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EXPLORING THE USE OF REMEDIAL EDUCATION PROGRAMMES IN A GRADE 5 CLASS TO FACILITATE INCLUSIVE TEACHING AND LEARNING IN A GAUTENG REMEDIAL SCHOOL

by

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Supervisor: Dr Siboniso Phathumuzi Dlamini

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ABSTRACT

This research delved into the intersection of remedial education and inclusive practices within a Grade 5 remedial school in Gauteng, South Africa. The study aimed to understand how remedial education programmes enhance learning outcomes for learners with learning impairments. For ease and convenience, in this qualitative study, the research group comprised educators teaching Grade 5 classes in which all the learners were exposed to remedial education programmes. Grade 5 was furthermore selected because one of the researchers taught in this grade, which meant that the data was readily accessible. Adopting an interpretivist paradigm, the research employed a qualitative method (semi-structured interviews), to gather rich insights from the participating educators. A participatory action research (PAR) approach was used to actively involve participants in identifying and addressing challenges in remedial education. Findings revealed that while remedial education can significantly improve academic performance and social inclusion, challenges such as insufficient support, limited resources, and the need for individualised instruction, persist. To address these issues, the study recommends specialised learning environments, inclusive pedagogy, professional development, learner-centred approaches and collaborative partnerships. By implementing these recommendations, it is anticipated that remedial education can become a more effective and inclusive component of the South African education system (Zajda, 2023).

Keywords

Remedial education programmes, inclusive education, inclusive pedagogy, remedial schools, learning impairments.

DECLARATION

I, Zaheera Mohammed, know and accept that plagiarism is wrong. Consequently, I declare that:

The following research report is my own work.

I have correctly acknowledged all direct quotations and paraphrased ideas/content. In addition, I have provided a complete, alphabetised reference list, as required by the APA referencing method.

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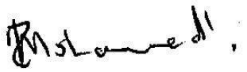
Signed: 

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Dedication

• First and foremost, I would like to thank God for guiding and protecting me throughout the study.

• To my husband, Arif Muhammad, your emotional support during this journey has been comforting. Thank you for always pushing me to do my best and to reach for the unthinkable. Your continuous support and love are greatly appreciated.

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LISTS OF ACRONYMS

ADHD	Attention Deficit Hyperactivity Disorder
ARROW	Aural-Read-Respond-Oral-Written
CEA	Cognitive Enrichment Advantage
CRPD	Convention on the Rights of Persons with Disabilities
EFA	Education for All
IEPs	Individual Education Plans
MDGs	Millennium Development Goals
MKO	More Knowledgeable Other
NEPA	National Education Policy Act
ORB	Oxford Reading Buddy
OT	Occupational Therapy
PAR	Participatory Action Research
SALT	Speech and Language Therapy
SASA	South African Schools Act
SIAS	The Screening, Identification, Assessment, and Support
SDGs	Sustainable Development Goals
ZPD	Zone of Proximal Development

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Figure 1: An illustration of a U-shaped seating arrangement (Researcher: Zaheera Mohammed)

Figure 2: An illustration of Social and Emotional Learning (Source: McCormick et al, 2020)

CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION

The research explores the implementation of remedial education programmes for Grade 5, emphasising the promotion of inclusive teaching and learning practices (Siddiqui & Alghamdi, 2017). In this context, the study highlights the opportunities for growth and development available to learners enrolled in remedial schools. It investigates the effectiveness of remedial educational programmes, the provision of academic support services and the needs of the learners (Jimenez et al., 2016). The literature review explores inclusive education's background, legal frameworks, social constructivism, and the South African contexts. The research methodology details the data collection, analysis and the ethical considerations of the study (Bal et al., 2021).

1.2 BACKGROUND OF THE STUDY

Remedial education is an educational approach that provides additional support and guidance to learners facing learning barriers. Consequently, it emphasises the importance of individual attention for each learner (Twomey, 2006). The goal of the intervention process in remedial schools is to empower learners to return to mainstream education settings by providing comprehensive support. Remedial schools strive to prepare learners for a smooth transition back to regular classrooms. Jimenez et al. (2016) highlight the positive outcomes of remedial education interventions for learners with learning barriers, demonstrating the effectiveness of such programmes in facilitating successful reteaching and reinforcing basic skills, often referred to as filling the “learning gaps.” Hence, it is essential to continuously develop and maintain such institutions in our societies to achieve an inclusive educational system that caters to learners experiencing learning barriers. Remedial education programmes help children improve their learning levels. Learners should be accommodated in receiving quality education where their learning gains can be sustained, ensuring they do not regress (Slavin et al., 2009).

The South African education system ensures equal and quality education democratically. Learners who consistently struggle in an academic content area, like reading or mathematics, should be considered for remedial teaching to improve their grade-level performance. Existing research underscores the importance of acquiring literacy and developing concrete early numeracy abilities to lay a firm foundation for future academic achievement (Duncan et al., 2007).

Remedial programmes have proven to be effective strategies for improving the academic performance of low-performing learners in various regions, including Africa. In Zimbabwe's education system, a similar approach has been implemented to promote primary school learners' English language skills. Ndebele (2014) highlights that the purpose of testing Grade 4 learners' English proficiency in Zimbabwe was to identify learners who needed additional support. Learners who were found to have lower English language levels were eligible to participate in remedial programmes. According to Schwartz (2012), when remedial education programmes are implemented correctly, they are more likely to be effective within a country's overall strategic plan to provide quality education to all learners.

In Chile, the non-profit organisation Un Techo Para Chile has made significant progress in addressing educational inequalities by implementing a remedial programme for underprivileged children. Contreras and Herrera (2005) state that the educational aim is to increase learners' overall learning and social abilities to improve their proficiency in mathematics and Spanish. This programme stands out for its combined emphasis on educational assistance and community involvement. Furthermore, the objective is to improve learning results and to encourage consistent school attendance in the subsequent years (Contreras & Herrera, 2005). The research also highlights support networks outside school, like family participation and community engagement, to maintain lasting educational advancements (Kelty & Wakabayashi, 2020).

Although the remedial programme has already been implemented in Malaysia, it needs attention and improvement (Othman & Rahmat, 2020). Schools should prioritise providing remedial learning spaces and allocate funds for remedial programmes to reduce educator workload and accelerate teaching and learning processes. The remedial education programme in Malaysia is designed for children with identified reading, writing, and arithmetic deficiencies (Richardson, 2015). An advocate of remedial education, Brooks (2009) supports remedial education for low-performing learners by assisting learners in catching up with their academic work, as they seldom achieve this with typical classroom instruction. Furthermore, Brooks (2009) alludes that children who fall behind their peers require more help than traditional classroom instruction provides. Remedial education programmes, particularly in early grades, are educational interventions that address the learning needs of specific learners who are academically behind or unable to acquire certain skills.

Similarly, Houtveen and van de Grift (2007) found that children who do not learn to read as expected in Grade 1 can significantly improve their reading and spelling performance with

systematic support. In addition, remedial education can be provided as a standalone programme, integrated into a larger educational programme or project, or as part of a country's curriculum guidelines and educational policy. Remedial education helps learners improve their academic progress by addressing cognitive gaps. Schools often refer learners to remedial classes or schools, where learning is often referred to as taking place in a 'little group', to resolve difficult classroom situations (Aron & Loprest, 2012). Scholars such as Stone et al. (2019) and Fletcher and Vaughn (2020) provide valuable insights into understanding the background of failure and developing practical remedial teaching approaches. Academic failure can be caused by various factors like learning difficulties, ineffective teaching methods, socioeconomic disparities, and inadequate support systems. Understanding these causes is crucial for successful remedial interventions, as they significantly impact cognitive development.

1.3 PROBLEM STATEMENT

As a Grade 5 educator in a remedial primary school, I have observed that learners who transfer from mainstream schools to remedial schools often face exclusion and isolation in the mainstream setting, resulting from labelling and stigmatisation due to academic struggles. In many South African mainstream primary schools, Grade 5 learners experience significant learning barriers in literacy and numeracy, yet they do not receive access to adequate remedial programmes to address these challenges. Despite multiple educational interventions, they often fail to meet learners' academic needs, necessitating effective remedial programmes in Grade 5 classes to achieve educational outcomes.

This can be accomplished by creating smaller class sizes typical of remedial schools while covering the same curriculum content as mainstream classes. The academic performance of Grade 5 learners in South African remedial schools can be improved by adopting effective remedial practices that provide additional educational support to learners experiencing learning difficulties. Implementing remedial practices addresses learning gaps and meets the specific needs of learners, preparing them for a successful transition back into mainstream schools and achieving better overall educational outcomes.

1.4 RATIONALE OF THE STUDY

The aim of the study emphasised the significance of remedial education for Grade 5 learners. In developing countries like South Africa, learners experience issues related to the growth of

literacy and numeracy skills (Taukeni, 2019). In the wake of situations such as the COVID-19 pandemic approximately two-thirds of the academic year was lost, resulting in learners achieving low numeracy scores (TIMMS, 2023). In lower to middle-income countries, investment in remedial programmes can help learners attain education at the right time and focus on high-priority subjects (Battistin & Schizzerotto, 2019). In Grade 5, many learners struggle to perform at the expected level due to being diagnosed with cognitive disabilities. Therefore, they require more time to process information.

In South Africa, the situation has been more critical as each child has specific learning needs and may not be comfortable with the pace of mainstream schools. With the right educational environment, every child can be brought up to speed. Each child with a learning difficulty should attend remedial classes to learn the same concepts in an interactive way and at a suitable pace (Blancia, 2023). Passionate educators can help these learners grasp ideas by providing personal attention and monitoring their progress. Considering these circumstances, this research study was deemed important.

1.5 PURPOSE STATEMENT

This research aimed to explore the use of remedial education programmes in a Grade 5 classroom to promote inclusive teaching and learning in a remedial school, examining the implementation and impact of these interventions. This research explores the strategies, resources, and instructional approaches used in remedial education programmes to understand how these programmes can effectively support diverse learning needs and contribute to a more inclusive learning environment, contributing to existing knowledge on inclusive teaching and learning practices (Zajda, 2023). This led to the main research questions and three sub-questions.

1.6 RESEARCH QUESTIONS

The main research question of this study can be formulated as follows:

How can remedial education programmes be used in a Grade 5 class to facilitate teaching and learning in a remedial school?

The study seeks to answer the following research sub-questions:

- How does implementing remedial educational programmes in Grade 5 further the aims of inclusive education?
- What academic support services are available for Grade 5 learners enrolled in remedial education programmes?
- What are the identified needs or challenges that continue to exist for Grade 5 educators when delivering remedial education programmes?

1.7 OBJECTIVES OF STUDY

- To investigate how the implementation of remedial education programmes in Grade 5 classes facilitate inclusive teaching and learning in a Gauteng remedial school.
- To examine the academic support services available for Grade 5 learners enrolled in remedial education programmes in the context of inclusive education (Bal et al., 2021).
- To explore the identified needs or challenges faced by Grade 5 educators in delivering remedial education programmes to support inclusive teaching and learning.

1.8 LITERATURE REVIEW

1.8.1 Background of Inclusive Education

Inclusive education represents an ongoing process of transformation within the education sector, guided by pre-defined equity indicators. Recent studies highlight the importance of developing adaptive learning environments that address diverse student needs and ensure equal access to educational resources (Rogahang et al., 2023). When assessing the effectiveness of inclusive education, it is essential to evaluate the quality of learning, learner outcomes, and overall experiences (Messiou, 2017). Inclusive education reforms are primarily design-focused rather than resource-intensive. Over the years, various factors have influenced the application of inclusive education in schools. Key factors include school reviews, planning, training, and support programmes for educators and school leadership (Moriña, 2019; Zajda, 2023).

Inclusive education requires clear policies, data collection systems, and a flexible curriculum that integrates with all national societal aspects (Mishra et al., 2019). Additionally, the integration of technology in inclusive education has proven to improve learning outcomes for learners with disabilities, promoting a more equitable educational experience (Somma, 2020).

Inclusive education emphasises academic achievement for all learners, and studies show that learners with disabilities perform better in inclusive settings compared to segregated ones (Salend, 2011; Avramidis, 2012). Inclusive education promotes social and emotional development by encouraging positive interactions among learners of varying abilities. Through these interactions, learners can acquire valuable life skills, develop empathy, and experience social inclusion (Horn, 2014; Friend, 2015). Inclusive education is consistent with the principles of equity and access to education for all, regardless of their abilities or disabilities. It aligns with human rights and promotes social justice (UNESCO, 2009).

One of the primary challenges of inclusive education is addressing the diverse needs of learners in a single mainstream classroom. Educators need specialised training and support to meet the varied requirements of learners (Sayed & Kanjee, 2015; Forlin et al., 2009; Loreman et al., 2005). Educators may not always have the necessary training or resources to effectively implement inclusive practices, which can hinder the success of inclusive classrooms (Ainscow, 2020). Ensuring adequate resources and support are accessible for learners with disabilities in inclusive settings can be a logistical challenge for schools and educational systems (Engelbrecht, 2018). Resistance from educators, learners, and parents can hinder the successful implementation of inclusive education. Changing attitudes and overcoming biases is an ongoing challenge (Avramidis, 2012).

1.8.2 International legal frameworks of inclusive education

The 1960 UNESCO Convention against Discrimination in Education upholds the principle that every individual has the inherent right to receive an education free from discrimination, including discrimination based on factors such as disability. The 1994 Salamanca Statement and Framework for Action on Special Needs Education, endorsed during the World Conference on Special Needs Education, advocates for the inclusion of all learners with disabilities into regular educational settings (Bal et al., 2021).

The Dakar Framework for Action (World Education Forum, 2000) was formally adopted during the World Education Forum ad and emphasises the government's commitment to achieving the objective of Education for All (EFA) by the year 2015. Under the EFA umbrella, a paramount aim is to guarantee equitable access to quality education for all children, irrespective of their diverse backgrounds or circumstances (Lang, 2009). The importance of the Millennium Development Goals (MDGs) was established in 2000 and were formulated

after the Millennium Summit of the United Nations, which took place in 2000, following the ratification of the United Nations Millennium Declaration. The MDGs represent a collective global commitment to addressing pressing challenges and achieving specific targets in poverty reduction, education, gender equality, and healthcare (Lewin, 2009; Rosenbaum, 2015).

The 2008 Convention on the Rights of Persons with Disabilities (CRPD) is a seminal international treaty officially adopted by the United Nations General Assembly. This convention serves as a cornerstone, as it articulates and safeguards the foundational entitlement of individuals with disabilities to access education under identical conditions and opportunities as their non-disabled counterparts (Garnett, 2022). Acknowledging the global commitment embodied in the 2015 Sustainable Development Goals (SDGs) is imperative. These goals, formally adopted by the United Nations General Assembly, encompass a comprehensive agenda for sustainable development. Among the SDGs, Goal 4 stands out as it fervently articulates the objective to ensure inclusive and equitable quality education while promoting lifelong learning opportunities for all (Iniesto et al., 2021).

1.8.3 South African legal frameworks of inclusive education

The transition to inclusive education in South African policy was part of a larger change away from apartheid's segregated education system and toward a diverse, economically, and socially empowered society. In South Africa, the journey of recognising education as a basic human right began after the country became democratic in 1994. This was established in section 29 of the Bill of Rights in the South African Constitution. The Constitution provides that "everyone has the right: (a) to basic education, including adult basic education; and (b) to further education, which the state, through reasonable measures, must make progressively available and accessible" (RSA, 1996). Spreen and Vally (2006) suggest in their study on education policy reforms through a right-based framework that after decades of apartheid, the constitution's pledges of justice became a symbol of hope for social justice.

At the onset of democracy, the new democratic Constitution stated that everyone should have access to basic education. This was translated into education policies, namely the South African Schools Act 84 of 1996. SASA is the main legislation for improving school access, quality, and democratic governance (Taylor, Fleisch, & Shindler, 2008). This legislation secured the right of all children, regardless of colour, ethnicity, or disability, to attend a public school. SASA is a legislative framework that underscores the importance of access to quality education

in South Africa. This act encompasses various provisions, one of which pertains to the quality of education.

The National Education Policy Act (NEPA), formally known as Act 27 of 1996, shaped South Africa's education landscape during a crucial period of democratic transition. NEPA was designed with the goal of establishing a comprehensive framework for the implementation of national education policy. It played an important role in supporting the democratic restructuring of the national education system, focusing on serving the diverse needs of all South Africans while safeguarding their fundamental human rights.

The Department of Education (DoE, 2001) published White Paper 6. South Africa's Inclusive Education and Training System. This policy document presented the South African government's goal for inclusive education. It stresses the significance of ensuring that all learners, regardless of their specific requirements, have access to high-quality education. The Department set out in this paper to gradually implement an inclusive education (IE) system, including the National Strategy on Screening, Identification, Assessment, and Support (SIAS). The SIAS policies' objectives aim to address the needs of all learners in the country, especially those who are disadvantaged and are more likely to be marginalised and excluded (Department of Education, 2014).

The *Education White Paper 6: Inclusive Education is Ensuring the Right to Education for All* was introduced in 2001 and marked a significant milestone in South Africa's pursuit of inclusive education. This policy document stands as a testament to South Africa's dedication to providing equitable educational opportunities for all its citizens. Notably, *Education White Paper 6* introduced a host of innovative measures aimed at advancing inclusive education, including the creation of inclusive school models, designed to foster environments where learners of all abilities could thrive.

Building on the foundations laid by *Education White Paper 6*, the *National Policy Framework for the Provision of Education and Training to Disabled Learners* was introduced in 2002. The policy framework outlines specific guidelines for inclusive education practices, ensuring equal opportunities for all learners with disabilities. It aims to address their unique needs and ensure full access to quality education, in line with international standards, thereby promoting equal educational opportunities. It is important to recognise the importance of the *2013 National Inclusive Education Framework*, which provides a detailed blueprint for inclusive education in South Africa, outlining the roles and responsibilities of stakeholders, outlining necessary

resources and support, and promoting the country's commitment to creating an inclusive educational environment for all learners, regardless of their abilities.

1.9 SOCIAL CONSTRUCTIVISM (THEORETICAL FRAMEWORK)

Social constructivism is a form of cognitive constructivism that focuses on the collaborative nature of learning. Vygotsky developed social constructivism after rejecting the assumptions of Piaget and Perry (Thomas et al., 2014). Psychologists believed learning could be separated from the social environment, which Vygotsky refuted. He argued that education is not just the assimilation of knowledge, but the integration of knowledge into social activities (Kiraly, 2014; Newman & Latifi, 2021). The cultural development of a child occurs at two stages: at the social level and the individual level. Internal cultural development is referred to as intra-psychological, while external cultural development is called inter-psychological development.

Vygotsky's theory has been expanded by psychologists, focusing on the role of language and culture in a child's cognitive development, enhancing their intellectual growth and world perception (Hoff, 2020). Language enables humans to communicate, experience, and understand reality, transferring concepts and constructing cognitive structures. Acquiring linguistic abilities allows humans to overcome natural limitations and interpret the world (Gee & Zhang, 2023). Learning to respond to external stimuli requires the use of language, enabling learners to solve problems independently and understand available materials, thereby promoting development.

The educator-learner collaboration at the core of the Zone of Proximal Development (hereafter ZPD) allows for knowledge co-construction and knowledge transfer from the educator to the learner, enabling the learner to be actively involved in knowledge acquisition and ultimately empowered to become a self-regulated learner (Verenikina, 2008; Newman & Latifi, 2021). Pathan et al. (2018) cite extensive research conducted by Campbell (2008) that indicates that Vygotsky's sociocultural theory, including ZPD, mediation, scaffolding, and internalisation, has been reviewed, researched, and proven beneficial in second language acquisition. The sociocultural theory's demonstrated effectiveness stems from integrating learners' social and cultural experiences, critical to children's cognitive development and potential performance (Amineh & Asl, 2015; Juma et al., 2017).

Blake (2015) and numerous scholars, including Vygotsky (2012), contend that learners are more willing to activate their (ZPD) levels by engaging with other learners and expressing themselves during group work. The social constructivism theory suggests that an individual's

understanding of the world is shaped by their social experiences and knowledge, and the meaning derived from these experiences is deeply intertwined with their social and cultural dynamics (Amineh & Asl, 2015).

1.10 DIFFERENT APPROACHES TO INCLUSIVE EDUCATION RESEARCH

1.10.1 Disability Approach

Inclusive education aims to explore disability with a focus on understanding experiences, exposing the limitations faced by disabled individuals in mainstream activities like education. Despite the increasing number of learners with disabilities, many educational institutions design spaces and learning experiences based on the medical model, neglecting the rights model that considers individuals' impairments and characteristics as inherently disadvantageous (Bal et al., 2021).

1.10.2 School Reform Approach

The school reform approach highlights the importance of learning in implementation and the role of educators in shaping initiatives (Drago-Severson, 2007; Hubbard, Mehan, & Stein, 2006). The effective communication of philosophical ideas and visions for inclusive practices is crucial for guiding school communities. Oliver (2013) suggests that learners with disabilities should be recognised as equals rather than academic burdens. Community-level work is needed to reconceptualise learners' values as moral attitudes, acknowledging their diverse contributions to school communities.

1.10.3 Critical Theory Approach

Adapting the critical theory approach for young learners, as Kincheloe (2008, p. 49) discusses, necessitates judicious simplification without compromising the theory. Hattie (2017) highlights the need to align instructional content with learners' cognitive development. Complex concepts, such as those in critical theory, need to be converted into simple language and relatable contexts. This approach allows learners to grasp the concepts without becoming overwhelmed by technical jargon. Gardner (2011) accentuates the importance of adjusting instructional methods to learners' developmental stages, focusing on activities that align with children's experiences and cognitive capacities (Bal et al., 2021).

1.10.4 Emancipatory/Transformative Approach

This study embraces the emancipatory/transformative approach for its ability to recognise vulnerable groups in societies, including but (not limited) to women, people with disabilities, people of colour, Indigenous peoples, and those of a lower socio-economic status (Barnes, 2010; Mertens, 2007). In this study, Grade 5 learners from a remedial school represented the marginalised group, as this approach aimed to use research to bring about positive social change to address injustices and inequity (Padron & Ballet, 2011, p. 166).

1.11 BACKGROUND OF THE RESEARCH METHODOLOGY

1.11.1 Introduction

Research methodology is a systematic process of planning, conducting, and evaluating education research, encompassing methods, techniques, and approaches used to investigate educational phenomena, answer research questions, and contribute to the field's knowledge (Cohen, Manion, & Morrison, 2017). Qualitative research, utilising focus group interviews, semi-structured interviews, and questionnaires, is a valuable method for studying human behaviours, attitudes, and perceptions in education (Creswell & Creswell, 2017)

1.11.2 Research Methodology

1.11.2.1 Research paradigm (Interpretivism)

The study adopted the interpretivism paradigm to gain an understanding of remedial education activities in a remedial primary school for inclusive education.

An interpretivism research approach is viewed as ideographic research, the exploration of individual cases or events, and it can understand different people's voices, meanings, and events (Creswell & Creswell, 2017). According to Pham (2018), interpretivism researchers aim to understand the social setting of objects, humans, or events beyond mere description. With interviews as a data collection tool, interpretivism researchers can probe an interviewee's thoughts, values, prejudices, perceptions, views, feelings, and perspectives, which allows them to explore and prompt issues that are not observable (Pham, 2018). The interpretivism paradigm enables researchers to interpret elements of a study and are concerned with

understanding the world as it is from the subjective experiences of individuals (Shah & Al-Bargi, 2013).

1.11.2.2 Qualitative approach

The study was conducted using qualitative research to evaluate remedial programmes that allow for a deeper understanding of human knowledge and experience through 'social and human science exploration' (Creswell & Creswell, 2017). This study required multiple data sources, including document reviews, classroom observations, and learner-educator interviews. The study involved six Grade 5 learners who participated in group interviews and document analysis to gather their experiences and perceptions about the remedial education programme, using a focus-group approach. Additionally, the programme's impact on Grade 5 educators was assessed through written work, including numeracy assessment records collected through semi-structured interviews and classroom observations of individual educators. The study involved individual interviews with two educators, focusing on their teaching experiences, conflict management strategies, and effective remedial practices. Classroom observations were also conducted to observe interactions between educators and learners.

Qualitative research focuses on recognising individual situations and combining them into a collective view. This allows for an examination of interconnected components in academic remedial programmes enhancing learning experiences. Creswell & Creswell (2017) defines qualitative research as a method involving natural data collection, self-created instruments, data analysis, and a personal account from the researcher, aiming to provide a holistic account of participants' meanings and the research's importance. Qualitative research offers flexibility in study design and data collection, allowing researchers to adapt methods based on participant responses and emerging themes, resulting in a more comprehensive understanding of the research topic (Patton, 2015).

Nevertheless, qualitative research is criticised for its subjectivity and researcher bias, which can introduce personal biases and preconceived notions. This subjectivity can impact the reliability and validity of the findings, raising concerns about the generalisability of results (Silverman, 2016). The in-depth nature of qualitative research may limit the number of participants that can be studied, potentially affecting the breadth of insights obtained. Additionally, the time-consuming nature of qualitative research can delay the dissemination of the findings (Creswell & Creswell, 2017).

1.11.2.3 Research design: Participatory Action Research (PAR)

The study employed a Participatory Action Research (PAR) approach, wherein all participants were actively engaged in the research process. The action research stages were adopted during data collection. These included planning (during which objectives for PAR were determined), observation (where current practices were observed), action (where new practices were implemented), and reflection (where the PAR processes were reviewed). The core principle of participatory research is that knowledge is co-produced through the collaboration between the research participants and the researcher (Camden et al., 2015). PAR with children and youth showed positive outcomes for children, organisations and communities (Zuber-Skerritt, 2015; Shamrova & Cummings, 2017; Townsend & Taylor, 2022). The different stages of data collection are briefly discussed below.

1.11.2.4 Research plan

The research adopted a qualitative method for data collection and analysis. The four overarching phases in data collection were planning, observation, action, and reflection. The study undertook a PAR approach. The subsequent steps included sample selection, data collection, and data analysis. Furthermore, the researcher justified the data's validity, credibility, and accuracy through ethical considerations, and demonstrating systematic and proper research conducted without any participant impact. The participants in this study were Grade 5 learners aged 10-12 years. Six Grade 5 learners, initially not selected but placed in a remedial school in Gauteng, were involved in the study. The researcher observed two other classes teaching remedial activities and collected data using a journal. The entire Grade 5 cohort consisted of 28 learners.

1.11.2.5 Qualitative data-collection instruments

For conducting qualitative data research within the context of this research project, data was gathered through a multi-faceted approach encompassing the following methods (Bal et al., 2021).

Phase 1 - Planning: During this phase, the researcher and two educators (participants) determined the objectives for PAR.

Phase 2 - Observation: One of the participants, a Grade 5 teacher, observed the researcher while teaching a mainstream activity. The researcher also observed the two participants teaching during the lesson presentations in their respective classes.

Participant observations

Through participant observation, the researcher becomes an active participant in understanding the contextual and social environment from the participant's point of view (Jorgensen, 2015). This approach enables the researcher to gather data, providing valuable insights into the subject's culture, behaviours, and social dynamics (Corbin & Strauss, 2008). The method served as a foundational component in the data collection process facilitating the documentation of credible classroom interactions and dynamics. The researcher observed the two educators, who were participants in the research, teaching numeracy in their Grade 5 classes. The Grade 5 teacher, a participant, observed the researcher teaching a mainstream activity (Bal et al., 2021).

Description of interventions use of 3D objects:

Learners utilised 3D objects like blocks and geometric shapes to comprehend mathematical concepts, such as volume and spatial relationships.

Rationale:

3D objects enhance mathematical learning by providing a tangible, visual representation, promoting active engagement and allowing learners to construct their understanding, aligning with the constructivist approach.

Alignment with Constructivist Principles:

Active engagement: By physically manipulating 3D objects.

Collaboration: Working with peers to explore and discuss mathematical concepts.

Real-world relevance: 3D objects were used to model real-world scenarios, helping learners see the practical applications of the mathematical concepts they learned.

Maths education:

• Providing 3D objects relevant to teaching concepts.

• Integrating 3D object activities into regular lessons.

• Offering guidance and support for exploration and work with 3D objects.

Intervention effects measurement:

• Observed learner engagement and participation in 3D object activities.

• Collected learner feedback on focus-group activity experiences.

• Assigned a 3D robot made from recycled materials for a geometry project.

Ethical considerations in mathematics lessons:

• Maintain learners' privacy and confidentiality.

• Obtain informed consent from parents/guardians before 3D object intervention activities.

Phase 3 – **Action:** The researcher used evidence from observations and interview data to identify remedial practices that facilitated inclusive learning and teaching. During this phase, the two educators and the researcher adapted and adjusted these practices where necessary. They collaborated to implement interventions based on the findings from the preceding phases. The researcher documented the implementation process in a journal, noting successes, challenges, and lessons learned.

Semi-structured interviews

Semi-structured interviews are a qualitative method of inquiry that enables a researcher to mix a preconstructed set of questions that arise during the interview (Bryman, 2017). These interviews provide a flexible framework for researchers to explore participants' perspectives, experiences, and insights related to educational phenomena, allowing for in-depth data collection and interpretation (Patton, 2015).

The perceptions and experiences of the participants were explored through semi-structured interviews conducted by the researcher, who interviewed two Grade 5 educators from the remedial school. This method allowed for a comprehensive exploration of their viewpoints, providing valuable qualitative data to enhance the research findings. The semi-structured

interviews involved the researcher interviewing the two educators separately, focusing on their teaching experiences and how they managed conflict in the classroom. Each interview lasted approximately 30 to 45 minutes. The classroom observations were recorded and journaled by the researcher and the interviews were audio-recorded. The recordings were used solely for transcription purposes and were kept confidential.

Document analysis

Document analysis in education is a qualitative research method that involves written or visual materials relevant to the educational context. This method provides clear information, patterns, themes, and historical contexts embedded in documents, such as official reports, policy documents, curriculum materials, assessment records, and other educational artefacts. According to O'Leary (2021) systematic document analysis offers a robust framework for understanding educational systems and pedagogical structures by uncovering the intentions, biases, and assumptions inherent in institutional documentation. Assessment records were used in this study to determine any fluctuations in learners' academic performance after implementing the interventions. The numeracy assessment records for the six Grade 5 participants were used in the document analysis (Bal et al., 2021).

1.11.3 Sampling and selection of participants

Purposive sampling is a non-probability sampling method employed in qualitative research, wherein researchers intentionally select participants or cases based on predetermined criteria that are relevant to the research objectives (Creswell & Creswell, 2017). This approach allows researchers to strategically choose individuals, groups, or cases that possess specific knowledge, experiences, or perspectives essential for the in-depth exploration of the research topic, thus maximising the richness and depth of the qualitative data (Miles, Huberman & Saldana, 2018; Patton, 2015).

The qualitative research design for this study employed purposive sampling, a deliberate and considered approach aimed at selecting participants with pertinent insights into the research focus. Their professional backgrounds offered credible insights into inclusive pedagogical practices. Participant profiles captured relevant variables such as age, qualifications, years of experience, and area of specialisation. While the educators were purposively selected, the six Grade 5 learners were assigned by the school at the start of the academic year, independent of

researcher influence. The group was evenly split between boys and girls to reflect emerging concerns about gender disparities in ADHD diagnosis. Recent research highlights that girls often experience delayed or under-recognised symptoms, making gender-balanced sampling essential for inclusive analysis (Sayal et al., 2018).

1.11.4 Data collection process

1.11.4.1 Research timing and schedule

Research activities were scheduled around participants' availability, primarily during free periods or after the instructional day, to ensure minimal disruption to their teaching responsibilities. This flexible approach supported ethical engagement and reinforced the participatory ethos of the study. The research journal functioned as both a reflexive tool and a methodological record, capturing key decisions, insights, and interactions throughout the PAR process. It contributed valuable qualitative data and enhanced the transparency and rigour of the research.

1.11.5 Data collection timeframe

Each phase in the data collection process, sample collection, participant observation, semi-structured interviews, and intervention, took about one month to complete. Semi-structured interviews were conducted offline via face-to-face interactions. The research used non-digital methods for sample collection and offline techniques for participant observation and intervention at the research site.

1.11.6 Data analysis

In qualitative research, data analysis is systematically examining and interpreting non-numerical data to extract information based on the research topic (Miles et al., 2018). Qualitative data analysis aims to uncover patterns, themes, and relationships within the data to achieve insight into the research phenomenon (Creswell & Creswell, 2017; Braun & Clarke, 2006). This research employed thematic analysis to identify underlying themes collected from interviews and observations at the research site, facilitating inclusive teaching and learning in a Grade 5 class. Data analysis involved transcribing audio recordings into text, a necessary process for data collected through interviews, focus groups, and observations. Additionally, journal entries were used as an optional source of information.

1.11.7 Research site

The research site was a remedial school that provided a holistic school environment, where social and emotional growth was prioritised alongside academic capabilities. The remedial school typically offered smaller class sizes and on-site therapy services (including occupational and speech therapy), with accommodations or adaptations of the curriculum. The study provided the researcher who observed two educators delivering remedial activities or curriculum teaching. The researcher's Grade 5 class was compared to the other two Grade 5 classes, and the educators met weekly to reflect on and improve the teaching methods.

1.12 ETHICAL CONSIDERATIONS

In response to society's expectation of greater accountability, the focus on ethical conduct (personal, professional, and research activities) has increased and expanded (Fleming & Zegwaard, 2018). Confidentiality and anonymity tend to be used interchangeably in research but are distinct, yet related concepts (Wiles et al., 2008). Anonymity refers to the principle that the identity of research participants is completely unknown and cannot be linked to their responses or data in any manner, whilst confidentiality refers to the protection of participants' sensitive information and data. Confidentiality is spoken or written in confidence, charged with secrets where anonymity is defined as an unknown name (Dougherty, 2021). The researcher may know the identities of the participants and is responsible for safeguarding their data by ensuring that is not disclosed to unauthorised individuals. Anonymity is generally used to remove a participant's real name to shield them from harm, particularly in qualitative research that provides participant narratives or points of view.

The research employed purposive sampling, selecting a Grade 5 class within a remedial school context where the researcher served as the classroom teacher. This dual role introduced inherent power dynamics, as the learners may have perceived participation as obligatory. To mitigate this, ethical protocols were strictly adhered to. Informed consent was obtained from parents or guardians [Appendix G], while learners provided assent after the process was explained in age-appropriate language [Appendix F]. To minimise coercion, the Head of Department (HOD)—an independent authority—communicated the voluntary nature of participation and served as a point of contact for any concerns, thereby ensuring that learners did not feel pressured due to the researcher's positional authority. Educators also provided

written informed consent via a Participation Information Sheet and consent form [Appendix B] and were assured of confidentiality and the right to withdraw at any time. Ethical clearance was obtained from the University of the Witwatersrand's Non-Medical Ethics Committee [Appendix M], as well as the Gauteng Department of Education [Appendix N]. Research activities were clearly explained in advance and designed to align with the developmental level and needs of the learners, while all data was anonymised using pseudonyms to ensure confidentiality. These measures were implemented to uphold ethical integrity, manage power imbalances, and protect the rights and well-being of all participants.

As the researcher had an employer/employee relationship with the school where the research was conducted, potential conflicts of interest were a concern. To mitigate these conflicts and ensure the integrity of the research process, the following steps were taken:

- The Head of Department (HOD) explained to the learners what the study was about.
- Participation was voluntary, as indicated in the PIS consent form [Appendix H].
- Learners with any concerns about their participation were encouraged to speak with the HOD.

1.13 STRUCTURE OF THE REPORT

Chapter 1

This chapter investigated the influence of remedial education programmes on academic achievement in inclusive schools, such as social constructivism, interpretive paradigm, qualitative approach, and ethical considerations. It aims to enhance inclusive teaching practices through PAR.

Chapter 2

The chapter explored remedial education programmes and inclusive teaching in a Gauteng remedial school Grade 5 class, focusing on their theoretical background, significant concepts, and academic literature. It highlights the benefits of remedial education programmes in Zimbabwe, Chile, and Malaysia for inclusive education.

Chapter 3

This chapter discussed a qualitative research methodology, that adopted PAR to examine intricate educational issues, emphasising the need for collaboration between researchers and participants.

Chapter 4

This chapter analysed interview transcripts, conclusions, and interpretations, categorising data based on the research questions and themes, and presents data from interviews, participant observations, document analysis, and the researcher's research journal.

Chapter 5

The study's concluding chapter detailed the research question, objectives, themes, literature review, findings, recommendations for pedagogical practices and policies, limitations, and future research recommendations.

1.14 DEFINITION OF MAIN CONCEPTS

1.14.1 Remedial pedagogy

Remedial pedagogy is a method of teaching that focuses on assisting learners who are struggling with acquiring skills and knowledge (Hattie, 2017). Many learners struggle to meet academic standards, performance levels, and progression requirements, potentially risking exclusion from mainstream school instruction. Pedagogical practices aim to facilitate learner advancement by removing learning obstacles and providing adequate support for learners (Alghamdi & Siddiqui, 2016). They are aligned with a wide range of curriculum expectations for which learners are at risk of not achieving.

1.14.2 Remedial education programmes

Remedial education programmes work to identify and assist individuals with skills and knowledge gaps and may target a single subject area or multiple learning areas in reading, writing, and mathematics (Accurso-Salguero, 2016). Remedial programmes can be designed to serve a specific population such as learners with learning disabilities, such as the learners in this study, or learners who do not meet the passing requirements on tests or maintain previous skill levels upon the transition to a new grade or school. Such programmes assume that

remedial services can help learners learn effectively when provided with the structure, content, and instructional methods that best suit their needs (Jimenez et al., 2016).

1.14.3 Inclusive education

Education is a fundamental human right, essential for development and fostering a just, egalitarian society free from exploitation and oppression, encompassing individuals of all ages, cultures, and backgrounds. Education empowers individuals and societies to improve their quality of life, enhances productivity, builds self-confidence, promotes tolerance and understanding, fosters economic and social prosperity, reduces poverty, and strengthens democracy (Mahlo, 2013).

1.14.4 Social constructivism

Social constructivism, an epistemological approach, posits that knowledge is acquired through claims about reality, analysing the mutual interactions between subjects and knowledge objects (Vygotsky,1986). The nature of these interactions becomes mediated through cultural tools, which are often anchored in, but never solely determined by historical events. Vygotsky's social constructivist epistemology suggests that knowledge can be manipulated due to its deceptive nature, which people often perceive as an objective reflection of reality (Muller et al., 2017).

1.14.5 Participatory Action Research (PAR)

Participatory action is a progressive education method that encourages individual growth within a group, promoting creativity and encouragement among learners (Shamrova & Cummings, 2017). Participation is crucial for initiating participatory actions as it fosters creative ideas, increases group consciousness, and deepens understanding of self-existence and group life. Action and reflection on the emergent behaviour are paramount to group transformations, enhancing individual growth (Zuber-Skerritt, 2015).

1.15 CONCLUSION

This chapter explored remedial pedagogy, emphasising the importance of tailored instructional practices to address diverse learners' needs. The effectiveness of remedial education

programmes aided in bridging learning gaps and promoting success. Highlighting the transformative potential of group consciousness and providing insights for a literature review on inclusive learning environments (Zajda, 2023).

CHAPTER 2: THEORETICAL FRAMEWORK

2.1 INTRODUCTION

This chapter explores remedial education programmes and inclusive teaching in Grade 5 in a Gauteng remedial school. The theoretical framework identified key concepts. Additionally, the review addresses the challenges and opportunities found in the literature contributing to understanding how inclusive education can be effectively realised in remedial education settings. This chapter discusses the advantages of remedial educational programmes for Grade 5 learners, focusing on their implementation in Zimbabwe, Chile, and Malaysia.

2.2 REMEDIAL EDUCATION

2.2.1 A definition of remedial education

Remedial education in South Africa continues to face systemic challenges due to disparities in infrastructure, educator training, and resource allocation, particularly in under-resourced and rural areas. While the concept of remedial teaching is well-established, its implementation varies drastically across provinces, limiting its intended impact. Recent studies affirm that schools in marginalised communities often lack structured support systems for learners who require remedial interventions. Williams et al. (2020) report that many schools operate in "poor academic environments" where a shortage of resources and overcrowded classrooms hinder effective remediation. The authors emphasise that a lack of well-trained teachers and insufficient learning materials compound the learning gaps, especially in foundational literacy and numeracy.

Research suggests that remedial education, when tailored to the specific needs of learners through interventions such as specialised instructional activities, supplementary resources, and personalised support, can significantly improve academic performance and reduce underachievement (Engelbrecht, 2020). This concern is echoed by East (2023), who underscores the importance of targeted remedial programs that are supported by intensive teacher training and diagnostic tools. Their research documents the role of foundational literacy and numeracy programmes in mitigating COVID-19 learning losses, noting that many learners still struggle with basic decoding and number sense well beyond the appropriate grade level.

Phala and Hugo (2022) also highlight implementation gaps in full-service schools, particularly concerning learners facing reading difficulties in the early grades. Teachers reported overcrowding, inadequate support personnel, and the lack of individualised reading interventions as major barriers to remediation success. These findings support the need for both systemic and localised approaches that address the structural inequalities within the school system.

Furthermore, Machipi (2021) provides evidence that after-school remedial education services can play a critical role in addressing low literacy and numeracy levels, particularly in the intermediate phase. These programs offer learners additional instruction time, often with tailored content and smaller group settings, to ensure mastery of foundational concepts. In addition, Chetty (2019) critiques the systemic disconnect between national literacy strategies and classroom realities. He argues that despite well-meaning policies, implementation remains weak due to ecological and infrastructural limitations in township and rural schools. The study urges alignment between policy, teacher training, and school-level resources for remedial initiatives to succeed.

Lastly, Venketsamy et al. (2025) stress the role of diagnostic assessment in guiding remedial instruction. Their work in early-grade mathematics shows that many teachers proceed with curriculum pacing without identifying or addressing underlying learning gaps, highlighting a crucial area for capacity building.

2.2.2 An international perspective of remedial education

In Zimbabwe, remedial education has addressed the needs of low-performing learners by providing targeted assistance to conquer their struggles and achieve academic success. According to Ndebele (2014), remedial teaching aims to eradicate common weaknesses associated with slow learners and reduce learning obstacles. When thoughtfully designed and adequately supported, remedial programmes significantly contribute to bridging the achievement gap and enhancing overall educational quality.

The Zimbabwean Ministry of Education, Sports, and Culture is tasked with ensuring remedial education in all primary schools, aiming to achieve the national goal of education for all. The issuance of Chief Education Officer Circular Minute No. 12 of 1987 demonstrated Zimbabwe's commitment to the remedial education programme. This circular embraces the need for a remedial education programme as a detection mechanism (Urombo, 1999). The programme

initially targeted Grade 4 learners of average and above-average educational competency in all schools and eventually expanded to include learners from other grades except Grade 1. The school's Psychological Services and Special Needs Education department targets fourth-grade learners to identify strengths and areas for instruction. Successful learners may leave within six months to a year, while those falling behind will remain until the necessary skills are developed. The minimum expected result of this initiative was functional literacy and numeracy for all learners by the end of primary school. Recent research by Chibaya and Shonhiwa (2024) highlights ongoing challenges in the implementation of remedial education particularly in pre-urban primary schools. Their study identified issues such as lack of remedial learning resources, stigma and discrimination, large class sizes and insufficient teacher training as significant barriers of remedial programmes in Zimbabwe.

Recent scholarship affirms the importance of this dual focus. Stone et al. (2019) in a regional meta-analysis of early literacy interventions report that remedial programs are most effective when they are structured, skill-targeted and accompanied by active community or parental engagement. Similarly, Sepúlveda et al. (2020) underscore the need for context-specific interventions in Chile, where socioeconomic status is strongly correlated with disparities in school performance, particularly in early numeracy and language acquisition. Incorporating community and family engagement has also been shown to reinforce the sustainability of educational outcomes. Furthermore, Guthrie et al. (2019) highlight that Chilean education policy has increasingly recognised the need for inclusive strategies that target underserved populations especially indigenous and migrant children through tailored support services and community outreach. Programs like *Un Techo Para Chile* exemplify this shift, offering a model that goes beyond curriculum-based remediation to integrate social inclusion and emotional support. Finally, technological innovations in remedial education, particularly those accelerated by the COVID-19 pandemic, have opened new avenues for reaching marginalised learners. Moncada Nahuelquín & Ibáñez Orellana (2025) document how EdTech-enabled platforms in Latin America, including in Chile, have been used to mitigate learning loss, particularly among learners at risk of dropping out or falling behind. While digital access remains uneven, such innovations show promise when combined with the in-person support structures already embedded in community-based programs.

Remedial schools can aid learners in developing well-rounded abilities that go beyond academic success by creating a learning atmosphere that promotes ethical behaviour and stimulates critical thinking (Darling-Hammond et al., 2017). Remedial education focuses on

early problem-solving for Level 1 learners to ensure they have 3M skills (reading, writing and counting (Darling-Hammond et al., 2017). Learners who have not mastered 3M skills will be placed in remedial education offered at the school to help them. Continuing with a push for remedial education, Stone et al. (2019) also note that remedial education is an efficient measure against long-term learning problems. Jiménez et al. (2022) address difficulties experienced by children with reading disabilities that are diagnosed early into a remedial intervention programme can improve their phonological processing, fluency, and comprehension.

In Malaysia, remedial education has been recognised as essential for improving outcomes among learners with academic difficulties. Although frameworks exist, challenges remain in implementation and resource allocation. Othman and Rahmat (2020) highlight the need for designated learning spaces and sufficient funding to support effective delivery and reduce educator workload. These programmes primarily target deficiencies in reading, writing, and mathematics. Richardson (2015) emphasises that systematic needs-based interventions such as the "Success for All" model can significantly reduce learning gaps. Since its introduction in 1967, Malaysia's remedial education has included initiatives like Early Intervention Classes and the Reading Skills Remedial Programme to improve foundational skills and reduce dropout rates.

Taukeni (2019) examines remedial education through the lens that linking these programmes with overall educational objectives improves their impact. The implementation of remedial education programmes is not without its challenges. Asio and Jimenez (2020) discuss obstacles that can impact the effectiveness of these programmes such as a lack of funding, inadequate educator preparation, and limited resources. A remedial class is an effective approach to addressing this common issue. Thilges and Schmer, (2020) conducted a concept analysis of formal remediation, establishing a framework for defining the concept.

2.2.3 A South African perspective of remedial education

In South Africa, remedial education programmes are designed to support learners who face academic challenges or developmental difficulties. Recent assessments have highlighted significant learning losses in foundational literacy and numeracy, particularly exacerbated by the COVID-19 pandemic. For instance, the 2021 Systemic Tests conducted in the Western Cape revealed that Grade 3 learners experienced a decline of up to 13.8 percentage points in mathematics and 8.0 percentage points in language compared to 2019 results (Department of

Basic Education, 2022). These findings underscore the urgent need for targeted remedial interventions to bridge learning gaps.

The Department of Basic Education (DBE) has recognised this need and collaboration with UNESCO released the 2024 Spotlight Report focusing on foundational learning. The report emphasises the importance of structured remedial programmes, such as the Teaching Mathematics for Understanding initiative, which has been piloted in 40 schools to enhance numeracy proficiency among learners (UNESCO, 2024). Additionally, the Mental Starters Assessment Project introduces focused mathematics lesson units for Grade 3 learners, aiming to strengthen number sense and reduce reliance on inefficient counting methods.

Furthermore, the DBE's Early Grade Reading Programme, introduced as part of broader efforts to strengthen the basic education system, provides an integrated package of lesson plans, reading materials, and professional support to Foundation Phase teachers (Parliamentary Monitoring Group, 2020). These interventions are critical in addressing disparities in educational outcomes and ensuring that all learners acquire the necessary foundational skills.

2.2.4 Types of Remedial Education Programmes

The Oxford Reading Tree is a popular programme that develops children's literacy through engaging tiered activities, promoting vocabulary, comprehension, and fluency in classrooms. Research emphasises the necessity of employing tiered reading schemes such as the Oxford Reading Tree to promote early literacy abilities, particularly phonemic awareness and reading confidence (Vetsch-Larson**,** 2022). Diverse genres in educational content boost learners' engagement and critical thinking skills (Middleton, 2023). With graded books that gradually introduce phonics and comprehension abilities, the Oxford Reading Tree programme is popular and supports the development of reading skills (Oxford University Press). Letters and Sounds, a UK-based phonics programme, uses a sequential approach to teach critical reading and writing skills through the relationship between letters and sounds.

Mathematics interventions are important in remedial education, with online tools like Mathletics providing systematic exercises and tracking progress. These resources offer personalised feedback, allowing learners to practice at their own pace and reinforcing concepts. Math therapy addresses gaps in understanding through problem-solving, discussions, and targeted practice. Concrete understanding in math therapy helps bridge the gap with abstract learning (Aguhayon et al., 2023). The ARROW programme was initially created to help deaf

learners develop their speech, but it is currently being used extensively to enhance literacy in various learner profiles (Lane, 2010)

Speech and Language Therapy (hereafter SALT) is used in South African remedial schools to assist learners with language development, articulation, and communication issues. According to Schuele and Boudreau (2008), SALT strengthens vocabulary, speech clarity, and the ability to understand and use language in various contexts. Occupational Therapy (hereafter OT) assists learners by improving their fine and gross motor skills, which are significant for their full participation in classroom activities. OT helps learners develop the physical coordination for tasks such as writing, using tools, and engaging in group activities. O'Brien and Kuhaneck (2020) note that OT in the educational setting focuses on improving sensory processing and motor function, empowering learners to engage with their learning environment. OT employs techniques with sensory integration therapy and fine motor skill exercises to achieve learners' physical capabilities for academic and social success. Remedial education programmes include behavioural interventions like the Cognitive Enrichment Advantage (CEA) and Self-Regulation Programmes**.** The CEA, developed by Dr. Katherine Greenberg encourages critical thinking and self-reflection, which aid learners in managing cognitive and behavioural challenges (Ejubović and Puška, 2019; Bal et al., 2021).

Oxford University Press created the Oxford Reading Buddy (ORB), a digital resource that is applied to encourage reading. ORB scaffolds learners' reading comprehension skills, vocabulary, and fluency by providing individualised reading experiences via interactive eBooks, guided exercises, and tests. According to research, struggling readers benefit from the individualised support provided by the ORB programme (Lewin 2019). Additionally, encouraging social, cognitive, physical, and emotional development with extracurricular activities in remedial education improves classroom instruction. Particularly for those with developmental delays or learning disabilities. These activities support learners in exploring their interests, gaining self-confidence, and developing life skills (Lewin., 2019).

Differentiated instruction in a teaching approach adapts teaching methods, content, and assessments to learners' unique learning styles and abilities by recognising their progress rates. Educators can assist learners in achieving their academic goals and attaining their full potential by offering individualised instruction and support (Skae, Brown, & Wilmot, 2020). Additionally, LEGO blocks stimulate creativity and inspire possibilities, promoting inclusive learning settings. LEGO Education's experiential approach improves social interaction,

creativity, problem-solving, and fine motor skills (Whitebread et al., 2015).

2.3 INCLUSIVE EDUCATION

2.3.1 An international perspective of inclusive education

The history of inclusive education dates to the global adoption of the Universal Declaration of Human Rights (United Nations, 1948), which mandates that every person is entitled to an education (Suleymanov, 2015). The activism of parents in Nordic countries in the 1960s based on the Universal Declaration of Human Rights (United Nations, 1948) prompted the global adoption of inclusive education. Education is inclusive in the Nordic region, including Sweden, Denmark, Norway, Iceland and Finland. It causes much interest and generates endless discussion on ideology, politics, theories, practices and methods for implementing them in schools. The introduction of inclusive education in Scandinavia dates to the second half of the 20th century. This was when special education could meet all the requirements of a healthy society with equal opportunities for everyone. However, in most countries, special education is still an alternative form of education for children with special needs who cannot attend secondary schools because of specific health reasons. The history of Swedish inclusive education began in 1842 when it initiated the so-called 'public school' (*allmänfolkskola*). The purpose of the school was to accustom all citizens to education (before 1842 only middle-class citizens and the upper social group of the community could gain an education).

Developing an inclusive education policy in Iceland became part of the democratisation of education when Iceland accepted the Schools Act in 1974. The primary and dominant purpose of compulsory secondary education at that time was to transform learners into citizens of a democratic society. In fact, "inclusion" was mentioned only two decades after the signing of the Salamanca Statement and Frameworks of Action (UNESCO, 1994). Expanding the net of inclusive educational institutions but also through actions inevitably followed that decision. Renewal of syllabuses, outlining a completely new learning programme, preparation for educators and working in an inclusive environment.

2.3.1.1 International legislative and policy framework regulating inclusive education

It acknowledges everyone's fundamental right to an education, regardless of race, sex, language, religion, political or other beliefs, national or social origin, economic status, or place of birth. The UNESCO Convention Against Discrimination in Education (1960) laid the

groundwork for international law. The foundation for further global initiatives to advance inclusive education was set up by this Convention (UNESCO, 1960). The inclusion principle emphasised the 1990 World Declaration on Education for All. It demands that educational institutions make greater accommodations for learners from various backgrounds, including those with impairments. The EFA framework identifies and eliminates obstacles, including social, physical, and attitude barriers that impede access to education. Education systems can provide more inclusive settings that meet the needs of all learners by proactively removing these obstacles. The Salamanca Statement and Framework for Action (1994) built on this basis by promoting inclusive education and stressing the value of integrating all learners, regardless of disability, into regular classroom settings (UNESCO, 1994).

By emphasising fair access to quality education for all learners, including those with disabilities. The Dakar Framework for Action (World Education Forum, 2000) further strengthened the commitment to inclusive education. According to UNESCO (2000), this framework highlighted the significance of attending to the individual needs of marginalised groups, including children with disabilities, and guaranteeing their full participation in education. A thorough framework for advancing and defending the rights of people with disabilities is offered by the Convention on the Rights of Persons with Disabilities (CRPD) (United Nations, 2006). The CRPD highlights accommodations and guarantees learners with disabilities can engage in their educational learning.

Even though the Millennium Development Goals, particularly MDG 2, were instrumental in channelling global attention towards universal primary education, they did not include explicit provisions for persons with disabilities (UNESCO, 2015). This was a clear indicator of the urgent need for inclusive policies, as evidenced in Sustainable Development Goal 4, whose call was explicitly for equitable and quality education for all (United Nations, 2015).

2.3.2 A South African perspective of inclusive education

From the nineteenth century to 1994, South Africa was dominated by consecutive minority white governments that enforced disenfranchisement and systematic mistreatment of other races' lives and livelihoods. Apartheid was the systematic and legislative discrimination in favour of white people in South Africa from 1948 to 1994, led by the National Party government. During the legalisation of apartheid, racial divergence and inequality, as well as the establishment of separate schools for children of different racial classifications, were legally

and rigidly established (McKeever, 2017). Since the transition to democracy in 1994, South Africa has embraced inclusive education, which focuses on equal rights and access to education. A changed education system is projected to play a role in ending apartheid-era discriminatory social and economic systems and contributing to building a democratic society (Badat & Sayed, 2014). There has been a growing recognition of numerous ways in which individual and group factors (ability, race, ethnicity, socioeconomic status, gender, religion, and so on) and institutional capability interact to influence access, acceptance, and involvement in schools. The process leads to positive and systemic conditions with innovative and context-relevant activities within school communities (Bal et al., 2021).

The education capacity of educators, school leaders and education support personnel is acknowledged internationally as important for achieving inclusive education. South Africa's educational progression could address past inequalities by preparing educators for inclusive learning. Past teaching methods did not adequately prepare educators for this purpose. Inclusive teaching standards for learners at the beginning of their teaching practice have been set up since 1994 (Walton & Rusznyak, 2019). These include the achievement of continuing professional development to facilitate educators with unanticipated teaching support strategies (Engelbrecht & Muthukrishna, 2019). Advancements in educator training have led to specialised courses in universities instructing children with specific disabilities. For example, children with low vision impairment, deaf learners, and children with Autism and other neurodevelopmental disorders (Galiano et al., 2024). The medical-deficit approach may strengthen path dependency and segregation. Understanding the diverse learning needs of children with specific disabilities through an intersectional lens can improve educators' and therapists' opportunities in mainstream or remedial schools.

Educators teaching in the different types of schools in South Africa are adapting to a context characterised by policy changes. Recent case studies (Adewumi, Mosito& Agosto, 2019; Andrews, 2020; Engelbrecht & Muthukrishna, 2019; Themane & Thobejane, 2019) highlight that despite numerous difficulties, for example, overcrowded classes and the lack of tools. Educators are developing different strategies to foster more inclusiveness. Engelbrecht & Muthukrishna (2019) highlight the collaborative efforts of educators to ensure inclusive education despite the lack of funds by adapting their pedagogy to accommodate all (Adewumi, Mosito& Agosto, 2019; (Bal et al., 2021).

Research by Landsberg et al. (2005) emphasises that most learners who have learning difficulties or are physically disabled have negative experiences in their school environment.

Learners are being laughed at by their peers, stigmatised and isolated in peer-related activities and assignments given in the classroom. Bhengu (2006) investigated how teaching facilities and educator training affect primary school educators' attitudes towards inclusive education. Bhengu (2006) states that children with disabilities are not easily integrated or accepted in regular classes. The author underscores the need for educators and the community to change perceptions by implementing inclusive education in South Africa effectively as it is a working system. Still, if the curriculum is not implemented within the classroom, learners are the biggest losers.

Bal et al. (2021) point out that educators are employed with whole-group instruction, which is inconsequential to the needs of disabled learners. Therefore, special educators must provide special instructions in a resource class. However, special education educators in mainstream schools do not always have enough time to give instructions. According to Adewumi et al. (2019), special educators promote inclusion by providing different types of instruction that are not offered in mainstream classrooms, and more needs to be done. In an inclusive context, special education educators must revisit and teach new concepts to meet the needs of the learners (Engelbrecht & Muthukrishna, 2018). Adwemi et al. (2019) account that special educators in mainstream schools hardly have time to review and reteach due to time constraints. The authors suggest that providing more time for special educators or condensing the curriculum can promote personalisation and instruction (Adewumi et al. 2019; Andrews 2020). According to Engelbrecht & Muthukrishna (2018), autocratic leadership and decision-making structures that exclude educators can hinder the development of an inclusive school culture (Bal et al., 2021).

2.3.2.1 Legislative and Policy Framework Regulating Inclusive Education in South Africa

Section 29 of the Constitution of the Republic of South Africa addresses the right to education. It states that everyone has the right: (a) to a basic education, including adult basic education; and (b) to further education, which the state, through reasonable measures, must make progressively available and accessible (Republic of South Africa, 1996a). This right encompasses inclusive basic education for all learners, irrespective of their abilities or disabilities, ensuring that every individual has equitable educational opportunities (Republic of South Africa, 1996a). This constitution guarantees that all learners, regardless of ability, have access to quality education and establishes the legal foundation for inclusive education.

The (Republic of South Africa, 1996b) makes education mandatory for children ages 7 to 15 and guarantees that all learners have access to quality education, free from discrimination. The structure, management, and financing of South African schools are outlined in this Act. According to SASA, schools must make proper modifications to meet the requirements of learners with impairments. Providing assistive technology, changing instructional strategies, and making sure the school's physical space is accessible are a few examples of these modifications. The Act also requires schools to create Individual Education Plans (IEPs) for learners with special needs (Republic of South Africa, 1996b). A key piece of South African legislation that offers a thorough framework for national education policy is the National Education Policy Act (NEPA). To provide a coordinated approach to educational policy and delivery, this act delineates the roles and responsibilities of both the national and provincial governments in the field of education (Department of Education [DoE] 1996). This includes offering assistive technology, specialised instruction, and counselling to learners with impairments.

White Paper 6 was launched in 2001 as a strategic plan to address the integrated education system in South Africa. White Paper 6 especially states that the Department of Basic Education (2001) has "A special responsibility … to make certain that all learners, with or without disabilities can contribute as equals to society and to realise their learning potential to the fullest." The *Guidelines for Responding to Learner Diversity through Curriculum and Assessment Policy Statements in the Classroom* (Department of Basic Education, 2011) offer useful insights into how educators can address learners' diverse needs. The guidelines highlight the importance of adjusting teaching methods to suit different learning styles, abilities, and backgrounds. The Department of Basic Education (2011) encourages educators to use differentiated instruction and assessment strategies.

The SIAS policy was introduced in 2014 and offers a thorough framework for identifying, evaluating, and assisting learners who need extra help to improve their involvement and inclusion in the classroom (Department of Education, 2014). Furthermore, the SIAS strategy reduces the wrong placement of learners in special schools, determines the most appropriate sites of learning for support, and offers directions about the involvement of parents and educators in the strategy (Department of Education, 2014). Even when learners with learning barriers are integrated into mainstream schools, they often are excluded from classes with their able-bodied peers. According to Human Rights Watch (2019) despite its recent conversion into a full-service school, a local primary school continued to segregate children with disabilities

into separate classes. In addition, Human Rights Watch found multiple instances in which disabled children were not incorporated into classroom activities (Human Rights Watch, 2019).

2.4 THE INTERSECTION OF REMEDIAL AND INCLUSIVE EDUCATION

Inclusive teaching and learning practices and remedial education programmes can facilitate equal opportunities, equity, and human dignity for all learner populations, specifically for learners from diverse and marginalised backgrounds (Donohue & Bornman, 2014). According to Schuelka and Johnstone (2012), specialist multi-professional teams are involved in these programmes preparing to differentiate instruction and provide counselling. Remedial schools provide a secure learning environment for struggling learners, offering one-on-one assistance to help them succeed, and ensuring a more supportive learning environment (Zajda, 2023).

Remedial education classes are important to inclusion because they offer one-on-one support and usually have a lower learner-to-teacher ratio. Furthermore, they provide more detailed and direct feedback, less complex instructional content and teaching resources in class, which makes things clear. Moreover, reinforcement interventions and teaching inputs targeted at specific learners are often included to address children's variability (Darling-Hammond et al., 2019). Remedial programmes utilise various communication methods, including graphic displays, spatial organisation, technology, and audio/visual aids, along with cognitive, emotional, and memory techniques, to enhance understanding, with key features including guided scaffolding and clear learning environments. According to Darling-Hammond et al. (2019), the strategies assist in meeting the learning needs of children, answering the question of how learning becomes accessible and promoting the learning needs of all learners (Juma et al., 2017).

Remedial education is an intervention programme designed to aid learners who do not meet the academic requirements for their grade level (Bordia, 2023; Yazigy, 2023). This inclusive method fosters a feeling of fitting in and motivates learners to engage fully in the educational journey, boosting their confidence and drive (Al-Sheikhly et al., 2020). The strategies encompass various interventions like personalised tutoring, skill-building exercises, adaptive learning technologies, and collaborative learning environments. The success of these remedial measures significantly impacts learners' academic progress (Zhao et al., 2022). By identifying and applying effective remediation techniques, educational institutions can improve learner engagement, retention rates, and educational equity (Albreiki, Habuza, & Zaki; 2022; Abella

et al., 2024). According to Ren et al. (2021), pre-test and post-test assessments demonstrate an improvement in learners' abilities through targeted interventions. Assessing remedial strategies necessitates a comprehensive approach that examines the diverse factors affecting learner performance (Biwer et al., 2023). Elements such as academic proficiency, learning styles, socioeconomic background, and classroom dynamics all play a role in the success of remediation efforts (Shukla et al., 2020; Zajda, 2023).

2.5 DIFFERENT TYPES OF SCHOOLS IN SOUTH AFRICA

One needs to consider the different types of schools within the South African context. To understand the role of remedial education programmes and inclusive education; that is, *mainstream, full-service, special,* and *remedial schools* (Bal et al., 2021).

2.5.1 Remedial School

A *remedial school* is a specialised educational institution that provides additional academic support to learners who are behind their expected grade level. These schools typically offer smaller classes, individualised learning plans, and targeted interventions focused on core skills such as literacy and numeracy (Taukeni, 2019; Asio & Jimenez, 2020).

2.5.2 Resource Class (or Remedial Class)

A resource class refers to a specialised support setting within a mainstream school, where learners with learning difficulties receive individualised or small-group instruction in specific academic areas. These classes are typically staffed by remedial or special education teachers and are intended to help learners bridge gaps while remaining enrolled in mainstream education (Nel et al., 2016).

2.5.3 Special School

Special schools and remedial schools exist as **separate educational institutions** designed for learners who require intensive, individualised support. While special schools typically serve children with diagnosed disabilities (e.g., autism, hearing impairment), **remedial schools focus**

on academic difficulties without necessarily requiring a formal disability diagnosis (Taukeni, 2019; Asio & Jimenez, 2020).

In contrast to inclusive approaches these settings are often **segregated** with learners removed from the mainstream environment. Though effective for some, critics argue that they risk social exclusion and contradict the principles of inclusive education. However, Donohue and Bornman (2014) note that in the South African context shaped by historical inequality and limited resources. These institutions may remain necessary for learners requiring intensive remediation.

South Africa's inclusive education policy aims to integrate learners with diverse needs into regular classrooms. While **remedial and special schools** provide valuable services, the policy emphasis is now on **embedding support within mainstream and full-service schools**, wherever feasible. This reflects a **shift from segregation to support-based inclusion** (DBE, 2010).

However, successful inclusion of remedial programs into mainstream education requires:

- Adequate teacher training
- Strong support systems (e.g., SBSTs)
- Availability of remedial personnel and assessments
- Funding for resource classes and therapy services

2.6 DIFFERENT APPROACHES TO INCLUSIVE EDUCATION RESEARCH

2.6.1 Disability approach

The disability approach within inclusive education aims to explore disability understanding and experiences, exposing the limitations faced by disabled individuals in mainstream activities like education. Despite the increasing number of learners with disabilities, many educational institutions design spaces and learning experiences based on the medical model, neglecting the right model that considers individuals' impairments and characteristics as inherently disadvantageous (Bal et al., 2021).

The South African constitution mandates that children with disabilities or learning barriers should attend mainstream schools. However, many mainstream schools still discriminate against these learners, as they decide on their own if they can accommodate their needs or

disabilities. Many schools refuse to accept these learners, demonstrating a reluctance to accommodate them (Human Rights Watch, 2015). Similarly, parents in South Africa are ignorant of the available information regarding their rights. They lack adequate information and assistance on the services that can evaluate their children and assist them in making decisions that will benefit them (Human Rights Watch, 2015).

2.6.2 School Reform Approach

The school reform approach emphasises the importance of learning in implementation and the role of educators in shaping initiatives (Drago-Severson, 2007; Hubbard, Mehan & Stein, 2006). Effective communication of philosophical ideas and vision for inclusive practices is crucial for guiding school communities. Oliver (2013) suggests that learners with disabilities should be recognised as equals rather than academic burdens. Educational reforms are always challenging and take a long time to implement (Gumede, & Biyase, 2016). The return to education literature has suggested several measures of quality of schooling or education.

2.6.3 Critical theory approach

Adapting the critical theory approach for young learners, as Kincheloe (2008, p. 49) discusses, necessitates judicious simplification without compromising the essence of the theory. Hattie (2017) highlights the need to align instructional content with learners' cognitive development. Complex concepts, such as those in critical theory, must be distilled into simple language and relatable contexts. This approach enables learners to grasp the essence of the concepts without becoming overwhelmed by technical jargon. According to Gardner (2011), different developmental stages require specific teaching approaches. Thus, from an educational perspective, this means creating activities that would be relevant to children’s real-life situations and abilities (Bal et al., 2021).

2.6.4 Emancipatory/transformative approach

This study embraces the emancipatory or transformative approach in its capacity to assert the existence of various oppressed groups of people in societies that comprise but are not limited to, women, disabled persons, people of colour, Indigenous people, and people of a lower socio-economic status (Barnes, 2010; Mertens, 2007). In this study Grade 5 learners from a remedial

school represented the marginalised group since this approach aims for the research to bring about positive social and academic change to address injustices and inequity (Padron & Ballet, 2011, p. 166).

2.7 SOCIAL CONSTRUCTIVISM

Social constructivism, based on Vygotsky's cognitive development theory, is the foundation of this study's conceptualization of the social co-construction of knowledge. Vygotsky (1978) believed that learning initially takes place at the social level (interpsychological) and only subsequently within the individual (intrapsychological). This theory is especially relevant for remedial education, as learners in this context thrive on structured interaction, guided facilitation, and cooperative learning activities (Newman & Latifi, 2021).

A central concept in social constructivism is known as the Zone of Proximal Development (ZPD), which is defined as the difference between one's ability to perform independently and the attainable potential that can be realized through external support. With regards to the present study, the ZPD was manifested in how the learners developed with the help of educators and peers through targeted interventions (Newman & Latifi, 2021; Van der Westhuizen & De Beer, 2021). These interventions included the use of concrete manipulatives, visual representations, and peer collaboration activities, allowing for gradual internalisation on the part of the learners.

Instructional approaches rooted in social constructivism emphasise the importance of directed participation and collaborative problem-solving, concepts that resonate through the cooperative instructional strategies applied in the remedial environment under study here. The constructivist framework also encourages the utilisation of diverse instructional methods and pedagogical teaching. The convergence of social constructivism and remedial education was realised as *"instructional approaches rooted in social constructivism... foster human connectedness and collaborative problem-solving... even in remedial classrooms"* (Solomon-Jenkins, 2024, p. 89).

Participatory Action Research (PAR) was selected as the methodological approach because it aligns closely with the social constructivist paradigm. According to Kemmis and McTaggart (2000) PAR is not merely a method, but a process of collective inquiry and reflection undertaken by participants to improve their own practices. This research involved Grade 5 educators and learners collaboratively identifying barriers to learning and implementing

targeted interventions. PAR's iterative cycle of planning, acting, observing, and reflecting enabled participants to co-construct meaning from their experiences. This collaborative dynamic is consistent with Vygotsky's emphasis on the role of social interaction in cognitive development. Zuber-Skerritt (2015) further emphasises that PAR empowers participants, fosters ownership of change, and promotes inclusive educational practices.

In this study, PAR allowed the researcher and participants to test inclusive strategies such as PBL (Problem-Based Learning) and CPA (Concrete-Pictorial-Abstract) models, which support the development of foundational skills within learners' ZPD. The approach also helped document the effectiveness of remedial interventions in real-time, thus linking theoretical framing directly with practice (Newman & Latifi, 2021). PAR and Social Constructivism are mutually supportive frameworks. While PAR emphasises collaborative inquiry and empowerment, Social Constructivism provides the psychological and pedagogical grounding for understanding how knowledge is built in interaction. Together, they enable this study to:

- Centre the voices of educators and learners in the process of educational change.
- Develop responsive strategies that are contextually relevant to remedial classrooms.
- Explore how scaffolding and learner agency intersect in inclusive mathematical teaching.

2.8 CONCLUSION

South Africa faces challenges with special needs and learning disabilities, and progress is slow for children requiring full inclusion. Parents can explore private sector remedial schools to support their children with learning difficulties and disabilities. This literature review examines the complex nature of inclusive and remedial education from both global and South African perspectives, focusing on individuals and groups that address skills shortages. The study compares South African and international remedial education systems, focusing on their unique approach to accommodating diverse learners within diverse educational structures. It underscores inclusive education to address historical inequalities and improve access to high-quality education, while international frameworks prioritise this approach.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 BACKGROUND OF RESEARCH METHODOLOGY

3.1.1 Introduction

The previous chapter reviewed existing literature on the research topic. This chapter outlines the research methodology, detailing the qualitative approach, design, and data collection techniques. Participatory Action Research (PAR) was employed to explore complex educational issues through collaboration between the researcher and participants (Kemmis & McTaggart, 1998; Chevalier & Buckles, 2019). The chapter also reviews literature on inclusive education, remedial teaching, and mathematics pedagogy, highlighting how constructivist and participatory strategies support diverse learners with cognitive barriers (Vygotsky, 1978; Bal & Perzigian, 2023). Both global and South African studies contextualise challenges and innovations in inclusive mathematics education (Engelbrecht et al., 2020; Mpu & Adu, 2021).

3.2 RESEARCH METHODOLOGY

3.2.1 Research paradigm (interpretivism)

The research adopted the interpretivism paradigm to understand social phenomena and promote inclusive teaching in remedial primary schools, focusing on understanding unique cases and experiences (Flick, 2014). Interpretivism seeks to interpret participants' experiences rather than just describe observable phenomena, which is ideal for this research (Pham, 2018). According to Pham (2018), interpretivism research goes beyond describing events and seeks to comprehend the social environment in which they occur. Interviews allow interpretivism researchers to find underlying difficulties and perspectives that are difficult to detect, improving their comprehension of participants' subjective experiences (Pham, 2018). The interpretivism paradigm allowed the researcher to examine the classroom environment through the subjective lenses of learners and educators. This approach is consistent with the research's goal of promoting inclusive education because of a more in-depth analysis of how people perceive and engage with remedial educational activities. Interpretivism is a valuable method for this research since it allows for the interpretation of complex social interactions in the classroom (Shah & Al-Bargi, 2013).

3.2.2 Qualitative approach

Qualitative research is an approach used to study human experiences, behaviour, and social phenomena in natural settings. It focuses on depth rather than breadth, exploring participants' perceptions and how these enhance the understanding of key issues (Creswell & Creswell, 2017). Data collection through interviews, observations, and document analysis is crucial for studying context-related phenomena, providing detailed knowledge assessment and understanding from participants' perspectives (Miles et al., 2018). Qualitative research in education evaluates programme effectiveness, explores teaching processes, and examines attitudes, offering flexibility for researchers to adapt strategies as new issues arise (Braun & Clarke, 2006). It facilitates the collection of detailed data compared to the cardinal data gathered in quantitative methods (Creswell & Creswell, 2017). Additionally, using primary data sources like interviews and focus groups enhances credibility through triangulation, where data from different sources are compared and analysed (Silverman, 2020). Qualitative research faces limitations like researcher bias, small sample sizes, and time-consuming data collection, transcription, and analysis, which can affect the credibility and dependability of results (Creswell & Creswell, 2017).

3.2.3 Research Design: Participatory Action Research (PAR)

The researcher decided to use the PAR approach to ensure the involvement of the participants. PAR is an ongoing, self-observational method in which participants are active researchers who help to broaden and reconnect the observation with the researched environment and people (Kemmis & McTaggart, 1998). As stated by Creswell & Poth (2018), using the PAR approach brings the knowledge and experience of the participants to light with achieving the needed change.

In PAR, communication among the participants is important as they progress through all the stages. The group members are expected to discuss issues from the planning stage, where they would agree on the objectives of the proposed study, to the reflection stage. In this current study, the action research stages identified by Kemmis and McTaggart (1998) were adopted to collect data. The stages are as follows: *planning* (during which the PAR objectives were determined), *observation* (current practice observed), *action* (new practices put into action), and *reflection* (reflecting on PAR processes). During these stages, a series of reflective

meetings were held as part of data generation. These meetings are determined by the degree of theoretical saturation reached.

One of the most significant shortcomings of PAR is the possibility of limited generalisability due to the context-specific nature of the research and participants' active participation in influencing the study's course (Kemmis & McTaggart, 1998). This concern is consistent with this research, as the findings may be greatly influenced by the specific group dynamics and context in which the action research is conducted. Because PAR prioritises local knowledge and context, the outcomes may be limited to the specific environment or group involved, lessening the conclusions' broader application (Kemmis & McTaggart, 1998).

3.2.4 Qualitative data-collection instruments

Qualitative data collection instruments were used to grasp the research context. These tools included participant observations, semi-structured interviews, focus group interviews and document analysis, which were chosen based on their relevance to the study's aims. Participant observation was an important technique that allowed the researcher to become an active participant in the study's social and educational context. This method supported the collection of detailed, contextual data on classroom dynamics, instructional techniques, and learner engagement. During the study, observations were made in a Grade 5 class, where the researcher and participating educators watched each other's teaching methods. This dual perspective provided useful insights into teaching tactics and classroom interactions, focusing on activities like using 3D objects in mathematics lessons. The observations gave a better understanding of teacher-learner interactions and the efficacy of instructional interventions, in line with the constructivist paradigm (Corbin & Strauss, 2008).

3.2.4.1 Semi-structured interviews

Semi-structured interviews were another important approach for capturing participants' experiences and ideas. These interviews, which combined pre-planned questions with the flexibility to explore emergent issues, provided an in-depth insight into the instructors' perspectives on remedial teaching approaches and classroom management (Bryman, 2017). The researcher interviewed two Grade 5 educators for 30-45 minutes each. These conversations centred on the educators' tactics, experiences with remedial learners, and ways to manage

classroom issues. Ethical issues were prioritised, and the interviews were audio-recorded for transcription to ensure anonymity and conformity to ethical principles (Patton, 2015).

3.2.4.2 Focus group interviews

Six participants (3 boys and 3 girls) from Class A were interviewed in focus groups to investigate the usage of remedial education programmes in a Grade 5 class and their function in enabling inclusive teaching and learning. This balanced representation guaranteed that a variety of viewpoints were captured. The researcher knew the individuals and used pseudonyms to protect their identities. Although total secrecy could not be ensured during the focus group, anonymity was maintained in the final report, and data management followed ethical guidelines. Focus group interviews are a well-established qualitative research method involving the structured collection of data through facilitated group discussions (Krueger & Casey, 2015). The conversations prompted participants to express their thoughts, experiences, and viewpoints, with the researcher facilitating and monitoring the dialogue. This approach effectively gained insight into shared perceptions and social interactions concerning educational events (Gibbs, 2018; Stewart & Shamdasani, 2015). To ensure ethical research practices, no personal or sensitive questions were asked, and participants were not exposed to risk. The focus group provided a supportive environment where participants felt comfortable expressing their thoughts and experiences. This approach yielded rich, qualitative data highlighting how remedial education programmes supported inclusive teaching and learning in the classroom.

3.2.4.3 Document analysis

Document analysis supplemented the observational and interview data by looking at written sources pertinent to the study. The analysis comprised six Grade 5 learners' numeracy assessment records, which were analysed to identify patterns in academic performance following the adoption of educational interventions. This method identified trends and fluctuations in learner progress, offering additional insights into the effectiveness of the strategies used. By triangulating the data acquired using these instruments, the study was able to gain a solid picture of the interventions' effectiveness (Taylor, Hinton, & Kintzer, 2019).

A specific intervention involved 3D objects in mathematics lessons to enhance learners' understanding of abstract concepts (Vygotsky, 1978). Learners engaged with blocks and

geometric shapes to explore mathematical ideas such as volume and spatial relationships, and they completed a geometry project using recycled materials. These activities aligned with constructivist principles, promoting active engagement, collaboration, and real-world relevance in learning (Marlowe & Page, 2005). To measure the impact of this intervention, learner engagement was observed during activities, and feedback was collected through focus groups to assess their understanding of the concepts (Krueger & Casey, 2014). The study adhered to strict ethical guidelines to protect the privacy, confidentiality, and well-being of participants (Fleming & Zegwaard, 2018).

3.2.4.4 Research Journal

Throughout the PAR process, the researcher kept a research journal to document and reflect on the many stages of the study. The journal acted as a dynamic record, documenting observations, reflections, and iterative adjustments made during the research process. It enabled a more systematic approach to study documentation, guided by best practices in qualitative research journaling (Creswell & Creswell, 2017). During classroom activities, the researcher utilised the diary to make real-time observations about how learners interacted with teaching tactics and interventions. For example, the researcher described how learners interacted with 3D objects during numeracy courses, highlighting their passion, teamwork, and capacity to understand abstract concepts. These observations contained detailed data regarding classroom dynamics, environmental conditions, and specific actions. The study involved semi-structured interviews with two Grade 5 educators, audio-recordings, and a journal analysis to gather themes about their teaching approaches, obstacles, and perspectives on treatments (Patton, 2015)

The journal also became a platform to track challenges and adjustments during the implementation of interventions. For example, when learners struggled with certain 3D object exercises, the researcher documented the situation and recorded collaborative solutions as discussed with the involved educators. At the end of each day, the researcher engaged in reflective practice, examining the efficacy of tactics, exploring alternative ways, and assessing if the study objectives were reached. This reflective technique, based on constructivist ideas, highlighted the active, evolving aspect of learning (Corbin & Strauss, 2008). Additionally, the journal documented collaborative interactions with the two educators, including their feedback on observations and interventions. These interactions gave useful insights that guided the

following steps in the research process and improved the study's validity by including diverse views (Bryman, 2017). Beyond documenting, the journal encouraged deeper involvement in the research process by serving as a medium for reflection and analysis. Creswell & Creswell (2017) note how this systematic methodology ensures the study's dependability and trustworthiness.

3.3 SAMPLING AND SELECTION OF PARTICIPANTS

The qualitative research design for this study involved purposive sampling, a type of sampling method not suited for use in probability sampling in qualitative research since participants were selected based on certain characteristics pertinent to the study question and objectives (Creswell & Creswell, 2017). The purpose of this sampling technique is crucial in choosing respondents with information exploitation and an adequate richness of qualitative data in analysing purposes, experiences, or valuable insights into the research topic selected (Patton, 2015; Miles et al., 2018). The two participating educators (females) in this study were selected purposively because they are two competent Grade 5 educators with experience in remedial education and participation in curriculum facets related to CAPS. The participants' teaching experience enriched the research findings through the sharing of best practices and deficits in the context of remedial intervention.

The study sample consisted of Grade 5 learners, evenly divided because 6 parents gave their consent. Research indicates that gender differences in ADHD often result in lower identification rates for girls due to their differing symptom expression compared to boys (Hinshaw, 2018). To address such potential biases, this study ensured gender parity to provide a balanced understanding of the gender-sensitive educational needs and experiences of learners in remedial classes.

3.3.1 Research site

The research was conducted at a remedial school referred to under the pseudonym *Bright Horizons Academy*. This fee-paying independent school supports learners' social, emotional, and academic needs. Classes average 8–12 learners, ensuring individualised attention. The school offers on-site occupational, speech and language, and psychological therapy. It accommodates about 180 learners from Grade 0 to 7, with 19 full-time educators and additional Language Support therapists.

The study focused on Grade 5 learners in one class selected for mainstream activities. This class was compared to two other Grade 5 classes, which were designed as follows: Class A -10 learners, Class B -8 learners, and Class C -9 learners allowing for extra assistance and guidance. Two educators implemented the remedial activities to revisit and reinforce key areas. Weekly reflection sessions were held with the educators to discuss ways to improve instructional practices. A focus group interview was also conducted with six learners, three boys and three girls, to evaluate the effectiveness of the interventions. This approach aligns with remedial education principles, emphasising individualised learning and adjustments.

3.4 DATA COLLECTION PROCESS

3.4.1 Research procedure

The first process was getting permission from the University Research Ethics Committee (Non-Medical) at the University of the Witwatersrand [Appendix M]. Subsequently, the researcher sought permission from the Gauteng Department of Education (GDE) to conduct the study at *Bright Horizons Academy* (pseudonym) [Appendix N]. In this research study at the remedial school, the researcher gave a formal letter to the school principal seeking permission to conduct the study [Appendix A]. Parents or guardians returned consent forms and were told that participation was voluntary for the learners [Appendix F]. Likewise, the educators completed the Participation Information Sheet (PIS), where consent was sought [Appendix B]. All participants were assigned pseudonyms to protect their identities. This measure ensured that the learners' and educators' personal information remained. During focus-group activities, anonymity could not be guaranteed due to group interactions, but the data collected was handled securely and with strict confidentiality.

The researcher had an employer/employee relationship with the institution while conducting the research, which might have created a conflict of interest (Mertens, 2007). To counteract this, the Head of Department (HOD) spoke to the learners and described the study's voluntary nature. Learners were allowed to speak with the HOD about any worries they had regarding their involvement. The participating educators met once a week to discuss ideas to enhance teaching methods and reflect on the execution of remedial exercises. To record how these activities were delivered, observations were made on how the researcher and the two participating educators reviewed and reinforced important subject areas. The researcher followed ethical standards to safeguard the participants' rights during the study. Drawbacks

during the research were noted and reflected upon during the planning meetings with the two educators.

3.4.2 Data collection process

For the PAR paradigm, the researcher began by collecting data via observations and comments recorded in a research journal (Kemmis & McTaggart, 1998). Throughout the research process, this journal allowed the researcher to document their observations, thoughts, and methodological choices, guaranteeing an open and thorough approach. To minimise disturbances to participants' professional obligations and accommodate their availability, the researcher planned out the research activities (Creswell & Poth, 2018). To get six learners' opinions on the interventions, the researcher also held focus group interviews with three boys and three girls (Krueger & Casey, 2014). To cause the least amount of disruption to their academic schedules these interviews were scheduled during free periods or after school (Cresswell & Poth, 2018). Ethical principles were upheld during the data-gathering procedure, guaranteeing participant confidentiality and respecting their opinions (Fleming & Zegwaard, 2018). The study's findings contributed to the educational discourse by scheduling data-gathering activities and implementing reflective techniques (Finlay, 2008). The collaborative and iterative character of this approach was aptly captured in the research journal (Creswell & Cresswell, 2017).

3.4.3 Data collection time frame

Participant observation, semi-structured interviews, and intervention activities were conducted over a one-month period. The extended duration of each phase was beneficial as it allowed for an examination of all aspects of the arrangements made by the researcher. The comfort of the participants and facilitated compliance with PAR emphasises the principles of iteration and reflection (Kemmis & McTaggart, 1998).

3.5 DATA ANALYSIS

In this study, the researcher employed an approach known as thematic analysis, a common approach in qualitative research that helps conduct a thematic analysis of data collected during

the research (Braun & Clarke, 2006). Thematic analysis is particularly suited to exploring complex social phenomena and was used here to interpret patterns in participant experiences and perspectives. Qualitative data analysis refers to interpreting data sets that are non-numerical and identifying patterns that come up with hypotheses or add to theories (Miles et al., 2018). Within this approach, the researcher searches for patterns, themes and connections in the data and interprets the chosen research phenomenon (Creswell & Creswell, 2017; Braun & Clarke, 2006).

The main steps in the data analysis entailed included producing text accounts of audio-recorded interviews, focus-group discussions, and observations which is standard procedure when dealing with data generated through interviews, focus groups and observations (Mertens, 2007). This transcription made it easy to analyse participants' views and evaluate which themes were most meaningful or prominently discussed by participants. Other forms of source information were also used where journal entries proved to be optional forms of information together with additional information that could be used to support the actual data collected during the process (Braun & Clarke, 2006). To get an overall picture of inclusive teaching practices the researcher planned to use an interdisciplinary approach. This was to obtain the voice recordings that were transcribed enhancing the trustworthiness of the study particularly its credibility and confirmability.

3.6 TRUSTWORTHINESS OF THE STUDY

The research accurately reflected the participants' perspectives and experiences, as well as the processes and methodologies applied. The trustworthiness of this study was established through several key strategies, including credibility, transferability, dependability, and confirmability (Flick, 2018). These strategies were employed to ensure the research findings were valid, reliable, and reflective of the reality within the classroom context. Researchers establish credibility through tactics such as member checking and triangulation, which include cross-checking data from numerous sources to improve correctness (Ahmed, 2024). This demonstrated a credible representation of participants lived experiences.

3.6.1 Role of the Researcher

As part of their job the researcher had to design, carry out, and evaluate the remedial activities. In addition to gathering and evaluating data in a way that was morally and methodologically

sound. As the class educator, the researcher had an intimate understanding of the learners' needs and capabilities, which allowed them to select appropriate interventions and tailor remedial activities that were both effective and meaningful to the learners (Fleming & Zegwaard, 2018).

Organising reflection sessions with their colleagues was another facet of the researcher's job. These gatherings provided a forum for candid conversation about the educational strategies being used as well as a chance for input and development. To evaluate and improve the teaching strategies, the researcher actively participated in the analysis of the data from these sessions as well as the observations collected during the remedial activities (Vainio, 2012). The researcher was able to provide a space where they could critically analyse their teaching methods and advance their knowledge of remedial education in a real-world classroom setting by juggling the roles of researcher and teacher. To ensure openness and rigour throughout the study the researcher kept a reflective notebook to record these observations and insights (Wiles et al., 2008). This method enhanced the data collection procedure and the study's conclusions by enabling the researcher to participate in the research in both a personal and professional capacity (Fleming & Zegwaard, 2018).

3.7 ETHICAL CONSIDERATIONS

As society increasingly demands greater accountability in research, the ethical conduct of research has become a focal point, particularly concerning the protection of participants' rights and privacy (Fleming & Zegwaard, 2018). In this study, ethical safeguards were paramount, with particular attention to concepts of confidentiality and anonymity (Wiles et al., 2008).

The study involved minors, necessitating additional ethical considerations, such as obtaining informed consent from parents and educators. Parents were provided with consent forms that explained the voluntary nature of their children's participation. These forms were signed by the parents or guardians and provided details about the study's objectives, methods, and data protection measures [Appendices F and G]. Educators involved in the study were similarly asked to sign consent forms to ensure their confidentiality and participation rights [Appendix H]. The voluntary nature of the study was emphasised, with participants assured that they could withdraw at any time without consequence.

In alignment with ethical research protocols, formal approval was obtained from the University of the Witwatersrand's Non-Medical Ethics Committee, the Gauteng Department of Education

(GDE), and the principal of the participating school (see Appendices A, M, and N). Although the focus group format limited complete anonymity, confidentiality was upheld through the use of pseudonyms and secure handling of data. To mitigate potential bias due to the researcher's affiliation with the school, the Head of Department (HOD) independently communicated the voluntary nature of participation to the learners and served as a point of contact for any concerns. These measures ensured the study met institutional ethical standards while prioritising participant protection and research transparency.

3.8 CONCLUSION

In this chapter, the research methodology was outlined, emphasising an interpretive paradigm and qualitative approach (Creswell & Creswell, 2017). The study used PAR, a technique that involves participants in the research process to address practical issues and enhance teaching methods (Kemmis & McTaggart, 1998). Careful attention was paid to ethical issues, guaranteeing that the study complied with moral guidelines at every stage (Creswell & Poth, 2018). To inform educational practices and offer insights for educators and policymakers. The chapter lays out the framework for improving inclusive teaching and learning practices within the remedial education environment (Ainscow et al., 2019). The research provided a foundation for future remedial education approaches by coordinating ethical criteria with university requirements and educational norms, ensuring trustworthy and morally sound data (Mertens, 2007). The next chapter focuses on the data analysis and the formulation of themes. It seeks to triangulate the collected data with the existing literature, as discussed in Chapter 2.

CHAPTER 4: RESULTS OF THE EMPIRICAL DATA ANALYSIS

4.1 INTRODUCTION

This chapter details the compilation and analysis of the data extracted from the interview transcripts, the conclusions drawn from the study, and the interpretation of the data. The conclusions and interpretations were based on extracts of the interview transcripts. This chapter presents the collected data under various themes and then triangulates the results from semi-structured interviews with educators, focus group interviews with learners, participant observations, document analysis, and the researcher's research journal. The researcher categorically organised the chapter based on the formulated research questions.

4.2 THEMES DERIVED FROM THE ANSWERS TO QUESTION 1: TO WHAT EXTENT DOES IMPLEMENTING REMEDIAL EDUCATION PROGRAMMES IN GRADE 5 FURTHER THE AIMS OF INCLUSIVE EDUCATION?

4.2.1 Individual support and group inclusion

Findings from the Participatory Observation Data Analysis (PODA) and Research Journal Document Analysis (RJDA) show that these programmes provide many benefits, such as boosting learners' confidence, increasing their engagement, and giving them the individual attention they need to succeed. The team observed the importance of one-on-one support and group inclusion in helping learners meet academic challenges while feeling included. Overall, inclusive education means ensuring every learner could participate and thrive in the classroom. During the study, the educators shared their experiences within the classroom, particularly when providing one-on-one support during therapy sessions.

This is what the educators had to say in support of individual and group inclusion:

Educator X: *By providing learners with individual support… when they need instructions repeated… while also including them in group activities creates an inclusive environment… helps them feel more confident. In this setting… learners are more likely to engage in tasks they once found difficult… as they feel supported and encouraged to participate.*

Educator Y: *Learners often benefit from one-on-one support. They can consolidate and… revise topics or concepts related to their academic challenges. With a teacher's guidance… they can move at their own pace and ask questions. Sometimes peer teaching works as learners feel included when… engaging with one another which helps build their confidence.*

4.2.2 Access to the curriculum

The document analysis (DA) and RJDA findings indicate that remedial teaching methods help the learners significantly improve their performance in mathematics, particularly in mastering 3D shapes. Before participating in the study, most learners showed lower achievement levels, as reflected in the Term 1 results. However, these marks improved considerably after receiving instruction in a remedial school setting, as shown in Term 2 and Term 3's data using triangulation (see Appendix L). The research findings show:

Significant Improvement for Struggling Learners:

- Learner 4 and Learner 6 showed the highest progress moving from Level 2 (35% & 35%) to Level 6 (71% & 70%), demonstrating a strong response to remedial support.
- Learner 2 also improved substantially moving from Level 2 (37%) to Level 5 (67%), reinforcing the effectiveness of an intervention.

Steady but Slower Growth for Some Learners:

- Learner 1 showed minimal improvement likely due to a high baseline (72% in Term 1). This suggests that high-achieving learners may require more advanced content to maintain engagement and progress.
- Learner 5 had the least improvement progressing from Level 3 (42%) to Level 4 (51%), indicating a need for differentiated instruction to better address individual learning needs.

For high achievers, such as Learner 1, enrichment and challenge-based strategies are essential to sustain engagement and further intellectual growth. Problem-based learning (PBL) can be incorporated by engaging learners in real-world applications of 3D shapes, such as exploring architectural designs or engineering structures. Advanced problem-solving tasks should be introduced to encourage critical thinking, including puzzles and higher-order geometry challenges that push learners beyond basic comprehension. Additionally, assigning high achievers a peer tutoring role can reinforce their learning while supporting their classmates. For struggling learners, including Learners 2, 3, 4, and 6, a hands-on and visual learning approach is effective. The Concrete-Pictorial-Abstract (CPA) method can be utilised by first introducing physical 3D models, such as cones and cubes, before transitioning to drawing diagrams and eventually solving equations. Geometry-based educational games can further enhance engagement and motivation. To support understanding lessons should be broken into

smaller manageable steps with frequent feedback and scaffolding. This can be provided through guiding questions to ensure learners grasp each concept before moving forward.

This is what learners had to say about the improvement in their marks after being part of the study:

Learner 3: *I like maths... mmm and I do like how my teacher teaches maths and how she helps me. When my mum asks me a question and then I can think back to what I have learned today in class… and what I can use from what I've learned in maths to answer a question and that helps me.*

Learner 4: *I enjoy mathematics and the activities… they are so much fun. I am busy with the 3D Project where mmm… I have to make a robot from recycled material that my teacher has given us. I am learning so much.*

4.2.3 Classroom management

According to the RJDA and PODA, the Grade 5 classroom's U-shape formation promotes a useful teaching and learning environment. One of the success factors in classroom management lies in the organisation of the setting. A U-shaped desk arrangement is effective for a class size of 10 learners, ensuring everyone has a clear view of each other. This arrangement promotes direct contact between the educator and the learners. More specifically, face-to-face communication is friendly; thus, learners can notice body language, facial expressions, and tone as they engage in classroom discussions, enabling active participation. The organisation of the lessons promotes observability, minimising the chances of disengagement. Classroom management is one of the most important duties of education because it ensures that learners' learning conditions are ideal. Adapted educational methods foster a diverse learning context, promoting belonging, group success, and individual success. Effective instruction enhances emotional and social competence, facilitating academic success.

This is what one participant had to say:

Educator X: *Begin setting the tone. Check-in emotionally where everyone is. Ensure everyone is ready for the lesson… with books and stationery. Explain expectations… Teach the lesson… question whether everyone understands… and shift to either reexplain or move on. Allow for movement breaks… ensure the lesson is dynamic… and that expectations are clear. Checklist on board for what is required*

as a reminder. Complete the lesson and move on to the next. I always have to be available to… meltdowns and reassurances.

4.2.4 Assistive technology to foster inclusivity

PODA reveals that the research team used assistive technologies to foster inclusivity in the classroom. These technologies are important tools in increasing teaching and learning and ensuring that all learners have access to the necessary resources. For instance, speech-to-text tools like Read & Write and Google's Speech-to-Text support learners with writing difficulties or dyslexia by converting speech into written text. Assistive listening devices, including Frequency Modulation (FM) systems and hearing loops, enhance auditory reception for learners with hearing impairments by amplifying the educator's voice. Learning management systems like Google Classroom provide a centralised platform for accessibility, while devices like Scan pens and iPads aid learners with reading difficulties by enabling text scanning and storytelling, enhancing learning interactivity.

The research team determined that these assistive technologies effectively enhance inclusivity, accommodate different learning requirements, and ensure equitable access to educational content. This is what the participants had to say:

Educator X: *Such assistive devices like speech-to-text software… audiobooks and FM system tools have been incredibly helpful. These resources help the learners with reading and writing disorders…thus improving their chances of active and successful participation.*

Learner 3: *One of the things that I like is… using the reading buddy audio books… when reading stories for homework.*

Learner 4: *In class when my teacher speaks into my FM device… then I can hear her better. I understand what I need to do. I am not lost.*

4.3 THEMES DERIVED FROM THE ANSWERS TO QUESTION 2: WHAT ACADEMIC SUPPORT SERVICES ARE AVAILABLE FOR GRADE 5 LEARNERS ENROLLED IN REMEDIAL EDUCATION PROGRAMMES?

4.3.1 Differentiated instruction using technology

The RJDA and DA found that learners who received instruction in small groups and utilised technology-based learning, such as eMathletics and Kahoot, demonstrated significant progress

in overcoming various learning obstacles. Educators provided favourable evaluations of the Aural Read Respond Oral and Write programme. PODA indicated that the research team have noted that the ARROW programme improves learners' literacy competencies, particularly in reading and spelling, through strategies like reading aloud, word recognition, and word segmentation. The research team shared their thoughts on differentiated instruction using technology-based learning.

Educator X*: The software addresses many learning styles by… mixing aural, spoken, and written replies, allowing learners to connect with… the subject in the most effective way for them. This personalised approach has made a huge difference… in their literacy growth.*

Educator Y*: The ARROW app has helped learners break down difficult words and… increase their reading fluency. Allowing learners to read at their own pace… has improved their confidence, as they believe they have thoroughly grasped the subject before proceeding.*

The research team's justification prompts the question of whether differentiated instruction and technology-based learning tools fully meet the educational needs of all learners. Although small-group instruction and educational apps have shown advantages in meeting the varied needs of learners, their efficiency may differ among individuals. Educators have observed that these methods boost learner engagement, improve reading skills, and provide opportunities for individualised attention, yet it's unclear if they fully meet the needs of all learners.

Focus-group analyses indicated that the participating learners perceived the ARROW programme as key towards boosting their learning, suggesting that the pedagogy was inclusive and attentive to their needs. This is what one of the learners said:

Learner 3: *In ARROW we do reading… where I read lines and… then write what I read and then answer questions. This makes me feel more happy… because I can read slowly and no one is judging me.*

4.3.2 Targeted remedial interventions

Findings from RJDA and DA demonstrate that the use of visual and tactile instructional materials modifies learners' approaches by improving their perception and application of mathematics. The participating learners, especially those who had difficulties solving activities involving abstract mathematics, improved when using equipment such as counters, Dienes

blocks, and the number chart. These resources made it simple for learners to participate and better understand and retain fundamental aspects of their course.

Furthermore, one educator participant advocated for the use of tactile and visual teaching tools in mathematics, noting that learners demonstrated higher self-confidence in solving multiplication problems when using tools such as multiplication grids and manipulatives. Ultimately, these tools aid in providing a tangible form for abstract concepts. Another educator emphasised the importance of visual representations, such as fraction circles, in enhancing the learner's understanding of part-whole with fractions. DA further revealed that learners performed better when taught in a math therapy group to consolidate and reteach mathematical concepts. This is what one of the educators involved in the study had to say:

Educator X: *Many learners struggle with basic skills… such as bonds, times tables, and math vocabulary.*

Learners felt that using tactile tools and visual aids helped them to understand mathematical concepts more easily and confidently. It also improved their engagement, participation, and ability to process abstract concepts in class. This is what some of the learners said during the focus group interviews:

Learner 1: *In Math Therapy, we use blocks to help with numbers. I can move them around… and see how they fit together. It helps me understand math better.*

Learner 2: *We use big cards to show math problems. When I can point to the answers on the cards… it helps me learn faster.*

Learner 3: *We use paper strips to help with fractions. It's easier to see what half or a third looks like… when I can hold it in my hands.*

Learner 5: *We use drawings and shapes to solve math. I like drawing because it… helps me see the math in a way I can understand.*

4.3.3 Team teaching (PAR)

RJDA and PODA highlight that team teaching enhances learners' participation, provides additional support, and showcases collaboration with learners. This set-up proved beneficial for both educators and learners. Learners appreciated the cooperative approach because it

provided a more satisfying and supportive educational environment. Educators recognised the importance of shared responsibilities and the opportunity to learn from each other. Despite the challenges faced in organising and planning the duties, which required a lot of time for coordination due to the team being composed of educators, the approach encouraged the improvement of educational practices for all involved.

DA indicated that team teaching improved the quality of learning as both educators approached the same topic. Educator X emphasised that team teaching enabled them to concentrate on systematic and sequential learning, while a colleague integrated individual support by walking around the classroom. This combination-maintained learner engagement and provided them with accommodations for individual demands. The team observed that the presence of two educators in the classroom empowered one educator to instruct the subject content while the other offered individual assistance, fostering a more adaptive learning environment. According to Educator Y, team teaching was effective in creating an engaging learning atmosphere. The learners got to view many methods used in teaching, teamwork, and collaboration. Immediate intervention during lessons ensured more efficient addressing of learning gaps. The team recognised the challenges involved, including the need for careful planning, aligning preferred teaching methods, and managing individual teaching responsibilities. However, both educators agree that team teaching enhances the quality and diversity of education provided to the learners.

This is what the educators had to say:

Educator X*:* *Team teaching has been a real boost in our classroom in the teaching and learning process. It helps us to complement… one another in many ways. For example… this means that I spend more time and effort on a direct teaching approach… offering instructions in a clear manner.*

However, it is not without challenges. So mmm… coordination is important… and it can be tricky to align our teaching styles and expectations. We've had to work hard to make sure we are consistent with our approach. Especially when it comes to discipline or feedback. There is also the challenge of managing differing perspectives… sometimes we need to compromise on how to deliver content… which takes time and good communication.

Educator Y: *One of the biggest benefits of team teaching is the dynamic atmosphere it creates in the classroom. Learners get to experience different teaching styles, which keeps things fresh and engaging. They also see us demonstrating working together in a lesson… which is an*

important life skill. Having two educators also means we can provide feedback and support during lessons. This makes it easier to address the learning gaps.

However, I would also say that effective team teaching needs a lot of planning. We need to regularly communicate with one another to make sure we are on the same page… which can be time-consuming. There's also the challenge of balancing responsibilities…sometimes one of us may naturally take the lead more often, so we have to be mindful to share the load equally. Despite these challenges the teachers face… the learners thrive in a more supportive and responsive learning environment.

4.3.4 Cooperative teaching and learning

In the context of a remedial setting, educators successfully used a cooperative teaching and learning approach to encourage inclusive learning. During observations, it was clear that this strategy encouraged the frequent application of interpersonal and small-group skills, as well as regular reflection on group performance to improve future effectiveness. Cooperative learning proved useful for learners facing academic challenges, providing an inclusive and interactive environment that fostered active participation and engagement. Learners in this setting could clarify concepts and deliver knowledge to their classmates in a more accessible way than mainstream instruction. They learned to teach one another by explaining information in their own words, which helped them grasp concepts better. The group dynamic fostered a relaxed atmosphere that made it easier to ask and answer questions. This leads to fun learning experiences. Learners developed positive interdependence as they understood the connection between their own success and that of their peers. This technique honed important interpersonal and cooperative skills.

To effectively implement cooperative learning in a remedial context, educators provided clear explanations of the desired results. This ensured learners-maintained focus and comprehended the expectations, fostering an environment where specialised instruction taught various learning requirements. Data analysis of focus groups and semi-structured interviews showed that educators who employed small-group discussions effectively promoted inclusive learning and teaching. This is what some of the participants had to say:

Educator X*: My experience has been fulfilling, challenging, exhausting… and rewarding. Working in this dynamic environment means that each day is unique… heavily influenced by the emotional states of the learners*

Educator Y*: Group work helps learners build confidence… because they learn from one another. It's wonderful to see them sharing ideas and…. supporting each other to solve problems.*

4.3.5 Social and Emotional Support

PODA and RJDA revealed that learners often found the classroom environment overwhelming, particularly when they struggled to manage their emotions while trying to keep up with the mainstream pace in a Grade 5 class. The faster pace of academic demands often left these learners feeling anxious and frustrated. However, the atmosphere began to change when the learners were taught at their own pace, with tailored lessons to meet their unique needs.

Some learners discovered that by slowing down the learning pace and addressing individuals differently, they felt they could control their learning process. The fear of falling behind gave way to a sense of understanding the lessons at their own pace. It was beneficial for both their academic success and emotional development, as they learned how to remain composed, seek assistance when needed, and feel proud of their accomplishments without feeling embarrassed. This is why it is crucial to include consolidation, re-teaching a concept, and revision during class teaching. These practices allow learners to review difficult concepts at their own pace and ensure that the learners have adequate mastery of the basics before proceeding to the next level.

The focus group and semi-structured interviews revealed that when learners in remedial education programmes encountered the mainstream pace in a Grade 5 class, they experienced feelings of overwhelm and struggled to control their emotions. However, when they received instruction at their own pace, learners gained more confidence and experienced a sense of empowerment.

This is what some of the participants had to say:

Learner 1: *Um... I think it helps because sometimes, like, I get frustrated when I don't get the answer right awa…, but now I kinda know how to stay calm.*

Learner 2: *Well, I used to get really annoyed when I couldn't do something… but now I try to breathe and not get mad.*

Learner 6*: I have learned to stay calm when I'm confused… and I ask the teacher or my friends for help. I used to cry when things got hard, but now I try again.*

Educator X: *Daily it is important to check in with everyone's emotional state. If the schedule in the timetable changes… without learners being informed. Then you must be ready to handle meltdowns and provide reassurance. Learners are accustomed to routine and… any changes in their day-to-day learning cause various emotional outbursts.*

4.3.6 Collaboration with therapist

PODA research findings revealed the crucial role of direct intervention by OTs. One such instance demonstrated how immediate support from an OT helped a learner who could not sit and pay attention. The OT recommended a modifiable device—the looped-up resistance band secured around the learner's seated chair. This tool lets the learner bend a little at his/her seat during the lesson so that they cannot fidget a lot during the lesson. The research team concluded that such collaboration, involving prompt and effective support from therapists, was essential in addressing individual learner needs, fostering a positive learning environment, and enhancing overall academic engagement.

The research team emphasised the necessity for collaboration with therapists such as OTs, Speech and Language Therapists (SALTs), and Learning Support Therapists (LSTs). Respondents articulated strategies for addressing learners' challenges through regular team meetings and ongoing engagement with professionals throughout individualised education plans (IEPs). Educators in remedial environments frequently need to complete comprehensive documentation, including IEPs, progress reports, and meeting notes. Integrating these administrative obligations with their instructional responsibilities can be demanding.

The analysis of the semi-structured interview data indicated that, when educators use interventions in inclusive learning, teaching takes place effectively. This is what the participants had to say:

Educator X: *We work with the LSTs, OTs, and SALTs as the term progresses. By having an IEP meeting… we can reflect on individual learner requirements needed for social, emotional and academic learning.*

Educator Y: *Collaboration with other teachers, therapists and other staff members is often in a one-on-one session… or done as a team meeting. Both have their advantages and are a means of trying something new… or accepting and knowing that other teachers are experiencing the same difficulties. Moral support is key to finding the help both teachers and learners need.*

4.4 THEMES DERIVED FROM THE ANSWERS TO QUESTION 3: WHAT ARE THE PERCEIVED NEEDS OR CHALLENGES THAT CONTINUE TO EXIST FOR GRADE 5 EDUCATORS WHEN DELIVERING REMEDIAL EDUCATION PROGRAMMES?

4.4.1 Improved pedagogy

PODA and RJDA demonstrated that educators engaged in diverse instructional strategies to promote inclusive learning and teaching while concurrently refining their pedagogical practices. Throughout the study, educators recognised the substantial impact of scaffolding and personalised support in identifying the best approach for each lesson. Notwithstanding the advantages of reduced class sizes, on-site therapies, and individualised assistance, challenges persist. Educators encounter difficulties in addressing the various learning requirements of learners and maintaining their motivation.

The following statements illustrate educators' perspectives on facilitating inclusive teaching and learning:

Educator X: *Even with smaller classes… it can be hard to meet every learner's needs because their learning gaps are so different. Some learners need help with basic skills… while others are working on more advanced concepts. It's not just about teaching content… it's about figuring out where each child is and helping them move forward. Time is still an issue… especially when learners need extra repetition or reinforcement to really understand the material.*

Educator Y: *I think motivation is a big challenge too. A lot of our learners come in feeling like they have already failed… so rebuilding their confidence takes time. Even with the therapies and support we have… some learners struggle with believing they can succeed. Another thing is that while we have access to on-site therapies… it can sometimes feel like there's not enough collaboration between the therapists and teachers to create a fully connected plan for the learner.*

4.4.2 Slow progress in certain learners

The term 'slow progress' refers to learners who make minimal or sluggish progress in their development, despite exerting significant effort. Some learners may face challenges that impede their expectations set by the curriculum. RJDA and PODA revealed that slow progress

is a challenge with some learners in the remedial education setting. Some learners do not respond as quickly to interventions as others, and the learning process may require more time and individualised approaches, which may not always result in immediate, visible improvements.

The semi-structured interviews revealed that both educators encountered challenges when using targeted interventions to explain topics to slow learners. This is what some of the participants had to say:

Educator X: *Some children progress but some… have a barrier that unfortunately takes longer to remediate and sometimes… this never happens***.**

Educator Y: *This is difficult when we do not see changes right away… in learners progress. Let alone when we have tried a lot. We should never forget that every learner is unique... and that they learn at their own pace. Sometimes, weak learners that show slow progress have a good general knowledge background… on which they can build upon.*

4.4.3 Foundational gaps in learners

The DA and the RJDA clearly showed that most learners faced challenges and were having meltdowns in class. They frequently expressed difficulty understanding the taught content. Initially, meltdowns occurred in 30% of observed lessons, particularly when learners could not grasp a concept at a mainstream pace. During the third week, the rate of meltdowns dropped to 10%, as learners adapted to the supportive and structured classroom environment when introduced to reteaching concepts at their own pace. The study revealed significant foundational gaps in both numeracy and literacy among Grade 5 learners when teaching mainstream activities. These included limited proficiency in fundamental skills such as multiplication tables, basic mathematical vocabulary, and reading comprehension. These deficiencies made it difficult for learners to grasp more basic foundational concepts, resulting in further academic challenges. The literacy gaps were equally prominent. Learners struggled with understanding instructions and lacked the vocabulary required to engage meaningfully with the curriculum at a mainstream pace. Reading comprehension difficulties further exacerbated their challenges, limiting their ability to make connections and apply learned concepts across subjects. These deficits underscored the importance of addressing foundational skills to equip learners to engage more effectively with the curriculum and support their academic growth. The inability to follow through with instructions further contributed to their

feelings of inadequacy and self-doubt. The pace of mainstream activities often left little room for learners to consolidate foundational skills, leading to a cycle of failure and heightened emotional distress. This pattern not only negatively affected academic performance but also made learners feel less confident, and their willingness to participate in the learning process was not much.

The analysis of the semi-structured interview revealed that there were foundational gaps in learning. This is what one of the educators had to say:

Educator Y: *The challenge faced by a teacher in the classroom is trying to help the learner calm down. Due to learners' complex learning difficulties… it is not always possible to complete an activity. This shows that learners in a remedial school cannot understand why the concept has not been mastered yet and they find faults within themselves. This creates a…. low self-esteem and causes hurdles to their academic success. These learning gaps are not easily filled without targeted interventions.*

4.4.4 Time management

The research findings (based on DA and RJDA) indicate that limited time to teach the curriculum was a challenge. Effective time management was useful when dealing with challenges posed by limited teaching time. It can be said that proper planning and preparation were important since detailed lessons were prepared to connect teaching strategies with specific learning outcomes while maintaining the overall relevancy and applicability of the curriculum. The research team implemented classroom management strategies to control teaching and learning times and minimise disruptions. Furthermore, personal evaluation was critical, as educators always reflected and assessed the practices to determine areas that needed improvement in the effectiveness of implementation. Setting and achieving realistic goals ensured that there were actual learning objectives that could be met within the given time, which helped reduce pressure on educators and learners. Finally, activities were broken down into smaller parts to improve the understanding of concepts and help learners build their knowledge step-by-step. These strategies collectively enhanced the academic performance of the participants.

Before learning about 3D shapes, most of the participants achieved lower grades. However, their academic performance drastically improved after they started receiving learning support

in numeracy throughout Terms 2 and 3 [see Appendices L and M]. This is what one participant had to say:

Educator Y: *Since the time is very limited… to ensure that I touch on all issues. I use math therapy sessions for consolidation. Some learners could not grasp what was expected of them in the 3D shapes… so I offered them the necessary learning support. They required more time and revision of this concept… and I have noticed significant changes in their performance.*

The use of an adapted curriculum helped prioritise learning outcomes while providing additional time and support for learners who needed it. This approach allowed educators to address gaps in understanding and provide the necessary scaffolding for learners to succeed, even when time constraints were present.

4.4.5 Emotional and behavioural challenges

PODA and interview data analysis, which encompassed focus groups and semi-structured interviews, indicated that emotional and behavioural issues substantially affected teaching and learning. These issues frequently resulted in poor concentration and decreased involvement in the class, as learners found it difficult to engage fully with the content and activities delivered. The research team aligned the activities with Grade 5 curriculum standards to keep learners engaged during class lessons. However, while the two classes taught the content at a slower pace, the class with the research participants followed a mainstream pace for introducing topics.

The class with mainstream teaching encountered numerous challenges, especially when it came to addressing emotional and behavioural difficulties among the learners. The fast-paced delivery of content often overwhelms learners, leading to frustration and disengagement. Learners struggling to keep up with the rapid progression experienced heightened anxiety, which manifested in emotional outbursts or opting out of class activities. Learners, feeling inadequately supported in meeting academic demands, compounded these emotional challenges with behavioural issues such as disruptions, lack of focus, and reluctance to participate. During the lesson, a visibly distressed learner sniffed and cried. Such emotional reactions highlight the depth of the frustration and helplessness these learners experience.

The four-week research data collection period involved the application of this approach. The research team held the belief that the other two Grade 5 classes, which incorporated active

learning and focused listening at a slower pace, were the most successful. Learners were significantly and thoroughly involved with one another; they demonstrated improved attentiveness and participation.

Data analysis of both the focus groups and semi-structured interviews revealed that when educators taught at a slower pace, the level of concentration and participation in the class was better compared with the learners who were taught at a mainstream pace:

Educator Y: *The slower pace helps learners understand the instructions given and the way they can process the content being taught.*

4.5 CONCLUSION

This chapter details the data analysis methods used, including focus-group interviews, semi-structured interviews, and questionnaires, to collect information from learners, educators, and remedial educational programme participants. The chapter examines key study themes such as individual support, group inclusion, team teaching, cooperative learning, differentiated instruction, classroom management, remedial interventions, social and emotional support, and therapist collaboration. The study reveals that remedial interventions improve learners' academic and social development by building confidence in reading and numeracy skills. Increasing learner involvement and creating a supportive classroom environment was supported by interviews, observations, and reflective journal entries. The data was analysed using the literature from Chapter 2, with the next chapter providing a summary, recommendations for improving remedial education, and the study's conclusion.

CHAPTER 5: SUMMARY, RECOMMENDATIONS AND CONCLUSION

5.1 INTRODUCTION

The concluding chapter of the study presents the research question, alongside the research objectives for the study. Consequently, the researcher examined the study's findings for the primary research question and the sub-questions. An analysis of the themes in Chapter 4 compared with the literature review in Chapter 2 provide several findings that demonstrate the study's contribution to the existing knowledge in this field. Recommendations for pedagogical practices and policies are made based on the presented findings. The researcher delineates the study's limitations and presents recommendations for further research in the concluding section of this chapter.

5.2 RESTATING THE RESEARCH AIM FOR THE STUDY

5.2.1 Research questions

The main problem addressed in this study is whether remedial education programmes can effectively improve inclusive teaching and learning in a Grade 5 class within a Gauteng remedial school. Hence, the subsequent research questions are stated.

Chapter 1 states the study's research question: How can remedial education programmes be used in a Grade 5 class to facilitate teaching and learning in a remedial school?

To answer the question, the researcher had to consider the following sub-questions:

- How does implementing remedial educational programmes in Grade 5 further the aims of inclusive education?
- What academic support services are available for Grade 5 learners enrolled in remedial education programmes?
- What are the perceived needs or challenges that continue to exist for Grade 5 educators when delivering remedial educational programmes?

5.2.2 Objectives of the study

The study's objectives are as follows:

- To investigate how the implementation of remedial educational programmes in Grade 5 classes facilitates inclusive teaching and learning in a Gauteng remedial school.
- To examine the academic support services available for Grade 5 learners enrolled in remedial education programmes in the context of inclusive education.
- To explore the perceived needs or challenges faced by Grade 5 educators in delivering remedial educational programmes to support inclusive teaching and learning.

5.3 SUMMARY OF THE STUDY

Chapter 1 highlighted the importance of remedial and inclusive education, outlining its scope, objectives, theoretical framework, background, legal frameworks, ethical considerations, and research approaches.

Chapter 2 explored the theoretical framework on remedial education programmes and inclusive teaching in Grade 5 in Gauteng remedial schools, examining their benefits, implementation in Zimbabwe, Chile, and Malaysia, and the challenges of achieving inclusive education.

Chapter 3 discussed the research design and methodology, including data collection methods and interview types, and the rationale behind selecting a qualitative research approach for this study.

Chapter 4 documented the data analysis methods, focusing on focus groups and semi-structured interviews with learners and educators. The researcher organised the findings systematically, guided by the research sub-questions, ensuring a comprehensive and insightful analysis.

Chapter 5 discusses the study's limitations and shortcomings, offers recommendations for addressing them, and concludes with a discussion of possible interpretations and implications of the findings.

5.4 DISCUSSION OF FINDINGS

This section of the study examines the findings with the themes employed in the data analysis presented in Chapter 4. The discourse initially reiterates the research question, followed by discussions of the themes. The Theoretical Framework in Chapter 2 is cross-referenced with the themes to substantiate the conclusions. The study's implications are discussed by exploring

the use of remedial education programmes in a Grade 5 class to facilitate inclusive teaching and learning in a Gauteng remedial school.

5.4.1 Themes derived from the answers to question 1: To what extent does implementing remedial education programmes in Grade 5 further the aims of inclusive education?

To answer this research question, the following themes derived from Chapter 4 are used:

5.4.1.1 Individual support and group inclusion

The study revealed that educators who repeated instructions and allowed the learners to work at their own pace boosted their confidence. The study emphasises the importance of inclusive education practices, which integrate individual support with collaborative learning opportunities, as suggested by Vygotsky. These practices based on social constructivism assist learners in developing resilience and skills to succeed in a positive learning environment. In line with Chapter 4 (section 4.2.1), inclusive education practices provide support and inclusive learning activities to help learners develop self-assurance and perseverance. Individual support in remedial education programmes supports learners to reflect, practice, and apply new knowledge. Inclusive education, which combines individual support and group inclusion, supports peer engagement in the learning environment. In Chapter 2 Blake (2015) and Vygotsky (2012) reportedly stated that interaction was necessary for learners to transition to their ZPD. Amineh and Asl's (2015) assertion that knowledge is a socially created reality wherein learners develop with sufficient support. Lantolf and Poehner (2014) note that Vygotsky's theories emphasise the interplay between cultural practices and psychological development.

5.4.1.2 Access to the curriculum

The study revealed that the application of personalised interventions and learner-centred strategies has a profound impact on the academic progress of participating learners as evidenced by their significant advancement from Term 1 to Term 3 (refer to Appendix L). This aligns with the Department of Basic Education's (2011) assertion that adapting curriculum delivery to meet learners' diverse needs promotes academic growth and fosters a sense of

belonging and holistic development. Learners who initially displayed lower achievement levels showed remarkable improvement over time. For instance, those progressing from Level 2 to Level 4 in mathematics demonstrated how focused strategies such as scaffolding, visual aids, and hands-on activities addressed their learning gaps and enhanced their confidence. Vygotsky's ZPD concept suggests that learners need assistance to reach their full potential. The curriculum should include scaffolding techniques to support learners within this gap (Newman & Latifi, 2021). This may involve tailored instruction, small group collaboration, and technology integration to make learning personalised and engaging.

The decision to employ this framework is also supported by the literature on inclusive education, where constructivist strategies are increasingly advocated to meet the needs of diverse learners (Van der Westhuizen & De Beer, 2021). Inclusive pedagogy requires educators to recognise variation not as a deficit but as a natural feature of learning environments. This necessitates adaptive teaching methods, peer collaboration, and a culture of reflection—all of which are scaffolded by a constructivist worldview (Newman & Latifi, 2021). Through this theoretical lens, the study identifies how social interactions among educators, learners, and school leadership served as mechanisms for negotiating meaning and addressing barriers to inclusion. By foregrounding relational processes, this research repositions knowledge construction as a collective achievement rather than an individual endeavour.

Central to Vygotsky's theory is the Zone of Proximal Development (ZPD) the gap between what a learner can do independently and what they can achieve with guidance. This concept provides a powerful lens through which to understand how learners with diverse needs can be supported through scaffolding temporary support structures provided by peers, educators or the environment (Juma et al., 2017). In this study, scaffolding emerged in the data as collaborative planning sessions, peer mentoring, and dialogic reflections that enabled educators to refine inclusive practices.

Additionally, mediation through tools, language, and cultural artefacts is a foundational idea that shaped both the data collection and interpretation. Learning was not seen as internal acquisition alone, but rather as a shared construction, shaped by contextual variables such as language diversity, classroom routines, and institutional constraints (Bal et al., 2021). The theoretical concepts were not only used to guide the initial research design but were also employed deductively in the analysis phase. Each thematic pattern identified in the data such

as "teacher agency", "learner voice", or "adaptive pedagogies" was interpreted through the lens of ZPD and social mediation. This ensured a tight coupling between the study's conceptual underpinnings and its empirical insights.

5.4.1.3 Classroom management

The study revealed that the U-shaped desk arrangement was suitable in a Grade 5 classroom with 10 learners. The U-shape classroom arrangement, aligned with Vygotsky's framework of the ZPD, provides a convenient view of the educator and peers, promoting effective teaching and learning strategies. This seating design facilitates easy collaboration and interaction among learners, encourages social constructivist learning. This allows learners to ask for clarification, receive support, and share ideas, fostering critical thinking and better understanding. Moreover, the U-shape classroom design allows educators to provide guidance and scaffolding, enhancing learner engagement and academic performance. It allows for easier observation and proximity, enabling intervention, cues, or explanations. The positive atmosphere encourages participation and discussions, making learners feel supported. As previously mentioned in Chapter 2, it was important to implement effective classroom management because it helped ensure that the necessary conditions for learning were met. Thus, when the learners were involved in the learning process the educator ensured they paid attention and felt included. Research by Marzano, Marzano, and Pickering (2003) emphasises that a well-managed classroom ensures that learners feel included and engaged in an atmosphere where learning thrives. Additionally, Wong and Wong (2014) highlight that classroom organisation and management enhance a sense of belonging, enhancing academic outcomes for diverse learners. Extracurricular activities promote emotional, social, cognitive, and physical development when combined with effective classroom management practices.

Lewin (2019) claim that these exercises are particularly influential in building self-esteem and encouraging learners to explore new activities. The remedial programme's success was attributed to effective classroom management and an integrated teaching approach. The integration of technology, such as shared screens or group software, enhanced the learning experience by merging conventional and digital tools. The programme also acknowledged the diversity among learners and provided a supportive environment, allowing them to achieve their best.

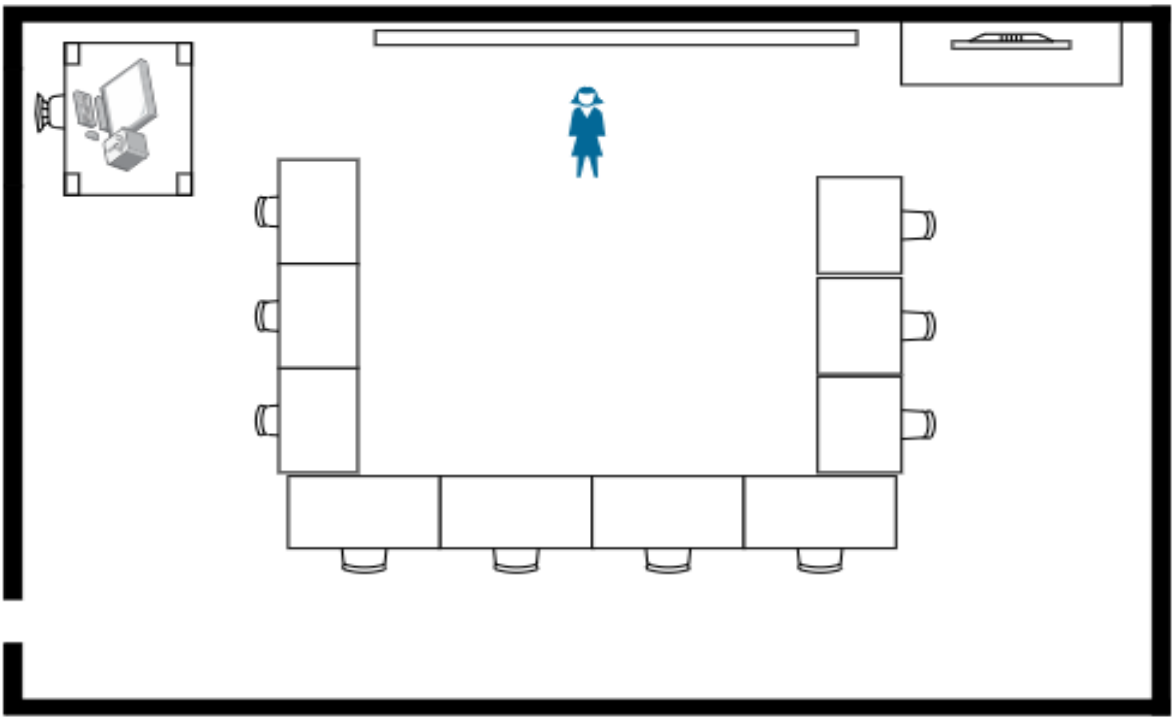

Figure 1: An illustration of a U-shaped seating arrangement (Researcher: Zaheera Mohammed)

5.4.1.4 Assistive technology to foster inclusivity

Assistive technologies, such as speech-to-text software and FM systems serve as contemporary scaffolding tools. They offer the support that helps close the gap between what a learner can do today and what they can achieve within their ZPD. Assistive devices aid learners in challenging tasks, promoting cognitive development and inclusion. They mediate interactions between learners and the environment, enhancing their capacity to acquire and internalise new knowledge and skills. For example, the speech-to-text software, FM system facilitated engagement and success for learners who needed it, as they provided support to meet individual learning needs and accessibility in inclusive classrooms (Krasniqi, Zdravkova, & Dalipi, 2022). Speech-to-text allowed learners with cognitive challenges to express their thoughts clearly and participate in class or group discussions without hurdles. Similarly, graphic organisers and mind-mapping tools are beneficial for learners who struggle with organisation. These tools visually represent complex information, allowing learners to see connections and gain a clearer understanding. They address learning needs while simultaneously supporting learners in advancing within their ZPD, promoting both inclusivity and personalised learning. From the researcher's view, ongoing training and support for educators are important to make sure assistive technologies are used well to help learners. Educators must be adequately prepared to apply them strategically to increase learner engagement and participation. Assistive

technologies, such as communication devices and online platforms, enhance social interaction and collaboration in learning, as emphasised by Vygotsky. These devices assist learners in speaking, participating in group discussions, and communicating with others, while also accommodating learners of diverse abilities and learning styles. Vygotsky's concept of the "more knowledgeable other" (MKO) refers to individuals who possess more knowledge and assist learners in acquiring new skills, with educators serving as MKOs, effectively utilising assistive technologies.

5.4.2 Themes derived from the answers to question 2: What academic support services are available for Grade 5 learners enrolled in remedial education programmes?

To answer this research question, the following themes were derived from Chapter 4:

5.4.2.1 Differentiated instruction using technology

Various learning requirements of the learners were dealt with effectively by using differentiated instruction incorporating small group teaching and educational applications. Mathletics and Kahoot particularly stood out in their ability to provide interactive learning and as such were able to overcome different impediments to learning among the learners. This aligns with Vygotsky's theoretical framework regarding language acquisition and cognitive development, particularly his emphasis on the role of social interaction and mediated learning in developing literacy and linguistic skills. The ARROW programme is described as a scaffold in the ZPD by tailoring instruction to the learner's pace for mastery of literacy skills. The educator assumed the role of the MKO by communicating necessary strategies and reinforcing progress, a practice that has been shown to improve reading speed, spelling, and comprehension (Gunobgunob-Mirasol, 2024; Waller & Dahle-Huff, 2023*)*. This approach improved the learners' reading speed, spelling, and comprehension. Furthermore, the programme's ability to reduce anxiety and build confidence aligned with Vygotsky's emphasis on the emotional and social dimensions of learning. The programme helped learners acquire literacy skills and develop inner speech, a key component of Vygotsky's self-regulation and independent learning model. The systematic interventions facilitated learners from guided to self-directed mastery, proving that learning drives development.

5.4.2.2 Targeted remedial interventions

This study's findings revealed that the research's results strongly support social constructivism, especially as articulated in Vygotsky's concepts related to the ZPD and the importance of social interaction in learning. Integrating hands-on materials and visual aids, such as counters, Dienes blocks, and number charts, constitutes a kind of scaffolding in the ZPD that provides learners with the needed support to progress from their current level of understanding to more complex mathematical concepts. These tools allow learners to understand and retain mathematical vocabulary and concepts, addressing individual needs through targeted remedial support. Social constructivism highlights the role of cooperation and peer tutoring in the cognitive process. The study presents the effect of peer instruction on closing achievement gaps, demonstrating the benefits learners derive from mutual support and cooperative problem-solving. Vygotsky's sociocultural theory emphasises the role of social interaction in learning, suggesting that individuals develop understanding through dialogue and shared experiences (Vygotsky, 1978). Educators highlighted that these tools improved comprehension and encouraged peer-assisted learning. This aligns with Vygotsky's notion of the ZPD, where learners benefit from guided interactions with more knowledgeable peers or educators. Daniels (2001) states that social contexts and collaborative tools significantly influence cognitive development. These discussions are further elaborated in Chapter 2, where the role of structured peer interactions and scaffolding in mathematical learning is explored in depth. The research participants reported increased feelings of self-efficacy when working with manipulatives, such as blocks and paper strips, to solve mathematical problems. These tools provide a concrete foundation for understanding abstract concepts, bridging the gap between hands-on experience and mental abstraction.

5.4.2.3 Team teaching (PAR)

Shamrova and Cummings (2017) epitomise the advantages of team teaching and the effect it had on educators and learners. The stimulating atmosphere created better engagement for the learners. Having two educators in the classroom provided a combination of organised, teaching methods with individualised help, making it easier for the learners to focus. This is in line with the literature review in Chapter 2, which highlights how team teaching encourages engagement and allows for differentiated learning through various instructional strategies (Sanir, 2022). When educators with different areas of expertise come together, they tend to provide an

enriched learning environment that brings tailored support to match the ZPD of every learner. Furthermore, collaborative teaching facilitates a more accurate discernment and response to the specific needs of learners, thereby providing tailored instruction and scaffolding. Collaborative teaching allows educators to share resources, expertise, and best practices; it also hints at a cooperative environment leading to better learner outcomes (Strogilos, King-Sears, Tragoulia, & Toulia, 2024). Technology integration is important in nurturing cooperation during joint planning and effective communication, but it also helps with resource distribution inside the classroom and beyond. Overall, team teaching is a dynamic and effective approach to education, in line with the principles of ZPD and cultural mediation, to provide a more inclusive and responsive learning environment.

5.4.2.4 Cooperative teaching and learning

The cooperative learning approach facilitates the development of intrapersonal, interpersonal, and leadership skills, as learners interact and collaborate with their peers**.** The interconnectedness strengthened teamwork and collaboration, which were essential skills in both academic and social contexts. Developing interpersonal and cooperative skills through such activities was especially beneficial in a remedial environment, where learners often faced challenges that required tailored, supportive interactions (Soloman-Jenkins, 2024). As noted, explanations of expectations and desired outcomes were crucial for maintaining focus and ensuring learners understood how to achieve the objectives. This clarity helped create an environment where each learner's unique learning needs could be addressed through specialised instruction. The findings of this study confirmed the effectiveness of small-group discussions in maintaining inclusive learning. Educators generally support cooperative learning for learners with learning issues, acknowledging its benefits such as improved self-esteem, a safe learning environment, and higher classroom success rates. This environment allowed peers to collaborate by offering support, clarification, and constructive feedback, effectively supporting one another through their respective ZPDs. Collaborative learning presented multiple perspectives, as learners were exposed to various solutions and approaches to understanding problems, thereby broadening their knowledge and enabling them to perform at their best within their ZPDs (Solomon-Jenkins, 2024). Cooperative learning, based on collaboration and social interaction principles, encourages active engagement among learners through discussions, debates, and reasoning. It not only enhances knowledge acquisition but also equips them with effective communication and interpersonal skills, crucial for academic

success and personal growth. Through collaboration, learners engaged in meaningful communication that facilitated their ability to comprehend and express meaning (see section 4.3.4). The process of cooperative learning was significantly enhanced through mediation and the use of cultural tools. Common resources such as group projects, shared documents, and presentations served as mediating tools through which knowledge was constructed. Shared norms and values were developed within these groups, ensuring effective interaction and facilitating learning processes Research, as outlined (see section 4.3.4), highlighted the success of cooperative learning, particularly in remedial education. In group settings, learners worked together to achieve common goals, making the method effective in addressing numerous academic challenges. Solomon-Jenkins (2024) describes how cooperative learning promotes inclusivity by involving all learners. This approach enhances understanding by allowing learners to explain concepts in their terms, while open group environments promote questioning and cooperative learning through positive interdependence and individual success.

5.4.2.5 Social and emotional support

According to McCormick (2020) learning at their own pace allows learners to experience a greater sense of control over their education, which reduces the anxiety associated with falling behind. This approach creates a more supportive learning environment that boosts learners' confidence and motivation to engage actively in their learning. During whole-class discussions, learners were exposed to different perspectives that challenged them to think critically. The educator's role was to guide learning through thought-provoking questions, focusing on emotional well-being, as anxiety and stress can negatively impact attention, information processing, and collaboration in learners with ZPD. For instance, undue stress among learners significantly hinders their capacity for learning and constructive participation in a collaborative setting, as noted in transformative education (Mertens, 2007). Transformative learning models are designed to allow individuals to undergo reflection on their beliefs and assumptions, hence challenging them to reconsider their worldview and self-identity (Mertens, 2007). This is in support of the findings given by van de Sande et al. (2019), where self-awareness and social self-awareness emerged as key outcomes of social-emotional learning (SEL) interventions. Affective skills help learners manage academic stress and interpersonal relationships. Self-awareness (SEL) programmes help learners regulate emotions and engage fully in learning activities. Empathy education in the classroom helps learners understand peaceful conflict resolution and interpersonal relationships. These skills enhance peer learning and enable

learners to perform well in groups. With the employment of these abilities, learners more often showed the ability to cooperate and thrive in multicultural learning and social settings (Vygotsky, 1978; Solomon-Jenkins, 2024). Participants shared their experiences with emotional self-regulation and resilience in overcoming academic and social challenges. They learned to remain calm when confused and to breathe calmly when tasks were difficult. The educator's suggestion to monitor emotional states emphasised the importance of emotional support, especially when dealing with common or unexpected events that may trigger emotional responses.

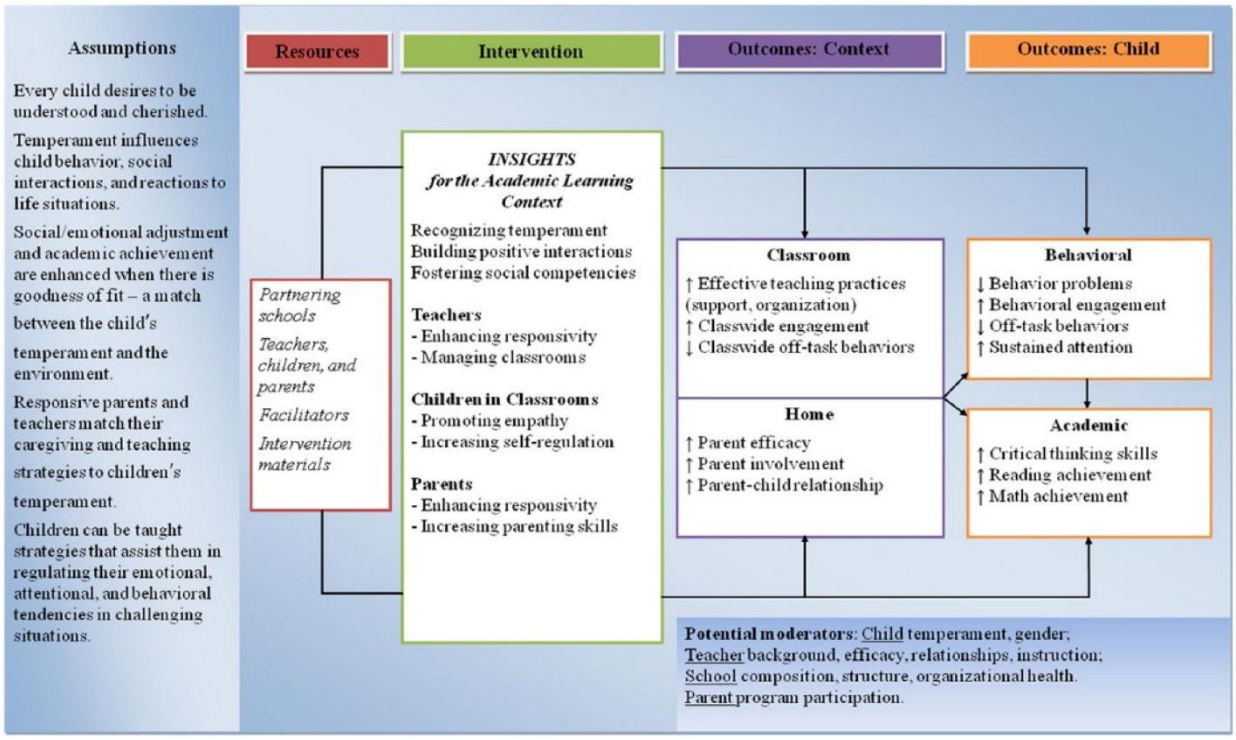

Figure 2: An illustration of Social and Emotional Learning (Source: McCormick et al., 2020)

5.4.2.6 Collaboration with therapist

The study revealed the central position of therapists as MKOs in the ZPD, where they led learners through individually appropriate support, positive feedback, and appropriate challenges. This scaffolding helped in achieving therapeutic goals, in a close parallel with Vygotsky's emphasis on guided interaction as a means of self-development. Additionally, social interaction and cooperation played a major role in the therapy process, whereby clients and therapists collaborated dialogically to discuss ideas, explore problems, and develop solutions

together. The creation of a constructive therapeutic relationship, based on trust and respect, was deemed to be important in enabling successful collaboration and effective learning. Therapeutic approaches such as cognitive-behavioural therapy (CBT) and mindfulness training were cultural instruments mediating learning. These instruments presented structured models which facilitated the attainment of self-regulation, emotion monitoring, and problem-solving abilities in clients. Also noted in the study were the benefits of interdisciplinary collaboration among the therapy and education disciplines of OTs, SALTs, and LSTs in supporting learners with cognitive disabilities (Goldin-Meadow et.al, 2014). As one illustration, simple yet effective interventions such as an OT using a looped resistance band to support a learner's focus were identified as significantly enhancing participation and reducing behaviour disruption in inclusive and remedial classroom settings. The study adopted an intersectional perspective on interventions for children with learning disabilities, advocating for expanding support systems into inclusive environments. The study demonstrated the potential of a systemic and collaborative approach to address learners' academic and socio-emotional challenges, enhancing academic achievement and personal development through interdisciplinary collaboration, cultural tools, and an inclusive lens.

5.4.3 Themes derived from the answers to question 3: What are the perceived needs or challenges that continue to exist for grade 5 educators when delivering remedial education programmes?

To answer this research question, the following themes were derived from Chapter 4:

5.4.3.1 Improved pedagogy

Vygotsky's theory on learning is effective when the learner is provided with support to accomplish tasks slightly beyond their current ability but still within reach if the right support is provided (Vygotsky, 1978). Scaffolding in the ZPD was used to challenge learners with presenting difficulties that are within their reach. A major element of effective pedagogy is differentiated instruction, which caters to the diverse needs and learning profiles of learners. Tomlinson (2017) describes differentiated instruction as enabling educators to modify content, processes of strengths and needs of individual learners. Vygotsky's theory suggests that learning speeds vary among learners, necessitating adaptive teaching methods. He emphasises the significance of social interactions in cognitive development, emphasising collaborative

learning, where learners engage in activities, peer learning, and group discussions to share knowledge and learn from diverse backgrounds. Ainscow (2020) stresses that teacher, peer, and stakeholder involvement in collaborative practices matters in meeting the diverse needs of learners. Teacher-learner relationships are important and good at communication. Attentive listening, and respectful conversation matter in developing a supportive learning environment (Pianta, Hamre, & Allen, 2012).

Mediation and cultural tools were also imperative in improving pedagogy. Vygotsky emphasises utilising tools (i.e., technology, language, and multimedia) to mediate learning (Vygotsky, 1978). Educators employed tools to create engaging learning activities that connected learners' prior knowledge and meaningful contexts that enabled them to utilise their acquired knowledge and enhance their understanding. Educators were faced with the challenge of supporting a diverse set of learner needs. As noted in the study, scaffolding was required as well as individualised support to determine the most effective pedagogical strategies for each lesson. The two-pronged strategy of teaching some learners foundational skills and others more advanced concepts required educators to balance the presentation of content with individualised learning frameworks (Ainscow, 2020). Despite the advantages of small groups and individual attention, educators face challenges in accommodating varying skill levels, increasing lesson planning and delivery complexity, and focusing on motivation as an aspect of inclusive learning.

Most learners, especially those who had previously struggled in school, entered inclusive classrooms with lower self-esteem. Tomlinson (2017) mentions the necessity of ongoing, supportive encouragement to enable learners to rebuild confidence. Thus, strategies to enhance motivation catered not only to academic success but provided emotional support as well, promoting a positive perception of learners' capabilities. SEL models have contributed towards making this component possible, as held by Pianta, Hamre, and Allen (2012), who state that processes in the educator-learner relationship were critical to making emotional as well as academic development possible.

5.4.3.2 Slow progress in certain learners

The study revealed that Vygotsky introduced the concept of ZPD as a cornerstone for understanding individual differences in learning and development. Educators need to see these differences because good instruction should be contingent on the support given matching the

needs of the learners. Misalignment which is either too simple or overly complex causes the learner frustration and disengagement. Thus, assessments in the form of scaffolded activities or formative evaluation can serve to help determine a learner's ZPD and adjust instruction on ways to teach. In Vygotsky's theoretical framework lies the importance of social interaction and collaboration. Social barriers, such as isolation, cultural differences, and lack of supportive peers or mentors, hinder the learning process for those who thrive in cooperative environments, exacerbated by insufficient opportunities for social engagement. Inclusive environments, group work, peer learning, and guidance are essential for promoting learning. Computer media can facilitate social scaffolding and learning without physical contact. Cultural tools and intermediation are crucial for knowledge acquisition. Heterogeneity in access to resources can hinder progress among learners. Barriers like financial or geographical limitations can hinder the optimal use of available tools, necessitating improved access to technology, precise education for educators, and experimentation with various learning tools for learners. These findings highlight the importance of providing sustained support and leveraging learners' strengths, even when improvements appear gradual or inconsistent. The researcher's view aligns with Fletcher and Vaughn (2009), who assert that slow progress among learners requires flexible grouping strategies and individualised interventions. The study affirms the need for continuous, personalised efforts to overcome significant barriers to academic success, emphasising the significance of adapting teaching methods to meet diverse learner needs.

5.4.3.3 Foundational gaps in learners

The ZPD theory explains how cognitive deficits in knowledge and skills hinder a learner's developmental potential. It suggests that a learner with weak foundational reading competency may perform poorly in all subject matter exposure. Addressing these constraints involves implementing individualised scaffolding that is sensitive to the learner's prior knowledge, thereby enhancing the ZPD. Vygotsky accentuates the importance of addressing basic learning gaps to improve social interaction and collaboration. He suggests designing inclusive environments where learners can work together and benefit from others' knowledge. Grouped activities, peer mentorship, and differentiated instructions can boost confidence. Educators play an important role in helping learners access and navigate cultural tools, ensuring they have the necessary knowledge and resources for success. They provide individual support to help learners navigate relevant information and resources. However, literacy gaps hinder meaningful engagement with the curriculum, leading to feelings of inferiority, lower self-

esteem, and reduced classroom participation. This creates a vicious cycle of academic and emotional barriers. As highlighted by Yazigy (2023), structured remedial education programmes are important in addressing such gaps.

5.4.3.4 Time management

Effective time management was a metacognitive ability of this kind that existed in a learner's ZPD. It was constructed through guidance and support that allowed learners to assume more responsibility for the learning process. It was scaffolded by educators through the instruction of time management strategies such as breaking down work into manageable steps. Helping learners set realistic goals with definite timelines and instructing them in prioritisation skills to allow them to allocate their time accordingly. Cooperative learning areas facilitated the learning of time management as learners picked up tips from one another, motivated one another, and cooperated in project completion within time.

Group projects provided an opportunity for learners to enhance their time management in a collaborative environment where they divided tasks, made timelines, and coordinated to ensure they finished projects. Various tools such as timetables, calendars, and the Pomodoro technique assisted learners in staying on task and being productive. The research results showed that the lack of sufficient instructional time was a major problem for educators, especially in the context of coping with an overwhelming curriculum. Nevertheless, proper time management was a vital factor in countering the problem. The research team spent significant time planning and reviewing to create well-organised lessons that aligned with learning outcomes, ensuring relevance and practicality despite time constraints. Classroom management strategies were also crucial for controlling instructional time and maximising teaching and learning activities. The study highlighted the importance of self-reflection in educators, who used reflective practices to analyse areas for improvement and enhance lesson effectiveness despite time constraints.

5.4.3.5 Emotional and behavioural challenges

Vygotsky's theory of ZPD highlights the difference between what learners could do alone and what they could do with appropriate guidance. Within this approach, the role of emotional and behavioural regulation was also emphasised, as these skills were key in predicting learning performance. Educators and other adults were MKOs, providing scaffolding to guide learners in developing self-regulation skills. This support included teaching emotional regulation

strategies such as deep breathing, mindfulness training, and solving problems (Vygotsky, 1978). Social interactions play a role in shaping emotional and behavioural development. The study revealed that emotional challenges in peer interactions often resulted in decreased focus and withdrawal from learning activities. The fast-paced classroom environment caused frustration and anxiety, leading to behavioural disruptions. Learners who struggled to keep up displayed distress or disengagement, hindering effective learning. The researcher documented an instance where a distressed learner, visibly in tears, exemplified the intense frustration experienced due to academic and emotional struggles (Pianta, Hamre, & Allen, 2012).

The study found that classrooms with a moderate instructional pace, aligned with Grade 5 learning standards, showed higher learner interest and engagement, as learners showed increased attention and active participation in class activities.

Educators indicated that this allowed learners to follow instructions and comprehend material strengthening emotional and intellectual involvement. The results of this study agree with previous research which highlights the importance of a supportive and organised learning environment for learners with emotional and behavioural difficulties (Ainscow, 2020). The research revealed that the application of self-regulation strategies in the classroom necessitated regular breaks in instruction, as well as direct educator intervention. The strategies were effective in supporting emotional resilience and academic success, but they also strained the curriculum, posing challenges in instructional balance. The outcomes led the researcher to observe that mainstream pacing in a remedial context was not sufficient because it was unable to offer the one-on-one support required and learners could not self-regulate when struggling with their emotions (Tomlinson, 2017).

5.5 IMPLICATIONS OF THE STUDY

The implications of the study are explained below concerning the research sub-questions, based on the themes discussed in Chapter 4.

5.5.1 Themes derived from the answers to question 1: To what extent does implementing remedial education programmes in Grade 5 further the aims of inclusive education?

To answer this research question, the following themes derived from Chapter 4 were used:

5.5.1.1 Individual support and group inclusion

The concurrent delivery of individualised support with the promotion of group participation for every learner was a very effective approach that catered to the varying learning styles among the learners. Consequently, the integration of cognitive and social dimensions of learning into the practice allowed educators to help each learner realise their full potential and make great strides in their learning process. The implications and the need for educators to incorporate social interaction are based on peer and group learning in remedial education. The integration of subjects with English and Social Science was important since it established an environment conducive to learning. Individualisation of learning, along with offering chances for collaboration, proved beneficial to learners since it catered to cognitive aspects and emotional elements. However, this approach required planning as there were many variables to consider. While some might have disagreed with these methods, the evidence at hand suggested that these strategies significantly improved educational outcomes. This was particularly true in diverse learning environments, where individual support made a significant difference.

5.5.1.2 Access to the curriculum

Remedial education programmes were designed and incorporated into the curriculum by a combination of targeted interventions, individualised support, and integrative inclusion. These programmes addressed specific areas where learners were found to be struggling, thereby allowing educators to provide support in those areas that the learners needed most within the curriculum. In so doing, the educators helped overcome academic difficulties while at the same time building confidence in the learners by tailoring the interventions to the unique needs of each learner. The research findings underscore the importance of combining individualised support with participation in group activities, thus ensuring that learners would not be isolated and could benefit from socialisation and peer learning. Educators looked at both the academic and social dimensions of learning, creating an all-inclusive support system that enabled overall development.

In the 2023 Trends in International Mathematics and Science Study (TIMSS), South Africa's Grade 5 learners ranked last out of 59 participating countries in Mathematics and Natural Science assessments. The findings of this study have significant implications for the use of

remedial education programmes. These results underscore the systemic challenges within mathematics education at the foundational level and highlight the urgent need for interventions that address learning gaps. Remedial education programmes, such as those implemented in Grade 5 classes, are important for inclusive teaching and learning. They offer targeted support for learners struggling with foundational concepts, thereby addressing disparities in performance (TIMSS, 2023). This context justifies the focus of the research on exploring effective strategies for inclusive education within a remedial school setting in Gauteng.

5.5.1.3 Classroom management

The implementation of strategic classroom management, together with inclusive educational practices, was crucial for the academic and emotional growth and development of learners. Further, the researcher analysed the U-shaped desk configuration and pedagogical strategies that enhanced learners' active participation. Of all the factors that were considered, the seating was arranged in such a manner because of the small class sizes and thus could allow for movement both by the educator and learners. This helped in creating a good mood in the class and it also gave the educators a chance to meet the learners' needs efficiently. Consequently, this approach helped create an atmosphere that supported both care and independent learning; nonetheless, it posed some challenges. Some of the strategies were occasionally difficult to implement considering the limitations of time and the learners' different attributes. Therefore, this was an essential element in maintaining a balance between teaching and learning.

5.5.1.4 Assistive technology to foster inclusivity

The study revealed that assistive technologies significantly improved the autonomy and self-esteem of learners. As a result, extra channels of sharing information enabled through assistive technology empowered learners to become independent contributors and reduced their reliance on educators for help with their work. Technological tools such as speech-to-text software and scanning pens were reported to help learners overcome their learning difficulties, thus raising their self-esteem and enable a sense of independence in their classrooms. Using various tools in the classroom supported the independence and self-directedness of learners in their learning. The effective implementation of these technologies requires appropriate training and continuous professional development for educators in practice. The study affirms the need for educators to be adequately trained to effectively integrate assistive technology into education,

emphasising the necessity of professional development initiatives to ensure they possess the necessary competencies for successful integration.

5.5.2 Themes derived from the answers to question 2: What academic support services are available for Grade 5 learners enrolled in remedial education programmes?

To answer this research question, the following themes derived from Chapter 4 were used:

5.5.2.1 Differentiated instruction using technology

The findings of the study show that the combination of differentiated instruction with technology-enabled resources is a promising approach to create more inclusive and effective educational environments. However, for it to truly be effective, educators and policymakers must address systemic issues such as unequal access to technology and the need for ongoing professional development in digital literacy and pedagogical strategies for educators. The study highlights the importance of combining traditional teaching methods with modern tools to cater to a range of learning needs. Accommodating a culture of patience and understanding is important for the development of both confidence and resilience, as evidenced by the learners' positive perceptions of the ARROW programme. This carries a broader implication that the simple presence of technology is insufficient without supportive and sensitive teaching practices.

5.5.2.2 Targeted Remedial Interventions

Implications of the study's findings on focused remedial interventions have brought to light the pivotal use of visual and tactile teaching resources in improving comprehension and retention, primarily in mathematics education. Although there are positive effects of manipulatives, findings from this study also indicate that learners to some degree, continue to struggle with abstract problem-solving, which is an indication that instructional design needs more structured scaffolding. This would be an important aspect in helping learners work toward internalising mathematical concepts before applying them in more complex and abstract contexts. This is further emphasised by the educators' call for increased utilisation of visual and tactile resources, which have an important place in the educational process, thus calling for their more integrated inclusion in school curricula.

5.5.2.3 Team teaching (PAR)

The findings from the study on team teaching indicate a strong need for collaboration in improving both approaches to instruction as well as learner outcomes. With this approach, two educators simultaneously interacted with different aspects of learners' learning. One educator facilitated direct instruction and the other delivered individualised support, which created an even more learner-centred approach, and an accommodating learning environment especially in mixed-ability settings. These results bring forth the importance of strategic planning, effective communication, and clearly defined responsibilities among educators in the improvement of this approach's efficacy. Additionally, professional development and support from the institution came out as important factors that gave educators the strength to overcome challenges in coordinating, task allocation, and synchronisation of lessons. The study revealed that academic and social results in learning institutions could be improved with team teaching as a strategy to meet learners' diverse needs.

5.5.2.4 Cooperative teaching and learning

The consequences of this research on collaborative teaching and learning are relevant to transformational remedial settings. Cooperative learning when implemented appropriately, can greatly improve inclusive education by creating an environment where learners actively engage with one another, seeking clarification on concepts and developing important skills. Clear communication by educators was important regarding expectations and the results intended to maintain focus and to ensure positive collaboration among learners. The positive effect on learners' self-efficacy and problem-solving skills further underlines the importance of peer teaching and collaborative activities. The research findings suggested that educators use cooperative learning strategies in remedial contexts because such strategies foster a shared sense of responsibility. This study suggests that cooperative teaching and learning are effective in creating an inclusive, interactive, and supportive learning environment, particularly for learners experiencing academic difficulties, as they help them understand the interrelationship between their success and that of their peers.

5.5.2.5 Social and emotional support

The findings of this study on social and emotional support highlighted the critical role of emotional regulation and personalised learning in both academic achievement and emotional growth. An implication from the findings was the need for educators to adjust the pace of instruction to suit the varied needs of their learners, especially those in remedial education programmes. The researcher suggests that when teaching is aligned with learners' learning pace, they experience less anxiety and frustration, which helps them feel more in control of their learning journey. This approach not only improved their academic performance but also strengthened their emotional resilience allowing learners to internalise the information and manage their emotions.

5.5.2.6 Collaboration with therapists

The implications of this study underline the importance of its findings and their broader impact on educational practices, particularly about the support given to learners with diverse needs. The study points out a great need for cooperation between educators and therapists, including OTs, SALTs, and LSTs, to enhance the learners' ability to function effectively in their learning environments. The study suggests that the establishment of regular team meetings coupled with the development of IEPs must be instituted so that teaching approaches can be modified based on the differing needs of learners. Moreover, the study highlights the need to address the administrative burdens that educators often face, which can hinder their ability to collaborate effectively with therapists. The research calls for structural changes to ease these demands, allowing educators to focus more on instructional duties while maintaining strong partnerships with support professionals.

5.5.3 Themes derived from the answers to question 3 What are the perceived needs or challenges that continue to exist for grade 5 educators when delivering remedial education programmes?

To answer this research question, the following themes derived from Chapter 4 were used:

5.5.3.1 Improved pedagogy

The research findings revealed that improved pedagogy plays a significant role in the promotion of inclusive education and the addressing of the diverse needs of learners through targeted interventions designed and facilitated by the PAR team. Social constructivism views knowledge not as a static commodity but as a dynamic, socially mediated process (Zajda, 2023). In this view, learning and development unfold in relational spaces such as classrooms, communities, or research groups which makes it particularly suited for inclusive educational settings. This paradigm recognises learners as active agents in their own meaning-making, an assumption that aligns naturally with the participatory and emancipatory goals of PAR (Townsend & Taylor, 2022).

5.5.3.2 Slow progress in certain learners

The term "slow progress" identifies those learners who have made very small or delayed gains in educational development, even though they put in a lot of effort. In a remedial education setting this often results from one or more challenges that impede the ability of learners to meet curriculum demands. Even with well-targeted interventions, the educational course for individuals often requires more one-on-one time and individualised strategies. Hence, efforts do not always pay off immediately and sometimes not at all. The researcher viewed this as necessitating a shift in perspective to acknowledge that each learner progresses uniquely, emphasising the importance of recognising and building upon their existing knowledge base. Furthermore, meaningful progress requires patience, consistency, and flexibility to adapt strategies to suit individual needs

5.5.3.3 Foundational gaps in learners

The findings of this study bring to light the serious implications resulting from basic shortfalls in learners' academic development. These foundational gaps in learners who have difficulties with basic mathematical skills and reading comprehension often experience a pattern of continued educational frustration and low self-esteem. If not resolved these may lead to disengagement and eventual loss of confidence in their ability. The emotional agitation caused by an inability to keep up with the pace of the classes can significantly impact learners' overall academic development, leading to feelings of inadequacy and a lack of preparation for further

learning. Consequently, educators need to be equipped with strategies that enable individualised instruction, thereby providing a more conducive and organised educational setting that permits learners to comprehend essential principles at their own pace. This strategy not only benefits academic performance but also alleviates emotional distress and contributes to the restoration of learners' self-assurance. The implications extend beyond individual educational settings to the broader educational system urging for adaptive and responsive remedial education programmes. These include regular assessment and personalised support, enabling each learner to overcome their unique learning challenges.

5.5.3.4 Time management

The findings of this research in time management show the critical role of effective planning, structured support, and reflective practice in dealing with time constraints in educational settings. The limited instructional time could pose a big challenge; however, through detailed lesson planning and ensuring teaching methods are in line with clear learning goals, educators can maximise the available time. In setting realistic and attainable goals, curriculum adjustment, and provision of special support to learners, would close existing gaps in understanding among learners in meeting specified outcomes within a particular period of instruction. When done effectively these time management strategies empower educators to maximise learning opportunities, increase academic achievement, and alleviate the stress associated with the limitations of time.

5.5.3.5 Emotional and behavioural challenges

The findings of this study could be of great importance to the management of social and emotional behaviour in schools. The study revealed that a standardised instructional pace enhances learners' focus and active participation, particularly those with emotional and behavioural challenges. It emphasises the need for educators to adapt their pedagogy to address these needs. To create a more inclusive and caring learning environment, educators can incorporate a more adaptable and empathetic teaching method, providing emotional support through planned interventions. It may lead to improved academic achievements as learners become well-equipped to regulate their emotional problems and engage themselves with the subject matter in a more useful manner. In summary, the study calls for developing an integrated teaching approach that includes both emotional and behavioural support, particularly

for learners who experience difficulties in these areas. Educators can improve the emotional well-being and academic performance of their learners by slowing down the pace of instruction, integrating SEL with remedial strategies, hence making the learner feel connected to the class.

5.6 RECOMMENDATIONS

5.6.1 Recommendations for teaching and learning

5.6.1.1 Individual support and group inclusion

The modification of individual and group support in teaching methods and the incorporation of specific interventions are instrumental in improving inclusive educational settings to meet the diverse needs of learners in various learning settings. The researcher recommends that educators and stakeholders adopt strategies that combine individualised support with group inclusion encouraging a sense of belonging among learners. For instance, individualised sessions may support learners in reviewing difficult subjectswhile group-based collaborative activities can strengthen peer interaction and social development. The researcher recommends reviewing and implementing strategies in remedial schools to improve pedagogy and create an environment conducive to learning and teaching delivery. These initiatives include refining teaching methods and procedures during lesson presentations where learners feel appreciated and supported.

5.6.1.2 Access to the curriculum

Educators continued to use an adapted curriculum, one which allowed for flexibility in focusing on core concepts while meeting the varying needs of learners. This approach provided opportunities for success for all learners, having differing outcomes especially for those who required additional support. However, time constraints may be a challenge for the educator involved in implementing different methods of teaching to cater for various learning styles. This not only enhanced the learning process but also advanced equality in educational outcomes and gave all learners an equal chance to realise their full potential. However, educators remained vigilant to avoid biases, ensuring that no child was left out of the learning process and that all were encouraged to participate in individual as well as group activities. The recommendations emphasise the importance of creating a curriculum that is adaptable and

inclusive, ensuring equitable access for learners with diverse learning needs. Educators will be able to plan lessons and help one another in the process, therefore reducing their workload and making teaching better. Parent and community involvement in education also helps to support learners, thereby ensuring that everybody works together to meet the needs of the learners.

5.6.1.3 Classroom management

The research recommends that the classroom environment should be positive, characterised by elements of respect, inclusiveness and support to sufficiently meet the diverse needs of learners. Clear guidelines by educators should not only acknowledge but also nurture empathy and a growth mindset among the learners. Although this approach has been quite promising it calls for educators to make constant efforts, act creatively, and be flexible in holding on to these principles amidst complex and dynamic classroom settings. Future research is recommended to determine the effectiveness of specific inclusive teaching practices, such as the U-shaped desk arrangement, but in larger class sizes. This would provide important information on whether such layouts help to foster interaction, engagement, and inclusion, or whether some other adjustments need to be implemented. In addition, longitudinal studies should be conducted to determine the long-term academic, emotional, and social impact of inclusive teaching methods on learners, thus showing a more holistic view of their long-term benefits. Research could further investigate how practical constraints, such as resource limitations, influence the adoption and sustainability of these practices. Finally, the study recommends examining how inclusive classroom management techniques can be adapted to suit diverse cultural, socioeconomic, and educational contexts.

5.6.1.4 Assistive technology to foster inclusivity

To promote inclusivity through assistive technologies, the researcher recommends that research should focus on understanding effective ways of training educators. This would involve studying the impact of workshops, seminars, and experiential learning on the confidence and competence of educators in using assistive tools. In addition, embedding modules on assistive technologies into educator education curricula is critical, and studies should probe how these programmes impact long-term teaching practices and inclusivity. Policymakers play a critical role in achieving the widespread adoption of these technologies and research must critically evaluate the formulation and implementation of policies

establishing clear and specific criteria for the allocation of resources, training programmes, and the thorough assessment of these tools. Equitable resource allocation and accessibility must also be a focus particularly in under-resourced schools with studies investigating funding models and strategies to address disparities.

5.6.1.5 Differentiated instruction using technology

More research is warranted to explore the sustained effects of technology-facilitated differentiation on broader educational outcomes including critical thinking, problem-solving, collaboration, and adaptability. Comparative analyses across a variety of demographic and cultural settings would be instrumental in exploring the scale-up potential of these methodologies. By focusing on these identified research priorities, both scholars and practitioners have the potential to make the educational system more inclusive and effective, using technology to meet diverse learner needs. The area of research concentrates on the importance of continuous assessment and feedback in technology-enhanced differentiated instruction. The researcher encourages more studies to determine the effectiveness of immediate data collection and adaptive learning models in creating customised learning experiences and improving academic outcomes. Partnerships with schools, policymakers, and stakeholders are crucial for effective funding and resource distribution, particularly in disadvantaged areas.

5.6.1.6 Targeted Remedial Interventions

Based on the findings, the study recommends prioritising the use of visual and tactile instructional materials in mathematics instruction to enhance learners' comprehension and engagement. Therefore, it is recommended that schools invest in these materials and include them in wider pedagogical approaches and focused remedial programmes to support learners who are having trouble mastering mathematical concepts. Professional development programmes should equip educators with the necessary competencies to effectively use tools and transition from concrete manipulatives to abstract thinking. In addition, the curriculum should be systematically reviewed and adapted to incorporate these methods, ensuring that all learners benefit from this enhanced pedagogical model. Further research is needed to explore the long-term effects of using these tools on learners' math skills especially in understanding higher-level math concepts. This will help reduce achievement gaps and enhance math

knowledge, ultimately enabling educators and policymakers to create an inclusive and effective learning environment for all learners.

5.6.1.7 Team teaching (PAR)

Based on the findings of the study on team teaching, it is recommended that there should be time allocated to educators to plan lessons together. Effective team coordination and regular communication are crucial for addressing issues and implementing the necessary changes. Educators should seek help in conflict management and addressing differences in teaching approaches to ensure cohesiveness and effectiveness within the team. Establishing clear roles and responsibilities for educators in collaborative teaching is recommended to streamline lesson delivery, avoid confusion, and provide a balanced workload. Flexibility is essential, but both educators should know their focus, whether it's direct instruction or individualised support. Regular revisiting task allocation, classroom behaviour management, and feedback provision is crucial for equity in responsibilities, as these tools streamline planning, track learner progress, and ensure both educators are on track. Feedback from educators and learners can inform the success of a strategy and identify areas for improvement. Schools should use this feedback to enhance teaching strategies and adapt planning techniques. Future practice should evaluate collaborative teaching's support for diverse learning needs and improve learner engagement and outcomes.

5.6.1.8 Cooperative teaching and learning

Cooperative learning allows opportunities for learners to work collaboratively, creating academic and social development in the classroom. If done properly and routinely monitored cooperative learning helps overcome learning problems but also fosters positive engagement and shared responsibility among learners. When educators implement cooperative learning in a remedial classroom setting, they foster an inclusive culture that encourage learners to participate in discussions with a feeling of being heard. This engagement also makes learners feel accepted and helps with their emotional moods by getting them in the just right zone for learning. In addition, educators are encouraged to set goals for cooperative learning intervention tasks by specifying what the learners should do individually and in group work. The researcher recommends that encouraging learners to explain concepts to one another

reinforces learning. This practice also encourages mutual respect and confidence among learners, making it a powerful tool for academic and social growth.

5.6.1.9 Social and emotional support

The study findings of the research point to the critical need for extending social and emotional reinforcement in educational settings. First, instructors need to adopt a more personalised instructional approach that changes the tempo of individual learner's needs. It is recommended that the slowing down of the learning pace specifically in a remedial education setting is needed because this reduces anxiety and thus makes the learner more confident in their abilities. This individualised approach encourages intellectual growth alongside emotional growth by making learners feel more in control of their learning experience. Regular emotional checks should become a part of the daily routine for an educator to monitor and attend to the learners' emotional states. This is to ensure that sudden changes in the learners' routines or schedules create an atmosphere of feeling safe, thus avoiding emotional upsets and creating a sense of security in their learning environment.

5.6.1.10 Collaboration with therapist

Based on the findings of the study, several important recommendations were made to improve the educational experience for learners with diverse needs. The researcher recommends that educational institutions emphasise and institutionalise collaboration between educators and therapists. Systematic team meetings should be held to ensure constant communication and alignment of plans aimed at addressing the academic, social, and emotional needs of the learners. These meetings also provide a forum through which educators are kept updated on relevant professional development regarding effective collaboration and the integration of interventions into their teaching practices. The administrative burden is eased by exploring ways to simplify IEPs documentation and progress reports with electronic media or focused administrative assistance. Additionally, a supportive work environment is created for educators, allowing them to share issues and solutions, which improves staff morale and enhances teamwork in addressing problems.

5.6.1.11 Improved Pedagogy

The study revealed some strategies towards inclusive education and enhancing pedagogy. Broad professional development equips educators with skills in dealing with different challenges and complex situations around diversity. Differentiated instruction in the classroom helps keep up motivational levels among learners. Scaffolding and effective classroom management allow educators to balance teaching content with individual progress. The partnership between educators and on-site therapists is recognised as an essential element of successful inclusive education. The researcher suggests that educational institutions promote regular interdisciplinary meetings, create integrated IEPs, and offer opportunities for collaborative professional development. These strategies are designed to guarantee a unified alignment of educational and therapeutic goals, thereby improving learner outcomes. The study revealed that further research is needed to improve the methodology of teaching. Trying and testing new strategies will help build a better, more effective system. Following these suggestions will allow inclusive education to better support the needs of learners to make it a place where everybody succeeds not only in learning but also in their social life.

5.6.1.12 Slow progress in certain learners

To assist learners' slow progress, a diversified approach is required. Educators should use individualised teaching styles with concrete and work towards abstract learning. The adoption of strengths-based approaches, building on what children already know, and rewarding minor victories can boost their confidence and motivation. The resources and tools should be made accessible so that learners learning at a slower pace can receive additional support from educators and teaching assistants. Professional development programmes should be prioritised to provide educators with the necessary skills to detect learning impediments early and conduct effective, evidence-based treatments. Smaller class sizes in remedial settings allow educators to provide focused attention which is critical for children who require further assistance. Policymakers need to make inclusive education better by giving resources to support fairness and access for every learner. These suggestions will help create an environment where learners who progress slowly are supported with patience, flexibility, and encouragement, ensuring meaningful and lasting success for all.

5.6.1.13 Foundational gaps in learners

The study's findings revealed recommendations for identifying learning disabilities and creating an inclusive and supportive learning environment. The use of detailed diagnostic evaluations to identify and correct areas where learners struggle is central to these recommendations. Modified remedial programmes focused on key competencies such as literacy and numeracy, were implemented to close the learning gaps. Scaffolding techniques incorporated into teaching practices provided systematic and one-on-one support, progressively shifting responsibility to learners as they build confidence and proficiency. To correct the basic problems in numeracy, literacy and reading. Schools should implement personalised learning plans that focus on the learners' strengths and work on their weaknesses during therapy sessions. This will empower learners to learn skills at their own pace and build on their self-confidence.

5.6.1.14 Time management

According to the researcher, one suggestion is that educators should be effective with time management in the classroom to increase teaching efficiency and learner involvement. Unlike less structured or spontaneous teaching methods time management strategies empower educators to plan lessons more efficiently ensuring that every moment in the classroom is used productively. The educators should maintain a well-paced, engaging lesson that provides clear instructions and sufficient time for learners to process the material. In the study, it is recommended that the use of time management could be advantageous when educators devise lessons in a way that fits the learning styles of all learners. For effective application, educators are advised to ensure that the material in the lesson aligns with the learning outcomes and does not overload the time allocated for the lesson. Properly structured lessons with a clear focus on key concepts allow learners to process and understand the material without feeling overwhelmed.

5.6.1.15 Emotional and behavioural challenges

Behavioural and emotional challenges were compared by the Grade 5 class exposing learners to the pace and teaching of mainstream activities. Learners could not keep up with the mainstream curriculum pace, resulting in meltdowns. The researcher recommends a slower-paced teaching method as one of the most effective ways of dealing with the needs of learners

with emotional and behavioural difficulties. Behavioural interventions were introduced, for example, Cognitive Enrichment Advantage (CEA) and Self-Regulation Programmes which are recommended as tools to foster the learning of learners' critical thinking, self-reflection, and self-management skills for effective coping with academic and social difficulties. Examples of applying strategies, including emotional check-ins, positive reinforcement and provision of a safe space for expression, are demonstrably effective in the classroom.

5.6.2 Policy recommendations

Despite South Africa's progressive legislative framework supporting inclusive education, including the Constitution (Republic of South Africa, 1996a), White Paper 6 (Department of Basic Education, 2001), and the South African Schools Act (Republic of South Africa, 1996b), the implementation of inclusive and remedial education remains inconsistent. Section 29 of the Constitution guarantees the right to education and obligates the state to provide reasonable accommodation for learners with special needs, including the development of Individualised Education Plans (IEPs). However, to translate this into meaningful practice, there is a pressing need for systematic monitoring and accountability mechanisms across provincial and school levels. Provincial education departments must be held accountable for delivering assistive technologies, adaptive testing materials, and accessible infrastructure such as ramps and elevators (Human Rights Watch, 2015). These are non-negotiable components of an inclusive learning environment.

Additionally, inclusive policies must prioritise sustained professional development for educators. Educators require training not only in differentiated instruction but also in inclusive pedagogical strategies that draw on social constructivist principles. This includes mediation, scaffolding, and managing learning within the Zone of Proximal Development (ZPD). Vygotsky's sociocultural theory (Van der Westhuizen & De Beer, 2021) provides a valuable framework for designing these interventions. When educators are equipped to mediate learning through structured support learners with cognitive difficulties can thrive. The development of these professional capacities should be embedded into district-level support and induction programmes (Mishra et al., 2019).

5.7 LIMITATIONS OF THE STUDY

The qualitative study was conducted in a remedial school with the target population being a Grade 5 class. The research focused on using remedial education programmes when teaching

and learning in an inclusive education setting. Educating learners can pose an array of diverse learning needs, learning styles and abilities for the educator in designing and delivering individually adapted remedial programmes to meet the learner's needs. The research was conducted in only one institution; hence the outcome may not be generalisable to other institutions, regions or provinces. All institutions operate under different circumstances and the challenges faced may not be identical to those faced elsewhere. These findings support remedial education programmes for learners when adequately resourced and implemented.

5.8 SUGGESTIONS FOR FURTHER RESEARCH

This research concentrated on ascertaining the functions of remedial education programmes in a remedial school environment to facilitate inclusive teaching and learning for underachieving learners in a Grade 5 class. The results highlight the need for continued research in the following areas to increase educational attainment and inclusivity:

- Investigating the impact of remedial programmes on foundational literacy and numeracy skills
- Developing effective teaching strategies for remedial educators
- Adapting curricula to meet the needs of learners with cognitive disabilities
- Investigating technology integration in remedial education
- Promoting social and emotional development through remedial education

5.9 CONCLUSION

This study investigated the role of remedial education programmes in facilitating inclusive teaching and learning in a Grade 5 class within a Gauteng remedial school. The research evaluated remedial education programmes highlighting the importance of academic support services, teaching methods, and supporting learners' development. However, it acknowledges limitations like the small sample size and short data collection time. Bringing attention to the need for more research particularly long-term studies and a broader understanding of the effects of remedial education. The study recognised the importance of remedial education programmes in promoting inclusive education.

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APPENDICES

APPENDIX A: PERMISSION TO CONDUCT RESEARCH

University of Witwatersrand,
Wits Education Campus,
Parktown
Tel: 27 (11) 717 9158

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Crossroads School
Yolandi Roux
106 13th Street
Victory Park
Randburg
2195
Tel: 011 782 5368

7 May 2024

Dear Madam

Re: Permission to conduct research at Crossroads School.

My name is Zaheera Mohammed. I am studying for a master's degree in education and coursework at the Wits School of Education Campus at the University of the Witwatersrand. I am a staff member at Crossroads School seeking permission to do my research at the school site.

I am conducting research to explore the use of remedial education programmes in a Grade 5 class to facilitate inclusive teaching and learning in a remedial school. This study examines the implementation and impact of remedial education interventions in promoting inclusive practices within the Grade 5 classroom. By investigating the strategies, resources, and instructional approaches employed in remedial education programmes, this research aims to provide insights into how these programmes can effectively support the diverse learning needs of learners and contribute to a more inclusive learning environment. The findings of this study will contribute to the existing knowledge on the role of remedial education programmes in fostering inclusive teaching and learning practices, thus informing educational stakeholders about the potential benefits and challenges of implementing such programmes in Grade 5 classrooms.

The research will entail collecting data from two Grade 5 teachers and 10 participants from my Grade 5 class.

If they agree, they will be asked to answer questionnaires; be interviewed; and participate in focus group discussions. Data collection will take place on the premises during free periods and after school hours. The participants' responses will be audio-recorded.

Participants will be asked to give their written consent before the research begins. For the participants who are minors, written consent must be given by their parents/guardians. Participants' responses will be treated confidentially, and identities (their names and the name of the organisation) will be anonymous unless otherwise expressly indicated. Individual privacy will be maintained in all published and written data resulting from the study.

The research participants will not be advantaged or disadvantaged in any way. They will be reassured that they can withdraw their permission at any time during this project without any penalty. There are no foreseeable risks in participating in this study. It is important to take note that learners are under the age of 18 years old and will need consent from a parent/guardian. All research data will be destroyed after 5 years.

I, therefore, request permission in writing to conduct my research at your organisation. The permission letter should be on your organisation's letterhead, signed and dated, and specifically refer to me by name and the title of my study.

Please let me know if you require any further information. I look forward to your response as soon as is convenient.

Yours sincerely,

Zaheera Mohammed

Consent to conduct research from the school principal.

Principals Signature: _____

Date: _____

Researcher: Zaheera Mohammed

2733642@students.wits.ac.za

0847525272

Supervisor: Dr Siboniso Phathumuzi Dlamini

sibonisodlaminidlamini11@gmail.com

APPENDIX B: INFORMATION SHEET FOR SAMPLED TEACHERS

Participant Information Sheet (PIS), Teacher

Dear Sir/Madam

My name is Zaheera Mohammed I am a master's student at the University of the Witwatersrand, Johannesburg. My supervisor is Dr Siboniso Phathumuzi Dlamini. I am conducting a research study with the purpose to explore the use of remedial education programmes in a Grade 5 class to facilitate inclusive teaching and learning in a remedial school. This study examines the implementation and impact of remedial education interventions in promoting inclusive practices within the Grade 5 classroom. By investigating the strategies, resources, and instructional approaches employed in remedial education programmes, this research aims to provide insights into how these programmes can effectively support the diverse learning needs of learners and contribute to a more inclusive learning environment. The findings of this study will contribute to the existing knowledge on the role of remedial education programmes in fostering inclusive teaching and learning practices, thus informing educational stakeholders about the potential benefits and challenges of implementing such programmes in Grade 5 classrooms. The study title explores the use of Remedial Education Programmes in a Grade 5 class to facilitate inclusive teaching and learning in a Gauteng remedial school.

I am inviting you to take part in to answer a questionnaire followed by a semi-structured interview. If you decide to take part, your participation in this research study will last about one month as a participant in the research The semi-structured interview and research activity will take place at Crossroads School after school hours. In this study, the researcher, myself will observe two teachers who teach numeracy in Grade 5. My Grade 5 class with 10 participants will be compared to the other two classes by reflecting and improving the teaching methods.

With your permission, I would like to audio-record the semi-structured interview. This data will be stored in password-protected computer in digital form with all identifying features removed and the data will be destroyed after 5 years. Only the researcher will have access to the data.

During the research activity, I will need to ask for some personal information about you, including your years of experience and your age.

The interview will be confidential and anonymous. You have the option on the Consent Form to be anonymous, or not anonymous. When I share the results of the research study, I will not include your name or anything else that could identify you. Pseudonyms will be used to conceal your identity. With your permission, the researcher may use the data collected from this research study, but your name and any personal information will not be used or passed on and the data will be used for teaching purposes only.

If you decide to take part in the research study, it should be voluntary. You do not have to take part. You can stop participating in the study at any time. You do not have to answer any questions if you do not want to. You will not get any direct benefits if you choose to join the research study. You will not lose any services, benefits, or rights you would normally have if you decide not to join. Taking part in the research study will not cost you anything. You will not be paid for being in this research study.

The risks for this research study are no more than those that occur in everyday life, however, some of the questions asked may make you feel sad or upset. If this happens, I will stop the interview and continue another time.

This research study will be written as a research report. The report will be available at the university, not online. If you would like to receive a summary of this report, I will be happy to send it to you.

If you have any questions during or afterwards about this research study, feel free to contact me or my supervisor at the details listed below. If you have any concerns or complaints about the ethical procedures of this research study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), by telephone at +27(0) 11 717 1408, email hrecnon-medical@wits.ac.za.

Yours sincerely,

Zaheera

Researcher:

Zaheera Mohammed, 2733642@students.wits.ac.za, 0847525272

Supervisor:

Dr Siboniso Phathumuzi Dlamini, sibonisodlaminidlamini11@gmail.com

APPENDIX C: CONSENT FORM - TEACHER

Semi-Structured Interview/Questionnaire/Observation

Wits School of Education

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Title of project: Exploring the use of Remedial Education Programmes in a Grade 5 class to facilitate inclusive teaching and learning in a Gauteng remedial school.

Name of researcher: Zaheera Mohammed

I, ……., agree to participate in this research project.

I agree with the following:

(Please circle the relevant options below)

The research study was explained to me. I understand what this study is about.	YES	NO
I understand that I can volunteer to take part in the study	YES	NO
I agree that the interview may be audio-recorded.	YES	NO
I agree that direct quotations from my interview, questionnaire and observation of an activity may be used by the researcher in their research report.	YES	NO
I agree that my participation will remain anonymous (my name or other identifying data will not be used by the researcher in their research report).	YES	NO
I agree that other researchers may use the information I provide in my interview, questionnaire, and observation of an activity (depending on their own ethics clearance being obtained) but my name and any personal information will not be used or passed on.	YES	NO

…… (signature)

…… (name of participant)

…… (date)

…… (signature of the researcher)

Zaheera Mohammed

APPENDIX D: SUGGESTED SEMI-STRUCTURED INTERVIEW QUESTIONS FOR PARTICIPATING TEACHERS.

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

1. Can you share your experience using the Remedial Education Programme to facilitate inclusive education for Grade 5 learners?

2. What do you find most rewarding about working with learners who face academic challenges?

3. Can you describe a typical day in the classroom and how you manage the diverse needs of the learners?

4. How do you assess the effectiveness of your teaching methods?

5. What challenges do you encounter in implementing Remedial Education Programmes during math therapy, and how do you overcome them?

6. How do you collaborate with other teachers and staff members to support learners with barriers to their academic needs?

7. Have you noticed any changes in the learners' academic progress or behaviour since implementing the Maths Programme to consolidate mathematical concepts?

8. How do you incorporate technology into your teaching to enhance the learning experience?

9. Can you share a specific example of a successful intervention or teaching strategy you have used with learners facing challenges academically?

10. How do you ensure that your teaching practices are inclusive and meet the diverse needs of all learners who face barriers to learning?

11. How do you provide academic and emotional support for learners in the classroom, considering that some learners are diagnosed with conditions such as ADHD, dyslexia, ADD, or are on the autism spectrum and that each learner’s level of independence varies?

THANK YOU FOR YOUR PARTICIPATION

APPENDIX E: OBSERVATION CATEGORIES (EDUCATOR)

Observable Characteristics	Observation made (Comments)
1. Lesson introduction	
2. Treatment of learners	
3. Quality of explanation	
4. Classroom management	
5. Use of active hands-on learners' learning	
6. Use of instructional techniques	
7. Formative feedback to learners	
8. Handling of learners' answers and questions	
9. Handling of learners' emotions	
10. Classroom environment	
11. Teaching pace	
12. Level of communication	
13. Uses of non-verbal behaviour, such as gestures, walking around and eye contact	
14. Lesson focus	
15. Professionalism	

APPENDIX F: PARTICIPANT INFORMATION SHEET (PIS) FOR PARENTS OF MINORS

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Dear Parent/Guardian,

My name is Zaheera Mohammed. I am a master's student at the University of the Witwatersrand, Johannesburg. My supervisor is Dr Siboniso Phathumuzi Dlamini. I am conducting a research study to explore the use of remedial education programmes in a Grade 5 class to facilitate inclusive teaching and learning in a remedial school. This study examines the implementation and impact of remedial education interventions in promoting inclusive practices within a Grade 5 classroom. By investigating the strategies, resources, and instructional approaches employed in remedial education programmes, this research aims to provide insights into how these programmes can effectively support the diverse learning needs of learners and contribute to a more inclusive learning environment. The findings of this study will contribute to the existing knowledge on the role of remedial education programmes in fostering inclusive teaching and learning practices, thus informing educational stakeholders about the potential benefits and challenges of implementing such programmes in Grade 5 classrooms.

The study title is, "**Exploring the Use of Remedial Education Programmes in a Grade 5 Class to Facilitate Inclusive Teaching and Learning in a Gauteng Remedial School**". I am inviting you to allow your child to take part in this research study. The purpose of this study is to explore how remedial education interventions impact inclusive practices within the Grade 5 classroom. By investigating the strategies, resources, and instructional approaches employed in these programmes, we aim to provide insights into how they can effectively support the diverse learning needs of learners and contribute to a more inclusive learning environment.

If you decide to allow your child to participate, their involvement will last about one month as a participant in the research. The research activities will take place at Crossroads School after school hours. In this study, I will observe two educators who are participants in the research as they teach numeracy in Grade 5. Your child's Grade 5 class will be compared to the other two classes by reflecting on and improving teaching methods.

With your permission, I would like to audio-record the focus-group interview. This data will be stored in a password-protected computer in digital form with all identifying features removed, and the data will be destroyed after 5 years. Only the researcher will have access to the data.

The focus group interview will be confidential and anonymous and will take 30 minutes. Pseudonyms will be used to conceal your child's identity. With your permission, the researcher may use the data collected from this research study, but your child's name and any personal information will not be used or passed on, and the data will be used for teaching purposes only.

If you decide to allow your child to participate in the research study, it should be voluntary. Your child does not have to take part and you can withdraw them from the study at any time. Your child will not get any direct benefits if they choose to join the research study. They will not lose any services, benefits, or rights they would normally have if they decide not to join. Taking part in the research study will not cost you anything. Your child will not be paid for being in this research study.

This research study will be written up as a research report. The report will be available at the university, not online. If you would like to receive a summary of this report, I will be happy to send it to you.

If you have any questions during or after the study about this research study, feel free to contact me or my supervisor at the details listed below. If you have any concerns or complaints about the ethical procedures of this research study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), by telephone at +27(0) 11 717 1408, email hrecnon-medical@wits.ac.za.

Yours sincerely,

Zaheera Mohammed

Researcher:

Zaheera Mohammed,

2733642@students.wits.ac.za,

0847525272

Supervisor:

Dr Siboniso Phathumuzi Dlamini,

APPENDIX G: PARENT CONSENT

Consent Form for a child's parent/legal guardian.

Participation in Research

Title of project: Exploring the Use of Remedial Education Programmes in a Grade 5 Class to Facilitate Inclusive Teaching and Learning in a Gauteng Remedial School.

Name of Researcher - Zaheera Mohammed

I, ……., agree that my child …….……. can participate in this research project.

I agree with the following:

(Please circle the relevant options below)

The research study was explained to me. I understand what this study is about.	YES	NO
I understand that my child can volunteer to take part in the study.	YES	NO
I agree that the focus group and class activity with my child may be audio-recorded. If the option 'no' is chosen, the researcher will write notes in her journal for gathering data.	YES	NO
I agree that direct quotations from my focus group with my child may be used by the researcher in their research report.	YES	NO
I agree that my child's participation will remain anonymous (their name or other identifying data will not be used by the researcher in their research report).	YES	NO
I agree that other researchers may use the information provided by my child in their focus group and activity (depending on their own ethics clearance being obtained) but that their name and any personal information will not be used or passed on.	YES	NO

…… (signature)

…… (name of parent/guardian)

…… (date)

…… (signature)

Zaheera Mohammed

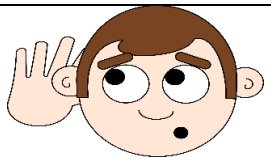
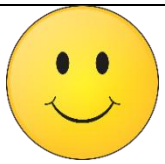
APPENDIX H: PARTICIPANT INFORMATION SHEET (PIS) FOR PARTICIPANTS OF GRADE 5

Dear Grade, 5 learners

My name is Zaheera Mohammed, and I am a student at the University of the Witwatersrand, Johannesburg. I am doing a research study to learn how we can make learning better for all learners, especially those who sometimes find it a bit harder. You are invited to participate in a research study titled, "**Exploring the Use of Remedial Education Programmes in a Grade 5 Class to Facilitate Inclusive Teaching and Learning in a Gauteng Remedial School**".

Your participation in this study is voluntary, and you can choose whether to take part or not. You will be asked to participate in classroom activities in a focus group related to mathematics. You will be asked questions about your experiences and thoughts about the programme. Your participation in this research project will be kept confidential and you will remain anonymous. Your name will not be used in any reports or publications. You can speak to the HOD at any time if you feel any type of way about participating in the research.

Please read the information and tick the box if you agree.

	I have listened to and understood the information about the research project.	
	I understood that I can stop at any time, and I don't have to give a reason.	
	I am happy to be audio-recorded.	
	I am happy for the information I give to be shared in the research so that my real name is not used.	
	I agree to take part in the session(s).	

Participant's Name: _____

Date: _____

APPENDIX I: FOCUS GROUP QUESTIONS FOR LEARNERS



1. Can you share your experiences with learning at our school?
2. How have the mathematics activities helped you in your learning?
3. What do you enjoy most about the maths lessons?
4. Have you noticed any improvements in your learning since participating in the classes?
5. How do you feel about being selected for the focus-group interview?
6. What are some of the challenges you face in your learning, especially maths, and how do you think we can support you?
7. Can you describe a memorable learning experience you've had in the classroom when learning mathematics?
8. What suggestions do you have for making the classroom environment even better in math lessons?

APPENDIX J: OBSERVATION/ACTION SHEET

INCLUSIVE TEACHING PRACTICES FOR TEACHING IN A REMEDIAL SCHOOL

Grade: _____

Subject: _____

Date: _____

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

1. Is the classroom environment welcoming to all learners?

2. What observations make me think so?

3. What kind of support does the teacher offer to the learners with barriers to learning? (Write the name of the barrier to learning and the type of support you observed that was offered.)

4. While presenting the lesson, how did the teacher demonstrate inclusive teaching practices? Did this include all learners?

5. How did the learners demonstrate that they had understood the lesson? (Please include any form of assessment used and how it enhances learning for all.)

6. Are there any other observations that you made that are relevant to inclusive teaching?

7. Things that you would have liked to be done differently, things that you would have kept the same.

APPENDIX K: GRADE 5 TEACHER QUESTIONNAIRE

Understanding Remedial Education Programmes

Personal Information:

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Name: _____ (Anonymous/ Not anonymous)

Grade 5 Class Assigned: 5__

Demographic Information

a. Years of Teaching Experience:

- Less than 1 year
- 1-5 years
- 6-10 years
- 11-15 years
- 16+ years

b. Gender:

- Male
- Female
- Non-binary/Other

c. Age Range:

- Under 25
- 25-34
- 35-44
- 45-54
- 55 or older

Section 1: Implementation of Remedial Educational Programmes

a. How would you describe your experience with implementing Remedial Educational Programmes in your Grade 5 class?

- Very experienced
- Experienced
- Somewhat experienced
- Inexperienced
- Very inexperienced

b. What specific strategies or methods do you employ to integrate Remedial Education Programmes into your teaching practice?

_____
_____

c. In your opinion, what are the main benefits of incorporating Remedial Educational Programmes into Grade 5 instruction?

_____
_____

Section 2: Academic Support Services

a. What academic support services do you currently utilise to assist Grade 5 learners who require remedial education?

_____
_____

b. Have you found any academic support services to be more effective than others? If so, please specify.

_____
_____

c. Are there any academic support services that you feel are lacking or could be improved upon? If yes, please explain.

_____
_____
_____

Section 3: Perceived Needs and Challenges

a. What are your main needs or challenges when delivering Remedial Educational Programmes to Grade 5 learners?

_____
_____

b. How do you currently address these needs or challenges in your teaching practice?

_____
_____

c. Are there any specific resources or support mechanisms you feel would better assist you in addressing the needs of learners requiring remedial education? Please elaborate.

_____
_____

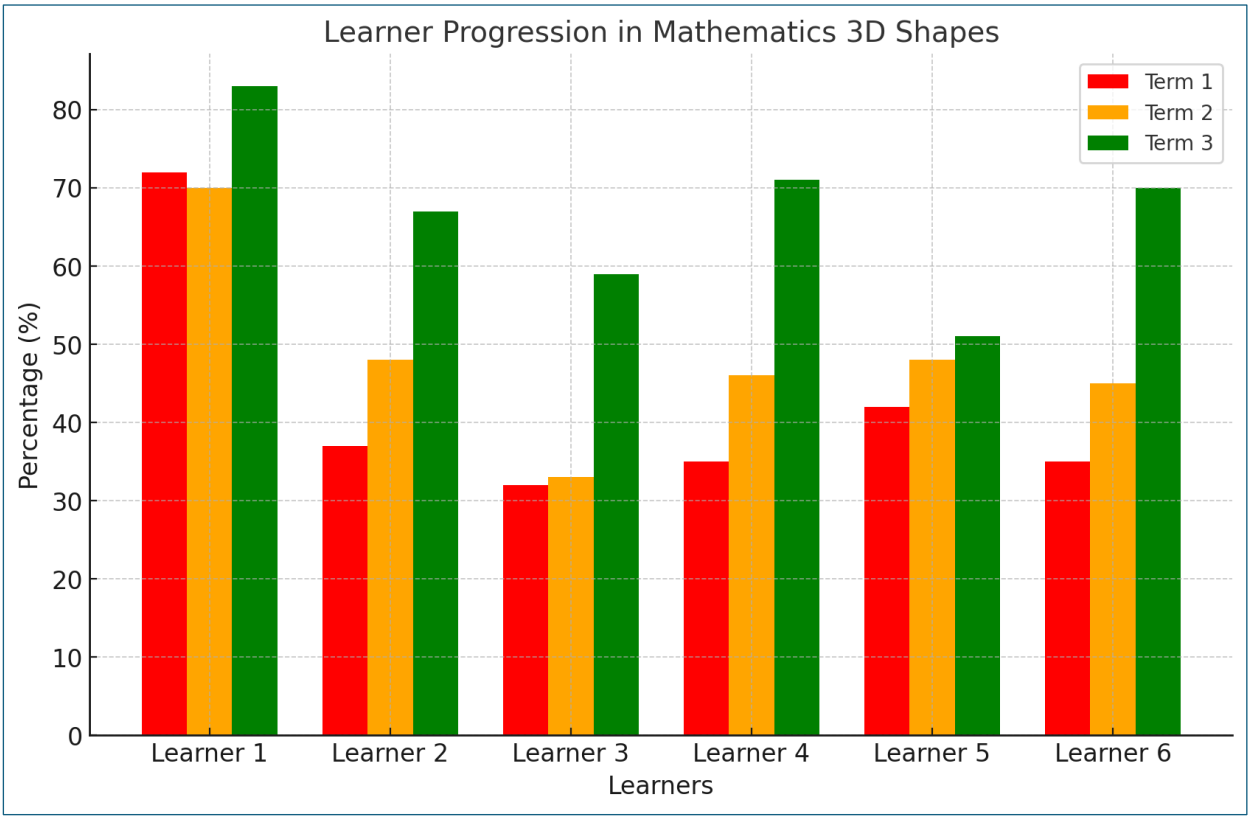
APPENDIX L: DATA ANALYSIS OF LEARNER PROGRESSION (TRIANGULATION)

Term 1 indicates levels achieved by learners before they were taught Mathematics 3D shapes and Terms 2 and 3 indicate levels achieved by learners after being taught in a remedial school setting.

	Term 1 % & Level	Term 2 % & Level	Term 3 % & Level
Learner 1	72% - 6	70% - 6	83% -7
Learner 2	37% - 2	48% - 3	67% - 5
Learner 3	32% - 2	33% - 2	59% - 4
Learner 4	35% - 2	46% - 3	71% - 6
Learner 5	42% - 3	48% - 3	51% - 4
Learner 6	35% -2	45% - 3	70% - 6

Data Analysis of Learner Progression

Mathematics 3D shapes



APPENDIX M: UNIVERSITY ETHICS CLEARANCE

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG | WSoE Wits School of Education

SCHOOL OF EDUCATION ETHICS COMMITTEE

CONSTITUTED UNDER THE UNIVERSITY HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER: 2024ECE0012M**
PROJECT TITLE	Exploring the use of Remedial Education Programs in a Grade 5 class to facilitate teaching and learning in a Gauteng Remedial School.
INVESTIGATOR	Zaheera Mohamed
SCHOOL/DEPARTMENT OF INVESTIGATOR	WSoE
DATE CONSIDERED	08 April 2024
DECISION OF THE COMMITTEE	Approved unconditionally
RISK LEVEL	Minimal Risk
EXPIRY DATE	Date of submission of the Research Report
ISSUE DATE OF CERTIFICATE	29 April 2024
CHAIRPERSON	Dr. Lawan Abdulhamid

cc: Dr Siboniso Dlamini

DECLARATION OF INVESTIGATOR

To be completed in duplicate and **ONE COPY** returned to the Chairperson of the School/Department ethics committee.

I fully understand the conditions under which I am are authorized to carry out the abovementioned research and I guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee.

Signature **Date** 30 / 04 / 2024

APPENDIX N: GDE ETHICS CLEARANCE

GAUTENG PROVINCE
Department: Education
REPUBLIC OF SOUTH AFRICA

8/4/4/1/2

GDE RESEARCH APPROVAL LETTER

Date:	06 May 2024
Validity of Research Approval:	08 February 2024– 30 September 2024 2024/75
Name of Researcher:	Mohammed Z
Address of Researcher:	68 St Albans Avenue
	Mayfair West/ Johannesburg
Telephone Number:	084 752 5272
Email address:	Zaheeramohammed43@gmail.com
Research Topic:	Exploring the Use of Remedial Education Programs in a Grade 5 class to facilitate teaching and learning in a Gauteng Remedial School.
Name of University:	Wits
Type of qualification	Masters
Number and type of schools:	1 Primary School
District/s/HO	Johannesburg North

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.

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:

Office of the Director: Education Research and Knowledge Management
7th Floor, 17 Simmonds Street, Johannesburg, 2001
Tel: (011) 355 0488
Email: Faith.Tshabalala@gauteng.gov.za
Website: www.education.gpg.gov.za