Teachers’ perspectives on addressing barriers to learning in learners in an independent mainstream high school in Gauteng province

by

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Chapter 1: Introduction of the study

1.1 Introduction ................................................................................................................................. 1

1.2 Background ................................................................................................................................. 1

1.2.1 Challenges perceived by teachers when addressing barriers to learning in learners in mainstream schools .................................................................................................................. 2

1.2.2 Teachers’ responses to the diverse needs of learners who experience barriers to learning ................................................................................................................................. 4

1.2.3 Teachers’ views on the support needed to effectively address barriers to learning in learners in mainstream schools .......................................................................................... 4

1.3 Theoretical Framework ................................................................................................................ 5

1.3.1 The chronosystem .................................................................................................................... 7

1.3.2 The macrosystem .................................................................................................................... 7

1.3.3 The exosystem ....................................................................................................................... 7

1.3.4 The mesosystem .................................................................................................................... 7

1.3.5 The microsystem ................................................................................................................... 7

1.4 Problem statement and rationale .............................................................................................. 8

1.5 Research Questions .................................................................................................................... 8
1.5.1 Main research question ................................................................. 8
1.5.2 Secondary research questions .................................................. 9
1.6 Research methodology .................................................................. 9
1.6.1 Research paradigm ................................................................. 9
1.6.2 Research approach ................................................................ 9
1.6.3 Research design .................................................................... 10
1.7 Data collection ........................................................................... 10
1.7.1 Research participant and sample selection ............................. 10
1.7.2 Data collection methods .......................................................... 10
1.7.2.1 Document Analysis ............................................................ 10
1.7.2.2 Individual interviews .......................................................... 11
1.7.2.3 Observations ................................................................... 11
1.8 Data Analysis ........................................................................... 11
1.9 Setting of the study .................................................................. 12
1.10 Trustworthiness ...................................................................... 12
1.11 Ethical considerations .............................................................. 12
1.12 Definition of key concepts ...................................................... 12
1.13 Chapter Outline ...................................................................... 13
1.14 Summary .................................................................................. 15

Chapter 2: Literature Review
2.1 Introduction ............................................................................. 16
2.2 Applicability of Bronfenbrenner’s ecological systems theory .... 16
2.3 The chronosystem .................................................................... 18
2.3.1 History of addressing barriers to learning in inclusive settings globally .... 18
2.3.2 Trends in addressing barriers to learning in inclusive settings in a few HICs .... 20
2.7.1 Home environment ........................................................................................................... 30
2.7.2 School and classroom environment .................................................................................... 30
2.7.2.1 Learning support ........................................................................................................... 30
2.7.2.2 Curriculum .................................................................................................................... 31
2.7.2.3 Curriculum differentiation ............................................................................................. 31
2.7.2.3.1 Readiness level .......................................................................................................... 31
2.7.2.3.2 Learners’ interest ....................................................................................................... 32
2.7.2.3.3 Learners’ profile ........................................................................................................ 32
2.7.2.3.3.1 Differentiation of the content .................................................................................. 33
2.7.2.3.3.2 Differentiation of the instruction and assessment ...................................................... 33
2.7.2.3.3.3 Differentiation of the learning environment ............................................................. 35
2.7.2.3.3.4 Differentiation of the assessment .............................................................................. 35
2.7.2.3.3.5 Differentiation of the learning environment ............................................................. 36
2.7.2.3.3.6 Differentiation of the learning environment ............................................................. 36
2.8 Summary .............................................................................................................................. 36

Chapter 3: Research methodology
3.1 Introduction ......................................................................................................................... 37
3.2 Research aims ....................................................................................................................... 37
3.2.1 Main and sub-aims .......................................................................................................... 37
3.3 Research methods .................................................................................................................. 38
3.3.1 Research paradigm .......................................................................................................... 38
3.3.2 Research approach .......................................................................................................... 38
3.3.3 Research design ................................................................................................................ 39
3.4 Ethical considerations .......................................................................................................... 39
3.5 Setting .................................................................................................................................. 41
3.6 Participants .......................................................................................................................... 42
3.6.1 Sampling method and selection criteria .......................................................................... 42
3.6.2 Sample size ....................................................................................................................... 43
3.6.3 Participant description ................................................................................................. 43
3.7 Data Collection Technique ............................................................................................ 46
3.7.1 Material ....................................................................................................................... 46
3.7.1.1 Semi-structured interviews .................................................................................... 46
3.7.1.1.1 Using open-ended questions, probing to obtain more information ............ 47
3.7.1.2 Document Analysis ............................................................................................... 47
3.7.1.3 Observation ........................................................................................................... 48
3.7.3 Apparatus ................................................................................................................ 49
3.8 Data collection ................................................................................................................ 49
3.8.1 Data collection procedures ....................................................................................... 49
3.8.2 Data processing and data Analysis ........................................................................... 50
3.9 Trustworthiness of the study ......................................................................................... 51
3.9.1 Credibility ................................................................................................................ 51
3.9.2 Transferability ......................................................................................................... 51
3.9.3 Dependability ......................................................................................................... 52
3.9.4 Conformability ....................................................................................................... 52
3.10 Summary .................................................................................................................... 52

Chapter 4: Data analysis and interpretation
4.1 Introduction .................................................................................................................... 53
4.1.1 Key research question ............................................................................................. 53
4.1.2 Sub-questions ......................................................................................................... 53
4.1.3 Results of the study ............................................................................................... 53
4.2 Theme 1: Challenges experienced by teachers when addressing barriers to learning in learners in an independent mainstream high school in Gauteng Province ....... 55
4.2.1 Sub-theme a: Attitudes towards addressing barriers to learning in learners in an inclusive setting .......................................................... 55
4.2.2 Sub-theme b: Lack of training, skills, and knowledge addressing barriers to learning in an inclusive setting .......................................................... 57
4.2.3 Sub-theme c: Lack of time when teaching in an inclusive classroom .......... 59
4.2.4 Sub-theme d: Managing learners with and without barriers to learning in one classroom .......................................................................................... 62
4.2.5 Sub-theme e: Lack of parental Involvement ........................................ 63
4.2.6 Sub-theme f: Lack of paraprofessionals in the school to provide learners with the support .................................................................................................. 65

4.3 Theme 2: Teachers' responses to the diverse needs of learners who experience barriers to learning in an independent mainstream high school in Gauteng Province ... 66
4.3.1 Sub-theme a: Identifying the diverse needs of learners who experience barriers to learning .......................................................................................... 67
4.3.2 Sub-theme b: Curriculum differentiation for learners who experience barriers to learning in an independent mainstream high school in Gauteng Province ............ 69
4.3.3 Sub-theme c: Differentiated learning environment for learners who experience barriers to learning in an independent mainstream high school in Gauteng Province ... 71

4.4 Theme 3: Teachers' views on the support needed to effectively address barriers to learning in learners in an independent mainstream high school in Gauteng Province .. 72
4.4.1 Sub-theme a: Further training needed on inclusive education .................. 73
4.4.2 Sub-theme b: Teaching assistant needed in the classroom ...................... 74
4.4.3 Sub-theme c: Establishment of a school-based support team ..................... 75

4.5 Summary .......................................................................................................................... 75

Chapter 5: General discussion, implication and conclusion
5.1 Introduction ...................................................................................................................... 76
5.2 Theoretical implications of the study ........................................................................... 77
5.3 Challenges perceived by teachers when addressing barriers to learning in learners in an independent mainstream high school in Gauteng Province ........................................... 77
5.4 Teachers’ responses to the diverse needs of learners who experience barriers to learning in an independent mainstream high school in Gauteng Province ............... 81
5.5 Teachers’ views on the support needed to effectively address barriers to learning in learners in an independent mainstream high school in Gauteng Province .................. 83
5.6 Critical Evaluation of the study ................................................................................................................. 84
5.6.1 Strengths of the study .............................................................................................................................. 85
5.6.2 Limitations of the study ........................................................................................................................... 85
5.7 Recommendations for future research ...................................................................................................... 86
5.8 General conclusion ....................................................................................................................................... 87
List of references ................................................................................................................................................. 88
Appendices ......................................................................................................................................................... 107
Declaration

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Degree: Master of Education (Inclusive Education)

Teachers’ perspectives on addressing barriers to learning in learners in an independent mainstream high school in Gauteng province

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

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

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

December 2019

________________________  _______________________
SIGNATURE                 DATE
Acknowledgements

To my Saviour Jesus Christ, without whom none of this would have been possible.

“No eye has seen, no ear has heard, and no mind has imagined what God has prepared for those who love him.”

Corinthians 2 vs 19

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- To my friends, thank you for the constant encouragement to never give up, thank you for your love and support.
Dedication
This thesis is dedicated to my son, Caden Levi Pillay, whom God has given me as my greatest achievement and blessing in life. Thank you, son, for giving me your time so that my dreams could be realised. This thesis is a reminder to you to work hard, to never give up and above all believe that God’s plans for your life will always be greater than your own. Value your education, hold on to it, step out and go deeper into its mysteries!

Oh the things you can find, if you don’t stay behind!
~ DR. SEUSS
Abstract
Limited research is available on teachers’ perspectives on addressing barriers to learning in learners in low to middle-income countries, such as South Africa. The main aim of the current research was to describe teachers’ perspectives on addressing barriers to learning in learners in an independent mainstream high school in Gauteng province. The study adopted a qualitative approach and data was collected by means of interviews, document analysis, and observations with 12 teachers in the school. The results of the study indicate that there are various challenges when addressing barriers to learning in learners. Furthermore, teachers respond to the diverse needs of learners by identifying the needs of learners and differentiating the curriculum. Lastly, teachers mentioned various forms of support that could help them effectively address the barriers to learning in learners in inclusive settings. Future countrywide research should focus on teachers’ perceptions when addressing barriers to learning in independent mainstream schools in South Africa.

Key terms: addressing, barriers to learning, challenges, curriculum differentiation, independent, learners, mainstream, support needs, school
**List of abbreviations**

The following abbreviations were used in the thesis:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAPS</td>
<td>Curriculum and Assessment Policy Statement</td>
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<tr>
<td>DBE</td>
<td>Department of Basic Education</td>
</tr>
<tr>
<td>DBST</td>
<td>District-based Support Team</td>
</tr>
<tr>
<td>DoE</td>
<td>Department of Education</td>
</tr>
<tr>
<td>ECCD</td>
<td>Early Childhood Care and Development</td>
</tr>
<tr>
<td>EFA</td>
<td>Education for All</td>
</tr>
<tr>
<td>EWP</td>
<td>Education White Paper 6</td>
</tr>
<tr>
<td>FET</td>
<td>Further Education and Training</td>
</tr>
<tr>
<td>HICs</td>
<td>High Income Countries</td>
</tr>
<tr>
<td>IE</td>
<td>Inclusive Education</td>
</tr>
<tr>
<td>IEB</td>
<td>Independent Examination Board</td>
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<td>IEP</td>
<td>Inclusive Education Policy</td>
</tr>
<tr>
<td>ISP</td>
<td>Individual Support Plan</td>
</tr>
<tr>
<td>LMICs</td>
<td>Low- Middle Income Countries</td>
</tr>
<tr>
<td>MOET</td>
<td>Ministry of Education and Training</td>
</tr>
<tr>
<td>NCS</td>
<td>National Curriculum Statement</td>
</tr>
<tr>
<td>RNPE</td>
<td>Revised National Policy on Education</td>
</tr>
<tr>
<td>SAHRC</td>
<td>South African Rights Commission</td>
</tr>
<tr>
<td>SBST</td>
<td>School-based Support Team</td>
</tr>
<tr>
<td>SIAS</td>
<td>Strategy for Identification, Assessment and Support</td>
</tr>
<tr>
<td>TA</td>
<td>Teaching assistant</td>
</tr>
<tr>
<td>UNESCO</td>
<td>The United Nations Educational, Scientific and Cultural Organization</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
</tr>
<tr>
<td>US</td>
<td>United States</td>
</tr>
</tbody>
</table>
## List of appendices

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix A:</td>
<td>Ethical clearance certificate – Faculty of Education, University of South Africa</td>
<td>107</td>
</tr>
<tr>
<td>Appendix B:</td>
<td>Request for permission to conduct research at the school</td>
<td>109</td>
</tr>
<tr>
<td>Appendix C:</td>
<td>Written permission from the principal</td>
<td>113</td>
</tr>
<tr>
<td>Appendix D:</td>
<td>Participant information and consent form (parents)</td>
<td>114</td>
</tr>
<tr>
<td>Appendix E:</td>
<td>Participant information and consent form (teachers)</td>
<td>119</td>
</tr>
<tr>
<td>Appendix F:</td>
<td>Document analysis</td>
<td>124</td>
</tr>
<tr>
<td>Appendix G:</td>
<td>Observation schedule</td>
<td>125</td>
</tr>
<tr>
<td>Appendix H:</td>
<td>Interview questions</td>
<td>126</td>
</tr>
<tr>
<td>Appendix I:</td>
<td>Letter from language editor</td>
<td>127</td>
</tr>
<tr>
<td>Table</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>---------</td>
<td>------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Table 3.1</td>
<td>Ethical principles applied in the research study</td>
<td>40</td>
</tr>
<tr>
<td>Table 3.2</td>
<td>General participant description</td>
<td>43</td>
</tr>
<tr>
<td>Table 4.1</td>
<td>Instructional time for NCS subjects for the Senior Phase</td>
<td>60</td>
</tr>
<tr>
<td>Table 4.2</td>
<td>Instructional time for NCS subjects for FET phase</td>
<td>61</td>
</tr>
</tbody>
</table>
### List of figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1.1</td>
<td>Bronfenbrenner's ecological systems theory - different systems</td>
<td>6</td>
</tr>
<tr>
<td>Figure 2.1</td>
<td>The scope of the study using Bronfenbrenner's ecological systems theory (Bronfenbrenner, 1979; 1994)</td>
<td>16</td>
</tr>
<tr>
<td>Figure 4.1</td>
<td>Themes and sub-themes identified</td>
<td>54</td>
</tr>
</tbody>
</table>
1.1 Introduction
This chapter aims to demonstrate the relevance of the study by discussing pertinent literature pertaining to teachers’ perspectives on addressing barriers to learning in inclusive settings. The brief introduction provides an overview of the challenges perceived by teachers when addressing barriers to learning in learners in mainstream schools; teachers’ responses to the diverse needs of learners who experience barriers to learning; and lastly teachers’ views on the support needed to effectively address barriers to learning in learners in mainstream schools. The problem statement, rationale, research questions, theoretical framework, research design and methods, ethical considerations, chapter outline and terminology are discussed.

1.2 Background
There has been an increase in the diverse learner population in schools worldwide, which may be due to globalisations and other influences such as the advocacy and social movements, financial resources, belongings and services (Florian, Young, & Rouse, 2010). According to Swart and Pettipher (2011), policies on inclusive education were driven by diversity in terms of languages, cultures, population groups, and learning abilities. The policy on inclusive education stipulates that all children, regardless of their barriers to learning, have the right to attend schools in their catchment areas (United Nations Educational, Scientific, and Cultural Organization [UNESCO], 1994).

Studies conducted in high-income countries (HICs) on teachers’ perspectives when addressing barriers to learning in learners in inclusive settings have identified various challenges experienced by teachers when addressing these barriers, teachers’ responses to addressing barriers to learning, and teachers’ views on the support needed to effectively address barriers to learning in learners. However, limited research has been conducted on the topic in low-and-middle-income countries (LMICs), such as South Africa. In South Africa, the few studies conducted on teachers’ perspectives when
addressing barriers to learning in learners were mostly conducted in public mainstream schools (Ledwaba, 2017; Malahlela, 2017). There is little evidence of research related to this topic focusing on independent high schools.

1.2.1 Challenges perceived by teachers when addressing barriers to learning in learners in mainstream schools

In recent years, addressing barriers to learning in learners in inclusive settings has been widely embraced as an ideal model for education, both in HICs and LMICs, such as South Africa (Maher, 2009). However, research has reported various challenges related to successfully addressing barriers to learning in learners attending mainstream schools (Donohue & Bornman, 2014). The challenges included: the lack of training, skills, and knowledge on addressing barriers to learning in inclusive settings; lack of time when teaching; problems in managing learners with and without barriers to learning in one classroom; lack of parental involvement; and lack of paraprofessionals to support the learners.

Mainstream teachers are not trained to address barriers to learning in inclusive settings (Mfuthwana & Dreyer, 2018). Thwala (2015) reported that in order for teachers to be able to address barriers to learning in inclusive settings effectively they need specific training and resources. The training should equip teachers with the knowledge and skills needed to address the barriers to learning in learners in inclusive settings (Donohue & Bornman, 2014). Teachers in LMICs, such as South Africa, have had to address barriers to learning in learners in inclusive settings with little or even no training. This is in spite of literature pointing out that it is important for teachers to receive adequate training in order to respond to the diverse needs of learners in inclusive settings (Ladbrook, 2009).

The lack of time can be a challenge for many teachers when addressing barriers to learning (Oliva, 2016). Lack of time can affect the level of support a teacher can give to a learner who experiences barriers to learning (Rosenzweig, 2009). Mukhopadhyay, Nenty and Abosi (2012) reported that teachers feel learners who experience barriers to learning
need more time with regard to their academic work than other learners in the classroom. However, this can be difficult to achieve as curriculum demands make it even more difficult to provide time and attention to learners who experience barriers to learning (Mukhopadhyay et al., 2012). Therefore, teachers may feel overwhelmed due to time constraints coupled with other stresses such as lack of support and training which affect individualised support to learners who experience barriers to learning (Rosenzweig, 2009).

Another challenge teachers experience when addressing barriers to learning in inclusive settings is managing learners with and without barriers to learning in one classroom (Mukhopadhyay et al., 2012). Research conducted by Bizimungu (2015) in a mainstream high school in Rwanda confirmed that teachers encounter challenges when accommodating learners with and without learning barriers in one classroom. Teachers reported that it becomes difficult for them to teach learners with and without learning barriers in one classroom as some learners are able to grasp a concept quickly, while other learners need more time and attention to grasp the concept (Bizimungu, 2016). Some learners may become bored in the classroom while other learners may fall behind (Bizimungu, 2016).

Lack of parental involvement has also been a challenge for teachers when addressing barriers to learning in learners (El Shourbagi, 2017). Research has confirmed that parents have an important role to play in inclusive settings (Afolabi, 2014). Parental involvement in learners’ education has been associated with higher academic achievement as well as better support for their learning needs (Afolabi, 2014).

Lastly, teachers have reported that there is a lack of paraprofessionals to provide learners who experience barriers to learning with the necessary support (Tews & Lupart, 2008). According to the Department of Education (DoE) (2001), it is important that paraprofessionals be involved in supporting learners who experience barriers to learning. Paraprofessionals, such as occupational therapists, speech-language therapists,
psychologists, physiotherapists and other health professionals can provide the learners with one-on-one support either in the classroom or in therapy sessions (DoE, 2014). Research in other LMICs and HICs has confirmed that there is a lack of paraprofessionals in most mainstream schools (Donohue & Bornman, 2014; Eleweke & Rodda, 2002). As a result, both learners and teachers are deprived of essential support.

In summary, there are various challenges that can create obstacles for teachers when addressing barriers to learning in learners in inclusive settings.

1.2.2 Teachers’ responses to the diverse needs of learners who experience barriers to learning

In order for teachers to respond to the diverse needs of learners who experience barriers to learning in inclusive settings, teachers need to identify the diverse needs of the learners and differentiate both the curriculum and the learning environment (DoE, 2014). In South Africa, various policies and guidelines (see Chapter 2, section 2.4.1.3) have been drafted to ensure that teachers are able to address barriers to learning in learners who experience barriers to learning (DoE, 2005a; 2005c; DoE, 2010a; 2010b; 2010c; DoE, 2014). One of the most important policies is the Screening, Identification, Assessment and Support (SIAS) policy which provide teachers with information on how to identify the diverse needs of learners as well as guidelines on how to differentiate the curriculum and learning environment for learners with diverse needs (DoE, 2014). Furthermore, the SIAS policy also provides guidelines on how to support learners who experience barriers to learning by establishing a school-based support team (SBST) in the school (DoE, 2014).

In summary, it is recognised that in order for teachers to respond to the diverse needs of learners they need to be able to identify these diverse needs as well as to differentiate both the curriculum and learning environment.

1.2.3 Teachers’ views on the support needed to effectively address barriers to learning in learners in mainstream schools.
Teachers have different perspectives on the support they need to effectively address barriers to learning in learners in inclusive settings (Donohue & Bornman, 2014; Mfuthwana & Dreyer, 2018; Ledwaba, 2017). Research has found that teachers were of the opinion that they needed support in the form of training, having teaching assistants, and access to an SBST (Alberts, 2016; Donohue & Bornman, 2014).

It is important for teachers to receive adequate training from higher education institutions as well as on-going training on how to address barriers to learning in learners in inclusive settings (Ledwaba, 2017). Teachers have reported that they are not receiving adequate training on how to address barriers to learning in learners while training at higher education institutions (Donohue & Bornman, 2014; Engelbrecht, 2006). Therefore, it is important for higher education institutions to consider whether their curriculum is providing teachers with adequate practical and theoretical training on how to address the barriers to learning in inclusive settings (Ledwaba, 2017).

Furthermore, teachers have limited time to address barriers to learning in learners and therefore need teaching assistants (TA) to help them provide these learners with the necessary support (Giangreco, Doyle & Suter, 2013). By appointing TA, teachers will have more time to teach all learners in the classroom and provide learners who experience barriers to learning with more support (Butt and Lowe, 2012).

Lastly, it is important for inclusive schools to have an SBST to support learners who are experiencing barriers to learning (DoE, 2014). SBST not only provide support to the learners with learning barriers but are also essential in providing teachers with the necessary strategies to support these learners (DoE, 2014). As mentioned in section 1.2.1 various studies have confirmed that there is a lack of paraprofessionals providing support to learners in inclusive settings. In independent mainstream schools, it is the school management’s responsibility to appoint the paraprofessionals of the SBST teams (Donohue & Bornman, 2014; Eleweke & Rodda, 2002). In summary, without the necessary support teachers are unable to effectively address barriers to learning in learners who experience barriers to learning in inclusive settings.

1.3 Theoretical Framework
In this study, the researcher applied Bronfenbrenner’s ecological systems theory (Bronfenbrenner, 1979). Bronfenbrenner’s theory focuses on the different ecological environments that and individual interacts with and the influence it has on the individual (Bronfenbrenner, 1979). The ecological environments consist of different systems with different levels (Bronfenbrenner, 1979). These levels, starting from the outside to the inside, entail the chronosystem, macrosystem, exosystem, mesosystem, and microsystem (Bronfenbrenner, 1979) as visually presented in Figure 1.1.

![Figure 1.1 Bronfenbrenner's ecological systems theory - different systems](image)

Bronfenbrenner’s ecological systems theory provides a comprehensive framework that takes into account all systems in a developing learner's environment (Bronfenbrenner, 1979). Using this methodological approach will assist in understanding the intricacy of interactions and influences between the learner and their environments (Swart & Pettipher, 2011). The systems of Bronfenbrenner's ecological systems theory merit further discussion as they can be applied not only to the developing learner but also to the various aspects contemplated in the current study.
1.3.1 The chronosystem
The chronosystem provides an understanding of different patterns that change over time within an individuals’ life lifespan, with the provision that these patterns can be changed in different contexts (Swart & Pettipher, 2011). The chronosystem in this study will focus on the history and trends of addressing barriers to learning in learners in inclusive settings.

1.3.2 The macrosystem
The macrosystem refers to the different belief systems, resources, opportunity structures, threats, lifestyles and disciplines in all of these systems (Bronfenbrenner, 1979). The macrosystem in this study focuses on the policies and legislation related to addressing barriers to learning in learners in inclusive settings in HICs and LMICs, which include South Africa.

1.3.3 The exosystem
According to Bronfenbrenner (1979), the exosystem can be defined as one or more settings that do not include the learner as an active participant, but where events happen that can affect the environment containing the learner. In the current study, settings that do not involve the learner as an active participant include teacher training institutions and school management.

1.3.4 The mesosystem
The mesosystem contains the relationships between two or more settings where the developing learner actively participates in, which included the relationships between the learner’s home environment and the school (Bronfenbrenner, 1979). For the purpose of this study, the mesosystem comprises the partnership between the home and the school.

1.3.5 The microsystem
The microsystem is the core of Bronfenbrenner's model and influences and is influenced by all other systems (Bronfenbrenner, 1979). The core systems include the individual and his/her immediate contexts. In the current study, the major microsystems consist of the
learner’s home environment and the school which play an important role in ensuring the active participation of the learner in the school.

1.4 Problem statement and rationale

High school teachers have an important role to play in addressing barriers to learning in learners as they are the ones who teach learners during the final phase of their school years (Nel, Tlale, Engelbrecht, & Nel, 2016). According to the South African Rights Commission (SAHRC) (2012), only 40% of learners complete their high school education. For learners experiencing barriers to learning the completion rate for high school is even less (Statistics South Africa, 2011). In order for teachers to successfully address barriers to learning in learners, it is important to know what the challenges are that teachers experience when addressing these barriers; how teachers are responding to the learners’ diverse needs; and what teachers’ views are on the support needed to successfully address the needs. However, limited research has been conducted on teachers’ perspectives when addressing barriers to learning in learners in mainstream independent high schools. The researcher identified a gap in the literature, realising that the majority of studies conducted on addressing barriers to learning in inclusive settings were conducted in public schools and limited research has been conducted in mainstream independent high schools. Furthermore, the researcher has taught a number of learners who experience barriers to learning and therefore has experienced some of the challenges related to addressing the barriers to learning in these learners. By conducting the research, the researcher obtained valuable information from the teachers teaching at an independent mainstream high school which could inform the school management on the teachers’ needs and challenges.

1.5 Research Questions

The study was guided by the following research questions:

1.5.1 Main research question

What are teachers’ perspectives on addressing barriers to learning in learners in an independent mainstream high school in Gauteng province?
1.5.2 Secondary research questions

- What do teachers perceive as the challenges when addressing barriers to learning in learners in an independent mainstream high school in Gauteng Province?
- How are teachers responding to the diverse needs of learners who experience barriers to learning in an independent mainstream high school in Gauteng Province?
- What are teachers’ views on the support needed to effectively address barriers to learning in learners in an independent mainstream high school in Gauteng Province?

1.6 Research methodology

The research methodology includes the methods, theoretical framework and explanation of the procedures followed in the research (Creswell, 2009). It includes the research approach, design and the different research methods which will be elaborated on in Chapter 3.

1.6.1 Research paradigm

According to Rehman and Alharthi (2016), a paradigm is a belief system and theoretical framework that a particular researcher uses to understand and study the reality of the world. Nieuwenhuis (2016) mentioned that there are different types of paradigms, namely interpretivist, positivist, and critical theory. This study was situated within the interpretivist paradigm to find out how high school teachers perceived teaching learners who experienced barriers to learning in a mainstream school environment. The research also revealed the various challenges teachers experienced and possible support that can be made available to help teachers implement inclusive education successfully in the classroom.

1.6.2 Research approach

The researcher has chosen a qualitative approach to illustrate teachers’ perspectives on addressing barriers to learning in learners in an independent mainstream high school in Gauteng Province. Qualitative research is used to understand a research question in a
humanistic way, gaining insight into a particular topic based on people’s beliefs, attitudes, experiences and behaviour (Pathak, Jena & Kalra, 2013). A qualitative approach enabled the researcher to collect rich descriptive data on the particular phenomenon in order to better understand what has been observed or studied (Maree, 2016).

1.6.3 Research design
A case study design was employed in the current study. Yin (2014) stated that a case study can be used in different situations to add new information about people, groups, or societies as well as information on social and political-related phenomena. A case may include an individual such as a teacher, a learner, a group of people, a school or a society (Bertam & Christiansen, 2014). In the current study, the case included all the teachers who address barriers to learning in learners in the selected mainstream independent high school in Gauteng Province.

1.7 Data collection

1.7.1 Research participant and sample selection
The researcher purposefully selected participants that would best help to answer the questions that were posed (Creswell, 2009). The researcher selected 12 teachers to participate in the research, as the independent school understudy is very small. There is a limited scope of teachers available, namely 20 teachers who work from Grade 8 to Grade 12, and each person is important in the study. The teachers each had a qualification in their field of teaching. The research methodology will be discussed in more detail in Chapter 3.

1.7.2 Data collection methods
Data were collected through the study of documents, face-to-face interviews, and observation schedules which will be discussed in more detail in the next section.

1.7.2.1 Document Analysis
Document analysis involves the study of existing documents to reveal deeper meanings or to understand the content of the documents at hand (Ritchie & Lewis, 2003). These
documents can include documents from institutions and even the state, finance, legal and political records. Furthermore, the documents can be published or unpublished (Merriam, 2009). In the current study, the researcher reviewed various documents and found document analysis appropriate for the study.

1.7.2.2 Individual interviews
Interviewing can be seen as the predominant way of conducting qualitative research (Greeff, 2011). The interview process is aimed at building a social relationship as well as gaining quality information through the exchange (Monette, Sullivan, & DeJong, 2005). Because the aim of the interviews in the current study was to understand the world through the teachers’ eyes, the researcher found semi-structured interviews with the teachers as the most appropriate data collection instrument. The researcher used face-to-face, semi-structured interviews to obtain an understanding of the participants’ personal perspectives and points of view regarding the addressing of barriers to learning experienced by learners.

1.7.2.3 Observations
Natural observation will take place in the researcher observing natural and or true behaviours from afar (Leedy & Ormrod, 2015). It involves a procedure of recording and observing conditions, feelings, physical settings, and activities (Denzin & Lincoln, 2000; Walliman, 2006). For the purpose of this study, non-participant observations were used, and the researcher did not disturb the teaching in the classroom since she just observed the teachers while they were teaching (Leedy & Ormond, 2015).

1.8 Data Analysis
Data analysis involves decreasing an enormous volume of raw data, determining important patterns or themes, and constructing a framework to interpret the data (Schurink, Fouché, & De Vos, 2011). Chapter 3 provides a detailed description of the data processing and data analysis followed in the study.
1.9 Setting of the study
According to Given (2008), the research site can be defined as the physical, cultural and social site where the actual research study is conducted. The current study was conducted in an independent mainstream high school in Gauteng province. The researcher will provide a more in-depth discussion on the setting of the study in Chapter 3.

1.10 Trustworthiness
Qualitative studies are evaluated using different criteria from those used in quantitative studies (Leedy & Ormrod, 2015). Guba and Lincoln (2005) suggest that trustworthiness should be used to determine the accuracy of the findings and interpretation when evaluating the quality of qualitative research. The trustworthiness of the current study was determined using the following strategies: credibility, authenticity, transferability and dependability and conformability (Guba & Lincoln, 2005). These constructs were adhered to when conducting the in-depth interviews and observations, and when studying the documents provided, as well as when analysing the information obtained, and will be explained in more detail in Chapter 3.

1.11 Ethical considerations
The researcher acted responsibly towards the participants in the research project and reported the findings honestly and accurately (Strydom, 2011). The guiding ethical principles are listed and discussed in Table 3.2 in Chapter 3 as they were applied to the current study.

1.12 Definition of key concepts

Barriers To Learning
The term “barriers to learning” refers to any difficulties that arise within the education system, the learning site, and/or within the learner him/herself which prevents access to learning and development (DoE, 2014).
Curriculum Differentiation

The curriculum can be differentiated by adjusting the instructional strategies, the material and the products, as well as the environment to provide support to learners differing learning needs (Simpkins, Mastropieri & Scruggs, 2009).

Curriculum Assessment Policy Statements

The Curriculum Assessment Policy Statements (CAPS) is a national policy set out by the Department of Education that states what should be included in the curricula of schools for each grade in South Africa as well as how it is to be tested or assessed (DoE, 2011a).

Inclusive Education

Inclusive education means that all learners attend and are welcomed by their neighbourhood schools in age-appropriate, regular classes and are supported to learn, contribute and participate in all aspects of the life of the school (Szecsi & Giambo, 2007).

Independent School

The term Independent schools, according to the South African Schools Act (1996), refers to schools that are governed by a board of governors and operate independently from government or public schools.

Learner support

Learners experiencing barriers to learning require support (Bouwer, 2011). Various stakeholders are involved in supporting learners who experience barriers to learning. Stakeholders include teachers, school management, paraprofessionals, and families (Bouwer, 2011).

1.13 Chapter Outline

This dissertation comprised five chapters with the following layout:
Chapter 1: Introduction to the study
This chapter provided an overview of the background of the study, rationale, problem statement, aims of the study, research methodology, theoretical framework, ethical considerations, trustworthiness, the definition of key concepts, and chapter outline of the study.

Chapter 2: Literature Review
In this chapter, the researcher focuses on the applicability of the theoretical framework and literature pertaining to addressing barriers to learning in learners in HICs and LMICs. Furthermore, the researcher reviewed literature, which is embedded in the theoretical framework of Bronfenbrenner’s ecological systems theory (1979). The literature included:

- History of addressing barriers to learning in inclusive settings globally
- Trends on addressing barriers to learning in inclusive settings in a few HICs
- Trends on addressing barriers to learning in inclusive settings in a few LMICs
- Policies and legislation related to addressing barriers to learning in learners in inclusive settings in HICs, LMICs and South Africa
- Teacher training and school managements
- Home, school and classroom environment
- Learning support
- Curriculum
- Curriculum differentiation

Chapter 3: Research methodology
This chapter provides an overview of the research approach, design and methodology used in this study. Thereafter, the sampling procedures, setting and research participants as well as the methods used to collect data are discussed. Furthermore, the trustworthiness and ethical considerations which were followed in the research investigation are discussed.
Chapter 4: Data analysis and interpretation
In this chapter, the researcher describes the findings from the data collected through document analysis, semi-structured interviews and observations. Collected data were themed and analysed, and findings were then presented in this chapter.

Chapter 5: General discussion, implication and conclusion
This chapter presents the general discussion, implication and conclusion of the study. The strengths and limitations of the study are discussed and recommendations made for future research.

1.14 Summary
Chapter 1 introduced the background of the study, rationale, problem statement, aims of the study, research methodology, theoretical framework, ethical considerations, trustworthiness, the definition of key concepts, and chapter outline of the study. Chapter 2 focuses on the applicability of the theoretical framework and literature pertaining to addressing barriers to learning in learners in HICs and LMICs.
CHAPTER 2
LITERATURE REVIEW

2.1 Introduction
In Chapter 1 the researcher demonstrated the relevance of the study by discussing background literature pertaining to teachers' perspectives when addressing barriers to learning in learners in inclusive independent mainstream schools. The theoretical framework, research questions, rationale and problem statement, research methodology, the definition of key concepts and chapter outline were also discussed in Chapter 1. In this chapter, the researcher focuses on the applicability of the theoretical framework and literature pertaining to addressing barriers to learning in learners in HICs and LMICs.

2.2 Applicability of Bronfenbrenner's ecological systems theory
Learners experiencing barriers to learning are influenced by different systems in their environment and therefore need to be understood within a framework. Bronfenbrenner's ecological systems theory provides a comprehensive framework that takes into consideration all the systems within the developing learner's context (Bronfenbrenner, 1979; 1994). Using this outline to also structure the methodological approach will ensure that the relationships and influences between the learner and the environments connected to him/her are brought into account (Swart & Pettipher, 2011). Furthermore, Bronfenbrenner's ecological systems theory also refers to different levels that play an important role in a learner's development as well as their participation and learning (Bronfenbrenner, 1979; 1994). Therefore, by employing Bronfenbrenner's ecological systems theory the researcher was able to enhance the understanding of addressing barriers to learning in a mainstream independent high school by explaining the interrelationships between and within the systems. Figure 2.1 describes the applicability of structures of Bronfenbrenner's ecological theory in the study by referring to the microsystem, mesosystem, exosystem, macrosystem and chronosystem.
Bronfenbrenner’s ecological systems theory will be used to discuss the literature reviewed in this study. The first or outer layer of the Figure refers to the chronosystem that represents the historic account of addressing barriers to learning in inclusive settings. The literature in this chapter will discuss the history of addressing barriers to learning in an inclusive setting in LMICs and HICs. The second layer is the macrosystem, which refers to the social and political legislation, policies, and movements influencing addressing barriers to learning in inclusive settings. The exosystem is discussed next, which provides an explanation of the influence of the support services and school management. Then the mesosystem follows, which focuses on the relationships between two or more settings within the microsystem, which can include the interactions between the home and school.
or between the school and the peers. In this study, the mesosystem will include parental involvement and the influence it has on addressing barriers to learning. The last system, the microsystem, which deals with the aspects of the learner’s immediate environment, will then be discussed.

2.3 The chronosystem
History and the concept of time are embedded in Bronfenbrenner’s chronosystem. This section of the literature study outlines the history and trends of addressing barriers to learning in inclusive settings in HICs and LMICs.

2.3.1 History of addressing barriers to learning in inclusive settings globally
According to Ferguson (2008) learners who experienced barriers to learning were labelled as having “special needs” during the 1980s. The learners with “special needs” who required special means of access to the curriculum had impairments of sensory or motor functioning, visual, hearing, speech and physical and did not receive a modified curriculum (Warnock, 1978). However, a modified curriculum was to be provided for children with intellectual, social, or emotional difficulties (Warnock, 1978). The education system for the “special needs” learners had to cater to their needs by modifying their physical environment, using specialised teaching methods, providing a special or adapted curriculum, providing access to the curriculum using alternative learning materials and providing them with additional support (Warnock, 2005).

In many HICs such as France, United States (US), Germany and the United Kingdom (UK) learners with “special needs” were educated in segregated environments such as disability-specific schools and state developmental centres (Donohue & Bornman, 2014). In 1990 the Education for All (EFA) initiative was introduced in 1990 by the United Nations Educational, Scientific and Cultural Organization (UNESCO). The initiative focused on providing quality basic education to all children, youth, and adults with or without a barrier to learning. To accomplish this initiative, six goals were proposed namely: provision and expansion of early childhood education; provision of free and compulsory education for all children of school-going age; provision of learning and life-skills programmes for
adults; improvement of adult literacy rate; elimination of gender inequality in education; and improvement of all aspects of education in order to provide quality education for all. Furthermore, in 1994 the Salamanca Statement was published by the World Conference on Special Needs Education in Spain (UNESCO, 1994). This statement emphasized that there is a necessity for educational policies to move from exclusion in education to including learners who experience barriers to learning in inclusive settings (UNESCO, 1994). According to the Salamanca Statement schools should accommodate all learners in the same education system regardless of their barriers to learning (UNESCO, 1994).

The history of addressing barriers to learning in South Africa followed a similar trend as internationally. During the years of apartheid (1948-1994) learners who experienced barriers to learning were segregated twice, according to their population group and according to disability. Under apartheid, White learners who experienced barriers to learning received quality special education with adequate resources and well-trained teachers (DoE, 2001). In contrast, Black, Indian and Coloured learners were educated in separate facilities and received relatively low-quality education from poorly trained teachers (DoE, 2001). In 1996 the Bill of Rights, included in the Constitution of South Africa, was introduced. The Bill of Rights declares that all South African citizens have the right to basic education, regardless of the barriers to learning. Key education legislation and policies introduced since 1994 were abolished and new policies related to inclusive education were introduced (DoE, 1995; DoE, 1996; DoE, 1997a, 1997b; DoE, 2010a; DoE, 2010b; DoE, 2010c; DoE, 2014). Evidently, the intention was to follow the same trend of including learners who experience barriers to learning as in most other countries where learners are included in mainstream classes (Engelbrecht, 2006; Jones & Frederickson, 2010; Waddington & Reed, 2017). The change towards including learners who experience barriers to learning began in the 1980s in HICs, whereas in LMICs, such as South Africa, the transformation of including learners who experience barriers to learning only began in the early 2000s (Engelbrecht, 2006).
2.3.2 Trends in addressing barriers to learning in inclusive settings in a few HICs

2.3.2.1 United States
In the US, the percentage of learners experiencing barriers to learning who are generally included in mainstream education classrooms for 80% of the day has steadily increased since 1989 (Hossain, 2012; Mader, 2017). During the period between 1900 and the 1970s, however, learners who experienced barriers to learning were segregated from their peers who did not experience such barriers. It was only during the 21st century that teachers, parents and activists called for learners with barriers to learning to be included in mainstream settings (Hossain, 2012). Legislation and policies such as the Individuals with Disabilities Education Act shaped the inclusion of learners who experience barriers to learning in mainstream schools (Hossain, 2012).

2.3.2.2 United Kingdom
The United Kingdom has several policies and legislations that shaped the inclusion of learners who experience barriers to learning in mainstream schools (Ellis, Tod & Graham-Mattheson, 2012), for example, the Education Act 1996, Children and Families Act 2014 and the Special Educational Needs and Disability 2016. In the United Kingdom, 85% of learners who experience barriers to learning are included in mainstream inclusive schools (Waddington & Reed, 2017).

2.3.3.3 Canada
Canada is known as the leading country when it comes to advocating for the inclusion of learners experiencing barriers to learning in inclusive settings, although this interpretation is only valid regarding four of the 13 provincial and territorial jurisdictions in Canada (Bunch, 2015). New Brunswick, in Canada, has been deemed to have the most inclusive schools according to UNESCO (Bunch, 2015). A decade ago Hinz (2010) reported that funding for inclusive practices was included in the budget and labels for learners with different learning needs were discarded (Hinz, 2010). Furthermore, in certain provinces, learners experiencing barriers to learning receive support from paraprofessionals based in the school, such as speech-language pathologists, educational psychologists, play therapists, occupational therapists, and physiotherapists, while teachers in the
classrooms are trained on how to address barriers to learning in learners and also have educational assistants in their classrooms to help support the learners (Hinz, 2010). It is evident that in some parts of Canada learners experiencing barriers to learning are supported on various different levels in the school setting to ensure that they are included.

2.3.2.4 Netherlands
The Netherlands has ratified several international agreements with regard to inclusive education such as the Frankel Resolution concerning Integration of Children and Young People with “special needs” into ordinary systems of education (Council of the European Union, 1990), the Salamanca Statement (UNESCO, 1994), the Convention on the Rights of Persons with “special needs” (UNESCO, 2006), and the Policy Guidelines on Inclusion in Education (UNESCO, 2009). However, together with other European countries (e.g. Germany), the Netherlands has for a long time adopted a two-track approach for “special needs” learners with two distinct education systems: the mainstream school system and special school education (Mooij & Smeets, 2006). Consequently, special schools still function as part of the Dutch educational system (Pijl, 2010; Expatica, 2019) with over 2.7% of learners with “special needs” segregated in special settings (Watkins, 2010). Only recently, the Dutch government has started promoting the inclusion of pupils with SEN into primary mainstream schools (Fanchamps et al., 2011).

2.3.3 Trends on addressing barriers to learning in inclusive settings in a few LMICs
2.3.3.1 Bangladesh
Like many other developing countries, Bangladesh has taken the principles of inclusive education on board in its education policies, acts, and legislation (Ahmmed, 2015). Bangladesh has accepted two programmes over the last seven years including Teaching Quality Improvement in Secondary Education Project (TQI-SEP) and Primary Education Development Program (PEDP) to implement inclusive education in primary and secondary mainstream schools (Malak et al, 2013). Increasingly more learners who experience barriers to learning are being included in mainstream schools (Malak et al., 2013). Research found that the enrolment of learners with barriers to learning in
mainstream schools grew from 65% in 1997 to 91% in 2007 (Das, 2011; Jahangir, 2008). However, later publications report that in areas of Bangladesh where support is provided with regard to disabilities there was an 18% enrolment, while in areas that did not provide support there was only a 4% enrolment (Noman Khan & Anisuzzaman, 2011). It seems fair to conclude that the government of Bangladesh has developed policies that increased enrolment levels of learners with disabilities in primary school settings over the years (Noman Khan & Anisuzzaman, 2011).

2.3.3.2 Brazil
The Brazilian government has also developed a number of policies and legislation on inclusive education, for example, the Brazilian Legal Framework which prohibits any exclusion or limitation of educational opportunities (Organization for Economic Cooperation and Development, 2015; UNESCO, n.d). During the past decade, literature has reported that 79% of the learners who experience barriers to learning in Brazil are included in mainstream schools (Mantoan, 2008; Mantoan, 2015).

2.3.3.3 Botswana
The Botswana government has recognised the importance of inclusive education on all levels of education and community through the implementation of two policies: the Revised National Policy on Education (RNPE) and the Inclusive Education Policy (IEP) (Government of Botswana, 1994; 2011; Mangope, 2017). According to Statistics Botswana (2015), in 2013, 3.4% of learners with special needs were enrolled in mainstream secondary schools in Botswana.

2.3.3.4 Lesotho
Although the Ministry of Education and Training (MOET) in Lesotho mandated quality education for all learners including those with diverse learning needs (MOET, 2019), the majority of learners who experience barriers to learning are not receiving education. In Lesotho, 40% of such children between the ages of five and ten do not attend primary school while 23% of children who experience barriers to learning do not attend high school (Eriamiatoe, 2013). Therefore, although the Constitution of Lesotho affirms the right of all
children to education, the majority of those who experience barriers to learning are not included in the educational system and are placed in segregated schools mainly located in the capital city, Maseru (Eriamiatoe, 2013).

### 2.3.3.5 Nigeria

According to Ajuwon (2012) Nigeria’s National Policy on Education (Government of Nigeria, 1977), refers to educating learners with and without barriers to learning in inclusive settings (Ajuwon, 2012). However, research found that a decade ago less than 10% of children who experience barriers to learning had access to any type of formal or non-formal education (Ajuwon, 2012). Furthermore, learners who do receive an education are mostly accommodated in disability-specific schools which are often neglected and not adequately funded (Akinbola, 2010).

### 2.3.3.6 Kenya

A 2008 national survey in Kenya (Government of Kenya, 2008) indicated that at that time there were up to one million children with and without disabilities who were not accessing any type of formal schooling in Kenya. The Government of Kenya (2008) reported poverty, gender disparities, ineffective inclusive education guidelines, and poorly trained teachers as causes of this lack of access to education. Though many learners who experience barriers to learning may have been attending residential special schools, their right to live with their families in their own communities were being violated (UNICEF, 2013). Subsequently, the Kenyan government developed policies and legislation related to the inclusion of learners experiencing barriers to learning in mainstream schools (Elder, 2015).

### 2.3.3.7 South Africa

Malajiti (2019), 600 000 learners who experience barriers to learning remain out of school. Furthermore, research indicated that less than a decade ago nearly 121 500 learners with barriers to learning were in mainstream schools and over 119 500 learners were enrolled in special schools with 11 500 children on their waiting lists (Dass & Rinquest, 2017). Therefore, it is evident that although the policies on including learners who experience
barriers to learning recommend that learners be included in mainstream schools, learners are still being segregated in “special” schools (Donohue & Bornman, 2014).

2.4 The macrosystem
The macrosystem includes the belief system, resources, threats, societies and lifestyles entrenched in each of the systems of the model (Bronfenbrenner, 1994). According to Lerner (2005), the macrosystem further includes the superordinate levels of the ecology in a individuals’ development that include institutions and public policies. Therefore, the macrosystem in this study includes policies and legislation related to addressing barriers to learning in inclusive settings in HICs and LMICs.

2.4.1 Policies and legislation related to addressing barriers to learning in learners in inclusive settings in HICs, LMICs and South Africa
After several years in which learners experiencing barriers to learning were excluded, legislation and policies were developed with the aim of abolishing discrimination and redirecting equality. Some of the key policies related to addressing barriers to learning in learners in HICs and LMICs will be discussed next.

2.4.1.1 Policies and legislation related to addressing barriers to learning in learners in inclusive settings in HICs
Inclusion of learners who experience barriers to learning has been advocated for since the publishing of the Universal Declaration of Human Rights in 1948. A number of key policies and legislations have been developed in HICs which include:

- Universal Declaration of Human Rights which endorses the right to free and compulsory elementary education for all children (1948).
- The World Declaration on Education for All (Jomtien Declaration), which set the goal of Education for All (EFA) (1990).
- The UN Standard Rule on Equalization of Opportunities for Persons with Disabilities, which not only affirms the equal rights of all children, youth and adults
with disabilities to education, but also states that education should be provided in “an integrated school setting” as well as in “general school setting.” (1993).

- The Salamanca Statement and Framework of Action on Special Needs Education, which requires schools to accommodate all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions (1994).
- The World Education Forum Framework for Action, Dakar, EFA and Millennium Development Goals, which specifies that all children have access to and complete free and compulsory primary education by 2015 (2000).
- The UN Disability Convention promotes the rights of persons with disabilities (2006).

Many HICs around the world have adopted the philosophy of including learners who experience barriers to learning in mainstream education.

2.4.1.2 Policies and legislation related to addressing barriers to learning in learners in inclusive settings in LMICs

A number of LMICs have adopted an inclusive education system in order to address barriers to learning for children who experience such obstacles. For example, Zimbabwe has embraced inclusive education by developing policies and legislation such as the Zimbabwe Education Act (1987), the Disabled Persons Act (1996), and various and the Education Secretary's Policy Circular (Ministry of Education, 1990), requiring that all learners, regardless of race, religion, gender, creed, and disability, have access to basic or primary education (up to Grade 7). Furthermore, the Secretary for Education’s directive for inclusive education requires schools to provide equal access to education for learners with disabilities, routinely screen for any form of disability, and admit any school-age child, regardless of ability.

Bangladesh has undertaken a number of policy and legislation initiatives to provide quality education for all children. The policies and legislation implemented in Bangladesh include
the Compulsory Primary Education Act (Ministry of Education, 1990), National Policy for the Disabled (Ministry of Education, 1995), Bangladesh Disability Welfare Act (Ministry of Education, 2001) and the National Education Policy (Ministry of Education, 2010). In addition, a comprehensive Early Childhood Care and Development (ECCD) policy has been implemented offering children an inclusive environment during early childhood development (Ministry of Education, 2012).

In Kenya, the Kenyan government has developed a number of policies as well as legislation related to the inclusion of learners experiencing barriers to learning in mainstream schools (Elder, 2015). The policies and legislation implemented in Kenya include the Free Primary Education Policy (Government of Kenya, 2003), Kenyan Constitution (Government of Kenya, 2010) and the National Special Needs Education Policy Framework (Government of Kenya, 2009). The aim of these policies and legislation is to attain education for all, and ensure that learners who experience barriers to learning also receive quality education (Adoyo & Odeny, 2015).

2.4.1.3 Policies and legislation related to addressing barriers to learning in learners in inclusive settings in South Africa

- As mentioned earlier in this chapter, in 1996 South Africa adopted a Constitution (Act No. 108 of 1996) that legally enshrined the basic human rights of all people. The Constitution legislated that all people are equal and thus have equal rights, including the right to basic education, and therefore prohibited unfair discrimination. The South African government changed the educational system within a framework that addressed human rights. Various national policies, legalisations and other initiatives were developed which include:
  - The White paper on Education and Training (DoE, 1995)
  - The South African Schools Act (DoE, 1996)
  - The White Paper on Integrated National Disability Strategy (DoE, 1997a)
  - The National Commission on Special Educational Needs and Training and the National Committee on Education Support Services (DoE, 1997b)
  - White Paper 6: Building an Inclusive Education and Training System (DoE, 2001)
• Draft Guidelines for the implementation of Inclusive Education (2002)
• Conceptual and Operational Guidelines for District-Based Support Teams (DoE, 2005a)
• Draft Guidelines for Inclusive Learning Programmes (DoE, 2005b)
• Guidelines for Inclusive Learning Programmes (DoE, 2005c)
• Guidelines for full-service/inclusive schools (DoE, 2010a)
• Guidelines for Inclusive Teaching and Learning (DoE, 2010b)
• The Guidelines for Responding to Learner Diversity in the Classroom through Curriculum and Assessment Policy Statements (DoE, 2011b)
• National Strategy on Screening, Identification, Assessment and Support (SIAS) (DoE, 2014)
• Draft Guidelines on Resourcing and Inclusive Education and Training system (DoE, 2018)

2.5 The exosystem

Bronfenbrenner (1979) stated that the exosystem focuses on the influences or events that influence the microsystem, but occur in contexts that do not include the people in the microsystem. In this system the developing learner is not actively involved, however, they are affected by the events that occur in the contexts that contain them. Bronfenbrenner (1979) also explains that the development of the learner is affected not only by the environment but also in the other settings to which they have access, for example, the educational systems, health services, the media, local community organisation, and parent’s place of work (Bronfenbrenner, 1979). In this study, the contexts and events that do not involve the learner as an active participant falls into two classifications of the educational system, namely the teacher training institutions and school management.

2.5.1 Teacher training

Professional development is of critical importance in understanding how to address barriers to learning in learners in inclusive settings and should not be underestimated (Armstrong, Armstrong, & Spandagou, 2011). According to the report on the
implementation of inclusive education, the standards of learning and teaching in schools can only be improved if teachers acquire the skills and knowledge to teach learners who experience barriers to learning (DoE, 2002). A number of documents have been developed and studies have also provided proof on the importance of teacher training in order to prepare teachers on inclusive education (Horne & Timmons, 2009). However, without adequate training teachers are unable to provide suitable support to their learners in schools (Horne & Timmons, 2009). It is therefore important for institutions that provide teacher training, to ensure that the disparity between special and regular education be eliminated. Teachers that are newly qualified should have the necessary knowledge of inclusive teaching for inclusive education to be successful (Mittler, 2000).

Furthermore, Fisher, Frey and Thousand (2003) identified the basic skills that teachers need for the successful implementation of inclusive education. The skills include understanding assistive technology, knowledge and understanding of collaborative learning, curriculum differentiation, behaviour support and appropriate content instruction. It is important for teachers to be competent and confident when teaching learners with and without barriers to learning (Winter & O’Raw, 2010). Consequently, the professionals and institutions that train teachers should ensure that they provide teachers with the necessary experience and training on how to address barriers to learning in learners in inclusive settings during their teaching.

In South Africa, a number of higher education institutions have embedded theory on inclusive education as well as practicums in their curriculum for pre-service and in-service training of teachers (Lomofsky & Lazarus, 2001). This suggests that the curriculum of the teacher training programmes can (or should) provide teachers with the theory on inclusive education and strategies, which the teachers can implement in their classrooms.

2.5.2 School management

In order to meet the diverse needs of learners who experience barriers to learning the school management needs to be involved (DoE, 1996). The school management has various responsibilities which include promoting the school’s best interest and making
sure that all learners receive a quality education; determining the mission and vision of the school; implementing a code of conduct; supporting all staff members; and managing school properties (DoE, 1996). Furthermore, it is the school management’s responsibility to appoint a school-based support team consisting of paraprofessionals who can assist learners experiencing barriers to learning in the school. The school-based support team have an important role to play as they can identify and address learning barriers in learners; assess the type of support required by the school and the learners; develop programmes for parents and teachers; provide training for teachers which can be implemented in classrooms; monitor and evaluate inclusive education and provide resources to the school (DoE, 2005c). The exosystem discussed in this section emphasizes the fundamental role that school management plays to ensure that learners receive the necessary support.

2.6 The mesosystem
The mesosystem includes the relationships between two or more settings in which the developing learner is an active participant, for example, the relationship between the school and the home of the learner, together with their peer group and the school (Bronfenbrenner, 1979). In this study, the mesosystem refers to the relationship between the home of the learner and the learner’s school. At home, the learner typically interacts exclusively with family members who include parents, siblings, and grandparents. At school, on the other hand, the learner interacts with a wide variety of individuals and groups including classmates, teachers, paraprofessionals, the school administration and school management. These settings make up the mesosystem, which is characterized by the relationships between two or more settings containing the developing learner (Bronfenbrenner, 1979). Bronfenbrenner (1994) later added further types of interconnections between settings of the learner such as multi-setting participation, interssetting communication and interssetting knowledge. Interssetting communication refers to the messages being transferred from one setting to another, an example of this is between the teacher and the parents. In order for inclusive education to be successful, it is important for parents to be involved in their child’s education (DoE, 2001). This
suggests that parents need to know their role, responsibility, and expected contribution towards inclusive education in the school.

2.7 The microsystem

The microsystem is the centre of Bronfenbrenner’s model which influences and is influenced by all the other systems (Bronfenbrenner, 1979). Core system components include the individual and their immediate contexts, which may comprise their home environment with parents, siblings and grandparents. Another microsystem may be the school environment, which includes the classmates and the teachers (Bronfenbrenner, 1979). In the current study, the major microsystems consist of the learner’s home environment and the school, both of which play an important part in the active involvement of the learner in the school.

2.7.1 Home environment

As mentioned in section 2.6 the families play an important role in the education of their children. However, some families are not involved in their child’s education and may hinder the successful implementation of inclusive education in schools (DoE, 2015).

2.7.2 School and classroom environment

According to Berns (2012), a school is seen as a setting where learners are able to learn more about the society. Furthermore, the school also includes teachers assisting in the development of different skills in learners. The school is seen as part of the microsystems in Bronfenbrenner’s model that can either help the learner develop or inhibit learning (Bronfenbrenner, 1994). This may include the classroom environment, teaching methods and strategies, curriculum differentiation, and teachers’ perspectives, as well as challenges related to addressing barriers to learning in the learner.

2.7.2.1 Learning support

In order to support learners who experience barriers to learning, it is important that the barriers be identified first (DoE, 2014). Furthermore, it is important for the teachers to understand the barriers experienced by the learners as this will influence the type of support required by the learner (DoE, 2001; DoE, 2014). Learners may experience either
intrinsic or extrinsic barriers to learning (DoE, 2005c). The intrinsic factors which result in barriers may include intellectual impairments, hyperactivity, visual impairments, hearing impairments, physical impairment, and speech-language difficulties (Swart & Pettipher, 2016). Extrinsic factors that result in barriers to learning include the language of learning and teaching, inflexible curriculum, poverty, HIV/AIDS, illiteracy of parents, inadequately trained teachers, lack of support services, negative attitudes towards addressing barriers to learning, lack of parental involvement, and lack of time when teaching learners who experience barriers to learning (Ledwaba, 2017). Lastly, it is important for the teacher to be aware of the learners’ learning needs as well as desires. Therefore, teachers should consult documents about the learner’s background, circumstances, medical history, family and schooling history to complete the learner’s learning profile (DoE, 2014).

2.7.2.2 Curriculum
The South African Department of Education (DoE) developed the Curriculum and Assessment Policy Statement (CAPS) with the aim of ensuring that all learners with and without barriers to learning acquire the necessary knowledge and skills in the least restrictive environment (DoE, 2011a). It is important for teachers to respond to learners’ diverse needs by differentiating the existing curriculum (Landsberg & Matthews, 2016).

2.7.2.3 Curriculum differentiation
Curriculum differentiation is a process that allows for the curriculum to be modified or adapted so that the different ability levels of the learners in one class can be accommodated for and to ensure that there is no exclusion of learners in the learning process. (UNESCO, 2004). According to Tomlinson and Imbeau (2010), the readiness level, interests and learning profiles are important aspects in achieving curriculum differentiation and are the first steps of curriculum differentiation. These three factors will now be discussed in more detail.

2.7.2.3.1 Readiness level
A learner’s readiness level can be defined as his/her current proximity to specified knowledge, understanding and skills (Tomlinson & Imbeau, 2010). Obtaining information
about learners’ support needs will allow the school to know how best to support their participation and learning in the curriculum (Tomlinson & Imbeau, 2010). When differentiating the curriculum for a learner it is important for the teacher that the work allocated is at an appropriate level of functioning, and not too difficult or too easy as the learner will otherwise become either bored or frustrated (Tomlinson & Imbeau, 2010).

2.7.2.3.2 Learners’ interest
Tomlinson and Imbeau (2010) state that learner’s interest refers to activities or content where the learner pays attention, is curious and is involved in. Learners who are interested are motivated to learn and this should be used as a guideline when designing learning activities (Tomlinson & Imbeau, 2010). Furthermore, learners who are interested in a topic will have a need to be more involved and in the end, learning takes place more easily and they pay attention for longer (Gregory & Chapman, 2013).

2.7.2.3.3 Learners’ profile
When differentiating the curriculum for learners who experience barriers to learning it is important that the teachers have an understanding of the learners’ profile (DoE, 2014). The learners’ profile provides more information about the strengths, preferences, needs, culture, language, personal characteristics, background and challenges of the learners and their families. Teachers should also use the Support Needs Assessment (SNA1) form to determine the needs, strengths, abilities and preferences of learners (DoE, 2014). Thereafter an individual support plan (ISP) should be developed (DoE, 2010b).

Once the learners’ profile has been completed the teacher can differentiate the content, instruction, assessment, and learning environment to meet the needs of the learners in the classroom (DoE, 2011b). The parts of the curriculum which need to be differentiated will be scrutinised in the ensuing sections.
2.7.2.3.3.1 Differentiation of the content

The DoE (2011a) explains that the content of the curriculum contains information of what is been taught and the method the learners are accessing the learning materials. By differentiating the curriculum the teachers are presenting the content in different ways to allow all learners to comprehend and participate (Westling & Fox, 2009). Therefore, the same content is taught to the learners while adjusting the complexity of the academic diversity of learners.

2.7.2.3.3.2 Differentiation of the instruction and assessment

Differentiation of the instruction and assessment refers to the differentiation of teaching methods or strategies that teachers use to present information to learners to ensure that they make sense of the content (Tomlinson & Imbeau, 2010). These may include strategies or methods such as peer tutoring, re-teaching, flexible grouping, individual support, designing down, scaffolding, and alternative learning materials.

- Peer tutoring

Peer tutoring or peer support refers to learners helping or supporting their peers to learn by being tutors, peer helpers, or peer buddies learning from their peers (Carmody & Wood, 2009). A teacher can assign a peer to help a learner who is having difficulties in understanding the content (Carmody & Wood, 2009).

- Re-teaching

Re-teaching refers to teaching the content again to learners who failed to understand it the first time (Engelbrecht, Oswald, & Forlin, 2006). It is important for teachers to monitor the progress of learners and to ensure that they understand the concepts and content being taught to them. If there is a learner who does not understand the concepts or content then the teacher should re-teach it in a different or new way (Engelbrecht et al., 2006).

- Flexible grouping
Flexible grouping is a term that covers a range of grouping learners for delivering instruction, such as whole class, small group, and partner. Instruction is provided in flexible groupings to maximize learner performance so that learners work together and all learners in the groups learn the same content (DoE, 2010b). Groups can be used for different purposes and teachers should use flexible grouping to ensure that children do not get labelled as belonging only to one group, for example, according to their abilities (DoE, 2011b). Teachers are advised to divide learners into different groups according to the task or assessment at hand (DoE, 2011b). Learners can be grouped into a large group, small groups, paired groups, interest groups, cooperative expert groups and cluster groups (DoE, 2010b).

- **Individual support**
  Learners who experience barriers to learning may require individual support from the teacher (DoE, 2011b). It is important that the teacher identifies who these learners are and provide them with the necessary individual support.

- **Designing down**
  The *Guidelines on Inclusive Teaching and Learning* (DoE, 2010b) explains that designing down involves the breaking down of content or an assessment in order to build it up in a logical way. The procedure entails dividing the minimum expected standard for the year-end into smaller, more achievable components that are spread throughout the tear.

- **Scaffolding**
  According to the DoE (2011b), learners with diverse learning needs often have difficulty working independently and may require extensive initial guidance. The term scaffolding refers to the personal guidance, assistance, and support that a teacher, peer, or task provides to a learner (DoE, 2011b). Teachers can also use scaffolding in assessment activities (DoE, 2010b).


- **Alternative learning materials**

  Teachers can provide learners with a wide range of materials that cater for different abilities, interests, and learning styles (DoE, 2010b). This can include electronic learning, e-learning, or a range of options for differentiated instruction that must be tailored by the teacher to meet learner needs (Tomlinson, 2009). During assessments, teachers can also use different technologies or learning aids (DoE, 2010b). Furthermore, teachers can provide learners with a range of graded learning materials and need to be aware that some learning materials will require adaptation for the learners experiencing barriers to learning (Salend, 2011). For example, a learner with poor vision might need a larger print to be able to read easily or a learner with an intellectual impairment might benefit from the use of pictures in the learning materials.

2.7.2.3.3 **Differentiation of the learning environment**

The learning environment in which learners work can create barriers to learning (DoE, 2010b). It is the teachers’ responsibility to ensure that the learning environment is as conducive to learning as possible (Tomlinson, 2004). The two key dimensions of the learning environment are psychosocial and physical features. The psychosocial learning environment includes social and psychosocial factors such as interpersonal cooperation; classroom and school culture; harassment; and effective or ineffective communication (DoE, 2010b). The physical environment includes factors such as classroom spaces; classroom infrastructure; the arrangement of furniture; the level of noise; class size; classroom displays and resources (DoE, 2010b). It is essential that teachers consider these factors to meet the learning needs of learners (Simpkins, Mastropieri and Scruggs, 2009). In order to differentiate the psychosocial environment teachers can use strategies which include listening attentively to the learner so that he or she knows their feelings are important; encouraging caring relationships amongst learners; creating safe environments where learners can take risks, and encouraging learners to be independent; ensuring that learners’ interests and inputs are valued; and giving learners an opportunity
to express themselves (Lomofsky & Lazarus, 2001). When differentiating the physical learning environment teachers can arrange furniture to allow learners to move around easily - this is of paramount importance for visually impaired learners.

Furthermore, it is crucial that the learners know their way around the classroom and school, and teachers should assist visually impaired learners by guiding them and warning them of obstacles. For learners who have hearing impairments the teacher can make the following adaptations in the classroom: using an overhead projector to present the material; speaking clearly in a normal tone; using visual signs to gain the learner's attention; supplementing information presented orally with visual aids, providing written directions, assignments, and lecture outlines to the learner; and eliminating noise in the classroom (DoE, 2005; DoE, 2010b).

Even though the DoE provides guidelines on how to differentiate the curriculum, teachers are sometimes unable to differentiate the curriculum in a way in which all learners have equal access to it (Dixon, Yssel, McConnell & Hardin, 2014). This may be because:

- Teachers see diversity as a problem instead of a strength in the classroom.
- Teachers are of the opinion that differentiating the curriculum will expose the differences of the learners.
- Teachers are unwilling to use the various teaching strategies of curriculum differentiation.
- Teachers are insensitive when addressing cultural and population group issues when they teach diverse learners.
- Teachers do not have adequate training on how to differentiate the curriculum.

2.8 Summary
In this chapter, the researcher discussed the applicability of Bronfenbrenner’s ecological systems theory in the study. Chapter 3 is devoted to the methodology followed in the study.
CHAPTER 3
RESEARCH METHODOLOGY

3.1 Introduction
The previous chapter highlighted the literature findings on addressing barriers to learning in learners in inclusive settings. This chapter focuses on the research aims, research methods, sampling procedures, participants, setting, data collection methods, data analysis, trustworthiness and ethical considerations for the current study.

3.2 Research aims
The study was guided by the following research questions:

3.2.1 Main and sub-aims
Main aim:
To explore teachers’ perspectives on addressing barriers to learning in learners in an independent mainstream high school in Gauteng province.

To achieve the main aim comprehensively, three sub-aims were generated.

Sub-aims:
- To establish the challenges teachers perceive when addressing barriers to learning in learners in an independent mainstream high school in Gauteng Province.
- To explore how teachers are responding to the diverse needs of learners who experience barriers to learning in an independent mainstream high school in Gauteng Province.
- To understand teachers’ views on the support needed to effectively address barriers to learning in learners in an independent mainstream high school in Gauteng Province.
3.3 Research methods

3.3.1 Research paradigm
A research paradigm is a set of common beliefs and agreements shared between scientists, a model or pattern according to which the social scientists view the objects of the research and how they should be understood and addressed (Leedy & Omrod, 2015). The purpose of the research and how it will be conducted are influenced by the researcher’s paradigmatic beliefs. According to Kawulich (2012), the paradigm as a basic belief system is based on ontological, epistemological, and methodological assumptions.

In the current study, a constructivist paradigm was employed. According to Hatch (2002), this school of scientific thought postulates that there is no real-world out there, only a narrative truth. Reality can thus only be known by those who experience it personally (Hatch, 2002). Those who are personally experiencing it construct knowledge through a process of self-conscious action (Hatch, 2002). Therefore, since the current researcher is a teacher working in a mainstream independent high school with learners experiencing barriers to learning she was able to understand the teachers’ perceptions and could construct knowledge based on her personal experience. The methodology typically employed in this approach gave the researcher the opportunity to co-construct understandings relating to the experiences of the participants (teachers at the selected school) by collecting data using qualitative methods which included interviews, observations and document analysis.

3.3.2 Research approach
According to Leedy and Ormrod (2015), a qualitative research approach was used to seek an in-depth understanding of a phenomenon, situation, problem or event in naturalistic settings. Furthermore, qualitative research is concerned with non-statistical methods and small samples (Leedy & Ormrod, 2015). Since the purpose of the study was to find a data-rich description of teachers’ perspectives on addressing barriers to learning in learners in an independent mainstream high school in Gauteng province by collecting
data through interviews, observations and document analysis, a qualitative research approach was considered the most appropriate approach.

### 3.3.3 Research design

A case study design was employed in the current study. According to Fouché and Schurink (2011), qualitative researchers are primarily interested in the meaning participants give to their life experiences by using some form of case study to immerse themselves in the activities of a single person or small group of people in order to obtain an understanding of their social world. The researcher looks for patterns in the research participant’s words and actions in the context of the case as a whole. A case study design was appropriate in the current study, as the researcher wanted to obtain an understanding of the teachers’ perspectives when addressing barriers to learning in learners and to identify pertinent themes based on the teachers’ responses in the selected school (Fouché & Schurink, 2011).

### 3.4 Ethical considerations

The research project was approved by the Faculty of Educations’ Research Ethics Committee at the University of South Africa (see Appendix A). After ethical clearance was obtained, the researcher requested permission to conduct research from the particular mainstream independent school. The researcher provided the principal of the school with an information letter to explain what the research was about and requested permission to conduct research at the school (see Appendix B). The researcher obtained written permission from the principal (see Appendix C).

The researcher acted responsibly towards the participants in the research project and reported the findings honestly and accurately (De Vos, Strydom, Schulze & Patel, 2011). The guiding ethical principles as they were applied to the current study are listed and discussed in Table 3.1.
<table>
<thead>
<tr>
<th>Principles</th>
<th>Application to study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoidance of harm: Research involving human subjects is based on the principle that it should be conducted in a way that minimises harm or risk (Leedy &amp; Ormrod, 2015).</td>
<td>Participants of the study were mainly the teachers. There was no direct contact with the learners as the teachers constituted the units of analysis. No teacher was exposed to any risks in the study. There were no direct benefits as a result of the study.</td>
</tr>
<tr>
<td>Voluntary participation: Participation should at all times be voluntary, and no one should be forced to participate in the study (Leedy &amp; Ormrod, 2015).</td>
<td>The target population was the teachers in the mainstream independent school. An informed consent letter was sent to all the parents (see Appendix D) and teachers (see Appendix E). The participation was voluntary, and teachers and parents could withdraw from the study at any time, without any adverse consequences. None of the teachers and parents was compelled to participate in the study.</td>
</tr>
<tr>
<td>Informed consent: Respect for persons requires that participants be given the opportunity to choose what shall or shall not happen to them (Leedy &amp; Ormrod, 2015).</td>
<td>Informed consent was requested from both the parents (see Appendix D) and the teachers (see Appendix E) of the learners experiencing barriers to learning in the mainstream independent school. Teachers provided informed consent since they were interviewed during the study. Furthermore, parents provided informed consent because their children were present in the classroom when the researcher observed the teacher while she provided learning support to the learners. There was no direct contact with the learners. Parents also gave the researcher consent to view documents related to their child such as their learner profile.</td>
</tr>
<tr>
<td>Anonymity and confidentiality: Information collected during the study is confidential and should be reported anonymously to ensure the</td>
<td>Only the researcher and her supervisor had access to the raw data obtained from the documents analysed (see Appendix F),</td>
</tr>
</tbody>
</table>
### Principles

**privacy of the participants (Leedy & Ormrod, 2015).**

**Application to study**

Observations (see Appendix G) and interviews (see Appendix H). The researcher made sure that the name of the school and the names of the teachers were not disclosed in the research project.

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**Action and competence of the researcher:**

Researchers are ethically obliged to ensure that they are competent, honest, and adequately skilled to undertake the investigation (Strydom, 2011).

**Application to study**

The researcher is a qualified educator and has been in the education field for the past 9 years and the researcher is thus familiar with the field of interest.

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**Appropriate storage of data:**

Data collected in research studies should be safeguarded and stored appropriately (Strydom, 2011).

**Application to study**

The policy of the University of South Africa states that data collected should be stored electronically, as well as in hard copy, for 10 years. Therefore the researcher will ensure that the data be safely stored in hard copy and electronically for 10 years in the Department of Inclusive Education.

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### 3.5 Setting

The researcher selected a specific school and hoped to obtain data-rich information from the teachers. The independent mainstream high school where the research was conducted was established in 1985 (personal communication with the principal). The school is situated in an urban area and currently accommodates 180 learners between the ages of 12 and 19 years. Of the 180 learners, there are approximately 36 learners in the senior and further education and training (FET) phase who experience barriers to learning (personal communication with the principal). Currently, there is no school-based support team at the school to support learners who experience barriers to learning.

The independent mainstream high school is aligned to South Africa’s national academic standards (CAPS) and furthermore seeks to extend student learning to meet international grade-level standards by having learners write the independent examinations board (IEB) exams in matric (Grade 12) (personal communication with the principal). In every subject,
the curriculum encompasses the requirements of the CAPS curriculum and deepens student knowledge to ensure that the learners are globally competitive. The school integrates technology into instruction and differentiates according to the support needs of every learner (personal communication with the principal).

3.6 Participants
The target population of the research investigation consisted of Grade 8 to 12 teachers working in the mainstream independent high school. The teachers teach various subjects such as Business, Economic Management Sciences, English, Social Science, Physical Sciences, and Mathematics. To maintain the anonymity of the research, participant codes were allocated to the transcribed responses (P=Participant 1-12). The sampling method, selection criteria, sample size and participant descriptions are presented in the following sections.

3.6.1 Sampling method and selection criteria
Purposive sampling was used to select the participants for this study. According to Leedy and Ormrod (2015), purposive sampling can be defined as a non-probability sampling method where the participants are selected based on the purpose of the research. Therefore, purposive sampling was appropriate since the researcher wanted to collect data from teachers addressing barriers to learning in a particular independent mainstream school. There are 20 teachers in the school and twelve teachers teaching in the senior and FET phase were selected for the study.

The inclusion criteria were as follows:

- The teachers currently teaching at the independent mainstream high school were included in the research study.
- Only teachers who provided consent were included in the study.
- Parents had to give consent for the researcher to observe the learners in the classroom while the teachers were providing the learners with support. Therefore the researcher only included teachers where parents gave consent for the researcher to observe.
• Teachers of different genders were included in the study.

3.6.2 Sample size
The sample size consisted of 12 teachers currently teaching at the mainstream independent high school. Of the twelve teachers who participated in the study, 60% were females and 40% were males.

3.6.3 Participant description
Table 3.2 provides a detailed description of the participants in the study.

Table 3.2 General participant description (n=12)

<table>
<thead>
<tr>
<th>Participant (P)</th>
<th>Population group</th>
<th>Gender (Male =M /F = Female)</th>
<th>Subjects which the teachers are teaching</th>
<th>Qualifications</th>
<th>Training in inclusive education</th>
<th>Years of teaching experience</th>
</tr>
</thead>
</table>
| P1- Mrs Anderson | White            | F                            | Life Orientation (Gr 10)                | • Bachelor of Art  
                             |                  |                              |              | • Honours in Art              | No                           | 40 years                     |
| P2- Mr Paul     | Black            | M                            | Accounting and Business Science Gr 9-12| • Bachelor of Education  
                             |                  |                              |              | (Senior and FET phase)        | No                           | 24 years                     |
|                 |                  |                              |                                         | • Diploma in Education  
                             |                  |                              |              |                             |                              |                               |
| P3- Mrs Patterson| Indian           | F                            | Physical Sciences (Gr 10-12)  
                             |                  |                              | • Bachelor of Science degree in Biology  
                             |                  |                              |              | • PGCE in Mathematics and Science  
<pre><code>                         |                  |                              |              | No                           | 14 years                     |
</code></pre>
<table>
<thead>
<tr>
<th>Participant (P)</th>
<th>Population group</th>
<th>Gender (Male = M / Female = F)</th>
<th>Subjects which the teachers are teaching</th>
<th>Qualifications</th>
<th>Training in inclusive education</th>
<th>Years of teaching experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>P4 - Mr Jacobs</td>
<td>Black</td>
<td>M</td>
<td>Mathematics (Gr 8-10)</td>
<td>PGCE, National Diploma in Electrical Engineering</td>
<td>No</td>
<td>2 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mathematical Literacy (Gr 10)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P5 - Mr Smith</td>
<td>Black</td>
<td>M</td>
<td>Life Sciences (Gr 10-12), Natural Science (Gr 8-9)</td>
<td>Bachelor of Science in Biology, Post Graduate Certificate in Education</td>
<td>No</td>
<td>28 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P6 - Mrs George CI</td>
<td>White</td>
<td>F</td>
<td>English (Gr 10-12)</td>
<td>Bachelor of Education (FET Phase)</td>
<td>No</td>
<td>31 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P7 - Mr Teddy</td>
<td>Black</td>
<td>M</td>
<td>Life Orientation (Gr 8-12)</td>
<td>Secondary Teaching Diploma – (Senior and FET phase), Bachelor of Arts degree in Sports Science (in progress)</td>
<td>No</td>
<td>24 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P8 - Mrs Singh</td>
<td>Indian</td>
<td>F</td>
<td>Dramatic Arts (Gr 8-12)</td>
<td>Bachelor of Arts in Law, Honours in Law</td>
<td>No</td>
<td>11 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Participant (P)</td>
<td>Population group</td>
<td>Gender (Male =M / Female = F)</td>
<td>Subjects which the teachers are teaching</td>
<td>Qualifications</td>
<td>Training in inclusive education</td>
<td>Years of teaching experience</td>
</tr>
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</tr>
<tr>
<td>P9- Mr James</td>
<td>Coloured</td>
<td>M</td>
<td>Business (Gr 11-12) Economic Management Sciences (Gr 8)</td>
<td>• Masters in Linguistics</td>
<td>No</td>
<td>3 years</td>
</tr>
<tr>
<td>P10- Mr Ngubane</td>
<td>Black</td>
<td>M</td>
<td>Engineering Graphics &amp; Design (Gr 10-12) Technology (Gr 8-9) Information Technology (Gr 11)</td>
<td>• Bachelor of Education (Senior and FET Phase)</td>
<td>Yes</td>
<td>9 years</td>
</tr>
<tr>
<td>P11- Miss Pepper</td>
<td>White</td>
<td>F</td>
<td>Visual Arts (Gr 10-12) Creative Arts (Gr 8-9) Life Orientation (Gr 9)</td>
<td>• Bachelor of Arts in Fine Arts • Bachelor in Education (FET)</td>
<td>Yes</td>
<td>2 years</td>
</tr>
<tr>
<td>P12- Mrs Olivier</td>
<td>White</td>
<td>F</td>
<td>Afrikaans (GR 8-12)</td>
<td>• Bachelor of Arts in Languages • Professional High School</td>
<td>No</td>
<td>30+</td>
</tr>
</tbody>
</table>
3.7 Data Collection Technique

The following material and apparatus were used for data collection.

3.7.1 Material

3.7.1.1 Semi-structured interviews

In qualitative research, semi-structured interviews are seen as the predominant way of research (Greeff, 2011). The semi-structured interviews for the study consisted of questions that granted the researcher access to probe and clarify answers (Nieuwenhuis, 2016). Furthermore, the interview process gave the interviewer and the participant more flexibility and allowed the interviewer to follow up on certain interesting information that has emerged in the process (Greeff, 2011). The interviews were the primary data collection method for this study. The researcher was able to gather data from the participants about their opinions, feelings and experiences (Leedy & Ormrod, 2015). Therefore, the interviews enabled the researcher to obtain an understanding of teachers’ perspectives on addressing barriers to learning in learners in an independent mainstream high school in Gauteng province.

The interviews lasted for approximately 20 minutes and were audiotaped and transcribed verbatim (Nieuwenhuis, 2016). The interview schedule included a number of questions that allowed the researcher to obtain information on the phenomenon of the study (see Appendix H). Creswell’s (2012) provides guidelines when using open-ended questions and the importance of using a quiet environment.
3.7.1.1 Using open-ended questions, probing to obtain more information
The researcher conducted individual, face-to-face interviews with the twelve teachers and used open-ended questions. In line with the constructivist paradigm, the researcher obtained as much information as possible on addressing barriers to learning in learners in the independent mainstream high school by asking multiple open-ended questions and avoiding yes or no questions. This enabled the researcher to obtain detailed answers, as the researcher was also able to ask probing questions when the teachers provided little information on a topic.

3.7.1.2 Locating a quiet and comfortable environment
The interviews with the 12 teachers were conducted after school in their classrooms. There were no distractions in the classroom when the researcher interviewed the teachers.

The following topics were addressed in the interview schedule:

1. Biographical information
2. Qualifications of teachers
3. Training on addressing barriers to learning in learners in the school.
4. Teachers' perspectives on addressing barriers to learning in learners in the school.
5. Challenges related to addressing barriers to learning in learners in the school.
6. Teachers’ responses to addressing the diverse needs of learners who experience barriers to learning in the school.
7. Teachers’ views on support needed to effectively address barriers to learning in learners in the school.

3.7.1.2 Document Analysis
According to Merriam (2009) document analysis is an information-rich source. The researcher used this instrument to collect additional useful information. Bowen (2009) stated that document analysis sheds significant light on the phenomenon being studied. The potential documents include but are not limited to, institutional documents, policies,
files and records (Merriam, 2009). In the current study (see Appendix F), the researcher analysed the following documents to help answer the research questions:

- The learner profiles – the learner profiles usually include biographical information, a document on the strengths and weakness of the learner as well as support needs assessment.
- Teacher files – the teacher files include lesson plans as well as any information on how the teachers differentiated the curriculum in order to support the learners experiencing barriers to learning.
- The National Strategy on Screening, Identification, Assessment and Support (DoE, 2014).
- Guidelines for Inclusive Teaching and Learning (DoE, 2010b).
- Guidelines for responding to learner diversity through curriculum and assessment policy statements (DoE, 2011b).

In the analysis of the documents, the researcher considered Bowen’s (2009) findings that documents can offer information as well as better understandings of a specific event. The DoE documents provided in-depth information on how teachers are intended to respond to the diverse needs of learners in inclusive settings.

3.7.1.3 Observation

Observation is the process of gathering information by observing people and places at a research site (Creswell, 2012). In other words, observation refers to what is seen through the eyes of the observer (Creswell, 2012). The observations in the selected mainstream independent high school enabled the researcher to obtain information on the teachers’ perceptions regarding addressing barriers to learning in learners in inclusive settings, how the teachers were addressing the diverse needs of learners experiencing barriers to learning, and the challenges the teachers experience when addressing the barriers to learning. It should also be noted that there was no interaction with the teachers during
observation sessions. The researcher merely observed the teacher’s activities related to the phenomena. The observations were used (see Appendix G) to corroborate the data obtained from the interviews and document analysis.

3.7.3 Apparatus
During the interviews and observations, the researcher used a clipboard and a pen to write down any additional information as well as what she observed during the observations. Furthermore, during the interviews, a digital audio recorder was used to record the interviews. The audio recorder allowed for a fuller record of notes and the interviewer was able to concentrate on the interview itself (Smith, Harre, & Van Langenhoven, 1995). Recording the interviews enabled the researcher to listen to the interviews over and over again when transcribing the interviews.

3.8 Data collection
3.8.1 Data collection procedures
The data collection procedures which were followed after obtaining ethical clearance for the study are the following:

- The researcher contacted the principal of the school and requested permission from the principal to conduct the research at the school.
- The researcher discussed specific dates with the principal to conduct the research at the school.
- The teachers and parents were given information letters with consent forms to read through and complete.
- The researcher collected the completed consent forms from the teachers and the parents.
- The researcher arranged specific dates and times to conduct interviews with the teachers and to observe them teaching in their classrooms.
- Prior to the main research investigation, the researcher conducted a pilot study with three teachers to determine whether there are any flaws in the measuring instruments (interview questionnaire, document analysis worksheet and observation schedule).
After the pilot study, the researcher went through the data and there were no changes made to the measuring instruments. No amendments were necessary since the teachers’ answers truly represented the phenomenon measured in the study.

- The researcher then commenced with the main investigation.
- The researcher conducted all twelve interviews and observed all the teachers while they were teaching.
- The researcher reviewed the learner profiles and teacher files.
- The researcher transcribed the interviews and recorded the data obtained from the observations and documents analysed.
- The researcher analysed the data and wrote up the results.
- The researcher completed the research project.

3.8.2 Data processing and data Analysis
According to Nieuwenhuis (2016), data analysis includes a range of approaches and procedures whereby the researcher extracts explanations, understandings or interpretations from the qualitative data. Furthermore, data analysis involves the process of decreasing enormous volumes of data as well as identifying themes (Schurink et al., 2011).

The researcher followed Creswell’s (2012) model for analysing the data. Firstly, after completing the data collection process, the researcher started organising the data. This included sorting the data according to the different sources, namely interviews, documents analysed and observations, and transcribing the individual interviews from the audio recordings. Secondly, the researcher read through all the data and thereby obtained a sense of the information and was able to reflect on the overall meaning of the information. Thirdly, the research began analysing the data by starting to code the data into ‘chunks’ before bringing meaning to the chunks. The researcher segmented sentences, paragraphs into categories and labelled the categories with a term. Lastly, the researcher used the coding process to generate a small number of themes or sub-themes/categories for the study (Creswell, 2012).
3.9 Trustworthiness of the study
It was essential to make sure that the findings and interpretations of the study were accurate. To ensure the trustworthiness of the study, various methods were applied which warranted credibility, transferability, dependability and conformability (Creswell, 2012). As mentioned earlier the researcher conducted a pilot study to improve the trustworthiness of the study.

3.9.1 Credibility
Credibility refers to the degree to which the results represent a credible analysis (Creswell, 2012). The researcher employed the following strategies to ensure credibility in the study: triangulation, prolonged engagement with the participants, and member checking.

According to De Vos et al. (2011) triangulation is the process of confirming evidence from different sources such as the methods, types of data, and theories. The researcher used different data sources, such as the interviews, observations and documents to triangulate the data (Creswell, 2012).

During data collection, the researcher continued her engagement with the teachers to ensure that they trusted her and answered the questions honestly. The prolonged engagement enabled the researcher to conduct in-depth interviews until data saturation was achieved.

The researcher further ensured credibility by conducting member checking. This process included submission of the transcripts, feedback and conclusions to the teachers to eradicate obvious mistakes during transcription (Creswell, 2012). Twelve of the teachers verified the data collected.

3.9.2 Transferability
According to Schurink et al. (2011), transferability talks about the extent to which the findings of the research can be applied in other settings or with other participants. It was hoped that the perspectives of teachers addressing barriers to learning in learners could
be transferred to a wider population of teachers working with learners experiencing barriers to learning in mainstream independent schools.

3.9.3 Dependability
Creswell (2012) stated that the dependability of data is the extent to which the same findings can be repeated if the same research instruments were utilised with similar participants under similar conditions. As mentioned earlier the researcher used interviews, document analysis and observations to understand the perspectives of teachers addressing barriers to learning in learners in the mainstream independent high school. To ensure dependability the researcher requested her supervisor to check the accuracy of the data. Furthermore, the researcher asked one of her colleagues to review the proposed interview questions. This improved the dependability of the study (Creswell, 2012).

3.9.4 Conformability
Confirmability refers to ensuring that the data and interpretations of the findings are not fabrications of the researcher’s imagination, but interpretations based on the data (Creswell, 2012). As discussed earlier, the researcher ensured conformability by submitting the data to her supervisor. This process also confirmed that the findings for the study were not subjective or biased by her thoughts or experience.

3.10 Summary
In this chapter, the researcher gave a description of the research methodology. The following chapter will focus on analysing and interpreting the data.
4.1 Introduction
In the foregoing chapter, the researcher discussed the research methodology employed in this study. This chapter will analyse the data obtained from the individual interviews, the observations and the document analysis. The findings are presented using themes and sub-themes, as well as literature that will be infused in the discussion of the findings, followed by conclusions drawn by the researcher. The research questions that guided the study is discussed in the following section.

4.1.1 Key research question
What are teachers’ perspectives on addressing barriers to learning in learners in an independent mainstream high school in Gauteng province?

4.1.2 Sub-questions
• What do teachers perceive as the challenges when addressing barriers to learning in learners in an independent mainstream high school in Gauteng Province?
• How are teachers responding to the diverse needs of learners who experience barriers to learning in an independent mainstream high school in Gauteng Province?
• What are teachers’ views on the support needed to effectively address barriers to learning in learners in an independent mainstream high school in Gauteng Province?

4.1.3 Results of the study
Figure 4.1 provides an overview of themes and sub-themes identified by the researcher. The themes and sub-themes subsequently assisted the researcher in addressing the research question.
Figure 4.1 Themes and sub-themes identified

Theme 1: Challenges experienced by teachers when addressing barriers to learning in learners in an independent mainstream high school in Gauteng Province

- Sub-themes:
  - Attitudes towards addressing barriers to learning in learners in an inclusive setting
  - Lack of training, skills and knowledge on addressing barriers to learning in an inclusive setting
  - Lack of time when teaching in an inclusive classroom
  - Managing learners with and without barriers to learning in one classroom
  - Lack of parental involvement
  - Lack of paraprofessionals in the school to provide learners with support

Theme 2: Teachers’ responses to the diverse needs of learners who experience barriers to learning in an independent mainstream high school in Gauteng Province

- Sub-themes:
  - Identifying the diverse needs of learners who experience barriers to learning
  - Curriculum differentiation for learners who experience barriers to learning.
  - Differentiated learning environment for learners who experience barriers to learning

Theme 3: Teachers’ views on the support needed to effectively address barriers to learning in learners in an independent mainstream high school in Gauteng Province

- Sub-themes:
  - Further training needed on inclusive education
  - Teaching assistants needed in the classroom
  - Establishment of a school-based support team
4.2 Theme 1: Challenges experienced by teachers when addressing barriers to learning in learners in an independent mainstream high school in Gauteng Province

This theme reports on the challenges experienced by the twelve teachers who participated in the study when addressing barriers to learning in learners in an independent mainstream high school in Gauteng Province. As noted in Figure 4.1, six sub-themes were identified.

4.2.1 Sub-theme a: Attitudes towards addressing barriers to learning in learners in an inclusive setting

- Negative attitudes towards addressing barriers to learning in learners in an inclusive setting

Seven participants (58.3%) had negative attitudes towards addressing barriers to learning in learners in an independent mainstream high school. The following verbal quotes reflect the teachers’ negative attitudes.

“Ah inclusivity, I think poses uh a lot of challenges in the classroom. I think it poses a challenge, it complicates teaching as a whole” (Participant 9).

“Uh, well, my take ma'am, I know the South African educational system at the moment prefers the inclusivity of learners with barriers to be in the mainstream, but I think, that learners who have barriers should be taught an adaptive curriculum in a school catering for their specific needs, otherwise the learners who do not have learning barriers get noisy in the classroom and are bored. This is because you are attending to the learner with barriers and not them. It becomes difficult to control the classroom then” (Participant 8).

The results of the current study are in agreement with a survey study conducted by Unianu (2012) in mainstream high schools in Romania. The researcher found that teachers have negative prejudices regarding the inclusion of learners experiencing barriers to learning in mainstream schools (Unianu, 2012). Furthermore, results from the current study are also in agreement with those from a study conducted by Campbell, Gilmore, and Cuskelly (2003) in Australia with pre-service teacher education students.
The researchers investigated the pre-service education teachers’ attitudes towards inclusive education for learners experiencing barriers to learning (Campbell et al., 2003). The results of the study by Campbell et al. (2003) indicated that pre-service education teachers believe that the needs of learners with barriers to learning are best met in separate classrooms.

In conclusion, it appears that more than half (58.3%) of the teachers in our study have negative attitudes towards addressing barriers to learning in learners in an independent mainstream high school in Gauteng. The main reason for the negative attitudes seems to be the demands the teachers feel are placed on them by inclusive practice (complicates teaching, makes the classroom difficult to control).

- **Positive attitudes towards addressing barriers to learning in learners in an inclusive setting**

Five participants (41.6%) had positive attitudes towards addressing barriers to learning in learners in an independent mainstream high school. The following verbal quotes reflect the teachers’ positive attitudes.

“Okay, I think it’s important those learners experiencing barriers to learning be accommodated included in mainstream schools because as all learners have the right to quality education. All learners with or without barriers to learning should be taught in the same classroom” (Participant 3 [P3]).

“I feel inclusivity is very much important in the classroom, no one should be discriminated against due to colour, race, sex or disability” (Participant 7)

Results from our study agree with the results from a comparative study of in-service teachers’ attitudes and self-efficacy in implementing inclusive practices in South Africa and Finland and its implications for teacher education in these countries (Savolainen, Engelbrecht, Nel, & Malinen, 2012). In this study, some teachers reported that learners experiencing barriers to learning should receive a quality education in the least restrictive
environments and had positive attitudes towards addressing barriers to learning in learners in inclusive mainstream schools (Savolainen et al., 2012).

In summary, less than half (41.6%) of the teachers had a positive attitude towards addressing barriers to learning in learners in an independent mainstream high school in Gauteng Province. The positive attitude appears to be grounded in ethical convictions, as evidenced in the use of the term “should be”.

4.2.2 Sub-theme b: Lack of training, skills, and knowledge addressing barriers to learning in an inclusive setting

Seven teachers (58.3%) noted that they lack training on addressing barriers to learning in an inclusive setting, and therefore did not know how to address the barriers to learning in learners in the mainstream school. The following verbal quotes reflect the teachers’ concerns regarding the lack of training on inclusive education:

“No one is qualified. And that’s a challenge. This means we lack skilled manpower in the country. We need skilled professionals to come and train us on how to implement inclusive education in our classrooms” (Participant 2).

“We aren’t trained on how to deal with learners with barriers, for example, learners with autism spectrum disorder (ASD), attention-deficit-hyperactivity-disorder (ADHD) and other barriers to learning. We are following a trial and error process with these children in the classroom as we do not have the necessary training” (Participant 3).

“We are expected to teach the learners who present with barriers, even though we are not trained on how to address these barriers to learning. We have no idea how to manage these learners and this is a challenge for some teachers, like myself” (Participant 9).

The results from the current study revealed that teachers think they do not have adequate training on inclusive education and often feel overwhelmed as they do not know how to address the needs of learners who experience barriers to learning. Teachers reported that they need training on inclusive education and the necessary skills to be able to also feel confident in providing the best support to their learners. The results from the current study
are in agreement with a study conducted by Dalton et al. (2012) in South Africa. The researcher reported on the reflections of teachers and therapists with regards to the implementation of inclusive education in South Africa (Dalton et al., 2012). The results indicated that teachers feel they do not have the necessary skills to adapt the curriculum to meet the needs of learners experiencing barriers to learning (Dalton et al., 2012). Furthermore, results from our study are also in agreement with a study conducted by Subban and Sharma (2006) in Australia. These researchers investigated the perceptions of primary school teachers regarding inclusive education in general mainstream schools. They found that teachers experienced a lack of training on inclusive education which also led to negative attitudes towards the implementation of inclusive education (Subban & Sharma, 2006). These results indicate how important it is for teachers to have the skills and knowledge on how to implement inclusive education, as a lack in this regard may hinder the successful implementation of inclusive practices and also lead to less positive attitudes towards inclusive education (Dalton et al., 2012; Subban & Sharma, 2006).

The study further highlighted that teachers work on what they refer to as a 'trial and error' basis and aim to accommodate the needs of learners with e.g. ADHD but they, unfortunately, do not know if they are following the correct procedure or adequately supporting the learners. Our results are therefore in agreement with a mixed-method research study conducted by Nishan (2018) with teachers from primary schools in the Maldives. Teachers in the study by Nishan (2018) reported that they are not equipped with skills and knowledge on inclusive education and are therefore not sure whether they are implementing appropriate strategies to address barriers to learning in the classroom. It is essential to provide teachers with sufficient and effective training on inclusive education as this will help them to be more confident when implementing inclusive education in the classroom setting (Nishan, 2018).

In conclusion, more than half (58.3%) of the teachers indicated that they do not feel adequately trained on inclusive education and believe they have inadequate knowledge and skills to address barriers to learning experienced by learners.
4.2.3 Sub-theme c: Lack of time when teaching in an inclusive classroom

Six teachers (50%) found time to be a challenge when addressing barriers to learning in the mainstream high school. The following verbal quotes reflect the teachers’ experienced challenge of not having enough time to address barriers to learning in an inclusive setting:

“So, going back to the challenges, now my main challenge would be a time constraint, because other than your teaching time, you’ve got to fit in a lot of administrative duties and therefore do not have the time to provide learners who experience barriers to learning with the necessary support” (Participant 6).

“We only have a number of weeks to complete the syllabus, and therefore do not have the extra time to provide every child with individual support” (Participant 2).

"Time is my biggest challenge. We have a number of other administrative duties that we need to do besides teaching the syllabus, which take up a lot of time. For example marking, lesson planning, setting exams or test papers, and updating our teacher files” (Participant 3).

It emerged from the interviews in the current study that many teachers have time constraints which prevent them from addressing barriers to learning in an inclusive setting. The time constraints were mostly related to teachers' administrative duties which they need to attend to. The administrative duties included marking, setting exams and test papers, and upgrading teacher files.

The findings of the current study thus concur with the mixed-method research study conducted by Nishan (2018) with teachers in a primary school in the Maldives. Nishan (2018) found that teachers described time as a challenge hindering the implementation of inclusive education. Teachers in the study by Nishan (2018) reported that they did not have enough time to provide learners who experience barriers to learning with individual support as there is no extra time in a lesson to attend to them as well.

Furthermore, results from our study are also in agreement with a survey study conducted by Cassaday (2011) in the United States. Cassaday (2011) investigated the challenges experienced by teachers when addressing barriers to learning in an inclusive setting. The
results of the study indicated that the majority of teachers were feeling frustrated as they did not have enough time to address the barriers to learning by implementing inclusive education (Cassaday, 2011). The teachers had lessons to plan, paperwork to complete, extra-curricular activities and meetings to attend.

Apart from the interviews, the researcher noticed during the observation in the classroom and analysis of the Curriculum and Assessment Policy Statement (CAPS) for Grades 8-12 (DoE, 2011a) that teachers had limited instructional time per week for the National Curriculum Statement (NCS) subjects (home language, first additional language, mathematics, life orientation and the three other subjects from group B in the NCS policy document). The instructional time for the NCS subjects for Grades 8-12 is depicted in Tables 4.1 and 4.2.

**Table 4.1 Instructional time for NCS subjects for the Senior Phase**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Language</td>
<td>5</td>
</tr>
<tr>
<td>First Additional Language</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4.5</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Technology</td>
<td>2</td>
</tr>
<tr>
<td>Economic Management Sciences</td>
<td>2</td>
</tr>
<tr>
<td>Life Orientation</td>
<td>2</td>
</tr>
<tr>
<td>Creative Arts</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>27.5</strong></td>
</tr>
</tbody>
</table>
Table 4.2 Instructional time for NCS subjects for FET phase

<table>
<thead>
<tr>
<th>Subject</th>
<th>Time Allocation per week (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Language</td>
<td>4.5 hours</td>
</tr>
<tr>
<td>First additional Language</td>
<td>4.5 hours</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4.5 hours</td>
</tr>
<tr>
<td>Life Orientation</td>
<td>4.5 hours</td>
</tr>
<tr>
<td>A minimum of any three subjects from Group B</td>
<td>12 (3x4h)</td>
</tr>
<tr>
<td>National policy pertaining to the programme</td>
<td></td>
</tr>
<tr>
<td>and promotion requirements of the National</td>
<td></td>
</tr>
<tr>
<td>Curriculum Statement Grades R-12, subject to</td>
<td></td>
</tr>
<tr>
<td>the provisos stipulated in paragraph 28 of</td>
<td></td>
</tr>
<tr>
<td>the said policy document.</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>27.5</td>
</tr>
</tbody>
</table>

As can be seen in Table 4.2, teachers only have a total of 4.5 hours to teach mathematics in Grade 10. While observing a teacher during her mathematics lesson for Grade 10, the researcher noticed that the teacher had a specific lesson planned for that day. However, instead of focusing on the lesson that had been planned the teacher spent the entire lesson doing corrections of the previous days' work. The teacher, therefore, did not have enough time to complete her lesson as she first had to attend to the corrections. This teacher did not have extra time to assist learners experiencing barriers to learning with individual support or to implement inclusive education practices. In another classroom, the researcher observed the teachers teaching Life Science and Afrikaans for Grade 12. As with the first teacher, each of these two teachers also had to first attend to the corrections of the previous day's work before she could start with her lesson for the day. Both the teachers had to spend an entire period doing corrections while they were supposed to explain an assignment to the learners. It is evident, therefore, that teachers have other time constraints which may hinder the implementation of inclusive education practices such as differentiating the curriculum.
In conclusion, the findings of the current study highlighted that half (50%) of the teachers do not have enough time to implement inclusive education practices or to provide learners experiencing barriers to learning with individual support as they either have administrative duties to attend to or require extra time to explain the previous days’ work to all learners in the classroom.

4.2.4 Sub-theme d: Managing learners with and without barriers to learning in one classroom

Ten teachers (83.3%) reported that managing learners both with and without barriers to learning posed a challenge to the implementation of inclusive education. The following verbal quotes reflect the teachers’ challenge of managing learners with and without barriers to learning in one classroom:

“Inclusive education in the classroom creates a lot of challenges for me in the classroom. One of the challenges you find is when the learners with barriers, for examples, have difficulty understanding the material that you teach, so, you need to give them more attention and when you give them more attention it also creates another problem, as learners without barriers grasp the material as quickly. Now, you find that the learners without barriers become bored and start to fidget while you are trying to explain the work to the other learner with barriers to learning. It complicates teaching as a whole” (Participant 9).

“I've got five learners with barriers to learning in my matric class and I need to explain the work to them over and over again, or adapt an activity for them then I do not get the time to teach the rest of the work to the other learners who have not problems. Therefore, you can never work at the pace you are supposed to as you have to make sure that all learners are on the same page and that everyone understands the work before you move on to the next lesson” (Participant 8).

“Some learners are slow and they should be placed in their own classroom and or have a teaching assistant in the classroom to help the learner experiencing barriers to learning.
Because we sometimes get frustrated as the other learners without barriers become bored” (Participant 6).

It emerged from the interviews that teachers were frustrated about having learners with and without barriers to learning in one classroom. They reported that having learners with barriers to learning creates problems for them as learners without barriers to learning become bored and that they spend a lot of time explaining or adapting activities for them.

Results from our study are in agreement with a study conducted by Mukhopadhyay, Nenty, and Abosi (2012) in mainstream schools in the South Central Region of Botswana. Mukhopadhyay et al. (2012) reported that teachers expressed their frustration about teaching learners with and without barriers to learning in one classroom. Teachers were of the opinion that learners with barriers to learning should be taught in a special unit and that it is impossible to provide equal attention to all learners (Mukhopadyay et al., 2012). It is evident that teachers are frustrated with the practice of inclusive education as they are unable to provide all the learners with equal attention and in the process may, therefore, be unable to implement the education practices as it is expected of them.

In conclusion, the results of the current study indicated that more than half (83.3%) of the teachers were frustrated with having to teach learners with and without barriers to learning in one classroom and that this poses a challenge for a teacher when addressing barriers to learning in learners in an independent mainstream high school in Gauteng Province.

4.2.5 Sub-theme e: Lack of parental Involvement
Five teachers (41.6%) reported that the parents are not involved in their child’s education and that this poses a challenge to successfully addressing barriers to learning in learners in an inclusive setting. Research found that parental involvement is a key strategy for promoting effective implementation of inclusive education and that there are several benefits to parents being involved in their child’s education (Afolabi, 2014; Povey et al., 2016). The benefits include improved academic outcomes, improved self-esteem, and
higher teacher morale (Durisic & Bunijevac, 2017; Henderson & Berla, 1994; Sanders & Sheldon, 2009). The following verbal quotes reflect the teachers’ perceptions regarding parent’s involvement in the school:

"I previously had two students that I've had many, many meetings with the parents, asking them, to please be involved in their children’s education help their children and provide them with extra support as they are struggling to cope in the classroom, but they do not get the extra support for their child as they do not have the time to take them for extra classes" (Paragraph 1).

“We also try and reach out to parents to involve them in the education of their child but some parents are illiterate and do not understand when we send home letters or when we try and explain why it is important for them to be involved in their child’s education. This creates a challenge to parental involvement” (Participant 7).

“Some parents are ashamed of their children’s disabilities or are in denial and this poses a challenge to parental involvement. I have seen that this causes parents to be uninvolved in their children’s education” (Participant 5).

Results from the current study are in agreement with a descriptive study conducted by El Shourbagi (2017), who examined barriers to parental involvement in Omani mainstream schools as perceived by teachers. The results of the study showed that there are various family, child, parent-teacher and societal levels which act as barriers to effective parental involvement in inclusive education (El Shourbagi, 2017). However, results from the current study are not in agreement with a study conducted in an inclusive mainstream school in Lithuania (Sukys, Dumcience, & Lapeniene, 2015). Their results indicated that parents were involved in their child’s schoolwork and with teachers (Sukys et al., 2015). Furthermore, Sukys et al. (2015) also found that parents were able to acknowledge that their child had a barrier to learning. The findings of the current study, on the other hand, indicate that there several factors hindering effective parental involvement in inclusive education.
In conclusion, the findings of the current study indicated that five (41.6%) of the teachers were of the opinion that parents were not involved in their child’s education and that this creates a challenge when trying to address barriers to learning in learners in an independent mainstream high school in Gauteng Province. Although more than half of the teachers did not specifically mention this particular challenge, this can not be regarded as an indication that it is not a significant issue.

4.2.6 Sub-theme f: Lack of paraprofessionals in the school to provide learners with the support

Five teachers (41.6%) in the study indicated that the mainstream school does not have paraprofessionals to provide learners who experience barriers to learning with the necessary support. The school in the current study does not have policies that acknowledge the need for having paraprofessionals and therefore does not have any assistance on that level at the time of the study. According to the teachers, this poses a challenge to them as it hinders the effective implementation of inclusive education in the school. The following verbal quotes reflect the teachers' concerns regarding the lack of paraprofessionals providing support to learners with barriers to learning:

"Look the school needs to have a school counsellor and our school doesn’t have one. There are too many learners that experience barriers to learning that don't receive the necessary support needed. I think there are not enough paraprofessionals in the private and public schools and something needs to be done so that we are able to help assist these learners" (Participant 8).

“I think that we need a psychologist in the school to support the learners. That would be fantastic” (Participant 11).

“We need a remedial teacher to support the learners experiencing barriers to learning” (Participant 6).

Results from the current study are in agreement with a study conducted in the United States by Reinke, Stormont, Herman, Puri, and Goel (2011). These researchers explored teachers’ perceptions of barriers to supporting learners with barriers to learning in schools.
(Reinke et al., 2011). Results from their study indicated that school psychologists and remedial teachers have an important role to play in supporting learners experiencing barriers to learning in schools. Furthermore, results from our study are also in agreement with a study conducted by Tews and Lupart (2008) in inclusive education settings in Canada. The researchers found that paraprofessionals, such as educational assistants, speech-language therapists, occupational therapists, and psychologists have an important role to play within inclusive education settings (Tews & Lupart, 2008). Learners with barriers to learning need additional support to help them cope in mainstream settings (Tews & Lupart, 2008). Therefore, the findings of the current study indicate that teachers are of the opinion that there are not enough paraprofessionals in the school to provide learners with the necessary support and that it hinders the effective implementation of inclusive education. The implicit suggestion seems to be for mainstream schools to ensure that paraprofessionals render their services at schools to assist learners who need additional support.

In conclusion, the results of the current study indicated that several, although less than half (41.6%), of the teachers, were of the opinion that their school lacks paraprofessionals to provide learners with additional support and that it hinders the effective implementation of inclusive education in the school.

4.3 Theme 2: Teachers’ responses to the diverse needs of learners who experience barriers to learning in an independent mainstream high school in Gauteng Province

Bronfenbrenner’s ecological systems theory categorises the microsystem as the system that features people closest to a person and the relationship between these people and the individual (Bronfenbrenner, 1979). The people in the microsystem plays a crucial role in the learning of the individual, which in the current study is represented by the teachers. Theme 2 reports on how teachers responded to the diverse needs of learners who experience barriers to learning in a mainstream independent school in Gauteng Province. The following sub-themes were identified: a) identifying the diverse needs of learners who experience barriers to learning in an independent mainstream high school in Gauteng Province; b) curriculum differentiation for learners who experience barriers to learning in
an independent mainstream high school in Gauteng Province; c) differentiated learning environment for learners who experience barriers to learning in an independent mainstream high school in Gauteng Province.

4.3.1 Sub-theme a: Identifying the diverse needs of learners who experience barriers to learning

Education White Paper 6: Building an Inclusive Education and Training System (DoE, 2001) says that all teachers should make sure that all learners who experience barriers to learning receive the support they need. A key strategy for responding to the diverse needs of learners who experience barriers to learning is curriculum differentiation based on the learners’ learning profile, which equips teachers with data on the learners’ strengths, preferences, learning needs and abilities (DoE, 2014). Furthermore, the learners’ profile may also include information on their backgrounds, circumstances, medical history and schooling history. According to the Policy on Screening, Identification, Assessment and Support (SIAS), teachers should screen all learners at admission as well as in the beginning of each phase and record their findings of their needs, strengths, abilities and preferences in the learners’ learning profile by completing the Support Needs Assessment (SNA) forms (DoE, 2014).

In the current study, none of the teachers (0%) was using the SIAS (DoE, 2014) forms to screen new learners admitted to the school or to screen learners at the beginning of each phase. Upon analysing the teachers’ files and the official school documents there was no evidence of any SNA form in the learner profiles. A possible explanation why the teachers were not completing the SNA forms as stipulated in the SIAS policy is that the school is an independent school and although they follow the same curriculum as public schools, they may not use the SIAS forms to identify the diverse needs of learners; or maybe that teachers lack training, skills, and knowledge on inclusive education and have excessive workloads which make it difficult for teachers to implement inclusive education practices, such as complementing the SNA forms.
The results of the current study indicated that although teachers were not using the SNA forms to identify the different barriers to learning, they were aware that some learners experienced barriers to learning. Through the interviews, it became apparent that several learners in the mainstream school experienced barriers that were revealed in the learners’ difficulties with reading, writing, hearing, vision, and/or comprehension. The following verbal quotes from teachers confirm the various types of barriers experienced by learners in the school:

“Well, I had a learner with a hearing problem in my one class. Other learners had reading difficulties. Then there are also learners who have difficulties understanding certain concepts” (Participant 3).

“I had a child once that had a visual impairment” (Participant 1).

Results from our study are in agreement with previous research conducted on the implementation of inclusive education (Donohue & Bornman, 2014; Wiledeman & Nombo, 2007). These researchers found that although teachers can identify the barriers to learning described in the Department of Basic Education’s policies on inclusive education, such as the SIAS policy, these policies are poorly implemented in mainstream schools (Donohue & Bornman, 2014). Teachers often do not have the training regarding inclusive education policies or do not have the knowledge on how to complete the SNA forms and are therefore not implementing the policies in their classrooms (Donohue & Bornman, 2014).

In conclusion, all teachers (100%) are disregarding the SIAS policy and not using the SNA forms to determine the support needs of learners who experience barriers to learning. It appears to be vital that teachers receive the necessary training on inclusive education for them to be able to implement the policies in practice. If the school management were to reduce the excessive workloads of the teacher, it is possible that they would have more time to identify and support learners who experience barriers to learning in their classrooms.
4.3.2 Sub-theme b: Curriculum differentiation for learners who experience barriers to learning in an independent mainstream high school in Gauteng Province

One of the key strategies for responding to the diverse needs of learners who experience barriers to learning is curriculum differentiation (DoE, 2011b). Curriculum differentiation can be described as an inclusive education practice in which teachers adapt the teaching, learning strategies, and assessment strategies, and differentiate the learning environment by considering the different needs of learners and maximizing learning opportunities for each learner in the classroom (DoE, 2011b).

- Differentiated learning, teaching, and assessment strategies

The responses from some of the teachers during the interviews indicated that the teachers were using differentiated learning, teaching, or assessment strategies to support learners who experience barriers to learning. The teaching and learning strategies that the teachers claimed they were using in their classrooms were revealed as they gave explanations, for example, peer-tutoring, flexible grouping of learners, reteaching, individual support, scaffolding, designing down, alternative learning material and alternative teaching methods. The following verbal quotes from teachers confirm that they were indeed using differentiated learning, teaching, and assessment strategies.

- **Reteaching:**
  “Well, I reteach. I go over the work again and again to try and explain the work to the learners who did not understand it the first time. Or I think of alternative ways to teach the work to them” (Participant 6).

- **Peer tutoring:**
  “Sometimes we use self and peer assessment where learners assess each other and sometimes assess themselves” (Participant 5).

  “Okay, well in the subject that I teach, Dramatic Art, I have a number of learners who need more support. I provide them with group work and one person is a leader who will help the other learners who struggle” (Participant 8).
Flexible grouping of learners:
“I look at an activity and then group the learners according to the activities we are doing. For example some I will give enrichment so that they don’t get bored” (Participant 5).

Individual support:
“Sometimes some learners need one on one lessons where I provide them with support” (Participant 8).

Designing down and scaffolding:
“I use different types of assessment in my class. Not all learners are the same. So when I assess them I take that into consideration. Sometimes I give them extra time to complete a task” (Participant 7).

“Sometimes we give them work by starting with the work that is not so difficult and then we move on, from what they know to the next part of the work which they don’t know. I provide them with the necessary guidance” (Participant 3).

Alternative teaching methods:
“I once had a child in my Visual Art class, he just couldn’t learn the theory. So, I saw this child is not a book learner, so I actually went and sat and recorded things for him. He was not a visual learner he was an auditive learner. So after recording the theory for him, I would play it and we would speak about it. He actually passed Visual Arts with fifty-six percent” (Participant 1).

Alternative learning materials:
“I also use alternative teaching materials such as videos on YouTube” (Participant 2).

“So, I sometimes use different types of multi-media to help certain kids to grasp activities or the content better” (Participant 3).

Results from this study are in agreement with a study conducted in Australia by Roberts and Simpson (2016). The study found that teachers were using various differentiated teaching methods and strategies when responding to the diverse needs of learners. Therefore, teachers in the current study seem to be following DoE guidelines in
responding to the diverse needs of learners who experience barriers to learning teachers and ensuring that all learners are participating by differentiating the teaching, learning, and assessments strategies, thereby taking into account the diverse needs of learners and making the most of learning opportunities for each learner in the classroom (DoE, 2011b).

In conclusion, all teachers (100%) in the current study were using various differentiated learning, teaching, and assessment strategies in their classrooms to support learners who experience barriers to learning. This was evident despite the fact that they reported feelings of inadequacy and lack of training.

4.3.3 Sub-theme c: Differentiated learning environment for learners who experience barriers to learning in an independent mainstream high school in Gauteng Province

Results from this study indicated that all teachers (100%) are differentiating the learning environment for learners who experience barriers to learning by adapting their physical environment, i.e. the classroom, through rearranging the classroom layout, providing alternative seating for the learners, providing learners with visuals, and reducing the noise levels. According to the Guidelines for inclusive teaching and learning (DoE, 2010b), there are various ways in which a classroom can be adapted to create an inclusive learning environment. For example, offering alternative seating arrangements, rearranging the layout of the classroom, limiting visual clutter in the classroom, reducing the noise level in the classroom, changing the amount of lighting, and adapting the type of furniture in the classroom (DoE, 2005c). The following verbal quote reflects how the teacher made adaptations to her classroom:

“Well, usually if I have a learner with a barrier to learning in my classroom I adapt the classroom environment by moving them around in the classroom. For example, a learner with a visual impairment I bring them to the front of the class. Or a learner with hearing problems I would reduce the noise level and make sure that I use visual supplements around the room” (Participant 3).
Results from this study are in agreement with a study conducted by Deng and Pei (2009) in China. These researchers investigated the modification and barriers for learners experiencing barriers to learning in a Chinese mainstream school. The results from the study by Deng and Pei (2009) revealed that teachers were adapting their classrooms to accommodate learners with barriers to learning by changing the seating arrangement and reducing the noise level. However, the teachers were not making any psycho-social adaptations in their classroom environment to assist the learners experiencing barriers (Deng & Pei, 2009). The findings of the current study indicate that teachers are physically adapting their classrooms to a certain extent, but that more adaptations are needed to assist learners experiencing barriers to learning in the classroom. Teachers in this study did not refer to any psycho-social adaptations being made in the classroom to create an inclusive learning environment. It may be that since several teachers reported not having had enough training on inclusive education, they do in fact not have the knowledge on how to make further adaptations to the classroom.

In conclusion, it is evident that all the teachers (100%) provided physical adjustments to the environment in the current study but may not know enough about differentiating the learning environment and therefore need more training so that they can know how to create an inclusive learning environment.

4.4 Theme 3: Teachers’ views on the support needed to effectively address barriers to learning in learners in an independent mainstream high school in Gauteng Province

This theme reports on the twelve teachers’ views regarding the support needed to effectively address barriers to learning in learners in an independent mainstream high school in Gauteng Province. As noted in Figure 4.1 three sub-themes were identified: a) further training needed on inclusive education; b) teaching assistants needed in the classroom; c) establishment of a school-based support team.
4.4.1 Sub-theme a: Further training needed on inclusive education

Responses from the teachers’ interviews indicated that seven (58.3%) of the teachers in the current study believed they lacked training on inclusive education. Teachers felt that they need more training on inclusive education in order to meet the diverse needs of learners in their classrooms. The following verbal quotes from teachers confirm that they feel that they need more support in the form of training to effectively address barriers to learners in learners in an independent mainstream school.

“Right with autism most teachers are not qualified to deal with such types of learners in our schools. We actually have a shortage of trained personnel on inclusive education. I have done this at honours level but still, it’s not sufficient. So, we need more training so that we are able to address the barriers to learning in our school. I think that is the support we need” (Participant 2).

“We are not trained on how to deal with learners with barriers, especially with like like I said the child that is autistic, you know and ADHD and things like that we need the to go for more training so that we can support the learners” (Participant 3).

It is evident from the results that teachers feel that they need more training in order to address the barriers to learning experienced by learners effectively. Results from our study are in agreement with research conducted by Donohue and Bornman (2014). These researchers found that South African teachers were of the opinion that they are not adequately trained and want more training so that they are able to support learners experiencing barriers to learning in their classrooms. Furthermore, Donohue and Bornman (2014) also found that if teachers are adequately trained on inclusive education they tend to report more positive attitudes toward inclusive education and are not so overwhelmed when asked to include a learner with a barrier to learning in their classroom.

In conclusion, teachers (58.3%) in the current study reported that they need support in the form of additional training on inclusive education so that they can effectively address barriers to learning in learners in an independent mainstream high school in Gauteng Province.
4.4.2 Sub-theme b: Teaching assistant needed in the classroom

It emerged from the interviews that some teachers (16%) were of the opinion that they needed teaching assistants in the classroom to support them. Teachers reported that in order for them to effectively implement inclusive education in the classroom, they need a teaching assistant as they find it impossible to implement the inclusive practices alone. The following verbal quotes from a teacher confirms that they feel that they need more support in the form of teaching assistants:

“We need teaching assistants to assist us in the classroom. Someone who can provide the learners with barriers with support. In my opinion, it is impossible to effectively implement inclusive education in the classroom without help” (Participant 6).

Aside from the interviews, the researcher also noticed while observing the classrooms that it was evident that teachers need additional support and appointing teaching assistants will alleviate the situation. As mentioned earlier in theme 1, teachers often have an excessive workload and do not have the time to attend to all their administrative duties, let alone implement inclusive education. Therefore, if teaching assistants were appointed in the classrooms teachers might feel less overwhelmed and have the support from teaching assistants to be able to implement inclusive education.

Results from the current study are in agreement with a study conducted by Butt and Lowe (2012) who found that there is a need for teaching assistants working in mainstream schools as they are able to assist the teachers with complex tasks, such as curriculum differentiation and supporting learners who experience barriers to learning in the classroom.

In conclusion, there were teachers (16%) in this study who were of the opinion that they needed more support in the form of teaching assistants. It might be beneficial for school management teams to support teachers by appointing teaching assistants in the classroom as this will help the teachers implement inclusive education more effectively.
4.4.3 Sub-theme c: Establishment of a school-based support team

As mentioned earlier in theme 1, the current school does not have a school-based support team (SBST). Teachers in the current study were of the opinion that they needed the school management to establish an SBST in the school. The following verbal quotes from teachers confirm that they feel they need more support in the form of an SBST, which their school needs to establish:

“We definitely need the support of paraprofessionals, we do not have a school-based support team to help us with the learners who experience barriers. The school management should establish one in the school” (Participant 12).

“Look the school needs to have a school counsellor and other professionals to support us. There is no support in our school from professionals, we need a team to help assist these learners” (Participant 8).

The results of the current study are in agreement with a quantitative study conducted in the Motheo school district in the Free State with teachers, principals and school management (Alberts, 2016). The study found that school management should provide support to their teachers by establishing support networks such an SBST (Alberts, 2016). An SBST will support teachers by providing them with regular opportunities for collaboration and facilitating the provision of support where needed (DoE, 2014). It is seen as imperative that the school management in the current school establish an SBST in the school. The team could include a school counsellor/psychologist, speech-language pathologist, occupational therapist, physiotherapist, and remedial teacher.

In summary, there were teachers (16%) who expressed a need for additional support from an SBST in order to implement inclusive education effectively.

4.5 Summary

Chapter 4 presented an analysis and interpretation of the results as well as relevant information regarding comparable studies reported in the literature. In Chapter 6, the research questions will be answered, after the general discussion presented in Chapter 5.
CHAPTER 5
GENERAL DISCUSSION, IMPLICATIONS AND CONCLUSION

5.1 Introduction
The purpose of this research project was to describe teachers’ perspectives on addressing barriers to learning in learners in an independent mainstream high school in Gauteng Province. This was achieved through 1) describing the challenges perceived by teachers when addressing barriers to learning in learners in an independent mainstream high school in Gauteng Province; 2) exploring how teachers are responding to the diverse needs of learners who experience barriers to learning in an independent mainstream high school in Gauteng Province; 3) describing teachers’ views on the support needed to effectively address barriers to learning in learners in an independent mainstream high school in Gauteng Province.

Limited research is available on teachers’ perspectives on addressing barriers to learning in learners in independent mainstream high schools in South Africa. The majority of research has focused on teachers’ perspectives on addressing barriers to learning in the foundation and intermediate phase (Ledwaba, 2017; Malahlela, 2017). It is important to document teacher perceptions of addressing barriers to learning in learners in independent mainstream high schools as this may influence the effective implementation of inclusive education. Since teachers’ perceptions of addressing barriers to learning in mainstream schools differ across countries, the study contributes to knowledge in South Africa.

The major findings of the study will be summarized in this chapter and the theoretical and practical implications will be indicated. The implications of each finding will be linked to recent literature to reflect the consequences of the research and to describe the contribution of the study to the field of inclusive education in South Africa. Lastly, the research will be critically evaluated, and a conclusion is drawn. The theoretical implications, major findings and practical implications of the study will be discussed in the following sections.
5.2 Theoretical implications of the study

The findings of the study were interpreted using Bronfenbrenner’s ecological systems theory. Teachers may broaden their perspective by using Bronfenbrenner’s ecological systems theory when working with learners experiencing barriers to learning (Bronfenbrenner, 1979). The microsystem in Bronfenbrenner’s ecological systems theory (see Chapter 1, section 1.3.1-1.3.5) highlights the significance of the interactions within the learner’s immediate environment (Bronfenbrenner, 1979), which in this study consists of the school, home, and classroom. Furthermore, the mesosystem emphasizes that there is a partnership between two or more settings containing the learner, in this study the school, paraprofessionals and home. Also, the exosystem in this study represented the institutions offering training on inclusive education to prepare teachers to meet the various learning demands of learners in the school. Lastly, the macrosystem highlights the key influences of larger political and social legislation, policies and movements which in this study included several laws and policies related to addressing barriers to learning in learners. It is evident that there are various influences and relationships between the developing learner and the environment which should be taken into account when addressing barriers to learning.

5.3 Challenges perceived by teachers when addressing barriers to learning in learners in an independent mainstream high school in Gauteng Province

The challenges perceived by teachers when addressing barriers to learning in learners in a mainstream independent high school in Gauteng were revealed in the current study. The challenges included the implicit challenge of the teachers’ own attitudes towards addressing barriers to learning, as well as the perceived challenges reported by the teachers: lack of training, knowledge and skills on addressing barriers to learning, lack of time when teaching in an inclusive classroom, managing learners with and without barriers to learning in one classroom, lack of parental involvement, and lack of paraprofessionals in the school to provide learners with support.
Firstly, more than half (58.3%) of the teachers in the study displayed a negative attitude towards addressing barriers to learning in learners in an independent mainstream school. The results of the current study are in agreement with results from previous research which confirmed that teachers in LMICs have prejudices regarding the inclusion of learners experiencing barriers to learning in mainstream schools (Ledwaba, 2017; Unianu, 2012). It is therefore imperative that future studies build upon the current research to determine why teachers in South Africa display negative attitudes towards addressing barriers to learning and how their attitudes can be changed to be more positive.

Secondly, the results indicated that 58.3% of the teachers indicated that they lacked training, skills, and knowledge on addressing barriers to learning in an inclusive setting. The results from the current study revealed that teachers feel they do not have adequate training on inclusive education and often feel overwhelmed as they do not know how to address the needs of learners who experience barriers to learning. Furthermore, teachers reported that they are not equipped with skills and knowledge on inclusive education and therefore are unable to address barriers to learning in the classroom. The results from the current study are in agreement with results from other studies conducted in both HICs and LMICs, which found that teachers do not have the necessary skills and knowledge on inclusive education and lack training on this topic, and consequently, are unable to address barriers to learning in mainstream classrooms (Dalton et al., 2012; Ledwaba, 2017; Nishan, 2018; Subban & Sharma, 2006). Therefore, tertiary institutions need to include more practical and theoretical modules on addressing barriers to learning in the Bachelor of Education degree to equip teachers with the necessary skills, knowledge, and training. Moreover, teachers should receive on-going training on addressing barriers to learning from the school or institution where they are employed. Research is also needed to investigate possible alternative underlying reasons for the teachers’ feelings of inadequacy since they do in some cases seem to be implementing strategies advised for inclusive education appropriately.
Thirdly, the findings indicated that 50% of the teachers experience time constraints which prevent them from addressing barriers to learning in an inclusive setting. The time constraints were mostly related to teachers' administrative duties to which they need to attend. The administrative duties included marking, setting exams and test papers, and upgrading teacher files. The results from the current study are in agreement with results from studies conducted in HICs and LMICs which indicated that teachers do not have enough time to provide learners who experience barriers to learning with individual support as there is no extra time in a lesson to attend to them since they have administrative duties to attend to as well (Cassaday, 2011; Ledwaba, 2017; Malahlela, 2017; Nishan, 2018). In order to ensure that the teachers have enough time to address barriers to learning, the school management could consider finding ways to either decrease their workload or appoint educational assistants in the classroom to help the teachers.

Fourthly, 83% of the teachers reported that having to manage learners both with and without barriers to learning posed a challenge to the implementation of inclusive education in their classrooms. Teachers reported that having learners who experience barriers to learning creates problems for them as learners who do not have to cope with barriers to learning become bored. Moreover, teachers spend a lot of time explaining or adapting activities for certain learners. The results are in agreement with results from studies conducted in HICs as well as LMICs, which found that teachers were of the opinion that teaching learners with and without barriers to learning in one classroom pose a challenge for the implementation of inclusive education (Ledwaba, 2017; Mukhopadhyay et al., 2012; Nishan, 2018). Teachers feel they are unable to provide equal attention to all learners (Ledwaba, 2017; Mukhopadhyay et al., 2012; Nishan, 2018).

Fifthly, 41.6% of teachers reported that parents are not involved in their children's education and that this apathy poses a challenge to successfully addressing barriers to learning in learners in an inclusive setting. Results from the current study are in
agreement with results from studies conducted in HICs and LMICs which also reported that parents are not involved in their children's education and that this creates a barrier to successfully addressing barriers to learning in learners in mainstream schools (El Shourbagi, 2017; Grynova & Kalinchenko, 2018; O'Hehir & Savelsberg, 2014). Since parental involvement is a key strategy for promoting effective implementation of inclusive education, it is essential that parents become more involved in their children's education. Therefore, the school and teachers need to create multiple opportunities for parents to play a more active part in matters relating to their children's education.

Lastly, 41.6% of the teachers in the study indicated that the school does not have paraprofessionals to provide learners who experience barriers to learning with the necessary support. According to the teachers, this poses a challenge to them as it inhibits the effective implementation of inclusive education in the school. Results from the study are in agreement with results from studies conducted in HICs and LMICs which found that paraprofessionals play an important role within inclusive education settings as they support the learners experiencing barriers to learning (Ledwaba, 2017; Reinke et al., 2011; Tews & Lupart, 2008). It is incumbent upon the school management to establish a support team at the current school to support the learners experiencing barriers to learning.

In conclusion, the findings of the study imply that teachers encounter many challenges when dealing with learners who experience barriers to learning. Furthermore, they experience a need for adequate training in addressing barriers to learning, training that will equip them to provide learners in mainstream settings with significant support and a support team.
5.4 Teachers’ responses to the diverse needs of learners who experience barriers to learning in an independent mainstream high school in Gauteng Province

The current study investigated how teachers are responding to the diverse needs of learners in a mainstream independent high school in Gauteng. Teachers attempted to meet this challenge by identifying the needs of learners who experience barriers to learning, and by differentiating the curriculum in terms of content, instruction, assessment and environment.

Firstly, none of the teachers in the current study make use of the SIAS policies in the school. Although teachers are aware of the need to accommodate all learners in the classroom, do not recognise the importance of the SIAS document and are unaware of the importance of using SNA documents in identifying learners who experience barriers to learning (DoE, 2014). A previous study likewise reported that teachers were frustrated with the SIAS documents and therefore it was recommended that teachers be encouraged to develop skills and knowledge in the area of identifying learners with barriers to learning in order to minimise bias, non-identification, over-identification and/or misidentification (Mkhuma, Maseko, & Tlale, 2014). The findings in this study are in accordance with the results of previous research in Namibia which confirmed the challenges of policy implementation (Hausiku, 2017). The study revealed that a lack of teacher training on inclusive education practices and lack of support from the relevant stakeholders and government bodies can result in challenges to the effective implementation of inclusive policies (Hausiku, 2017). If there were more training and education on the use of policies, teachers would be able to provide appropriate support. Therefore it is important that teachers have specific training on the importance of SNA documents and also how to use the documents. Should these documents be used more appropriately, teachers may feel more confident in addressing the barriers to learning in these learners. Teacher workloads and the number of paperwork teachers have to do also need adjusting so that teachers can focus on providing support to learners who experience barriers to learning.
Secondly, all the teachers (100%) revealed that they used differentiated learning, teaching, or assessment strategies to support learners who experience barriers to learning. The teachers used the following strategies to differentiate teaching, learning and assessment in their classrooms: peer tutoring, flexible grouping of learners, reteaching, individual support, scaffolding, designing down, alternative learning material, and alternative teaching methods. Results from the current study are in agreement with results from a study conducted in Australia by Roberts and Simpson (2016). The researchers found that teachers in mainstream schools were using various types of differentiated learning, teaching, and assessment strategies when teaching learners who experience barriers to learning, such as ASD. Therefore, teachers in the current study seem to be following DoE guidelines in responding to the diverse needs of learners who experience barriers to learning teachers and ensuring that all learners are participating by differentiating the teaching, learning, and assessments strategies, thereby taking into account the demands of learners and maximising learning opportunities for each learner in the classroom (DoE, 2011b).

Thirdly, all teachers (100%) reported that they were differentiating the learning environment by offering alternative seating arrangements, rearranging the layout of the classroom, reducing the noise level in the classroom, and providing visuals. However, although teachers are making physical adaptations to the classrooms, they are not making any psycho-social adaptations. Results from this study are in agreement with results from a study conducted in China by Deng and Pei (2009) who found that teachers are physically adapting their classrooms to accommodate learners with barriers to learning by changing the seating arrangement and reducing the noise level, but they were not making any psycho-social adaptations in their classroom environment to assist the learners with barriers (Deng & Pei, 2009). Although teachers are physically adapting their classrooms to a certain extent, more adaptations are needed to assist learners experiencing barriers to learning in the classroom.

In summary, the data obtained from this study indicate that teachers in the selected mainstream independent high school were differentiating the curriculum to a certain
extent, but that more can be done to accommodate learners experiencing barriers to learning in the school. Furthermore, the study found that teachers are not using SNA forms as stipulated in the SIAS policy (DoE, 2014) to identify the diverse needs of learners. Therefore, although the school is following the same curriculum (CAPS) as in public schools, it is evident that the school is not using the guidelines which the DoE provides on how to identify the diverse needs of learners (DoE, 2014). It is important for the school to determine how they will identify the diverse needs of learners and whether they will use the SNA forms provided by the DoE or developed their own forms which teachers can use.

5.5 Teachers’ views on the support needed to effectively address barriers to learning in learners in an independent mainstream high school in Gauteng Province

The need for more assistance for teachers in addressing barriers to learning experienced by learners in mainstream schools was confirmed in the study. Teachers mentioned various forms of support that could help them effectively address the barriers to learning experienced by learners in inclusive settings. These various forms of support include training on inclusivity, teaching assistants in the classroom, and the establishment of a school-based support team.

Firstly, 58.3% of teachers perceived their lack of training in inclusivity to be the reason for their lack of confidence in providing adequate support to learners who experience barriers to learning. Therefore, if the teachers were to receive more ongoing training on inclusive education, they could feel more confident in providing inclusive education to learners experiencing barriers to learning in the classroom. The findings in this study are in accordance with results from previous research which also confirmed that teachers lack training on inclusivity (Dreyer, Engelbrecht, & Swart, 2012; Zwane, 2016). The study conducted in Swaziland found that teachers lacked training on inclusive education and were not confident in providing inclusive education to learners in the classroom who experience barriers to learning and they were also not able to identify these learners (Zwane, 2016). Training on inclusive education could enable the teachers to identify
learners who experience barriers to learning and provide the appropriate support to those learners. Teachers may also feel more confident in their abilities to provide learning support. It would be the duty of the school management to arrange additional training on how to address barriers to learning in learners in the mainstream independent high school.

Secondly, 16% of the teachers reported that in order for them to effectively implement inclusive education in the classroom, they need a teaching assistant as they find it impossible to implement inclusive practices alone. Furthermore, teachers also reported that they are unable to provide learners with the additional support needed as they have administrative duties to attend to as well. Having teaching assistants in the classroom will therefore not only provide support to the learners experiencing barriers to learning but to the teachers as well. Results from the current study are in agreement with results from a study conducted by Butt and Lowe (2012) who found that there is a need for teaching assistants working in mainstream schools as they are able to assist the teachers with complex tasks, such as curriculum differentiation and supporting learners with barriers in the classroom.

Thirdly, it emerged that 16% of teachers from the study require school-based support teams to be established in the school and to support them in inclusive practices. The results reveal a need for more collaboration with other role-players in education such as speech therapists, psychologists, and occupational therapists. These paraprofessionals will be able to provide learners who experience barriers to learning with the necessary support and also provide support to the teachers (Tews & Lupart, 2008).

5.6 Critical Evaluation of the study
The strengths of the research study are critically reviewed in the subsequent section. The critical analysis also assisted in identifying research problems for future investigations.
5.6.1 Strengths of the study

- The use of the interviewing process enabled the researcher to gain insight into teacher perceptions on addressing barriers to learning in an independent mainstream high school. Teachers were able to express their opinions freely and the researcher was able to ask the teachers to clarify certain responses when necessary.

- The data obtained from the study can be used to inform the school's management on 1) the challenges perceived by teachers when addressing barriers to learning in learners; 2) teachers’ responses to the diverse needs of learners who experience barriers to learning, and 3) teachers’ views on the support needed to effectively address barriers to learning in learners in the school. The data may help the school management to understand their teachers’ challenges better as well as how to support the teachers better in future.

- Limited research is available on teachers’ perspectives on addressing barriers to learning in learners in independent mainstream high schools in Gauteng Province. This study provides clear and important implications for independent mainstream high schools in South Africa.

5.6.2 Limitations of the study

- Data for the study were collected from teachers in one independent mainstream school in Gauteng Province. The researcher did not include any other independent mainstream schools. Therefore, it is important to note that there can be no generalisations beyond the sample since other independent mainstream school teachers might have different perspectives on addressing barriers to learning in learners.

- The research was limited by the researcher herself, being a novice researcher who is still acquiring research skills.

- Another limitation was the small sample size (12). Therefore, as mentioned earlier, the results cannot be generalised beyond the sample.
5.7 Recommendations for future research

- The data obtained in this study can be used as a baseline for future research on teachers’ perspectives on addressing barriers to learning in learners in independent mainstream high schools in South Africa. The data can provide the school management teams with information on the challenges teachers experience when addressing barriers to learning in independent mainstream schools as well as the support they can provide to ensure that teachers receive the necessary assistance to effectively address barriers to learning in learners in independent mainstream high schools.

- Future research should focus on tracking teachers’ perceptions over time to determine whether teachers' perceptions remain static or alter, either in a negative or positive direction, as inclusive education policies are implemented more effectively across South Africa.

- In future research should be broadened to assist in evaluating the most effective and efficient means of changing teachers’ perceptions.

- Future research could focus on exploring the role of the school management with regard to the effective implementation of inclusive education in mainstream schools. It is incumbent upon the school management to provide their teachers with the necessary support, therefore if the school management is aware of their role teachers might receive better support in implementing inclusive education.

- In South Africa, educational placement for learners experiencing barriers to learning is a pertinent topic in the light of inclusive education policy recommending that all learners be included and educated in the least restrictive environment (DoE, 2001). Therefore the processes ensuring the successful inclusion of learners experiencing barriers to learning in mainstream schools should be investigated further in South Africa.

- Research is needed to obtain information on the factors influencing educational placement for learners who experience barriers to learning in South Africa. Obtaining more information regarding this topic will assist all stakeholders in
making more appropriate decisions for the educational placement of learners who experience barriers to learning.

- The study was conducted in an independent mainstream high school in an urban area in Gauteng Province. Future research should be conducted in independent mainstream high schools in rural areas in Gauteng province. This will enable researchers to initiate a comparative study to determine whether there are any similarities or differences regarding teachers’ perceptions when addressing barriers to learning in learners.

5.8 General conclusion

The study discloses the authentic and sometimes challenging experiences of teachers addressing barriers to learning in learners in an independent mainstream school in Gauteng Province. The results related to the first sub-aim contributed important information on the challenges teachers experience when addressing barriers to learning in learners in the school. Although the sample was not representative, the results provided the reality that teachers encounter a variety of challenges which include lack of training, knowledge and skills on addressing barriers to learning in inclusive settings, lack of time when teaching, problems in managing learners with and without barriers to learning in one classroom, lack of parental involvement, and a lack of paraprofessionals to support the learners. The second sub-aim provided information on how teachers respond to the diverse needs of learners who experience barriers to learning by identifying their diverse needs and differentiating the curriculum and the learning environment. The last sub-aim provided insight into teachers’ views on the support needed to effectively address the barriers to learning in learners. Teachers mentioned that they needed more training on inclusive education, teaching assistants in their classroom, and the establishing of a school-based support team. The study provided evidence that there is value in conducting research on teachers’ perspectives when addressing barriers to learning in mainstream independent schools, and not only in public mainstream schools.
List of references


Appendices

Appendix A: Ethical clearance certificate – Faculty of Education University of South Africa

UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE

Date: 2019/02/13

Dear Ms Pillay

**Decision:** Ethics Approval from 2019/02/13 to 2022/12/13

Ref: 2019/02/13/40808165/36/MC
Name: Ms R Pillay
Student: 40808165

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**Title of research:**
High School teachers’ perspectives on supporting learner’s with barriers to learning in an independent mainstream school in Gauteng Province

**Qualification:** M. Ed in Inclusive Education

Thank you for the application for research ethics clearance by the UNISA College of Education Ethics Review Committee for the above mentioned research. Ethics approval is granted for the period 2019/02/13 to 2022/02/13.

The low risk application was reviewed by the Ethics Review Committee on 2019/02/13 in compliance with the UNISA Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the UNISA College of Education Ethics Review Committee.

3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.

4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants’ privacy and the confidentiality of the data, should be reported to the Committee in writing.

5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children’s Act no 38 of 2005 and the National Health Act, no 61 of 2003.

6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.

7. No field work activities may continue after the expiry date 2022/02/13. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:
The reference number 2019/02/13/40808165/36/MC should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.

Kind regards,

Prof AT Motlhabe
CHAIRPERSON: CEDU RERC
motlhat@unisa.ac.za

Prof V McKay
EXECUTIVE DEAN
Mckayvi@unisa.ac.za
Appendix B: Request for permission to conduct research at the school

Title of the research: Teachers’ perspectives on addressing barriers to learning in learners in an independent mainstream high school in Gauteng province

Date: ____________

Dear principal,

I, Renel Pillay am doing research under the supervision of Ms Sumari Erasmus, an external supervisor in the Department of Inclusive Education in the department of inclusive education towards a MEd at the University of South Africa. We are inviting you to participate in a study entitled:

Teachers’ perspectives on addressing barriers to learning in learners in an independent mainstream high school in Gauteng province

In order to meet the main aim of the study, three sub-aims were formulated. The sub-aims of the study were:

1. To establish the challenges teachers perceive when addressing barriers to learning in learners in an independent mainstream high school in Gauteng Province.
2. To explore how teachers are responding to the diverse needs of learners who experience barriers to learning in an independent mainstream high school in Gauteng Province.
3. To understand teachers’ views on the support needed to effectively address barriers to learning in learners in an independent mainstream high school in Gauteng Province.

Your school has been selected because the teachers in your school are currently teaching learners experience learning difficulties in your classroom and meet the requirements for the study.

The inclusion criteria for the participants are as follows:
Your school has been selected because the teachers in your school are currently teaching learners experience learning difficulties in your classroom and meet the requirements for the study.

The inclusion criteria for the participants are as follows:

1. Must be high school teachers who will be teaching the Senior phase or Further Education Phase or both phases.

2. Teachers included in the study should have a minimum of a B Ed degree, teaching diploma or PGCE qualification to be able to participate in the study.

The study will entail semi-structured interviews being conducted with the teachers. The interview will include questions about the teacher’s educational background; what challenges the high school teachers’ face when providing learning support to learners with learning impairments; how teachers provide support to the learners experiencing learning difficulties in the classroom; and what strategies high school teachers were used to enhance the implementation of inclusive education in the classroom.

I will also be observing lessons to ascertain the levels of support given to learners who experience barriers to learning, different instructional techniques used and the different types of support given to teachers. There will be no direct contact with the learners. The researcher will only be observing how the teacher is providing support to the learners and how teachers are receiving support from the school. Lastly the researcher will also analyse various documents which include: The learner profiles – the learner profiles usually include biographical information, a document on the strengths and weaknesses of the learner as well as support needs assessment policies related to inclusive education, teacher files – the teacher files include lesson plans as well as any information on how the teachers differentiated the curriculum in order to support the learners experiencing barriers to learning. The interviews will be conducted after school at a time agreed upon by both the researcher and the teachers and will take approximately 20 minutes.
The study is expected to collect important information that could contribute positively to teachers, as it will improve support to teachers who teach learners who experience barriers to learning in a mainstream school.

The participants will not be exposed to any risks during the study.

The teachers and learners will not be exposed to any risks during the study. The researcher will not ask any uncomfortable questions. There will be no reimbursement or any incentives for participation in the research.

Feedback procedure will entail a teacher information session where the results and findings will be shared with the teachers and the principal. I am happy to share the results from this study with you. If you are interested to receive a free copy of the results, please inform me. Should you require any further information please contact me.

Yours sincerely

Renel Pillay

Ms R. Pillay
0839643699
renel.harry@gmail

Sumari Erasmus

Dr S Erasmus
Sumari.erasmus01@gmail.com
REPLY FORM: PERMISSION TO CONDUCT RESEARCH AT YOUR SCHOOL AND INFORMED CONSENT

I herewith give permission that Ms. R. Pillay can conduct research titled: "Teachers’ perspectives on addressing barriers to learning in learners in an independent mainstream high school in Gauteng province" at the school. The researcher Ms. R. Pillay, has informed me about the nature, process, risks, discomforts and benefits of the study. I am aware that the results of the study will be anonymously processed into articles and research reports. I have had the time to ask questions and have no objection to participate in the study. Hereby also give/do not give consent that the data may be used for future research.

Name of the Principal: ..........................................................

Signature: ........................................................................

Date: ...........................................................................
Appendix C: Written permission from the principal

REPLY FORM: PERMISSION TO CONDUCT RESEARCH AT YOUR SCHOOL AND INFORMED CONSENT

I herewith give permission that Ms R. Pillay can conduct research titled: “Teachers’ perspectives on addressing barriers to learning in learners in an independent mainstream high school in Gauteng province” at the school. The researcher Ms R. Pillay, has informed me about the nature, process, risks, discomforts and benefits of the study. I am aware that the results of the study will be anonymously processed into articles and research reports. I have had the time to ask questions and have no objection to participate in the study. Hereby also give/do not give consent that the data may be used for future research.

Name of the Principal: Johann du Toit

Signature: 

Date: 1/3/2019
Appendix D: Participant information and consent form (parents)

Title: Teachers’ perspectives on addressing barriers to learning in learners in an independent mainstream high school in Gauteng province

Date: ____________

DEAR PROSPECTIVE PARTICIPANT

My name is Renel Pillay and I am doing research under the supervision of Ms Sumari Erasmus, an external supervisor in the Department of Inclusive Education towards a MEd at the University of South Africa. We are inviting you to participate in a study entitled: Teachers’ perspectives on addressing barriers to learning in learners in an independent mainstream high school in Gauteng province

WHAT IS THE PURPOSE OF THE STUDY?

The study is expected to collect important information that could contribute positively to teachers. To establish the challenges teachers perceive when addressing barriers to learning in learners, explore how teachers respond to diverse needs of learners as well as understand teachers’views on the support needed to effectively support learners who experience barriers to learning in an independent mainstream high school.

WHY AM I BEING INVITED TO PARTICIPATE?

You are invited because a school learning community does not only include teachers, but also learners, parents and the community who need to work together to improve and enhance learners learning opportunities at school. I need to observe the teachers when they are teaching your child so that appropriate support structures can be identified to assist teachers to provide adequate support to learners who experience barriers to learning. There will be no direct contact with your child.
WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?
The study involves observing the teacher’s interaction with the learners. It will involve the researcher being in the classroom observing lessons as well as analyzing the data obtained in the observations. The researcher will analyze various documents including: the learner profiles – the learner profiles usually include biographical information, a document on the strengths and weaknesses of the learner as well as support needs assessment. There will be no direct contact with the learners and the researcher will only observe the teachers providing support as well as analyze the documents relating to the learner as stated above. You as the parent will only need to provide consent and will not be directly involved in the research.

CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO CONSENT?
Participating in this study voluntary and you are under no obligation to consent to my observation an analysis of your child/ward’s workbooks and assessments. If you do decide to consent to the study, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?
Teachers will be more knowledgeable of different inclusive practices. Teachers will be empowered with different strategies on how to support learners with barriers to learning and strengthen the implementation of inclusion in the classroom. The school will also be able to provide necessary support structures that are needed for teachers to be more confident in inclusive practices. This will then lead to leaners who experience barriers to learning to be provided with effective support and thus feel more confident in their learning and improve their self-esteem.

ARE THERE ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?
There are no negative consequences for you to participate in the study. Your child will not be exposed to any risks during the study. The researcher will not be in direct contact with your child/learner.
WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?
You as a parent have the right to insist that your child’s name will not be recorded anywhere and that no one, apart from the researcher and identified members of the research team, will know about your child’s involvement in this research.

All information obtained from the research will be reported on anonymously as there will be no names on the interview transcripts, observations and document analysis. I intend to write a dissertation and possibly research articles about the information obtained from the interviews, observations and document analysis. No school information will be given.

Information collected might be used for other purposes, such as a research report, journal articles and/or conference proceedings. The researcher will ensure to that your child will not be identifiable in such a report.

HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?
Hard copies of the answers will be stored by the researcher for a period of five years in a locked filing cabinet in Kyalami for future research or academic purposes; electronic information will be stored on an external hard drive and on a compact disk in a safe. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. Should there be a need to destroy information the researcher will delete all electronic copies will be permanently from the hard drive of the computer through the use of a relevant software program and shred all hard copies.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?
There will be no reimbursement or any incentives for participation in the research.
HAS THE STUDY RECEIVED ETHICS APPROVAL
This study has received written approval from the Research Ethics Review Committee of the (identify the relevant ERC), Unisa. A copy of the approval letter can be obtained from the researcher if you so wish.

HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?
If you would like to be informed of the final research findings, please contact Renel Pillay on 0839643699 or email renel.harry@gmail.com.

Should you require any further information or want to contact the researcher about any aspect of this study, please contact Renel Pillay on 0839643699/renel.harry@gmail.com.

Thank you for taking time to read this information sheet and for participating in this study.

Thank you.

_____________
Renel Pillay

Sumari Erasmus

Dr S Erasmus
Sumari.erasmus01@gmail.com
REPLY FORM: Consent to participate in the study

I, ________________ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet.

I have had sufficient opportunity to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable).

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

I agree to the recording of observation of teacher and learner their learner profiles.

I have received a signed copy of the informed consent agreement.

________________________________________
Participant Name & Surname (please print)

________________________________________
Signature
Appendix E: Participant information and consent form (teachers)

Title: Teachers’ perspectives on addressing barriers to learning in learners in an independent mainstream high school in Gauteng province

Date: _______________

DEAR PROSPECTIVE PARTICIPANT
My name is Renel Pillay and I am doing research under the supervision of Ms Sumari Erasmus, an external supervisor in the Department of Inclusive Education at the University of South Africa. We are inviting you to participate in a study entitled: Teachers’ perspectives on addressing barriers to learning in learners in an independent mainstream high school in Gauteng province.

WHAT IS THE PURPOSE OF THE STUDY?
The study is expected to collect important information that could contribute positively to teachers. To establish the challenges teachers perceive when addressing barriers to learning in learners, explore how teachers respond to diverse needs of learners as well as understand teachers’ views on the support needed to effectively support learners who experience barriers to learning in an independent mainstream high school.

WHY AM I BEING INVITED TO PARTICIPATE?
You are invited because you are currently teaching learners who experience barriers to learning in your classroom. The participants of the study must be high school teachers who will be teaching the Senior phase or Further Education Phase or both phases. Teachers included in the study should have a minimum of a B Ed degree, teaching diploma or PGCE qualification to be able to participate in the study. I hope to include 12 participants in the study who are fully qualified teachers.

WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?
The study involves semi-structured interviews, observation and document analysis that will be conducted with the teachers. Some of questions will include the teacher’s educational background; what challenges the high school teacher’s face when
providing learning support to learners with barriers to learning; how teachers provide support to the learners who experience barriers to learning in the classroom; and what strategies are used to enhance the implementation of Inclusive Education by high school teachers in the classroom. I will also be observing lessons to ascertain the levels of support given to learners with barriers to learning. Different instructional techniques used and the different types of support given to teachers. The researcher will analyse various documents including: the learner profiles – the learner profiles usually include biographical information, a document on the strengths and weaknesses of the learner as well as support needs assessment, policies related to inclusive education, teacher files – the teacher files include lesson plans as well as any information on how the teachers differentiated the curriculum in order to support the learners experiencing barriers to learning. The expected duration of participation will be two months. The semi-structured interviews will be conducted after school for 20 minutes at a venue and time that is appropriate to the participant. The observations will occur over a 55 minute lesson. Lastly the researcher will also analyse various documents that include policies related to inclusive education and documents used to support learners at the the researchers time.

**CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?**

Participating in this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason.

**WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?**

Teachers will be more knowledgeable of different inclusive practices. Teachers will be empowered with different strategies on how to support learners with barriers to learning and strengthen the implementation of inclusion in the classroom. The school will also be able to provide necessary support structures that are needed for teachers to be more confident in inclusive practices. This will then lead to learners who experience barriers to learning to be provided with effective support and thus feel more confident in their learning and improve their self esteem.
ARE THERE ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?
There are no negative consequences for you to participate in the study. You will not be exposed to any risks during the study. The researcher will not ask any uncomfortable questions.

WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?
You have the right to insist that your name will not be recorded anywhere and that no one, apart from the researcher and identified members of the research team, will know about your involvement in this research. Your answers will be given a code number or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings.

All information obtained from the research will be reported on anonymously as there will be no names on the interview transcripts, observations and document analysis. I intend to write a dissertation and possibly research articles about the information obtained from the interviews, observations and document analysis. No school information will be given.

Participants note that their anonymous data may be used for other purposes, such as a research report, journal articles and/or conference proceedings. Privacy will be protected in any publication of the information. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?
Hard copies of your answers will be stored by the researcher for a period of five years in a locked filing cabinet in Kyalami for future research or academic purposes; electronic information will be stored on an external hard drive and on a compact disk in a safe. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. Electronic copies will be permanently deleted from the hard drive of the computer through the use of a relevant software program.
WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?
There will be no reimbursement or any incentives for participation in the research.

HAS THE STUDY RECEIVED ETHICS APPROVAL
This study has received written approval from the Research Ethics Review Committee of the (identify the relevant ERC), Unisa. A copy of the approval letter can be obtained from the researcher if you so wish.

HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?
If you would like to be informed of the final research findings, please contact Renel Pillay on 0839643699 or email renel.harry@gmail.com.

Should you require any further information or want to contact the researcher about any aspect of this study, please contact Renel Pillay on 0839643699/renel.harry@gmail.com.
Thank you for taking time to read this information sheet and for participating in this study.
Thank you.

__________________________
Renel Pillay

Sumari Erasmus

Dr S Erasmus
Sumari.erasmus01@gmail.com
REPLY FORM: Consent to participate in the study

I, ___________ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet.

I have had sufficient opportunity to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable).

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

I agree to the recording of observation of teacher and learner their learner profiles.

I have received a signed copy of the informed consent agreement.

___________________________________________
Participant Name & Surname (please print)

___________________________________________
Signature
Appendix F: Document analysis

Written Document Analysis Worksheet

Type of document:
______ Newspaper
______ Letter
______ Map
______ Report
______ Government document
______ Other:
Describe __________________________________________

Who wrote the document? ________________________________
What is the date of the document? _______________________
For whom was the document for? ________________________
List important pieces of information presented in this document.
____________________________________________________
____________________________________________________
____________________________________________________
____________________________________________________
Why was the document written?
____________________________________________________
____________________________________________________
____________________________________________________
____________________________________________________
Appendix G: Observation schedule

Observation schedule for teachers

The purpose of the observation is to observe the classroom environment while teachers are addressing barriers to learning in learners in the classroom. This might include observing the challenges teachers experience, how they respond to the diverse needs of the learners in the classroom as well as what support they need in order to effectively address barriers to learning in learners in their classroom. The researcher plans to conduct a two 55 minute-long observation of each teacher. She will limit her observation to 55 minutes so as to not disrupt the classrooms. The second observation will confirm or refute the data collected in the first observation. The researcher will have no direct contact with the learners.

<table>
<thead>
<tr>
<th>OBSERVATION</th>
<th>QUESTIONS GUIDING OBSERVATION</th>
<th>PURPOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Challenges experienced by teachers when addressing barriers to learning in learners</td>
<td>Does the educator complete the proposed lesson? Challenges experienced in the time frame? Demands of the syllabus? What objectives of the lesson were not achieved/achieved?</td>
<td>To identify the challenges teachers experience when addressing barriers to learning in the classroom.</td>
</tr>
<tr>
<td>To explore how teachers are responding to the diverse needs of learners who experience barriers to learning</td>
<td>What teaching style is used? Does it allow for differentiated teaching? What support structures are provided by the school that teachers use in the classroom?</td>
<td>To check the different support strategies teachers provide to learners who experience barriers to learning.</td>
</tr>
<tr>
<td>To understand teachers’ views on the support needed to effectively address barriers to learning in learners</td>
<td>What types of support teachers are given to provide support to learners? What support do teachers need?</td>
<td>To check the different types of support teachers need to provide effective support to learners who experience barriers to learning.</td>
</tr>
</tbody>
</table>
Appendix H: Interview questions

Interview questions

1. Which population group do you belong to?

2. Please indicate your gender.

3. What qualifications do you have?

4. How many years have you been teaching?

5. What subjects are you currently teaching?

6. Have you had any training on how to address barriers to learning in learners in mainstream schools?

7. Views regarding the inclusion of learners who experience barriers to learning in inclusive settings?

8. How do you identify learners with barriers to learning in the classroom?

9. How do you respond to the diverse needs of learners in the classroom?

10. What strategies do you use to differentiate the curriculum?

11. What challenges do you experience when addressing barriers to learning in the mainstream school?

12. What support do you think you need to be able to address barriers to learning effectively in the mainstream school?
Appendix I: Letter from the language editor

ELSIE C NAUDÉ
DPhil Communication Pathology

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6573

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2019-11-25

This is to affirm that the manuscript

Teachers’ perspectives on addressing barriers to learning in learners
in an independent mainstream high school in Gauteng province

By
Renel Pillay

was edited by me with regard to language and style.

Elvaudé

Elsie Naudé