systemic barriers that prevent it from meeting the full spectrum of learning needs.

Conducive learning environment is a setting which allows for a free exchange of ideas, thoughts and skills among the teachers and learners to achieve the expected educational goals by considering the physical, psychological, social, and cultural needs of all the learners (IGI Global).

Teacher 1 a mentioned that, according to the Bill of Rights (RSA, 1996), all learners have the right to education, so it is impossible for a school to neglect a child with disability. She added that in order to create a non-discriminatory learning environment as a teacher, she could engage all learners in various activities and encourage maximum participation to get to know their feelings.

Teacher 3c agreed with teacher 1a on the above statement, and she also added that it is crucial for parents to teach their children that people are fundamentaly different and that they must accept others and avoid discrimination.

Teacher 4d argued that questions simplification would facilitate inclusion.

As departmental head, HD 1a commented that, to create a teaching and learning environment that is free of discrimination, she could ensure that LWPI are placed in the same classroom as other learners, so that they can learn to accept, respect and support them. She went further stating that if they isolate them, they will also create a wall of discrimination, therefore, they must recognize that they are learners who require assistance from others, and that the only difference between them and others is that they are unable to use other parts of their body.

On a similar note, HD 4d agreed with teacher 1a that by involving them in all classroom activities, and helping them in any way, they can reach their potential and be successful.

HD2d disagreed with HD 1a on the statement of placing them in one class, she mentioned that, these learners should be grouped according to their abilities in separate classrooms.

HD 3c agreed with teacher 1a and HD 4d about involving them in classroom activities. Furthermore, she mentioned that they plan the lesson and activities based on how well they can do them. For teaching and learning to go well, the following are important and must be in place:

> ➢ small classrooms;
> ➢ adapted curriculum and differentiated assessment;
> ➢ proper infrastructure;
> ➢ adequate resources and assistive devices and technologies to help LWPI; and
> ➢ qualified teachers and professional health workers to assist learners (De Jager, 2011).

Parent 1a indicated that, " I was in prison prior to becoming a parent,so I cannot ignore that, she went on to say that if we approach this life as human beings and not as parents with titles,or with stigmatizing issues, the schools will be a better place for our children to learn freely and without discrimination''. However, we must first be human in order to comprehend that we are all human, humanity goes a long way.

Parent 1a remarked that LWPI teaching and learning environment is conducive due to the school infrastructure, adequate LTSM and qualified teachers.

Parent 3c suggested that if learners at school can stop teasing and calling LWPI names, and if teachers too do not discriminate learners based on their disabilities and do not tell them that they are unable to do certain things due to their disabilities ,then the situation will improve.

Parent 3c emphasized that, some teachers use their education to discriminate against children and parents, they discriminate against children when they say they will tell their parents, and they say they cannot do anything about it.

Learner 2b mentioned that discrimination at school should be dealt with by the School Management Team (SMT), the disciplinary committee, by calling in their parents, conducting hearings, and suspending the learner for a month at home to demonstrate how seriously bullying and name calling are prohibited at school. By doing so, learners will realize the gravity of the situation and stop (De Jager: 2019).

Learner 3c agreed with learner 2b on this statement.

Principal 1a reported that their greatest challenge is lack of proper infrastructure, lack of parental involvement, adequate resources, qualified teachers and professional health care. This statement was supported by HD 3c and Principal 4d.

Principal 4d observed that the schools'lack of inclusivity negatively impacted the academic, social, emotional, and psychological development of learners. She further commented that DBE should make a point to revamp schools, train teachers, adapt curriculum, provide schools with adequate LTSM and professional health care.This statement was supported by HD 3c.

In addition, she mentioned that the DBE expected miracles while they sat in their offices high above, unwilling to assist. She added that, this practice gave the community false impression of the school, as some even claimed that educators do not know what they are doing, despite the fact that these circumstances were beyond their control and that teachers lacked the necessary resources to instruct these learners. She also mentioned that teachers are attempting to assist these learners with the limited knowledge they have gained from other collegues and SIAS workshop, but this is insufficient, DBE must provide them with adequate training.

Principal 1a stated that in order to create a teaching and learning environment that is free of discrimination for LWPI, it is essential that children and the community be educated about disabilities so that they are able to identify different disabilities and respect that all people are

created equal under the Constitution. He added that if they engage with the communities, they will be able to ensure that physically challenged people are respected (Landsberg et al. 2014: 336-337). In addition, he mentioned that the school is equipped to accommodate LWPI learners by creating ramps, ensuring that bathrooms are accessible, and installing ramps in classrooms.

Principal 2b stated that in order to make the education of LWPI free, the school can work with relevant structures and stakeholders to make it a reality for these learners, thereby providing them with the same opportunities as their able-bodied peers. Included among the stakeholders are the community, educators, DBE, parents, and sponsors (De Jager, 2019: 65). Principal 1a pointed out that in order to provide LWPI with an education, they have pleaded with the government to place LWPI in the appropriate school without payment. He also emphasised that their school is a tuition-free institution that accommodates learners with various disabilities. Infrastructure is the biggest problem he reported. Due to their dependence on government funding, he added, they arrange their own meagre facilities, such as shipping containers for classrooms.

The findings from the above verbatim quotes of the participants revealed that proper infrastructure, adequate resources LTSM, adapted curriculum, qualified teachers, professional health care services and together with community awareness for LWPI are needed in order to create a conducive learning environment for these learners.

4.3.2.3. THEME 3: Intervention mechanisms suitable for addressing challenges faced by LWPI in inclusive education schools.

Educational interventions provide learners with the assistance necessary to acquire the skills being taught by the educational system and should focus on functional skills, academic, cognitive, behavioural, and social skills that have a direct impact on the child's ability to access education. Behavioural, collaborative, one-on-one, classroom-based, as well as social and emotional interventions are examples of educational interventions.

Principal 1a stated that despite the challenges posed by LWPI in their school, they consider themselves fortunate because, unlike schools with inadequate infrastructure, they have multidisciplinary teams in the school, including occupational therapist, speech therapist, social workers, and school nurses, who assist those who are physically challenged. He also

emphasised that the same therapists are able to engage with educators and train them so that they understand how to interact with physically impaired individuals (De Jager, 2019:108).

From these multidisciplinary teams, the institution is able to assist LWPI. The school also employs a school nurse and social worker to assist learners who require their services (De Jager, 2011). In accordance with the SIAS policy, the Department of Basic Education is required to collaborate with the Department of Health on the provision of health-related services to children of school-going age in order to improve learning access and participation.

On a similar note, principal 4d agreed with principal 1a on the issue of infrastructure as the schools'greatest challenge. He further indicated that notional time cannot be met due to insufficient infrastructure for teachers to meet their quota of classes. Sharing classrooms by teachers is untenable and continues to be a persistent issue (Landsberg et al., 2014:337).

Principal 2b stated that the situation of his/her school was better and indicated that 'they only experiencing mild challenges, which are managed by their teachers.

On the other hand, teacher 4d proposed inviting the district officials to schools to observe what is taking place in schools.

Parent 3c agreed with teacher 4d on the above statement.

Teacher 1a agreed with principal 1a that it would be advantageous for intervention mechanisms to address the challenges of LWPI if stakeholders were invited to the school to observe how teachers work and learners learn (Landsberg 2016). She went on to say that if learners could be provided with the proper equipment and infrastructure, and if the class size could be reduced in proportion to the number of learners with disabilities, more teacher aides should be employed to assist with the children, especially during toilet time, when one child has a lot of work to do (feeding, nappy changing). When ratios are small, it is preferable to provide individual attention to learners (De Jager 2019:110).

HD 3c agreed with the above participants, and she also mentioned inviting the sponsors to the school to observe the challenges the school was facing and inviting the community to assist in any way they could. Inclusion of a child requires a community, Frenando Botelho (2021).

Teacher 3c agreed with teacher 1a about the proper infrastructure, resources that could be used to address the challenges of LWPI.

On the contrary, HD 1a indicated that intervention mechanisms could include hiring more teachers to assist with diaper changes and more masculine teachers to assist with learner management.

She also mentioned parental involvement, stating that learners must practice what they do at school at home in order to become accustomed to the programme. In addition, they require parental intervention to raise awareness about how to assist their learners in following the routine and help them improve, as these learners would have the opportunity to advance if they could work as a team.

Principal 4d agreed with HD 1a on the issue of parental involvement, she mentioned that, parents are strangers in their childrens'lives, they expect the school to do everything whereas they sat back holding crucial information about the learner.

HD 3c stated that remedial classes and support must be offered to learners who fail a pre-enrollment assessment. Infrastructure, curriculum, rotational timetable due to Covid-19, and the so-called ATP were cited by HD 4d as the school's greatest challenges (Annual Teaching Plan). The department anticipates keeping track of whether or not a child comprehends, the lack of resources (LTSM), the poor classroom arrangement and furnishings, and the amount of time spent on these issues (De Jager, 2011). Unqualified teachers and a deficiency of professional health personnel are assigned to schools.

HD 4d agreed with HD 3c ,and she mentioned that a baseline assessment to be administered at the beginning of the first term, screening the learner; after screening, they will identify the learner as early as the first term and initiate the necessary support (Du Plessis, Conley & Du Plessis 2011).

Parent 1a emphasises that by increasing awareness in inclusive educational settings, LWPI can be assisted. In addition to having guidance as a subject in schools to teach children about Ubuntu and humanity, it is also important to educate parents about the various sporting activities offered in schools, as both parents and children are unaware of Paralympics and Special Olympics in South Africa. Parent 2b concurred with parent 1a in raising community awareness about LWPI.

She reiterates that parents should discuss the difficulties they've encountered with LWPI in schools at a meeting. Parent 3c suggested screening children at the start of the school year so that they are placed in the appropriate school from the beginning. Parent 4d mentioned that

they conduct activities with learners in hospitals; therefore, I believe it would be advantageous for learners to use puzzles and blocks to construct various objects, such as a tower, and to practice speech pronunciation by pronouncing sounds at school.

Learner 2b expressed interest in mechanic education because he enjoys reparing automobiles, engines, watches, and other home appliances. He also emphasized that from young age he would play with toy cars and fix them, as well as observe people fixing real cars and tell himself that he would one day fix real cars (Dede, Ketelhut, Whitehouse, Breit & McCloskey, 2009, McCarthy, 2005).

Learner 3c on the other hand stated that she enjoyes reading books since a young age.

Learner 2b emphasized that he will persue his dream of becoming mechanic regardless of the circumstances, because 'it is my dream, I will persue it no matter what'.

On a similar note, learner 3c agreed with learner 2b, she indicated that 'I pray every night to see myself as a writer, and I have faith in God.'

4.3.2.4. THEME: 4 Assistive devices and other relevant reasonable accommodation measures for LWPI.

According to the SIAS policy (2014), an assistive device is one that is designed, manufactured, or adapted to assist a learner in completing a specific educational task. It is intended to compensate for any functional limitation that impedes a learner with a disability's access to the curriculum. Wheelchairs, prostheses, mobility aids, hearing aids, visual aids, and specialised computer software and hardware are examples of assistive devices and technologies. With the aid of these technologies, individuals with physical impairments are better able to live independently and contribute to society.

Assistive technology encompasses assistive, adaptive, and rehabilitative devices for learners with disabilities, as well as the process of selecting, locating, and employing them in an educational setting. Assistive technology promotes greater independence by enabling people to perform educational tasks they were previously unable to perform or had great difficulty performing, by providing enhancements to, or altering methods of interacting with, the technology required to perform such tasks (DBE SIAS, 2014).

According to the United Nations (2018), promoting access to assistive devices and technologies for LWPI should involve the provision of grants, maintenance of assistive products, and free

training on their use. In order to accomplish this, the school's second boards must implement policies regarding assistive technology. Furthermore, the United Nations (2018) notes that assistive technology enables LWPI to live independently.

Principal 1a stated that assistive devices and technologies are available at the school, including wheelchairs, go-talkers, and ear pieces for learners with hearing impairments, walkers, customer's wheelchairs and augmantative alternative devices (AAD). He also mentioned that they had multidisciplinary teams in the school every day, including occupational therapy, speech therapy, nurses, and social workers, that they conduct daily assessments and determine which assistive devices are needed for LWPI, and that they had qualified teachers still in training once a month, whose assessments aligned with SIAS policy, where all learners are treated fairly (De Jager, 2011).

On a similar note, principal 2b partialy agreed with principal 1a, she stated that the school has a number of assistive devices in accordance with the FSS allocation for learners with mild physical barriers. Regarding accommodations, she stated that they submit an application based on identified learners so that the Department will grant the school a mild concession and accommodation. She mentioned that they have qualified teachers, and it was her responsibility as principal to ensure that, when recruiting new staff, inclusive education and special needs specialists were given priority. She also emphasised that the curriculum is differentiated based on the learner's needs, and that the majority of their assessments are moderated by learner support educators in order to adapt certain assessments to the specific learner (RSA, 2012).

HD 1a stated that learners have access to assistive devices and technologies at school that all learners are accommodated in the school and classroom, and that learners on medication are assisted by the school nurse. She also mentioned that the school's teachers have received training and will receive additional training in the future (De Jager, 2019:108). 2019 marked the beginning of the LSPID (learners with severe physical and intellectual disability).

Regarding assessment, she stated that they have adapted the assessment and that the majority of learners do not participate in formal assessment, with the exception of those who are highly functional. Rather, the majority of learners practice daily living skills so that they can be independent, and their program is predominantly based on this, not writing or lots of work. They can be taught to recognise numbers and write their names, objects, and shapes. They are primarily instructed in independence, communication, numbers, and colours.

On the contrary, learner 2b and 3c reported that they do not have access to assistive devices and technologies at their respective schools. In addition, they reported not having access to assistive devices at home. Furthermore, they are not currently utilizing any assistive devices.

Parent 1a indicated that LWPI have assistive devices and technologies, and as a school they would like to have electric wheelchair so that learners with weak hands can move independently.

On a similar note, teacher 1a agreed with parent 1a that learners have access to a variety of learning aids at school. She added that they have qualified teachers. She went further and mentioned that the school has on-site therapists, social workers, and nurses to assist LWPI. On the other hand, parent 2b argued that the school lacks assistive devices and technologies as well as qualified teachers.

Parent 3c and 4d concurred with parent 2b that school lacks assistive devices and technologies as well as qualified teachers.

Parent 1a indicated that in addition to AAD,walking sticks, wheelchairs, and learning aids ,they desire powered wheelchairs ,clothing aids, text phones, personalized alarm systems, speech synthesisers, adapted computers and phones, tactile watches and other communication aids to assist and assess LWPI.

HD 3c reported that the school has only tablets, whereas HD 2b and HD 4d argued that they do not have any assistive devices and technologies available at school.

In contrast, parent 2b, 3c and 4d reported that their children do not have access to any assistive devices and technologies at school and home.

Principal 4d revealed that they lack assistive devices and technologies, as well as qualified teachers. She noted that despite the school's best efforts, the process for requesting accommodations for learners with disabilities is very slow. She added that they attempted to invite the district official assigned to assist their school, but she has not yet arrived. She also mentioned that teachers attempted to attend workshops, but they require practical instruction rather than theory, and that some teachers studied inclusive education to equip themselves with the most knowledge possible. Regarding curriculum differentiation, the school did its best, but qualified personnel were required to assist (RSA, 2012).

HD 3c mentioned that the school only uses tablets to teach language and sound. She also emphasised that there are few teachers with inclusive education credentials and that assessment is differentiated to accommodate all learners.

HD 4d reported that the school lacks assistive devices and technologies and has four teachers with inclusive credentials.

Teacher 2b stated that the challenges of LWPI could be addressed if the department came to the schools to see what was happening so they could intervene; otherwise, the school would not be able to manage on its own. She also suggested that the government construct a small number of schools in Mamelodi for LWPI, with qualified teachers, a specialised curriculum, and skill development, as the majority of these learners must engage in manual labour (RSA, 2002).

Teacher 2b and 4d argued that they are no assistive devices and technologies available at their schools.

They went on and mentioned that they lacked trained individuals at their respective schools, so if learners require assistance with assistive devices and technologies, they were directed to Via Nova resource center.

Principal 3c agreed with principal 4d, teacher 3c, teacher 4d, HD 3c and HD 4d that there are no assistive devices and technologies at their respective schools.

In conclusion ,the findings revealed that the four schools interviewed ,only one school,which is school 1 managed to have a few assistive devices and technologies at hand, school 3 have only tablets ,school 2 and 4 they have no assistive devices and technologies to assist and assess LWPI. The study revealed that LWPI in Mamelodi East primary schools are faced with challenges of inclusion.

4.3.2.5. THEME: 5. Observations of LWPI in the classroom and school surrounding.

After completing the interviews, the researcher asked the same educators who were interviewed permission to observe a lesson in their classrooms, physical education lessons, and during break times. Observing the same educators who were interviewed was done to validate and correlate what was said in the interviews and to ensure the reliability of the findings. Observation allows the researcher to see and hear what naturally occurs at the research site (McMillan and Schumacher, 2014:376). Observation facilitates a thorough comprehension of the context and

the participant's behaviour, allowing for the collection of a more comprehensive set of data that reflects the significance of the context's effect.

The observation occurred three weeks after the interviews were conducted in the respective classrooms. The observation was limited to a single lesson so as not to disrupt the normal classroom routine. The researcher took copious notes while remaining as unobtrusive as possible. After completing observation as a data collection technique (method), the researcher analysed and attempted to interpret the collected notes (McMillan and Schumacher, 2014:376 figure 14.1).

4.3.2.5.1 Analysis and interpretation of observation findings.

Observations in the classroom focused on the following themes derived from the research's sub-questions:

- ➢ How can stakeholders such as teachers, parents, and the Department of Basic Education create a discrimination-free learning environment for LWPI learners?
- ➢ Which intervention strategies can be utilised to address the challenges posed by LWPI in inclusive education settings?
- ➢ Which assistive devices and /or other accommodation measures are used by teachers to assist and assess LWPI?

Regarding the theme, it was evident that stakeholders such as parents, teachers, and the Department of Basic Education create a nondiscriminatory learning environment for LWPI. Educators ensure that they have a code of conduct and classroom rules, as well as educate learners about various disabilities and the right of every child, regardless of disability, to an education.

Educators under observation were able to switch between a variety of methods when delivering lessons. Thus, the methodology became learner-centered (inductive) as opposed to teacher-centered (Felder & Brent, 2009). Some educators began with a pre-learning assessment to determine the learner's content knowledge, and then continued instruction (Du Plessis, Conley & Du Plessis, 2011). After instruction and explanation of concepts, learners were placed in groups and given worksheets to reinforce their knowledge. Learners requiring minimal attention and support worked independently, while those requiring additional assistance received individual attention (Clarke, 2008; Davies & Hill, 2009).

The researcher observed that only one of the four schools observed gave learners individualised attention, while the other three schools have a one-size-fits-all approach and do not accommodate all learners' learning disabilities and preferences. The researcher observed that other learners learn by doing rather than by listening, but the teacher did not accommodate them; they did not adapt their teaching methods from narration to role play and practical approach teaching (Du Plessis, Conley, and Du Plessis 2011; De Jager 2019: 56). In all classes observed, the majority of learners spoke isiZulu or Sepedi. However, the teaching and learning languages at the school are Sepedi and Zulu.

In order to convey instructions and accommodate all learners and some educators adapted their teaching methodology by utilising code switching. Some teachers also requested that other learners translate the instructions for their classmates (Kuper, 2003; Genesee, Lindholm-Leary, Saunders & Christian 2006).

The researcher observed that school a, lacks adequate infrastructure, as the classrooms are made of containers and are too small to accommodate wheelchair learners (Swart and Pettifer, 2005). In a SPID (severe physical intellectual disability) class of nine learners, one teacher and one teacher assistant were present, with four learners using wheelchairs. The researcher observed that the classroom is overcrowded and requires two teacher aides to assist learners to the restroom and feed them because the majority of learners wear nappies. The instructor concurred with the researcher's conclusion that they require additional male assistants to assist with learner management.

During the lesson activity, the researcher observed that the teacher and assistant made an effort to include all learners; for those who cannot speak, they point, and for those who are struggling, they provide hints and leading answers. In addition, they used tangible objects such as colours, sticks, and music to meet the needs and abilities of all learners (Engelbrecht 2006). The researcher observed that wheelchair learners have limited mobility. The classroom and bathroom doors were not wheelchair accessible, there is no ramp for learners to use, and there is insufficient space for their bags and school supplies.

While the researcher was still in the classroom for observation, the therapist came to the classroom to pull out the learner for support; this indicates that the school employed speech therapists to assist learners and teachers (De Jager, 2011). On assessment, the researcher observed that learners who cannot write were assessed orally; in a class of nine learners, only three learners were assessed in writing (De Jager, 2019: 121).

In schools 3 and 4, the researcher observed that there were no ramps and adequate classrooms, whereas school 2 is better constructed. The curriculum, lesson plans, and evaluations for all three schools are identical. The uneven, rocky, and brick-strewn school grounds make it difficult for learners with physical impairments to move around (Landsberg et.al, 2014: 328-337).

The researcher observed that the curriculum for grades three and four was not adapted to meet the needs and abilities of learners. The teachers at school 2 have remedial and learner support educators who assist learners and teachers, but they require additional support and professional development from DBST. Learners in grades 2, 3, and 4 transcribe from the blackboard, but they tire quickly. From grades 2, 3, and 4, the researcher observed that during assessment, all learners were assessed the same, with no adapted assessment to meet the needs of learners. Educators stated that they do not know how to adapt the assessment because they were not trained to do so (De Jager 2019: 129).

The researcher observed that learners in school 1 have access to assistive devices, qualified teachers, appropriate accommodations, and trained health professionals, whereas those in schools 2, 3, and 4 do not. Wheelchair-using learners in grade 1 have access to various devices. Other assistive devices utilised by learners include hearing aids, walkers, crutches, and scissors for left-handed learners, and audiovisual equipment such as radios.

In terms of utilising learning and teaching support materials (LTSM) to provide support for learners, the lesson observation revealed that educators lack resources to support LWPI (Israel et al., 2007; Curzon, 2005). The researcher's visit to the classrooms to observe lessons was truly eye-opening. As articulated in the interviews, educators have gone above and beyond to modify the classroom environment in order to facilitate and support LWPI.

The researcher observed that the classrooms were poorly furnished and lacked vibrant charts and posters. The classrooms were filled with old desks, chairs, and cabinets. The environment was not conducive to teaching and learning, as the learners were seating on uncomfortable chairs (Landsberg et al., 2014: 337).

Furthermore, it is evident that schools 2, 3, and 4 lack assistive devices and technologies (De Jager, 2019:145-146). Moreover, according to the findings of the study, it is crucial that schools, particularly township schools, have access to specialised support, and that the updated White Paper 6 must include effective, realistic strategies for providing such support. If not, a

child with a disability's access to an effective education will continue to depend on the province in which they reside.

4.3.2.6. THEME: 6. Documents Analysis.

Due to the significance of text data in qualitative research studies, documents are a valuable and pertinent source of information (Creswell, 2015). According to Webster (2016), documents provide more of an advantage than participants' rehearsed diction for the purpose of an interview. The only difficulty associated with documents is that they can be difficult to acquire and interpret (Creswell, 2015). The following documents were provided by the school visited by the researcher for perusal and analysis in light of the difficulties encountered by LWPI. Artifacts of contemporary organisations and educational institutions can take three forms: personal documents, official documents, and objects (McMillan and Schumacher, 2014:387). For this study, the researcher conducted an analysis of official documents.

Table 4.6 Availability of documents and the implementation.

	School 1	School 2	School 3	School 4
Document				
1.Admission policy	✓	✓	✓	✓
2.School policy	✓	✓	✓	✓
3.Curriculum policy	✓	✓	✓	✓
4.Classroom rules policy	✓	✓	✓	✓
5.Policy on discipline	✓	✓	✓	●
6.Anti-bullying policy	●	✓	●	●
7.Lesson plan	✓	✓	✓	✓
8.Assessment policy	●	✓	●	●

9.SBST policy	•	•	✓	•

4.3.2.6.1 Findings of documents analysis.

Documents Analysis uncovered a variety of findings. Some schools, as indicated above, have all relevant documents, but they are poorly filed and implemented, whereas the majority of schools have documents that are precisely filed and implemented. The results indicate that schools 1 and 2 have nearly all policies except for one, whereas school 3 has few policies. The study revealed that SBST committees in schools are ineffective. Aside from the few documents required by the researcher, as outlined in Table 4.5.6, some schools provided additional information, while others have a single document that contains all the policies mentioned. The following school policy documents are available in nearly all of the schools that the researcher visited:

➢ school policy (school 1,2 and3);
➢ lesson plan (school 1,2 and 3);
➢ classroom rules (school 1,2 and 3);
➢ admission policy (school 1,2 and 3); and
➢ curriculum policy.

  ➢ Some of the schools that the researcher visited lacked the following school policies: anti-bullying policy (school 2 and 3);
➢ assessment policy (school 2 and 3);
➢ policy on discipline (school 3); and
➢ SBST policy (school 1 and 3).

The following is a description of each schools documents analysis:

4.3.2.6.1.1 School 1

During the admission process, the school's admissions policy is accessible and utilised, and it directs the admissions procedure for the entire school by dictating registration requirements and age prerequisites. The school's admissions policy is derived directly from the DBE. Admission policy for ordinary public schools, SBST, Anti-bullying policy, and assessment

policy are not available at this school; however, all important school policies are available in a separate file.

Class rules are utilised to create discipline and an environment conducive to teaching and learning and are the direct result of educator and learner engagement. For the proper management of the school, discipline policies are implemented and consulted on a routine basis. Lesson plans are accessible and accommodate the needs and abilities of all learners. Curriculum policy is available and effectively implemented to accommodate all learners with disabilities. School 1 is a well-managed institution because relevant documents are readily available, with few exceptions.

4.3.2.6.1.2 School 2.

Except for the SBST policy and the Assessment policy, all the documents requested for analysis are available and have been implemented. The school mentioned having an SBST policy, but failed to provide the researcher with a copy. In all classes, classroom rules are utilised to create an environment conducive to teaching and learning that is free of discrimination against all learners. The policy on discipline and bullying is effectively implemented and adhered to, and cases of learner discipline are documented for future reference. The policy on school discipline is accessible and outlines the operation of school rules, as well as the disciplinary hearing actions and procedure. School 2 is well-managed, with the majority of its policies available and implemented.

4.3.2.6.1.3 School 3.

The school's admission policy is accessible and implemented effectively. There are policies on discipline, SBST, curriculum policy, and assessment policy, but their implementation is inadequate. Learner discipline is not recorded for future reference, and existing policies do not appear to be adhered to. Some educators implement curriculum policy while others use a one-size-fits-all model. The school 3 lacks anti-bullying and assessment policies, and the majority of its policies are poorly implemented. The school 3 is partially managed with the majority of available policies.

4.3.2.6.1.4 School 4.

The school admission policy is available, but its implementation is inadequate. The school does not use an admission policy when accommodating learners, the majority of whom are underage. Only five policies are available at the school, and they are all poorly implemented and

ineffective. Regarding support for LWPI and reasonable accommodation, the school is not guided by its policy. Regarding the assessment of learners, the school did not adapt the curriculum and assessment to meet the needs and abilities of all learners; for the school, all learners fall under one umbrella. Classes do not utilise class rules. The discipline policy is neither implemented nor consulted, nor are cases of learners documented. The school lacks an assessment policy, anti-bullying policy, discipline policy, and SBST policy. School 4 is poorly administered, with several policies unavailable.

4.4 SUMMARY.

This chapter focused on the analysis and interpretation of data gathered to answer the research questions about the challenges LWPI face in inclusive education. A brief introduction is followed by discussions on the analysis and interpretation of qualitative data, the presentation of qualitative data, and an overview of qualitative research methods. This is followed by interviews with principals, teachers, parents, and learners, as well as an analysis and interpretation of interview findings, a description of how classroom observations were conducted and an analysis and interpretation of observation findings, and an analysis and interpretation of documents findings.

The analysis and interpretation of the data collected through interviews, analysis of documents, and observations revolve around the research question of the inclusion challenges faced by LWPI in Mamelodi East primary schools.

The concluding chapter, chapter 5, summarises and reports on the main findings by presenting the research findings and conclusions that were derived from the analysis of observations, documents, and interviews. This allows the researcher to make an informed extrapolation regarding the answer to the primary research questions, which is how inclusive education can be used to increase educational opportunities for LWPI. This chapter concludes with recommendations for the National Department of Education, the Gauteng Provincial Department of Education, School Governing Bodies, and education districts based on the findings. This study's contribution to the Department of Education is also described. In this chapter, the limitations of the study are unpacked, and the researcher concludes by classifying issues for further investigation by other researchers.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

"The important thing is not so much that every child should be taught as that every child should be given the wish to learn."

John Lubbock

5.1 INTRODUCTION.

This study aimed to highlight the difficulties LWPI face in Mamelodi East Primary schools. The purpose of this chapter is to provide an overview of the entire research project, and its content is presented in three sections: a summary of the research findings, a conclusion, and a recommendation. As the orientation chapter, chapter 1 discussed the introduction and background of the study, the problem statement, the purpose and objectives of the study, and the research questions. In addition, the chapter introduced the preliminary literature review, the methodology employed, the scope and limitations of the study, and the significance of the study.

Chapter 2 provided a literature review on the inclusion challenges learners with physical impairments face in inclusive education.

Chapter 3 described the study's research design and methodology. In addition, the chapter justified the research design employed for the study's sampling procedure. In addition, the chapter discussed the data collection instruments and the issues of reliability, transferability, dependability, and confirmability. In addition, ethical considerations were discussed.

Chapter 4 provided a detailed description of the interpretation and presentation of the collected data from the selected schools. Chapter 5 provided a summary of the study's methodology and key findings. The chapter also provided recommendations for addressing the obstacles to inclusive education faced by learners with physical impairments. In addition, it addressed the study's limitations and makes suggestions for future research.

The task at hand was to investigate the inclusion challenges faced by LWPI in primary schools in Mamelodi East. A qualitative approach, as described in chapter four, was used to gather information about the challenges LWPI face in inclusive education. The interviews, observations, and document analysis data were analysed using Creswell's technique.

The following objectives have been proposed by the study in response to the research questions:

- ➢ To identify measures and procedures that accelerates educational opportunities for LWPI in settings that are inclusive.
- ➢ To ascertain how stakeholders such as teachers, parents, and the Department of Basic Education (DBE) foster an inclusive teaching and learning environment for LWPI in particular.
- ➢ To identify intervention strategies that can be used to address the difficulties of LWPI in inclusive settings.
- ➢ To highlight which assistive devices and/or other accommodation measures are used by teachers to assist and assess LWPI

5.2 SUMMARY OF RESEARCH FINDINGS BASED ON THE RESEACH QUESTIONS AND OBJECTIVES.

This study's main research question focused on how to accelerate education opportunities for LWPI in inclusive environment.

Additionally, the research focused on the following sub-questions:

- ➢ How can stakeholders such as teachers, parents and the Department of Basic Education, create a teaching learning environment that is free of discrimination, especially for LWPI?
- ➢ Which intervention strategies can be employed to address the challenges of LWPI in inclusive settings?
- ➢ Which assistive devices and/or other accommodation measures are used by teachers to assist and assess LWPI?

The analysis and interpretation of qualitatively collected data, as discussed in the preceding chapter, leaves no doubt in the researcher's mind that LWPI at the schools under study faced inclusive education challenges.

5.2.1. Acceleration of education opportunities for LWPI.

Barriers to learning are any internal or external factors that impede a learner's ability to benefit from schooling. The Education 2030 Framework for Action was developed to guide global efforts to reach the most disadvantaged and vulnerable children. It emphasises that every

learner is of equal value (UNESCO, 2017: 13). The study revealed that LWPI have no educational opportunities at primary schools in Mamelodi East.

The LWPI followed the same curriculum as their learner counterparts, which is universally applicable. It was also discovered that LWPI lack adequate LTSM resources and certified teachers. Regarding the use of Learning and Teaching Materials, the study revealed that the three schools included in the research lack LWPI-related LTSM. The LTSM can assume numerous forms. Books, periodicals, newspapers, posters, puzzles, picture cards, games, videos, calculators, worksheets, drama therapy, puppets, and computers are included.

The research also revealed that the majority of teachers in the identified schools were not trained to teach LWPI, lacked the necessary credentials, and did not receive support from DBST and other relevant stakeholders. According to Bagree and Lewis (2013: 2), teachers are frequently unprepared or unsupported to instruct children with disabilities, making these learners among the most disadvantaged in terms of educational opportunities and achievement. The responses of the majority of teachers interviewed for this study confirm this. Teachers disclosed that they do not know how and what to teach LWPI because they were not trained to do so.

- ➢ buildings should be adapted to accommodate wheelchairs, such as by installing sufficiently wide classroom doors, ramps, adapted toilets, lifts, etc;
- ➢ ensure that desks are sufficiently high and adjustable to accommodate wheelchair access;
- ➢ appropriate devices and support should be available, such as assistants to assist learners in the bathroom, facilitators to help a student with a disability write, voice recorders, tricycles and standing frames, wheelchairs and walkers, therapists and psychologists;
- ➢ speech, occupational, and physiotherapists should be involved in therapeutic sessions;
- ➢ learners who walk slowly should be accommodated in class; and
- ➢ printed notes for visually impaired learners should be enlarged (De Jager, 2011).

Without ramps, a wheelchair is significantly less effective, hearing aids are significantly less effective without a reliable source of affordable batteries, and prostheses and other aids can become unaffordable due to essential responsibilities (WHO and others, 2011). In a number of mainstream schools, LWPI face challenges because some classrooms are still only accessible via stairs and not ramps (Yamba, 2017).

The study revealed that learners should not all be placed in the same class, but rather according to their abilities and learning barriers, so that they can each have their own individualised learning programme. It is difficult for teachers to prepare a lesson when they are not trained and equipped with the necessary knowledge and resources to assist and support LWPI in the classroom, and it is even more difficult when they are required to teach a mixed-level class.

Regarding educational opportunities, teachers disclosed that if these learners are equipped with the ability to take care of themselves, know their names, and have relevant skills and handwork, they will be able to enter the market industry.

Teachers disclosed that parents are not involved in their children's education. De Jager (2019:84) states that parents whose children have been diagnosed with learning disabilities experience emotions such as stress, pain, and grief. Parental attitudes can have positive or negative effects on learners; depending on the support they receive (Hoover-Dempsey et al., 2005). Moreover, parents must learn to accept their child and his or her disability and modify the household routine accordingly to ensure the child's full development.

De Jager (2019: 85) argues that the more informed the parents are, the more likely it is that the learner will receive support at home and that the parents will have the knowledge necessary to assist their child in achieving educational success. Unfortunately, there are still some parents who refuse to accept their children as they are. If parents were more involved, providing their children with support and encouraging them to grab educational opportunities with both hands, these learners would immensely benefit from education endeavours and encounters. A lack of parental involvement and community can negatively impact the learning and growth of learners (De Jager, 2019: 79).

The study revealed that the majority of primary schools included in the research lack proper infrastructure, as the schools are old with old buildings, no ramps, and overcrowded classrooms with small door frames that make it difficult for LWPI to gain entry.

To curb the above-mentioned problem, schools must have adequate infrastructure, spacious and welcoming classrooms to prevent overcrowding, appropriate furniture and desks, ramps, walk-in staircases, rest rooms, and toilets where LWPI can move freely and independently. According to De Jager (2019: 110), all learners should be included in all school settings, provided they receive the necessary support. Buildings should be modified to accommodate

wheelchairs, such as by installing classroom doors that are sufficiently wide, ramps, adapted restrooms, lifts, etc. In addition, the desks must be sufficiently high and adjustable to accommodate wheelchair access. Physical obstacles can cause learners to experience low self-esteem and emotional and social difficulties, and could impact their academic performance.

The research discovered that LWPI have mobility issues in school and rely on their peers to help them move around; take them to the restroom, and to the classroom. Physical obstacles impact mobility and physical strength, according to De Jager (2019).

Furthermore, the research revealed that if teachers administer the baseline readiness assessment and screening required by SIAS and White paper 6, they will be able to know their learners and provide the necessary support. The study also determined that the school should not focus on the learner's disability, but rather on the learner's abilities and strengths, as well as ensuring that they build on what the learner can do; for instance, if a learner is good at speaking, they should focus more on that and build self-confidence.

To accelerate education opportunities for LWPI, the research indicates that schools should collaborate with a variety of stakeholders and the school community, as well as liaising with companies such as Pick n Pay, to assist learners who graduate from school in entering the job market.

Welch and Brownell (2002: 133) view collaboration between all education stakeholders as a solution to the difficulties faced by LWPI.

The study found that it is very difficult for schools to accelerate educational opportunities for LWPI because the Department of Basic Education does not assist them with supporting these learners. Instead, the Department of Basic Education merely requests that they be enrolled in school but does not provide them with training, knowledge, or skills.

The research revealed that LWPI must be provided with skills and projects in order to have the same educational opportunities as other learners. Welding, plumbing, and cooking are some of the educational opportunities that can be made available to LWPI. In addition, the study revealed that in order to accelerate educational opportunities for LWPI, the various stakeholders must provide the necessary resources, equipment, and skills to the learners and teachers in order to transform educational opportunities for these learners.

To achieve that, learners with physical impairments should be equipped with different skills and schools would need to be equipped with workshops and teachers would need to be trained as artisans to assist learners in achieving their goals.

The study revealed that DBE should incorporate LWPI into school planning. In addition, teachers' input must be incorporated into the LWPI planning process, as they are the ones who know and teach the learners. In addition to accommodating the diverse needs of learners in each classroom, De Jager (2019:104) asserts that teachers must carefully plan each academic year to ensure that curriculum requirements and time constraints are met. To achieve this, teachers must select content that is meaningful, interesting, and applicable to the learning environment, as well as based on the current cognitive level of the student.

Research reveals that teachers require training and knowledge of physical disability in order to understand their abilities and the type of support required to facilitate their learning. The research revealed that LWPI require LTSM materials, support materials, assistive devices, and trained educators to increase their educational opportunities. According to Fakudze (2012: 74), a lack of support for teachers is characterised by a lack of state funding for inclusive education programmes and the provision of in-service training for teachers that can empower them and thus result in a shift in their attitude toward inclusive education.

Fakudze (2012) argues further that teachers upgrade themselves on a part-time basis at their own expense. Furthermore, the government does not recognise teachers' accomplishments by compensating them adequately after they obtain the necessary credentials; instead, they receive a one-time payment. According to interviews conducted by Mahlo (2011: 176) in Gauteng Province, SBSTs lacked the knowledge and skills to assist learners and teachers; however, empowering SBSTs could be one strategy to improve the implementation of inclusive education. In addition, the research revealed that teachers believe the DBE has exploited them by requiring them to teach LWPI without experience, knowledge, or skills.

According to Jackson, inclusive education provides the following advantages for all learners:

- ➢ all children are able to participate in their community, have a sense of belonging, and are better equipped for life;
- ➢ children's abilities vary; as a result, their motivations to learn in class differ from one another;
- ➢ successful inclusion efforts can foster the child's strengths and gifts;

> provides opportunities for all children to develop friendships that foster growth and serve as role models;

> foster a culture of belonging and esteem, and provide an opportunity to learn about accepting individual differences;

> Inclusive education encourages parental involvement in the education and school activities of their children; and children can work on their individual objectives while collaborating with their peers.

5.2.2 Discrimination of Learners with physical Impairments.

Discrimination is the act of making unjustifiable distinctions between individuals on the basis of the groups, classes, or other categories to which they belong or are perceived to belong. People may be subject to discrimination based on race, gender, age, religion, or sexual orientation, among other factors (Wikipedia). It is primarily the responsibility of the school and the community to include all learners in education without discrimination.

The disability awareness campaign "Just like You" was designed to educate and reduce the social stigmas associated with people with disabilities among elementary school learners (Lloyd et al 2017). Similar to other disability awareness campaigns, "Kids Are Kids" (KAK) was created to determine whether it can have a positive impact on attitudes toward peers with physical barriers (Tavaries 2011).

Through this study, educators aimed to inform and enlighten primary school learners so that they would be more accepting of classmates with physical disabilities. Consistently, research demonstrates that peers with physical impairments are more likely to be accepted than those with intellectual barriers (Godeau et al., 2010; Alaedin, 2017). Once children have been educated and LWPI acceptance has been established, schools and curricula can begin to emphasise intellectual disability and other special education requirements. The current lack of disability awareness among children may be attributable to the absence of teacher modelling behaviour (Cassiere 2017). In order for positive teacher behaviour to be modelled by learners, schools must ensure that teachers receive disability sensitivity training and are prepared to handle any potential situations in a positive manner.

Structures and practises must be in place to ensure that everyone, regardless of gender, race, ability, culture, or socioeconomic standing, has access to an effective education (Bornman and Rose, 2010). In addition to facing discrimination and social exclusion based on age, race,

language, ethnicity, religion, living in conflict zones, and other factors, children with barriers frequently face discrimination and other disadvantages (UNICEF; WHO and others 2015). Girls with disadvantages are subjected to a higher rate of discrimination and abuse (WHO and others 2012).

Education White Paper 6 on Special Needs Education: Building an Inclusive Education and Training System (2001: 17) outlines how past discriminatory practices and imbalances can be rectified and the principles of inclusion promoted by focusing on overcoming systemic barriers that prevent it from meeting the full spectrum of learning needs.

The research revealed that learners with physical impairments were discriminated against in the investigated schools. Learners must be taught about different disabilities beginning at home so that they can identify different disabilities and respect other learners who are physically challenged. In addition, the study revealed that the infrastructure itself discriminates against LWPI by lacking ramps, proper bathrooms, and classrooms that are wheelchair accessible.

According to Landsberg et al., (2016: 335), LWPI typically encounter difficulties with mobility, such as gaining access to buildings and specific areas where no special accommodations have been made. In addition, they state that the toilet facilities in some buildings do not accommodate wheelchair access. The research revealed that only one of the four schools studied has an adequate infrastructure, but classroom overcrowding is the primary issue.

The study revealed that in three of the investigated schools, learners with disabilities reported being discriminated against by their classmates and teachers. According to Landsberg et al., (2016: 336), socially acceptable behaviour must sometimes be taught. In addition, the study discovered that schools must raise awareness in schools and communities to educate learners, parents, and educators about various disabilities, particularly physical impairments.

Pertaining teaching and learning, the study found that the majority of learners and teachers lack knowledge about various disabilities, making it difficult for schools to create a discrimination-free teaching and learning environment. According to the Bill of Rights, all learners have a right to education regardless of their disabilities, and that all learners must be included in the school and participate in all school activities and lessons. The classrooms must have rules that daily remind learners of the ground rules.

For teaching and learning to be conducive to LWPI, the classroom must be sufficiently sized, stimulating, and inviting, according to (De Jager 2019: 110). The majority of educators are not trained in inclusive and remedial practices, so they do not know what they are doing in the classroom. Regarding how to make education free for LWPI, the study determined that various stakeholders would be consulted and asked to fund the education of physically impaired learners so that they can access the education for all objective.

Welch and Brownell (2002: 133) cite collaboration among all education partners as a solution to this issue, but note that teachers must be trained to deal with the "complexities and procedures of collaboration." The study also found that for teaching and learning to be conducive for LWPI, schools must have adequate infrastructure, well-trained educators, health workers, and readily available LTSM materials (De Jager, 2011).

Due to their disabilities, the majority of learners are bullied and called derogatory names by their peers and teachers, according to the research. In addition, the study revealed that parents of learners with physical impairments do not educate other parents about their child's disability in order to bring them on board to understand them.

5.2.3. Intervention Mechanisms.

According to Landsberg et al., (2016: 336-339), LWPI require assistance in the following areas:

> ➢ mobility;
> ➢ psychosocial support;
> ➢ prevention of pressure sores and injuries;
> ➢ care of learners with incontinence; and
> ➢ improving the teaching situation.

The formation of a positive but realistic self-concept is crucial for these learners, and they require active support, according to Landsberg et al. (2016). Further, they stated that it is necessary to assist LWPI in forming a realistic image of their own body and its composition in order for them to fully comprehend its capabilities and limitations. These learners should recognise that despite having a disability, they have value and potential because they also possess skills, (Landsberg et al., 2016: 337).

According to the results of the study, the majority of schools surveyed lack intervention mechanisms to address the difficulties LWPI face. In terms of lesson plans, student activities, assessments, and curriculum, one size fits all approach is employed. Few schools studied include LWPI in their lesson plans when planning and differentiating curriculum and assessment to meet the diverse needs of their learners. According to De Jager (2019: 113), assessment is a technique used to evaluate the performance of a learner. Assessment entails gathering information (evidence of learning) to evaluate the progress of learners, influences educational decision-making, and enables teachers to determine whether learners are acquiring the skills and knowledge outlined in the National Curriculum Assessment Policy Statement (CAPS, 2012).

The research revealed that a baseline assessment is not administered at the beginning of the first term, along with the screening of learners in order to appropriately place them. The study further revealed that learners are not identified and are not given adequate support. According to Landsberg, Kruger, and Nel (2005: 46), the professional should not be involved in assessing the learner, but assessment for learning should always be the priority. Consequently, it is crucial to abandon the performance-based perception of assessment when working with a learner who is experiencing some sort of barrier.

Concerning intervention mechanisms, the research revealed that if stakeholders were given time slots and invited to schools to observe how educators work and how learners learn, it would be a wake-up call for them to take these challenges seriously. Welch and Brownell (2002: 133) consider collaboration among all partners in education to be the solution to this issue, and they argue that teachers must be trained to deal with all the complexities and procedures of collaboration.

Moral support for coworkers is essential to collaboration because it fosters genuine trust, promotes a healthy work environment for learning and teaching, and creates an environment where perspectives can be shared without fear of snide remarks, criticism, or breaches of confidentiality. Community members can provide transportation for a learner in a wheelchair. Stakeholders such as builders can collaborate with the school to construct ramps. The study demonstrates that if the DBE could visit the schools and observe what is occurring so that they can intervene, the schools would not be able to function on their own.

Article 24 of the CRPD (UNESCO, 2006) mandates reasonable accommodations for the needs of each individual learner. Kruger and Groenwald (2004a:13-14) propose the following to reasonably accommodate learners with physical impairments:

➢ it is necessary to adjust the curriculum based on the amount of work. If learners write slowly, they should not be required to complete all written assignments;

➢ utilise alternate methods. If the learner writes disorderly, a computer, laptop, or tablet may be used;

➢ the other learner should also be instructed to help these learners carry their lunch boxes during recess and on the playground;

➢ ensure that these learners can easily navigate the classroom and reach their desks; and

➢ A mouthpiece can be used for this purpose if a learner has difficulty controlling the computer mouse.

One of the schools in the study has on-site multidisciplinary teams to assist and support learners and teachers, including school nurses, occupational therapists, audiologists, and speech therapists. This team intervenes when learners require their services (De Jager, 2019:108).

The research revealed that two schools under investigation require DBE intervention to assist them with LWPI, in terms of improving infrastructure, training teachers, and supplying schools with relevant LTSM materials and resources, because the majority of teachers in the schools do not even know about inclusive education. Moreover, schools should be assigned multidisciplinary teams to intervene whenever they encounter difficulties with physically impaired learners (De Jager, 2019: 108).

In terms of infrastructure as a significant obstacle, learners are unable to reach the required notional time for instruction because there are two teachers in each classroom, requiring them to share subjects. Mobility should be improved as much as possible because it contributes to the independence of the learner (Landsberg et al., 2016: 337). According to Landsberg et al., (2016), wheelchairs require sufficient space for maneuvering, especially within buildings. In addition, they state that the furniture must accommodate the learner so that the wheelchair fits under the table and the learner is able to work at the table in the correct position (Landsberg et al., 2016: 337). Since they are frequently clumsy and bump into walls and doors, caliper users require ample space for movement.

Correspondingly, LWPI require intervention for the prevention of wounds and injuries. According to Landsberg et al., (2016), shoes and orthopedic aids should be fitted with ongoing care to prevent sores and injuries.

The research revealed that the schools under study face significant obstacles, including infrastructure, curriculum, and time constraints, a lack of resources, multiple learning disabilities, parental involvement, bullying, and unqualified teachers. Regarding the curriculum, the activities should remain constant, but the tasks can be adapted to accommodate all learners' developmental needs (Kliebard, 2004).

Concerning curriculum and assessment differentiation, the study revealed that only two of the four schools included in the research differentiate assessments, and if a learner's performance does not improve, they apply for a mild concession and accommodation. A rigid and inflexible curriculum that does not accommodate individual differences can lead to a breakdown in learning (Motitswe, 2012: 39). Motitswe (2012: 39) argues further that one of the most significant obstacles to learning is the curriculum itself, specifically its inflexibility.

The study demonstrates that these obstacles had a negative effect on the performance of the learners because they lacked the courage and resilience to overcome the many barriers that impeded their access to high-quality education. According to Henning and Mithell (2002), a physical impairment can cause learners to experience low self-esteem as well as emotional and social difficulties, which can impact their academic performance. Besides this, learners cannot improve because parents are not involved.

5.2.4. Assistive Devices and Technologies.

DBE (2014) defines assistive devices as any device that is designed, manufactured, or adapted to assist a learner in performing a specific educational task. In addition, it is designed to compensate for any functional limitation that makes it difficult for a learner with a disability to access the curriculum. Wheelchairs, prostheses, mobility aids, hearing aids, visual aids, and specialised computer software and hardware are examples of assistive devices and technologies. With the aid of these technologies, children with disabilities are better able to live independently and participate in their communities.

The research revealed that only one of the four schools studied has a variety of assistive devices and technologies to assist and support learners with different learning programmes at school and at home. The school would also like to have electric wheelchairs so that learners with weak

hands can move freely without assistance. In addition, the school has a multidisciplinary team that conducts assessments and determines which assistive devices are required for each individual learner. In addition, teachers continue to receive monthly training from a qualified team.

The study further revealed that one of the four schools has only Learner Support Educators (LSE) who move learners from the classroom for remediation and then return them to the classroom. Learning support teachers are also crucial cogs in the inclusion wheel and may be charged with the moral duty of fostering classroom and school communities that celebrate diversity (Jorgensen, 2006: 69). Regarding assistive devices and technologies, when a learner needs a particular device, the resource centre is contacted so that the learner can obtain access to the device. Learners who require specialised LTSM or devices can access them through Full-service schools, a Special School Resource Centre, an Assistive Devices Resources Centre, or the Department of Health, per DBE, (2014: 21).

Two of the four schools studied lacked assistive devices and technologies to assist learners at school and at home, according to the study. In other words, no assistive devices and technologies are available to learners. Furthermore, the study revealed that there are no school personnel specifically trained to assist and support LWPI.

Access to assistive technologies is difficult for adults with disabilities, but these obstacles are even greater for children (WHO and others, 2016). In low- and middle-income countries (LMICs), where the vast majority of children with disabilities reside, a lack of or absence of technology equates to exclusion from academic, social, and community participation (WHO and others, 2016). In practice, the absence of assistive technology for LWPI results in lower rates of primary school completion (UNICEF, 2013), higher rates of unemployment and poverty later in life (WHO and others, 2016), and decreased household income as a result of caregiving responsibilities.

The study revealed that LWPI in primary schools in Mamelodi do not have access to assistive devices and technologies to assist them in their educational programmes. Learners with specific learning disabilities can be referred to schools for learners with special educational needs (LSEN), according to De Jager (2011). This demonstrates that they face difficulties in accessing different learning programs, such as reading, writing, the performing arts, and physical education.

The research revealed that at one school, only the most functional learners participate in formal assessments, while others learn daily living skills so they can be independent and able to communicate.

The results show that out of the four research schools, school 1 has the following devices: wheelchairs, walking sticks, hearing aids, and walkers. School 2 did not have any assistive devices on hand, School 3 only has tablets, and School 4 has no assistive devices at all.

In order for learners to participate in activities, assistive technology such as pencil grips, velcro mittens for picking up objects, calculators with extra-large numbers, and adapted eating utensils and drinking cups are provided (Beukelman & Mirenda, 2013).

5.2.5. Research findings from Observations.

Observation, according to McMillan and Schumacher (2014: 376), is a way for the researcher to see and hear what naturally occurs at the research site.

From the researcher's observations, it was determined that some teachers have classroom rules to remind learners of the ground rules and instill a sense of respect and humanity. Regarding learner-specific support, the research revealed that only one of the four observed schools, school 1, provided learner-specific support, whereas the other three employ a one-size-fits-all approach to education. The findings revealed that other learners learn by doing rather than by listening or writing, but the teacher disregards this information. In order to include all learners in a lesson, De Jager (2019:108) suggests that teachers plan three differentiated learning activities: one for slow learners, one for average learners, and one for gifted learners.

The researcher observed at schools 1, 2, and 3 that the infrastructure is problematic because the classrooms are too small to accommodate learners in wheelchairs.

Regarding assessment, the findings of the study indicate that learners in grade 1 who cannot write are assessed orally, and only three of nine learners in a class were assessed in writing. The trustworthiness of assessment, is ensured if assessment procedures and practices demonstrate fairness, validity, dependability, and practicability. Assessment refers to the ways in which teachers and other individuals involved in a learner's education systematically collect and then use information about a learner's level of achievement and/or development in various areas of their educational experience (academic, behavioural, and social). The primary purposes of assessment are stated as providing information on learner achievement and

development and enhancing the learning and teaching process (Department of Education, 1998:4).

In schools 2, 3, and 4, the researcher observed that the curriculum and assessment were not differentiated and learning was standardised. Teachers in schools 2, 3, and 4 require assistance from the SBST and DBST. The results revealed that learners in schools 2, 3, and 4 are able to transcribe from the blackboard, but tire quickly. Learners should be provided additional time for activities and evaluation (RSA, 2003).

The study found that learners in school 1 have access to assistive devices and technologies at school and at home, whereas those in schools 2, 3, and 4 do not. The researcher's visits to classrooms to observe lessons were truly eye-opening. In terms of using LTSM to support LWPI, lesson observations revealed that educators do not have sufficient resources to support LWPI. According to De Jager (2019: 142), instructors can utilise a variety of resources to engage learners in active learning, including electronic textbooks, online instruction courses, and games and simulations.

The study revealed that in all four schools observed, classrooms were overcrowded, classrooms and furniture were poorly arranged, and there were no colourful charts or posters. Posters can be useful because learners will see an image and, when recalling prior knowledge, connect an idea to the previously observed image (Curzon, 2005). Colorful images are more likely to pique a learner's interest and acclaim than line drawings (De Jager, 2019). In addition, learners sat on uncomfortable desks and chairs, and the atmosphere was not conducive to teaching and learning. Classes with wheelchair-using learners lacked sufficient space for them to move freely, place their bags and writing materials.

5.2.6. Findings from Documents Analysis.

Documents analysis is a qualitative research method that employs a systematic procedure to examine documentary evidence and answer specific research questions. Documents analysis is a methodical process for reviewing or evaluating documents, including both printed and electronic (computer-based and internet-transmitted) content. Documents analysis, like other qualitative research analytical methods, necessitates the examination and interpretation of data in order to extract meaning, gain comprehension, and develop empirical knowledge (Corbin & Strauss, 2008). Documents analysis is a qualitative research method in which the researcher interprets documents to give voice and meaning to an assessment topic (Bowen, 2009). According to O Leary (2014), there are three primary types of documents:

- ➢ public records: the ongoing, official documentation of an organisation's actions. Examples include learners transcripts, policy manual and strategic plans;
- ➢ personal documents e.g. emails, blogs and journals; and
- ➢ physical evidence e.g. posters and agendas.

Documents analysis revealed that the admission policies of schools 1, 2, and 3 were available and effectively implemented, whereas school 4's policy was available but poorly implemented. The school does not use an admission policy when admitting learners; therefore, the majority of learners are underage and improperly placed. According to Landsberg et al. (2016: 33), the school Act (RSA, 1996b: preamble) established a unified, inclusive national education system. This Act lays the groundwork for South African schooling and barrier-free education. Sections 5(1) and (2) of the School Act require public schools to admit all learners and meet their educational needs without any unfair discrimination or admission-related testing (RSA, 1996b).

The SBST policy, anti-bullying policy, and evaluation policy of school 1 are not available upon request. The classroom rules and discipline policy are implemented and consulted on a regular basis to ensure the proper administration of the school. Lesson plans are accessible and accommodate the needs and abilities of all learners. Curriculum policy is accessible and effectively implemented to accommodate all learners. According to the findings of the study, school 1 is well-managed due to the availability of most relevant documents. According to the School Act (RSA 1996b), schooling and barrier-free education in South Africa are based on policies.

With the exception of the SBST policy, all the documents the researcher requested to examine were accessible and effectively implemented at school 2. The school mentioned having a SBST policy, but failed to provide the researcher with a copy. The findings indicated that school 2 is well-managed, with the majority of school policies available and effectively implemented.

The findings from school 3 indicate that discipline, SBST, and curriculum and assessment policies existed but are inadequately implemented. Except for anti-bullying policy and assessment policy, the school has all policies. According to the findings, school 3 is poorly managed.

The research findings from school 4 revealed that the school has only five available policies, which are poorly implemented and ineffective. According to the study's findings, school 4 is poorly administered, with several policies unavailable.

According to the research conducted by Fernando (2021), of the 114 countries that responded to the 2005 Global Survey on government action on the implementation of the Standards Rules on the Equalisation of Opportunities for Persons with Disabilities, 48% did not have policies in place regarding the provision of assistive technologies, and 50% had not enacted relevant legislation. Given the importance of government policy at all levels of the education system, this is very difficult for children and their families.

5.3. CONCLUSIONS BASED ON THE RESEARCH FINDINGS.

The researcher concludes that for LWPI to access educational opportunities, they require trained teachers, adequate LTSM, assistive devices, adequate infrastructure, a flexible curriculum, and knowledge and skills.

Concerning LWPI discrimination, the researcher concludes that schools and community need to raise awareness about LWPI in order to educate parents, teachers, and learners so that they can become accustomed to them and accommodate them in society, thereby reducing bullying in schools. To create a discrimination-free learning and teaching environment, the community as a whole must include LWPI.

The researcher further concludes that more intervention is necessary for LWPI to gain access to better educational opportunities. Teachers must include learners in lesson planning, classroom activities and assessment. The community must assist the school in addressing LWPI inclusive education challenges. The school must provide sufficient assistive devices and technologies to enable learners to access educational opportunities. Parental involvement is also essential in LWPI education.

The researcher concludes that documents are essential to the school's operation. With policies, discipline, support, adaptation of the curriculum and assessment, adequate resources, LTSM and trained educators, all schools would be able to provide all learners with a quality education. In addition, schools must ensure that they have all the necessary policies in place and implement them so that learning and instruction can occur without interruption. The SBST of the schools must be functional in order to support teachers and LWPIs.

The researcher concludes from observations that all primary school teachers should be trained to work with diverse learners in the classroom and accommodate them. Moreover, the DBE must ensure that the old schools in Mamelodi are transformed into inclusive schools and that more classrooms are constructed to alleviate overcrowding. Regarding curriculum and assessment, the researcher concludes that teachers must adapt curriculum and assessment to meet the needs of all learners, particularly LWPI learners. To include all learners in the education system, the curriculum must be modified. The researcher concludes that LTSM are important for learning and teaching, and that the DBE must ensure that schools have the necessary materials for learners and teachers so that learning and teaching can occur efficiently.

5.4. THE STRENGTH OF THE STUDY AND THE LIMITATIONS.

As with any other study, this one had its limitations. The following constraints are acknowledged in the study:

According to Punch (2020:69), it is not possible to generalise the research's findings to other provinces, school districts, or school settings because the study was limited to the selected schools. Due to the fact that the study included interviews, some participants (parents, teachers, principals, heads of departments and learners) could become ill, miss the interviews, develop scepticism, and refuse to provide additional information about their schools. Participants are also permitted to withdraw from the interviews.

Furthermore, time itself may not be on the side of the researcher, as some participants may not show up for the interview and others may withdraw without notice. In addition, the researcher may have difficulty gaining access to various institutions, as some school principals may deny him or her access to school grounds because of the Covid-19.

Principals, department heads, teachers, parents, and learners from four schools in Tshwane South District, Gauteng, were selected as participants for this study; however, the sample cannot be generalised to all Gauteng schools.

Too many appointments were scheduled between the researcher and individual participants on the same day, necessitating expensive transportation and other costs. This indicates that the research was conducted with limited time and resources.

The interviews and data collection were delayed because some participants were not prepared for the interviews, and the researcher had to be patient until such participants were ready. A number of individual interviews had to be rescheduled due to clashes with school activities that were not reflected in the term plan.

5.5. RECOMMENDATIONS.

The following recommendations are made to assist LWPI who experience inclusion education challenges in primary schools.

5.5.1 Recommendations for education opportunities.

As a result of this research, a number of recommendations can be made to ensure that LWPI in Mamelodi primary schools in Pretoria, as well as learners from all schools across the country, receive support to access educational opportunities from all stakeholders. Regarding infrastructure, it is recommended that the DBE renovate or construct new schools in Mamelodi, as the majority of the schools are outdated and require modifications, such as the construction of ramps, railings, and wheelchair-accessible facilities.

According to De Jager (2011), buildings must be modified to accommodate wheelchairs, including classroom doors that are sufficiently wide, ramps, adapted toilets, and elevators. However, the department of education has not provided any funding to implement these changes. It is suggested that the DBE provide funding for these infrastructure improvements to primary schools in Mamelodi Township so that teachers do not have to share classrooms. Correspondingly, desks and chairs should be made available to accommodate the learner's disability (De Jager, 2011).

Concerning LWPI's educational opportunities, it is suggested that an adapted curriculum be designed and implemented immediately at mainstream and all primary schools, specifically for LWPI (RSA, 2003). Mamelodi primary school educators are dissatisfied with the one-size-fits-all LWPI curriculum because they do not know how to provide support to educators and newly appointed educators. The DBE expects educators to teach and differentiate the curriculum and assessment to meet the needs of their learners and to provide support for them.

In addition, it is recommended that the DBE train educators on how to adapt curriculum and assessment with learners in the classroom because, as demonstrated in the workshops, it is high time that the district officials provide the school with adequate resources, infrastructure, and

certified teachers. The DBE's one-time workshops (SIAS) are insufficient and devoid of experts for the LWPI.

It is further recommended that the DBE hold monthly workshops and make regular school visits to assist teachers. It is also recommended that the DBE, through the district-based support team (DBST), become more active in providing adequate support to elementary school teachers and LWPI. Support can be defined as any activity that enhances a school's capacity to respond to diversity (Mahlo, 2011: 54). For successful teaching and learning, a supportive environment characterised by collaboration among teachers, parents, principals, and district officials and learner support for teachers is essential.

Another recommendation is for the school to employ alternative assessment methods for LWPI that account for the variety of learning barriers. Traditional assessment criteria, such as formal tasks and examinations, are infeasible for severely impaired LWPI. To meet the needs of LWPI, informal, innovative, and ongoing assessment strategies must be incorporated into the curriculum (De Jager, 2019: 129).

5.5.2 Recommendations for assistive devices and technologies.

With assistive devices and technologies, it is recommended that the DBE, through the DBST, provide primary schools with assistive devices based on the needs of the learners, so that they have equal access to educational opportunities. The DBST is responsible for ensuring that schools have the necessary resources, LTSM, qualified teachers, infrastructure, assistive devices, and technologies (Landsberg et al. 2019: 464-514). It is also recommended that the DBST provide these devices, as it is essential for LWPI to have access to inclusive educational opportunities.

5.5.3 Recommendations for curbing discrimination against learners with physical impairments.

It is recommended that teachers and learners not discriminate against these learners in schools; they require support (Landsberg et al., 2016: 336). The DBE, through the DBST, should raise awareness in schools to educate parents, teachers, learners, and the community about LWPI, so that they view these individuals as identical to themselves, with the exception that other parts of their bodies are not functional. As they are also humans, they must be respected and treated with humanity and Ubuntu, as well as shown love.

It is essential to conduct disability awareness campaigns and camping opportunities for LWPIs to interact with others and be recognised in schools and in society. Parents must be taught to acknowledge their LWPIs' disabilities without shame, so they cannot be concealed.

5.5.4 Recommendations for intervention strategies.

It is strongly recommended that colleges and universities incorporate modules or courses on special needs education and inclusive education into the Bed qualifications in order to equip teachers with the necessary knowledge and skills at the tertiary level. According to Savolainen (2009: 16), teachers play a crucial role in ensuring that learners receive a quality education; consequently, the quality of an education system cannot surpass the quality of its teachers. Studies indicate that teachers are more willing to participate in inclusion when they perceive themselves as competent and adequately prepared to instruct learners with disabilities. The need for training to support differentiated instruction, curriculum adaptation, and modification to meet the needs of diverse learners is reaffirmed.

The study revealed that only six educators, including department heads and principals, were professionally qualified to instruct learners with physical impairments among the schools studied. Moreover, it is recommended that educators be experts in identifying the various barriers to learning, differentiating the curriculum, adapting methodology, employing alternative assessment methods, and utilising assistive devices and technologies (De Jager, 2011). In addition, it is recommended that parents be involved in their children's education if they want their children to have better educational opportunities.

Observation suggests that teachers require adequate LTSM, additional training and support from DBST on how to accommodate diverse learners, and curriculum and assessment adaptation (McMillan and Schumacher, 2014:224-376). Regarding documents analysis, it is strongly advised that schools must ensure that all school policies are available, accessible, functional, and effectively implemented in order for schools to run efficiently.

5.6. CONCLUSION.

The social model theory of disability is relevant to this study ,because it addresses social inclusion to learners who are marginalised and discriminated against. In addition it is a social constructed system for everybody.

This chapter elaborated on the research project's findings and suggested potential recommendations based on them. Every child has a right to education regardless of their disabilities, race, religion, and language etc. The researcher hopes that the recommendations made will be taken into account and implemented in order to help LWPI gain access to quality education on par with their abled counterparts, something they desperately need to accomplish.

The aim of this research is to highlight the prodigious importance of accelerating of education opportunities for LWPI in inclusive settings in order to transform the education system and meet the UN goal of education for all. This is only possible if the environment is less restrictive, teachers are appropriately trained to accommodate these learners, resources are made available, and support structures are in place. In addition, the study sought to persuade DBE and the Department of Public Works to construct ramps at schools, make the buildings wheelchair-accessible, and improve mobility to the classrooms.

The research intended to persuade the DBE to transform schools into full-service schools so that they can accommodate a variety of obstacles. The researcher hopes to persuade the School Governing Body (SGB) to collaborate with various organisations, businesses, and sponsors to enhance the school buildings and environment in Mamelodi East Primary Schools.

In addition, the study included a detailed description of the settings and participant quotes, accompanied by explanations from the researcher that elaborated on the difficulties faced by learners with physical impairments. Maree (2007: 301) argues that a detailed description of the school environment enhances the researcher's explanation of the phenomenon under consideration. These recommendations addressed educators, principals, assistant principals, parents, learners, the SGB, and the DBE.

The study also intended to serve as a wake-up call for the DBE to ensure that teachers are trained in inclusive education so that they have the skills necessary to teach diverse classes. It also sought to influence the policy and remind the DBE that they have a good policy, but it cannot enact the policy on its own. In addition, those at the highest levels (such as district

officials and principals) must be willing and able to implement the policy and provide support to teachers in schools.

5.7. RECOMMENDATIONS FOR FUTURE RESEARCH.

The study revealed that LWPI face difficulties with inclusion education in Mamelodi primary schools. The research study revealed that a number of obstacles prevent LWPI from gaining access to and advancing in inclusive education settings. The admission of learners without adequate support has negative effect on learners, parents, and educators. Infrastructure, curriculum, unqualified educators, time, LTSM, and resources are the major obstacles faced by LWPI and these have a significant impact on the acceleration of education opportunities. The research project suggest that future research may concentrate on the following recommendations:

The impact of inclusive education infrustructure on the teaching and learning of learners with physical impairments;

➢ DBST's involvement in aiding LWPI to expand educational opportunities in inclusive settings;

➢ education opportunities required by LWPI in inclusive education settings;

➢ Intervention mechanisms and programmes that the LWPI need to equally access and fully participate in education; and

➢ Challenges encountered by LWPI in South African secondary inclusive schools.

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Appendix A: Registration letter

From: mandd@unisa.ac.za <mandd@unisa.ac.za>
Sent: Friday, 07 January 2022 08:04
To: SEKHWELA M P <31802389@mylife.unisa.ac.za>
Subject: 31802389 Unisa Registration

UNISA | university of south africa

1004

        SEKHWELA M P MISS   STUDENT NUMBER : 31802389
        9094 MAMELODI GARDENS EXT2
        1327 MOTLOPI STREET   ENQUIRIES   :
mandd@unisa.ac.za
        MAMELODI EAST
        0122   -FAX : (012)429-
4150

                                                   DATE   : 2022-01-
07

Dear student

Your application for registration for the study units as indicated on your registration form
has been received.

Please note that you are not yet registered and that your registration for the indicated study
units
can only be finalised on receipt of the prescribed minimum initial payment. In order to have
your
registration activated, a further amount of R 15,960.00 is required before the appropriate
closing date
for registration. The full fees for the study unit(s) below amount to R 15,960.00 .

        DFIED95   MEd - Inclusive Education

The web address for authorizing credit card or EFT/SWIFT payment is as follows:
www.unisa.ac.za/paymentinfo

Bank deposits (not for foreign students) can be done at any branch of First National Bank (FNB)

in the RSA.
The deposit slip must be completed as follows:
* Credit - Unisa Student Deposits - The first eight blocks are for the student number. If the student number
   consists of only 7 digits, then an "0" must be filled in for the first digit of the student number.
* Leave one block open and then fill in the number 5400374721.
* Bank account number: Unisa Student Deposits

Study material can be accessed on the Unisa web after you have been temporarily registered. Visit the
following link: https://registration.unisa.ac.za/info/ to download your study material.
249 In order to finalise your placement at a school for the Teaching Practice module registered, you are requested
   to submit a completed DSAR25 form. The form can be obtained from either the my Registration @ Unisa brochure or
   at the forms link on the Unisa website at www.unisa.ac.za. The DSAR25 form must be faxed to 0866154699. Students
   who registered in person at one of the Unisa registration facilities or via the web and have already submitted
   this information, can ignore this request.

Your application for registration or registration for additional study unit/s will be cancelled if the
relevant minimum fee and/or documents have not been received by the University on or before the
appropriate closing date. You will then have to apply for registration for the next
registration period.

If there is a credit balance on your account, it will be refunded on your written request.

Prof M S Mothata
Registrar

Appendix B: A letter to request permission to conduct a research at school.

UNISA | university of south africa

Title of the research: Inclusion challenges faced by learners
with physical impairments in Mamelodi East primary schools.

Date:

Name of the Principal:
Department:
Cell number:

Dear Sir /Madam

I M P Sekhwela am doing research under supervision of Prof M O Maguvhe a Professor in the Department of Inclusive Education towards a MED at University of South Africa. We are inviting you to participate in the study entitled Inclusive challenges faced by learners with physical impairments in Mamelodi East primary schools.

The aim of the study is to investigate Inclusion challenges faced by learners at selected primary schools in Mamelodi East. Your school has been selected because the researcher realised that most learners with physical impairments are experiencing inclusion challenges in schools. The study will entail interviews, document analysis and observation.

The benefit of the study are to make government aware of the inclusion challenges in Mamelodi East Township School. There are no potential risks in the study, participants will be safe. The will be no reimbursement or any incentives for participation in the research. Feedback procedure will entail

Signature of researcher:
Name of the researcher:
Position of the researcher:

Ms. Sekhwela M P (Researcher)   Prof M O Maguvhe (Supervisor)

Cell: 0732117422   Tel:012484 1000

Email: phillipinemosibudi@gmail.com   Email: maguvmo@unisa.ac.za

Appendix C: A letter to request to the Department of Education

UNISA | university of south africa

Tshwane South.
Enq: Sekhwela M P
Cell: 0732117422.
1327 Motlopi Street
Mamelodi East
0122
02 March 2020

The HOD
Gauteng Department of Education
Private Bag x
Pretoria
0122

Dear Sir/Madam

Request for permission to conduct Research in Mamelodi Primary Schools

I humbly request your permission to conduct a research in Mamelodi circuit 5 primary schools. I am currently a Master of Education (Inclusive Education) student at the University of South Africa. My research topic is Inclusion challenges faced by learners with physical impairments in Mamelodi East primary schools.

I intend to interview primary schools principal, teachers, departmental heads, deputy principal and the parents. During my interview, I will use a tape recorder which will help me to organize my data after the completion of the interview process. The exercise will last for two weeks, at most, and will take 30 minutes per identified individual participants' teacher.

The identified participants will receive letters of notification for participation including time frames and fundamentals of the research projects prior the commencement. The process of collecting data will start as soon as ethical application has been approved by the ethical committee of the University of South Africa. After the completion of my research project, my findings will be made available to the Department of Education.

The research, in my opinion, will assist the principals, teachers and department in understanding the Inclusion challenges faced by learners with physical impairments in Mamelodi East primary schools.

I hope that my request will receive your favorable consideration.

Yours sincerely

 Ms.Sekhwela M P (Researcher)   Prof M O Maguvhe (Supervisor)

APPENDIX D: Parental consent

UNISA | university of south africa

RE: A letter requesting parental consent for minors to participate in a research project.

Dear Parent.

Your   son/daughter is invited in a study entitled Inclusion challenges experienced by learners with physical impairments in Mamelodi East Primary Schools .I am undertaking this study as part of my Masters research at the University of South Africa .The purpose of the study is to investigate inclusion challenges faced by learners with physical impairments in Mamelodi East primary schools, and the possible benefits of the study are the improvement of Mamelodi East primary schools in inclusive education .I am asking permission to include your child in this study because he/she is also experiencing inclusive education challenges at school.

I expect to have five other children participating in the study .If you allow your child to participate, I shall request him/her to take part in an interview. The interview will take place at school after the lessons from 14:00 to 15:00pm.During the interview I will be using tape recorder to record the interview.

Any information that is obtained in connection with this study and can be identified with your child will remain confidential and will only be disclosed with your permission .His/her response will not be linked to his/her name or your name or the name of the school in any written or verbal report based on this study .Such a report will be used for research purpose only .There are no foreseeable risks to your child by participating in the study. Your child will receive no direct benefit from participating in the study, however the possible benefits to education.

Neither your child nor you will receive any type of payment for participating in this study .Your child's participation in this study is voluntary .Your child may decline to participate or to withdraw from participation at any time .Withdrawal or refusal to participate will not affect him/her in any way .Similarly you can allow your child to be in the study now and change your mind later without any penalty.

The study will take place during regular classroom activities with the prior approval of the school and your child's teacher (during lesson, break time and physical education activities).In addition to your permission, your child must agree to participate in the study and you and your child will also be asked to sign the assent form which accompanies this letter .The information gathered from the study and your child's participation in the study will be stored securely on a password locked computer in my locked office for five years after the study .Thereafter, records will be erased .There will be no reimbursement or any incentives for participation in the research.

If you have questions about this study please ask me or my study supervisor, Prof M O Maguvhe, Department of Inclusive Education, college of Education, University of South Africa My   contact   number   is   0732117422   and   my   email   address   is

phillipinemosibudi@gmail.com.The email of my supervisor is maguvmo@unisa.ac.za. Tel:0124841000

You are making a decision about allowing your child to participate in this study .Your signature below indicates that you have read the information provided above and have decided to allow him/her to participate in the study .You may keep the copy of this letter.

Name of the child:

Sincerely

Parent/guardian name (print)   Parent/guardian signature   Date:

Researchers name (print)   Researcher signature   Date:

Ms. Sekhwela M P (Researcher)   Prof M O Maguvhe (Supervisor)

Cell: 073 211 7422   Tel:012 484 1000

Email: phillipinemosibudi@gmail.com   Email: maguvmo@unisa.ac.za

APPENDIX E: Request letter for learner participation

UNISA | university of south africa

RE: A letter requesting assent from learners in a primary school to participate in a research project.

Dear Learner: Date:

My name is Teacher M P Sekhwela and I would like to ask you if I can come and observe you during break, watch you do some activities and when you play outside on the playground. I am trying to observe Inclusion challenges faced by learners with physical impairments in primary schools.

If you say yes to do this, I will come and watch you when you do activities and play outside on the playground. We will do a fun game activities together. I will not ask you to do anything that may hurt you or that you do not want to do. I will also ask your parents if you can take part. I if you do not want to take part, it will also be fine with me.Remember, and you can say yes or no and no one will be upset if you do not want to take part or even if you change your mind later and want to stop. You can ask any questions that you have. If you have a question later that you did not think of now, ask me next time I visit your school.

Please speak to your mommy or daddy about taking part before you sign this letter. Signing your name at the bottom means that you agree to be in this study. A copy of this letter will be given to your parents.

Regards.

Teacher M P Sekhwela.

Learner name: I will take part □ Yes   □ No

Name of the researcher:

Date:

Witness

Ms.Sekhwela M P (Researcher)   Prof M O Maguvhe (Supervisor)

Cell: 0732117422   Tel:012484 1000

Email: phillipinemosibudi@gmail.com   Email: maguvmo@unisa.ac.za

APPENDIX F: A LETTER TO PARTICIPANT

UNISA | university of south africa

Enq: Sekhwela M P
1327 Motlopi Street
Mamelodi East X 2
0122
Cell: 0732117422

Dear Participant

Re: Request for your consent to participate in the research project

You are humbly requested to participate in the research project aimed at collecting data on Inclusion challenges faced by learners with physical impairments in Mamelodi East primary schools. I am currently a masters of Education (Inclusive Education) student at the University of South Africa.

My research topic is: Inclusion challenges faced by learners with physical impairments in Mamelodi East primary schools.

Your participation in this research is voluntary. Confidentiality and anonymity is guaranteed and if you decide to withdraw from the project you may discontinue, at any time. The purpose and the process will be fully explained and you will not be placed at risk or harm of any kind.

The aim of the research project

The aim of the study is to investigate Inclusion challenges faced by learners with physical impairments in Mamelodi East primary schools.

My expectation from you as participant.

I will meet with you to explain the purpose and aim of the study and I will as well give clear information about the following:

- The title of the research project
- The purpose of the study
- What is expected of you in this study
- Your rights as a participant in this study

In the meeting, you will be given a chance to ask questions and clarity will be given to avoid misunderstanding. If you are willing to participate, then you will be requested to sign a declaration in a form of a consent form. An arrangement of 30-45 minutes interview will be made for the individual participant.

Declaration of your consent.

If you are willing to participate in this research project, please sign the attached letter as declaration of your consent. If you have any questions, misunderstanding or need clarity, do not hesitate to contact my supervisor or me at the numbers given below, or via email. You must know that your acknowledgement to participate in this study is out of your free will, knowing that you may withdraw from the research at any time.Therfore, under no circumstances will your identity be made known to any party or organization that may be involved in the research processes and or which has some form power over you.

I hope and trust that my request will receive favorable consideration as I will wait patiently to receive a positive feedback from you.

Yours sincerely

M P Sekhwela (Researcher)   Prof M O Maguvhe (supervisor)

Cell: 0732117422   Tel: 0124841000

E-mail: phillipinemosibudi@gmail.com   maguvmo@unisa.ac.za

APPENDIX G: INTERVIEW SCHEDULE TEACHERS

TITLE: Inclusion challenges faced by learners with physical impairments in Mamelodi East primary schools.

INTERVIEW SCHEDULE TEACHERS AND PARENTS

Name of the teacher:

Name of the school:

Biographical information

How long have you been a teacher?

How many years have you been teaching?

How long have you been in the school?

What grade do you teach?

What subject do you teach?

What are your highest qualification?

How would you describe inclusive education in your school?

Have you worked in another school prior to this? If yes, then describe your previous experience at that school.

ACCELARATION OF EDUCATION OPPRTUNITIES.

1. How could you facilitate acceleration of education opportunities foe learners with physical impairments in inclusive education settings in order to transform the education system sufficiently and meet the education for all goal?

2. As a teacher /parents what would be your role in the acceleration for teaching g opportunities for learners with physical impairments?

3. Which learning opportunities according to you should be accelerated and which measures should be in place for the acceleration of those opportunities?

DISCRIMINATION OF LEARNERS WITH PHYSICAL IMPAIRMENTS.

1. How can you as a teacher/parent, create a teaching learning environment that is free of discrimination especially to LWPI?

2. What constitute a conducive teaching and learning environment for learners with physical impairment?

3. If education for LWPI is not free, what would you do to make it free?

INTERVENTION MECHANISMS.

1. Which intervention mechanisms can be used to address the challenges of LWPI in inclusive education settings?

2. Which major challenges are experienced by LWPI at your institution?

3. What impact do those challenges have on the teaching and learning encounter?

ASSISTIVE DEVICES AND TECHNOLOGIES.

1. Do learners with physical impairment have access to assistive devices and technologies and other relevant reasonable accommodation measures that supplement the initiatives as espoused in the inclusive education policy on the recruitment of qualified educators, mobilization of learners, assessment, in inclusive settings?

2. Which specific assistive devices, assistive technologies do your learners have access to at your school?

3. is there a specific person trained in the utilization of those assistive devices so that he/she give support to learners with physical impairment?

4. Do learners have access to assistive devices and technologies always or during school time?

Ms. Sekhwela M P (Researcher)   Prof M O Maguvhe (Supervisor)

Cell: 073 211 7422   Tel:012484 1000

Email:phillipinemosibudi@gmail.com   Email:maguvmo@unisa.ac.za

APPENDIX H: INTERVIEW SCHEDULE –PRINCIPAL AND DEPARTMENTAL HEAD

Name of school:

Name of principal/departmental head:

Biographical information

- How long have you been a principal at this school?
- How long have you been a teacher at this school?
- How many teachers are at the school?
- How many learners are at the school?
- From which grade does the school start?

1. What do you understand by Inclusive Education?

2. What do you understand by physical impairments?

3. How do you rate school in terms of inclusive education?

4. Do teachers undergo inclusive education training?

5. Do teachers trained to teach learners with physical impairments?

6. Does the school environment conducive for learners with physical impairments?

7. What challenges do you encounter with learners experiencing physical impairments
8.What does your school policy says about inclusive education?

9. Do you think teachers are coping in their classroom with those learners?

10. In your opinion, what can be done to help learners with physical impairments in schools?

Ms. Sekhwela M P (Researcher)   Prof M O Maguvhe (Supervisor)

Cell: 0732117422   Tel:012 4841000

Email: phillipinemosibudi@gmail.com   Email: maguvmo@unisa.ac.za

APPENDIX I: OBSERVATION/CHECKLIST

UNISA | university of south africa

Observe movement to and from the classroom

- Observe classroom activities
- Observe interaction with peers during break
- Observe physical education activities in the playground
- Observe how the learners
- Learn and write in the classroom.
- How they play sport.

Ms. Sekhwela M P (Researcher)   Prof M O Maguvhe (Supervisor)
Cell: 0732117422   Tel:012 484 1000
Email: phillipinemosibudi@gmail.com   Email: maguvmo@unisa.ac.za

Appendix J: A letter to request to Tshwane South District D4

Title: Inclusion challenges faced by learners with physical impairments in Mamelodi East Township primary schools.

Enq: Sekhwela M P

Cell: 0732117422.

<div align="right">

1327 Motlopi Street
Mamelodi East
0122
02 March 2021
</div>

The Circuit Manager
Tshwane South District D4
Private Bag x
Pretoria
0122
Dear Sir/Madam

Request for permission to conduct Research in Tshwane South District Schools.

I humbly request your permission to conduct a research in Mamelodi circuit 5 primary schools. I am currently a Master of Education (Inclusive Education) student at the University of South Africa. My research topic is Inclusion challenges faced by learners with physical impairments in Mamelodi East primary schools.

I intend to interview primary schools principal, teachers, departmental heads, learners and the parents. During my interview, I will use a tape recorder which will help me to organize my data after the completion of the interview process. The exercise will last for two weeks, at most, and will take 30 minutes per identified individual participants' teacher.

The identified participants will receive letters of notification for participation including time frames and fundamentals of the research projects prior the commencement. The process of collecting data will start as soon as ethical application has been approved by the ethical committee of the University of South Africa. After the completion of my research project, my findings will be made available to the Department of Education.

The research, in my opinion, will assist the principals, teachers and department in understanding the Inclusion challenges faced by learners with physical impairments in Mamelodi East primary schools.

I hope that my request will receive your favorable consideration.

Yours sincerely

Ms. Sekhwela M P (Researcher)   Prof M O Maguvhe (Supervisor)

Cell; 0732117422   Tel:012484 1000

Student number: 31802389   Email: maguvmo@unisa.ac.za

Email: phillipnemosibudi@gmail.com

APPENDIX K: INTERVIEW SCHEDULE FOR THE LEARNERS.

TITLE: Inclusion challenges faced by learners with physical impairments in Mamelodi East Township primary schools.

ACCELARATION OF TEACHING AND LEARNING OPPORTUNITIES FOR LEARNERS WITH PHYSICAL IMPAIRMENTS.

1.   Are they any challenges you encounter at school?

2.   If yes, how did you address those challenges as learners with physical impairments?

3.   Have those challenges affected you negatively or not?

4.   What do you suggest as solutions to challenges experienced by LWPI if they exist?

MECHANISMS FOR ADDRESSING CHALLENGES.

1. Which education opportunities do you wish to have as learners with physical impairment?

2. Why according to you those opportunities important to you as LWPI?

3. What will happen if those opportunities are not made to you as learners with physical impairment?

TEACHING AND LEARNING ENVIROMENT THAT IS FREE FROM DISCRIMINATION.

1.   Have you experience any form of discrimination as a learner with physical impairment at your school?

2.   What will you do if you were discriminated against?

3.   How should discrimination be dealt with at school level, by whom?

ACCESS TO ASSISTIVE DEVICES AND TECHNOLOGIES.

1. Do you have access to assistive device and other technologies?

2. Do you only have access at school, or you have access at home to assistive devices.

3. Which devices as a learner do you use and why?

UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE

Date: 2021/04/14

Ref: **2021/04/14/31802389/30/AM**

Name: Ms MP Sekhwela

Student No.: 31802389

Dear Ms MP Sekhwela

Decision: Ethics Approval from
2021/04/14 to 2024/04/14

Researcher(s): Name: Ms MP Sekhwela
E-mail address: 31802389@mylife.unisa.ac.za
Telephone: 0732117422

Supervisor(s): Name: Prof M O Maguvhe
E-mail address: maguvmo@unisa.ac.za
Telephone: 012484 1000

Title of research:

Inclusive Education challenges faced by learners experiencing physical barriers in Mamelodi East Primary Schools.

Qualification: MEd Inclusive Education

Thank you for the application for research ethics clearance by the UNISA College of Education Ethics Review Committee for the above mentioned research. Ethics approval is granted for the period 2021/04/14 to 2024/04/14.

The **medium risk** application was reviewed by the Ethics Review Committee on 2021/04/14 in compliance with the UNISA Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.

The proposed research may now commence with the provisions that:

1. The researcher will ensure that the research project adheres to the relevant guidelines set out in the Unisa Covid-19 position statement on research ethics attached.
2. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
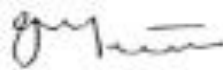
3. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the UNISA College of Education Ethics Review Committee.

4. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.

5. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing.

6. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.

7. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.

8. No field work activities may continue after the expiry date **2024/04/14**. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

The reference number **2021/04/14/31802389/30/AM** should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.

Kind regards,

Prof AT Motlhabane
CHAIRPERSON: CEDU RERC
motlhat@unisa.ac.za

Prof PM Sebate
EXECUTIVE DEAN
Sebatpm@unisa.ac.za

Approved - decision template – updated 16 Feb 2017

GAUTENG PROVINCE
Department: Education
REPUBLIC OF SOUTH AFRICA
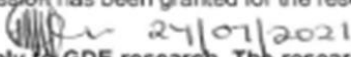
8/4/4/1/2

GDE RESEARCH APPROVAL LETTER

Date:	27 July 2021
Validity of Research Approval:	27 July 2021 - 30 September 2021
	2021/199
Name of Researcher:	Sekhwela M.P.
Address of Researcher:	1327 Metlopi Street
	Mamelodi Gardens Ext 2
	Mamelodi East, 0122
Telephone Number:	073 2117 422
Email address:	phillipinemosibudi@gmail.com
Research Topic:	Inclusive education challenges faced by learners experiencing physical barriers in Mamelodi East Township primary schools.
Type of qualification	B.Ed Inclusive Education
Number and type of schools:	25 Primary Schools
District/s/HO	01 Districts

Re: Approval in Respect of Request to Conduct Research

This letter serves to indicate that approval is hereby granted to the above-mentioned researcher to proceed with research in respect of the study indicated above. The onus rests with the researcher to negotiate appropriate and relevant time schedules with the school/s and/or offices involved to conduct the research. A separate copy of this letter must be presented to both the School (both Principal and SGB) and the District/Head Office Senior Manager confirming that permission has been granted for the research to be conducted.

24/07/2021

The following conditions apply to GDE research. The researcher may proceed with the above study subject to the conditions listed below being met. Approval may be withdrawn should any of the conditions listed below be flouted:

1. *Letter that would indicate that the said researcher/s has/have been granted permission from the Gauteng Department of Education to conduct the research study.* 1

Making education a societal priority

2. The District/Head Office Senior Manager/s must be approached separately, and in writing, for permission to involve District/Head Office Officials in the project.

3. Because of COVID 19 pandemic researchers can ONLY collect data online, telephonically or may make arrangements for Zoom with the school Principal. Requests for such arrangements should be submitted to the GDE Education Research and Knowledge Management directorate. The approval letter will then indicate the type of arrangements that have been made with the school.

4. The Researchers are advised to make arrangements with the schools via Fax, email or telephonically with the Principal.

5. A copy of this letter must be forwarded to the school principal and the chairperson of the School Governing Body (SGB) that would indicate that the researcher/s have been granted permission from the Gauteng Department of Education to conduct the research study.

6. A letter / document that outline the purpose of the research and the anticipated outcomes of such research must be made available to the principals, SGBs and District/Head Office Senior Managers of the schools and districts/offices concerned, respectively.

7. The Researcher will make every effort obtain the goodwill and co-operation of all the GDE officials, principals, and chairpersons of the SGBs, teachers and learners involved. Persons who offer their co-operation will not receive additional remuneration from the Department while those that opt not to participate will not be penalised in any way.

8. Research may only be conducted after school hours so that the normal school programme is not interrupted. The Principal (if at a school) and/or Director (if at a district/head office) must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage.

9. Research may only commence from the second week of February and must be concluded before the beginning of the last quarter of the academic year. If incomplete, an amended Research Approval letter may be requested to conduct research in the following year.

10. Items 6 and 7 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and be paid for by the Gauteng Department of Education.

11. It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.

12. The researcher is responsible for supplying and utilising his/her own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.

13. The names of the GDE officials, schools, principals, parents, teachers and learners that participate in the study may not appear in the research report without the written consent of each of these individuals and/or organisations.

14. On completion of the study the researcher/s must supply the Director: Knowledge Management & Research with one Hard Cover bound and an electronic copy of the research.

15. The researcher may be expected to provide short presentations on the purpose, findings and recommendations of his/her research to both GDE officials and the schools concerned.

16. Should the researcher have been involved with research at a school and/or a district/head office level, the Director concerned must also be supplied with a brief summary of the purpose, findings and recommendations of the research study.

The Gauteng Department of Education wishes you well in this important undertaking and looks forward to examining the findings of your research study.

Kind regards

Mr Gumani Mukatuni
Acting CES: Education Research and Knowledge Management

DATE: 27\07\2021

23 August 2022

<u>Declaration of a professional edit</u>

INCLUSIVE EDUCATION CHALLENGES FACED BY LEARNERS EXPERIENCEING PHYSICAL BARRIERES IN MAMELODI EAST PRIMARY SCHOOLS.

by

MOSIBUDI PHILLIPINE SEKHWELA

I certify that I edited and proofread this thesis (Chapters 4 and 5). My editing focused on grammar, spelling, consistency, and referencing. The content has remained unchanged structurally.

I am qualified to perform such editing as I hold a Copy-editing and Proofreading certificate from the South African Writers College.

As a copy editor, I am not responsible for identifying or removing passages in the thesis that are exactly equivalent to previously published text and thus constitute plagiarism. I am not responsible for any changes made to this document by the author or any other party after the date of this declaration. The academic content is entirely the responsibility of the researcher.

Sincerely,

Kuda Dzemwa

SA**WRITERS** COLLEGE
ONLINE COURSES FOR A CAREER IN WRITING
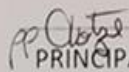
THIS CERTIFIES THAT

Kudakwashe Brandon Dzemwa

HAS SUCCESSFULLY PASSED

The Copy-editing and Proofreading Course

COURSE TUTOR:

Di Smith

CERTIFICATE NUMBER: SAWC D7666

CERTIFIED

15/07/2021

PRINCIPAL: Nichola Meyer

DATE