The role of dynamic assessment in framing reading difficulties

by

Mapule Muzanya

Submitted in partial fulfilment of the requirements for the degree

MAGISTER EDUCATIONIS
(Educational Psychology)

Department of Educational Psychology
Faculty of Education
University of Pretoria

SUPERVISOR
Dr. Suzanne Bester

PRETORIA
October 2021

Declaration

I, Mapule Muzanya (student number 10221345), declare that the dissertation/thesis, which I hereby submit for the degree Magister Educationis in Educational Psychology at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

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Mapule Muzanya

October 2021

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DEGREE AND PROJECT	MEd The role of dynamic assessment in framing reading difficulties
INVESTIGATOR	Ms Mapule Muzanya
DEPARTMENT	Educational Psychology
APPROVAL TO COMMENCE STUDY	13 June 2018
DATE OF CLEARANCE CERTIFICATE	10 September 2021

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Ethics Statement

The author, whose name appears on the title page of this dissertation, has obtained, for the research described in this work, the applicable research ethics approval. The author declares that she has observed the ethical standards required in terms of the University of Pretoria's *Code of ethics for researchers and the Policy guidelines for responsible research.*

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Mapule Muzanya
October 2021

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Acknowledgements

To have achieved this significant milestone in my life would not have been possible without the support of the following people to whom I would like to express my sincere gratitude:

- My research supervisor, Dr Suzanne Bester, for her invaluable advice, guidance and support throughout my research journey. Thank you, Dr B.
- My husband, Tinaye. Thank you for being my biggest cheerleader and support throughout this process. Thank you for staying up with me all those late nights and making sure everything else in our lives was taken care of so that I could focus on my studies. You are a wonderful husband.
- My parents, Eulenda and Rendani. Thank you for always supporting and praying for me throughout this journey. I am grateful to you.
- My siblings, Vongani and Tebogo. Thank you for understanding and always being there to encourage me and cheer me up.
- The rest of my wonderful family, dear friends and other members of my support system. You have walked this journey with me; your encouragement and constant support have given me the courage to keep going even when it felt impossible. Thank you for constantly praying for me.
- My language editor, Ms Nikki Watkins, thank you for your willingness to assist me, I appreciate it.
- Last, but not least, my Lord and Saviour, Jesus Christ. His unfailing love, grace and strength carried me throughout this journey. All glory be to God, Almighty.

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Abstract

The purpose of this descriptive case study was to describe how dynamic assessment provided a more detailed understanding and a clearer framing of learners' reading difficulties when done as a complementary assessment to standardised assessments. To achieve this goal, the clinical reports and case notes of the three learners who were assessed with both standardised tests and dynamic assessment – at the Training Facility at the University of Pretoria during the period of January 2015 to December 2019 – were analysed. The conceptual framework that supported this study was guided by constructs from Piaget's theory of cognitive development, Vygotsky's sociocultural theory, and Feuerstein's theory of mediated learning experiences. By using an interpretivist epistemological paradigm, this qualitative study provided insight into how the three learners' reading difficulties became more intelligible after the use of dynamic assessment. The findings of this study revealed that dynamic assessment provided a more detailed understanding of both the nature and extent of the reading difficulties that the three learners in this case study experienced. Dynamic assessment supplemented the standardised results by demonstrating how the use of mediational strategies can reveal the learners' potential for learning reading skills when provided with interventions that are aligned to their individual needs and how they responded to these interventions. Dynamic assessment further highlighted how the information gained from dynamic assessment informed recommendations for intervention strategies, which could be applied further in educational contexts.

Key words:

- Standardised tests
- Dynamic assessment
- Zone of proximal development
- Mediated learning experiences

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Language Editor

Nikki Watkins
Editing/proofreading services
Cell: 072 060 2354 E-mail: nikki.watkins.pe@gmail.com

26 October 2021

To whom it may concern

This letter serves to inform you that I have done language editing and proofreading on the thesis

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by

Mapule Muzanya

Professional EDITORS Guild

Nikki Watkins
Associate Member

Membership number: WAT003
Membership year: March 2021 to February 2022

072 060 2354
nikki.watkins.pe@gmail.com

www.editors.org.za

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List of Abbreviations

APSL	Personal-social adjustment scale
CBA	Classroom-based assessment
CBDA	Curriculum-based dynamic assessment
COVID-19	Coronavirus disease 2019
DBE	Department of Basic Education
DBST	District-based support team
DoE	Department of Education
DSM-V	Diagnostic and Statistical Manual of Mental Disorders, 5th Edition: DSM-5
DVD	Digital versatile disc
EDPL	Dynamic assessment device that evaluates processes involved in reading
EFL	English as a Foreign Language
ESL	English as a second language
FSIQ	Full-Scale Intelligent Quotient
HPCSA	Health Professions Council of South Africa
ICD-10-CM	International Classification of Diseases, Tenth Revision, Clinical Modification
IQ	Intelligence quotient
LPAD	Learning Potential Assessment Device
MLE	Mediated learning experiences
NARA	Neale Analysis of Reading Ability
SBST	School-based support team
SCM	Structural cognitive modifiability
SCT	Sociocultural theory
SNA	Support needs assessment
SSAIS-R	Senior South African Individual Scale-Revised
TOWRE-2	Test of Word Reading Efficiency - 2
WISC-IV	Wechsler Intelligence Scale for Children – Fourth UK Edition
WIAT-II	Wechsler Individual Achievement Test, Second Edition
ZAD	Zone of actual development
ZPD	Zone of proximal development

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Chapter 1
Introduction

1.1 INTRODUCTION AND RATIONALE

One of the main purposes of educational assessments is to determine academic achievement and to identify learners[1] who need support so that instruction in the classroom can be modified to enable them to reach their full potential (Cho et al., 2017). Therefore, it is important to use an assessment approach that can determine the exact nature and extent of learners' difficulties (Sanaeifar & Nafari, 2018). The need for effective assessments is emphasised in contexts where learners come from diverse educational and cultural backgrounds; in these contexts, using only standardised scores may not be sufficient to adequately determine their developing skills (Grigorenko, 2009).

In the South African context, National Systematic Evaluations (the benchmark test) conducted by the Department of Education (DoE) in the years 2001 and 2007 to determine literacy and numeracy levels in primary schools, revealed that learners in South Africa performed poorly when they were tested to determine their age-appropriate level for reading (DoE, 2008). For Grade 3 foundation phase learners, the Systematic Evaluation Programme revealed that 48% of the learners performed below their age-appropriate levels in language competency tests (Department of Basic Education [DBE], 2011). 63% of learners in the intermediate phase were below the required language competence for their age level (DoE, 2008). The DoE found that reading competency problems arose from a lack of teachers' training in teaching basic reading skills through using appropriate teaching methods and that the language of instruction and the learners' home languages differed, which led to insufficient exposure to the language they were assessed in (DoE, 2008).

In such instances where learners struggle with basic reading skills there is a need to assess their reading abilities by using assessments that can determine their reading level, predict their future reading skills, and diagnose reading difficulties or disabilities, these include Wechsler Individual Achievement Test (WIAT-II) and Test of Word Reading Efficiency - 2 (TOWRE-2) (Cho et al., 2017; Cruz, 2018; Lerner &

[1] Please note that the term learners will be used to refer to children under the age of 18 years.

Johns, 2012). Assessments such as standardised or static tests determine learners' reading performance without assistance. These assessments are valuable for evaluating the product of past learning experiences and current abilities (Cho et al., 2017).

Although these tests are useful for diagnostic and prognostic reasons, most of these tests focus on the results rather than the actual process of learning (Baek & Kim, 2003; Kovalčíková, 2015). By focussing on reading scores these standardised tests do not provide an understanding of the learner's learning processes, strategies, and potential to learn (Baek & Kim, 2003). Furthermore, critics argue that standardised assessments do not provide information regarding intra-individual change, and they cannot distinguish poor reading scores caused by cognitive deficits from poor scores caused by a lack of instructional opportunities or cultural and linguistic differences (Cho et al., 2017; Petersen et al., 2018).

Where standardised assessments help to determine only the current reading performance, it is important to include intervention during the process of assessment to determine how responsive a learner is to intervention, which may assist in the diagnosis process (Cho et al., 2017; Petersen et al., 2018). In fact, scholars argue that dynamic assessment may enable clinicians to identify learners with dyslexia more accurately than by using standardised assessments only (Cho et al., 2017; Petersen et al., 2018).

Although standardised assessments have limitations such as only being able to determine a learner's current reading skills instead of their capabilities, these assessments have paved the way for the development of more flexible approaches like dynamic assessment, which determine a learner's potential and how the learner may respond to future reading instruction (Mardani & Owusu, 2019; Petersen et al., 2018). International researchers have emphasised that dynamic assessment is not a substitute for standardised assessments; rather it serves a complementary role as an assessment that provides the opportunity for intervention as well (Haywood & Lidz, 2007; Mardani & Owusu, 2019).

An example of how dynamic assessment can be used as a complementary assessment to standardised assessments is in the evaluation of reading difficulties (Haywood & Lidz, 2007). When standardised reading test results are low and do not correlate with the information obtained from other sources such as aptitude tests,

dynamic assessment can be used to indicate the learner's potential and the instructional strategy that can be used to develop that potential into independent performance (Bester & Kühn, 2016; Mardani & Owusu, 2019). Dynamic assessment is an instructional-based approach to assessment that allows for mediation by the assessor, between the learner and the assessment task (Bester & Kühn, 2016; Haywood & Lidz, 2007; Poehner, 2007). It conceptualises the integration of teaching and assessment to gain an understanding of a learner's reading skills (Poehner & Infante, 2018).

International studies by Birjandi *et al*. (2013), Lantolf and Poehner (2011) as well as Sanaeifar and Nafari (2018) have revealed that the use of mediation in dynamic assessment leads to an improvement in learners' understanding of their work and their capability to work through activities independently (Birjandi et al., 2013; Lantolf & Poehner, 2011; Sanaeifar & Nafari, 2018). Learners can transfer the skills learnt during mediation to other tasks as well and improve their performance (Sanaeifar & Nafari, 2018). Mediation can also be used to observe a change in learners' responsiveness as they move from relying on the most explicit form of mediation to requiring more implicit forms such as hints (Lantolf & Poehner, 2011). Through the use of dynamic assessment, instruction and assessment can be integrated to assist learners in their development of literacy skills (Birjandi et al., 2013; Lantolf & Poehner, 2011).

In the South African context where learners come from diverse educational, cultural, and socio-economic backgrounds with limited learning opportunities that affect their literacy skills, dynamic assessment may provide learners with the opportunity for an interactive form of assessment that helps to determine their developing skills (Amod & Seabi, 2013; Bester & Kühn, 2016). South African researchers have indicated that dynamic assessment can be used to overcome cultural and educational biases that are usually encountered when using standardised assessments (Bester & Kühn, 2016; De Beer, 2006; R. Murphy & Maree, 2006). For learners who experience learning barriers due to language and cultural differences or due to socio-economic disadvantages, dynamic assessment can enable these learners to improve their performance when it is used as an accommodating and complementary form of assessment (Bester & Kühn, 2016).

South African studies indicate a limited use of dynamic assessment due to misconceptions such as the nature of dynamic assessment, the lack of consistent

research approaches used, its limited validity and reliability, as well as the the high costs of implementation (De Beer, 2006; R. Murphy & Maree, 2006; Smit, 2010). The high costs of implementation are due to dynamic assessment requiring a longer time to administer in comparison to standardised tests (Smit, 2010). In addition, few psychologists are exposed and trained to use this form of assessment and there is limited empirical evidence of its effectiveness (Smit, 2010; Zurakat, 2018).

As a former special educational needs teacher and as an educational psychologist in training, under the guidance of a registered educational psychologist and supervisor, the researcher has witnessed how standardised assessments provide limited results regarding a learner's abilities. Although standardised assessments show the learner's current abilities, they have not enabled the researcher – or other assessors – to determine if the learner's abilities can be improved with the appropriate intervention. Although the researcher has witnessed the value of standardised assessments when used for diagnostic purposes, without any form of intervention being provided during the assessment process, the standardised assessment results obtained were limited and did not indicate if the learner assessed would have benefitted from the use of instructional strategies (Amod & Seabi, 2013).

Due to the limited use of dynamic assessment by South African psychologists (Smit, 2010) there is a need for a study that shows how dynamic assessment can be used to determine the learning potential of learners with various learning difficulties or those with limited exposure to learning opportunities and to gain a better understanding of learner's reading difficulties. The findings of this study can provide South African teachers and psychologists with a greater understanding of how dynamic assessment can be a useful complementary assessment tool that informs standardised assessments of reading ability.

1.2 PURPOSE OF THE STUDY

The purpose of this descriptive case study was to describe how dynamic assessment can provide a more detailed understanding and a clearer framing of learners' reading difficulties if done as a complementary assessment to standardised assessments. To achieve this goal, the clinical reports and case notes of three learners who were assessed with both standardised assessments and dynamic assessment – at the Training Facility at the University of Pretoria during

the period of January 2015 to December 2019 – were analysed. At this stage of the research, dynamic assessment will be generally defined as an interactive approach for assessing the ability of a learner's response to intervention (Ajideh & Nourdad, 2012).

1.3 RESEARCH QUESTIONS

The following research questions guided the study.

1.3.1 PRIMARY RESEARCH QUESTION

What role did dynamic assessment play in providing a clearer framing of the reading difficulties of the three learners who were assessed with both standardised tests and dynamic assessment at the Training Facility at the University of Pretoria from January 2015 to December 2019?

1.3.2 SECONDARY RESEARCH QUESTIONS

- How did dynamic assessment inform the standardised test results of the three learners who were assessed with both standardised reading tests and dynamic assessment?
- How did dynamic assessment influence the conceptualisation of these learners' reading difficulties?

1.4 CONCEPT CLARIFICATION

The key concepts of this research study are defined below:

1.4.1 DYNAMIC ASSESSMENT

There are multiple definitions of dynamic assessment. According to Haywood and Lidz (2007), it is defined as an approach that follows the test-teach-retest format. It focuses on modifiability and interventions by a more knowledgeable individual to improve performance (Haywood & Lidz, 2007). Poehner (2008) defines dynamic assessment as active collaboration with the learner to determine the learner's abilities, and to promote their future development (Poehner, 2008). In a classroom setting, dynamic assessment can be defined as an approach to understanding

learners' abilities to support them by introducing instruction during the assessment to improve those abilities (Poehner, 2008).

In this research study, dynamic assessment is defined as an instruction-based assessment used to determine a learner's reading abilities (Elliott, 2003; Grigorenko, 2009). Through receiving assistance during the mediation phase of the assessment – from a more experienced individual – the learner's performance may improve, and the assessor can determine the instructional strategy that the learner responded positively to (Elliott, 2003). By using various mediational strategies, the assessor can gain a better understanding of the learner's reading difficulties based on the responses to the mediational strategies provided (Birjandi et al., 2013).

1.4.2 READING DIFFICULTIES

Reading difficulties are the problems experienced while developing the skills required to recognise words and understand written text (Lerner & Johns, 2012). In some learners, reading difficulties may be observed as confusion when recognising letters and words and difficulty with understanding information that is presented in written format. These difficulties may present as a type of learning disability known as dyslexia, or as a specific learning disorder with impairment in reading (American Psychiatric Association, 2013; Lerner & Johns, 2015). These reading disabilities or reading disorders can co-occur with other diagnoses, developmental disorders, or behavioural problems (Kempe et al., 2011; Russell et al., 2015).

In some learners, reading difficulties may include challenges due to a failure to develop the prerequisite skills and knowledge. This may prevent learners from learning how to read fluently (Johnson et al., 2013). These reading difficulties may arise as a result of a disadvantage in a learner's background, such as a social, cultural, or linguistic disadvantage, or as a result of a lack of exposure to sufficient learning opportunities. These difficulties may prevent a learner from gaining exposure to a range of language concepts that support the learner's progress in developing literacy skills (McPhillips & Sheehy, 2004).

In this research study, reading difficulties are defined as the failure to recognise or differentiate letters of the alphabet, a lack of phonemic awareness, or a lack of understanding of written words (Lerner & Johns, 2015). Learners with these reading

difficulties often lack sufficient oral and written vocabulary and require intensive support to improve their reading skills (Lerner & Johns, 2012; Van Staden, 2018).

Different authors use the terms reading disabilities and reading disorders interchangeably to describe reading difficulties that have not shown an improvement when intensive intervention strategies have been provided to remediate the reading difficulties (Lerner & Johns, 2012; Vaughn et al., 2008; Wanzek et al., 2011). Reading difficulties, reading disorders or reading disabilities can be assessed using dynamic assessment for different purposes that will be elaborated on in chapter 2 of this study.

1.5 WORKING ASSUMPTIONS

For the purpose of this study, the researcher made the following assumptions:

- Dynamic assessment can be used to better understand reading difficulties.
- Dynamic assessment can be used as a complementary method to standardised assessments.
- Dynamic assessment can enable an assessor to distinguish learning disabilities from learning difficulties.
- The mediational strategies used in dynamic assessment can improve reading ability.
- The mediational strategies used in dynamic assessment can enable the assessor to design an intervention for learners with reading difficulties.

1.6 SIGNIFICANCE OF THE STUDY

This study has the potential to contribute to the existing literature in the field of dynamic assessment and reading difficulties in the South African context. The findings of the study may broaden assessors' understanding of learners' reading difficulties and provide them with information regarding the mediational strategies that can be used to support learners' reading skills. The findings of this study may encourage more assessors to use dynamic assessment to gain information that will inform their understanding of standardised reading test results and help them determine how a learner may benefit from intervention.

1.7 DELIMITATIONS

This study was limited to analysing the client reports and case notes of three learners who were assessed at the Training Facility of the Department of Educational Psychology at the University of Pretoria using both standardised and dynamic assessment. The learners were assessed by the assessors (student educational psychologists who interpreted the assessment results under the supervision of registered educational psychologists). These selected client reports and case notes from the case files were documented from 2015 to 2019 only.

Purposive sampling was used to select the case files of the learners who were assessed for reading difficulties using both standardised assessment and dynamic assessment. The conceptual framework in this study was limited to the concepts of Vygotsky's sociocultural theory, Piaget's theory of cognitive development, and Feuerstein's theory of mediated learning experiences (MLE).

1.8 INTRODUCING THE CONCEPTUAL FRAMEWORK SUPPORTING THE STUDY

The conceptual framework for this research study was based on concepts from Piaget's theory of cognitive development, Vygotsky's sociocultural theory, and Feuerstein's theory of mediated learning experiences. The concepts that underpinned this study were assimilation, accommodation, zone of proximal development, scaffolding, and MLE strategies (Feuerstein et al., 1979; Piaget, 1962; Vygotsky, 1978).

According to Piaget's theory, optimal learning occurs when the information gained from the environment can be assimilated into the individual's cognitive structure (Hergenhahn & Olsen, 2001). When an individual experiences new information from the environment, it leads to a change in the number of schemata available in the individual's cognitive structure (Pritchard & Woollard, 2010). This change is known as assimilation and it is achieved when there are no contradictions in one's mental representations of the environment (Bavali et al., 2011; Pritchard & Woollard, 2010).

The modification of the cognitive structure is known as accommodation (Bavali et al., 2011). If the schemata significantly change during the process, a new way of thinking or accommodation is created (Bavali et al., 2011). Accommodation is the process of modifying the child's cognitive structure through the interaction of the

child with their environment (Piaget, 1962; Pritchard & Woollard, 2010). It occurs when the schemata within an individual are changed to adjust to the new – or contradictory – information (Abrie et al., 2016; Pritchard & Woollard, 2010). As the child internalises the information they are gaining, the development of their cognitive skills is enabled (Seabi, 2012).

Vygotsky's (1978) concept of the zone of proximal development (ZPD) refers to the level of functioning that a child can achieve with the assistance of a more competent individual (Ensing et al., 2014). The ZPD assists in the conceptualisation of the difference between the level of actual performance and the learning potential of the child (Kozulin, 2003). It emphasises the significance of providing appropriate support for children to assist them in reaching their potential by improving their current performance (Lantolf & Poehner, 2011). The ZPD provides knowledge about the psychological functions of the child, which have not yet fully developed (Kozulin, 2003).

The ZPD is revealed from the scaffolding approach that occurs through the interaction of the child with a more knowledgeable individual (Vygotsky, 1978). Scaffolding is the guidance provided during instruction by a more competent individual when a child struggles to perform independently (Elliott et al., 2010). As the child becomes more competent and reaches a new level in their development, the guidance provided is gradually decreased (Ensing et al., 2014). Scaffolding can be used as a strategy to improve reading comprehension when learners are exposed to it as an intervention strategy for longer periods (Nazari & Mansouri, 2014).

Feuerstein's mediated learning experiences (MLE) refers to the interactions that create the capacity within an individual to modify themselves towards greater adaptability and to use their higher cognitive processes (Feuerstein et al., 1979). During the MLE process, the mediator facilitates the child's internalisation of the interaction (Poehner, 2008). The quality of MLE can be achieved only when the MLE criteria are met (Feuerstein et al., 1979). The three main strategies of MLE are (i) intentionality and reciprocity of interaction, (ii) the mediation of meaning, and (iii) mediation of transcendence (Feuerstein et al., 1979; Tzuriel & Remer, 2018). These strategies improve the cognitive development of a child (Poehner, 2008).

Intentionality refers to the mediator's deliberate efforts to alter a child's perception, processing, or reaction (Tzuriel, 2013). The mediator changes the stimulus to make it more attractive to the child by changing the amplitude, frequency, and duration of the stimulus' exposure. The intention to mediate not only transforms the stimuli, but it transforms the child as well (Feuerstein et al., 1988). Reciprocity refers to the child's response to the mediator's behaviour. The response can be verbal or non-verbal (Tzuriel, 2013). As the child is an active co-constructor of the knowledge, the focus of reciprocity is on the interaction between the mediator and the child (Feuerstein et al., 1988). Intentionality and reciprocity can be observed when the mediator focuses the child's attention on a specific aspect of the task by highlighting its features, and the child reciprocates with the relevant response (Tzuriel & Shomron, 2018).

Mediation of meaning refers to the interaction observed when the mediator emphasises the importance of the stimulus through verbal or non-verbal communication (Tzuriel & Remer, 2018). Verbal communication includes the enlightening of an event or activity, relating it to previous or current events or explaining its value whereas non-verbal communication includes the use of facial expressions, repetitious acts, or tone of voice (Tzuriel & Remer, 2018). Lastly, mediation of transcendence goes beyond the context of the content discussed; the mediator focuses on using principles, concepts, or rules to generalise their explanations to other contexts (Tzuriel & Remer, 2018; Tzuriel & Shomron, 2018). The conceptual framework for this research study is discussed in more detail in Chapter 2.

1.9 OVERVIEW OF THE RESEARCH METHODOLOGY, APPROACH, AND PROCESSES

This study relied on an interpretivist paradigm to gain insight into how dynamic assessment augmented the standardised test results and provided a deeper understanding of the assessment of reading skills. A qualitative research approach was used with a descriptive case study design to describe the role dynamic assessment played when it was used to support standardised test results of reading ability. I purposefully selected three case studies that met the criteria of the children who were assessed with standardised assessments of their reading ability as well as dynamic assessment.

I followed the steps of deductive content analysis – as described by Mayring (2014) – to analyse the secondary data. Deductive content analysis enabled me to use predetermined themes derived from the conceptual framework of this study and my research questions to understand each case study. To ensure the trustworthiness of this study I used the quality criteria of credibility, transferability, dependability, and confirmability.

Since this was a secondary data analysis study, the ethical considerations that were taken into consideration in the study included permission from the research site, informed consent, and confidentiality. A detailed discussion of the research approach, methodology, processes, quality criteria, and ethical considerations of this study will be provided in Chapter 3.

1.10 OVERVIEW OF THE DISSERTATION

Chapter 1 provided a summary of the introduction and rationale of the study. The purpose of the study and the research questions were stated to provide the direction of the study. Chapter 2 provides the conceptual framework on which the study is based as well as the literature review focusing on the usefulness of dynamic assessment as a supplementary tool to standardised assessments. Chapter 3 provides a discussion on the paradigmatic assumptions, the research design, and the analysis of the data that were used. The findings of the research are presented in Chapter 4. Chapter 5 provides the summary of the findings as well as a discussion and conclusion for the study.

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Chapter 2
Literature Review

2.1 INTRODUCTION

This chapter introduces the reader to various methods of assessing reading difficulties, building up to the emergence of dynamic assessment as a complementary approach to the assessment of reading difficulties. The chapter commences with a description of classroom-based assessments (CBA) of reading difficulties used in the school context. These assessments assist teachers in the initial identification of learners with reading difficulties. When learners require further assessments, they are usually referred to the clinical context where standardised and other forms of assessments are used. The next section discusses the use of these standardised assessments in a clinical context. This is followed by a comprehensive description of dynamic assessment as an alternative approach to standardised assessments.

An overview of the emergence and progression of dynamic assessment is provided in the next section, which covers the history of dynamic assessment to show how this form of assessment came into existence. This is followed by a comparison of dynamic assessment and standardised assessment as well as an explanation of the different types of dynamic assessment. These types are further categorised into the different models of dynamic assessment, which demonstrate the use of dynamic assessment in different ways to accommodate learners' needs and provide valuable insight into learners' reading skills. An in-depth discussion of the use of dynamic assessment includes an explanation of the benefits and limitations of this form of assessment.

Since dynamic assessment is an evidence-based approach, research studies conducted on its effectiveness are discussed in the section that follows. These studies cover some of the previously mentioned limitations of dynamic assessment. The studies also provide practical examples of how dynamic assessments have been used effectively to assess and ameliorate reading difficulties. The chapter ends with a discussion of the conceptual framework of this study.

2.2 ASSESSMENT OF READING DIFFICULTIES

Reading difficulties arise when learners experience challenges with decoding words, lack of word recognition skills, or have problems with reading comprehension (Jennings et al., 2014; Lerner & Johns, 2012). Accurate assessment of these reading difficulties is important if appropriate support and intervention are to be provided (Afflerbach, 2016; Nation & Snowling, 1997). Assessment of learners' reading difficulties can be done in different contexts using a variety of tests (Grabe & Jiang, 2014). In the school context, CBA can be used to identify learners' strengths and growth areas (Brown & Hattie, 2012; Donovan, 2016). In cases where further assessments are required to diagnose reading difficulties and disorders and develop an intervention plan, learners are often referred to an educational psychologist who can apply a battery of assessments (DBE, 2014). The following sections discuss the purpose of assessing reading difficulties in school and clinical contexts.

2.2.1 READING ASSESSMENT IN THE SCHOOL CONTEXT

The school context is the primary context in which learners learn to develop reading skills. Some learners can master the reading content that they are taught, while others struggle. In the classroom, teachers monitor learners' academic progress and identify those who experience reading difficulties (Dunn et al., 2009). They are the first professionals to notice learners with reading difficulties (Dunn, 2006; Dunn et al. 2009).

A teacher can use various methods to support a learner who is experiencing reading difficulties, such as determining the learner's reading level (Dednam, 2019). Although this method does not determine the learner's actual reading abilities, it helps the teacher determine when they should start with the provision of support (Dednam, 2019). If the support is ineffective, the teacher needs to investigate further. Teachers can use CBAs to gather information and develop interventions to help the identified learners (DBE, 2014).

Classroom-based assessments indicate learners' reading ability in the classroom setting (Hill & McNamara, 2012). A CBA aims to provide feedback based on the information gathered during learning and teaching (Hill & McNamara, 2012; Rea-Dickins, 2001). A CBA can be used as a summative (formal) or formative (informal) assessment (Hill & McNamara, 2012; Nieuwoudt & Reyneke, 2016). Summative

assessments are used to identify learners' reading levels and to determine if they have mastered the reading skills needed to progress to the next grade (Nieuwoudt & Reyneke, 2016; Rea-Dickins, 2001). Formative CBAs are used to monitor learners' progress and identify their growth areas (Nieuwoudt & Reyneke, 2016). The information obtained from formative assessments is used to give learners feedback on their progress and to provide the correct form of mediation for those with reading difficulties (Nieuwoudt & Reyneke, 2016; Rea-Dickins, 2001). These formative CBAs enable teachers to determine and improve learners' understanding of concepts (Nieuwoudt & Reyneke, 2016; Rea-Dickins, 2001).

If an improvement is not seen after classroom interventions are used, the teacher refers the learner to a specialist for further scholastic assessment (DBE, 2014; Dunn et al., 2009). The teacher also conducts a vulnerability assessment to identify "at-risk" learners. Once such learners have been identified, the school-based support team (SBST) is approached to assist with the development of an individualised support plan for these learners (DBE, 2014).

Specialists who are part of the SBST include educational psychologists. According to the Department of Basic Education, psychologists can form part of the SBST and district-based support team (DBST) depending on where they are employed (DBE, 2014). Learners are referred to an educational psychologist when a lack of improvement has been observed in their progress after the provision of support (DBE, 2014). The teacher describes the learners' strengths and growth areas and the support that was given as stipulated in the SIAS policy document, which serves a guideline for the standardisation of the process for identifying, assessing and providing support for all learners (DBE, 2014). This information is included in a report or the learner profile and the support needs assessment form (SNA) (DBE, 2014). At this stage, these learners require the assistance of an educational psychologist.

2.2.2 READING ASSESSMENTS IN THE CLINICAL CONTEXT

Where support has been provided without success in the classroom context, the learner is referred to the clinical context for further assessment of their reading difficulties (DBE, 2014). The assessment can be conducted by an educational psychologist to determine the learner's specific barrier to learning and to develop an appropriate intervention (DBE, 2014). The psychologist can use a variety of reading

tests including standardised tests, which are used to collect information for diagnostic purposes (Alderson, 2000; Donovan, 2016; Grabe & Jiang, 2014).

Standardised assessments inform the professional judgement of assessors by serving as scientific instruments to interpret data (Weiss, 2016). The results of such assessments can help psychologists make diagnoses and recommend evidence-based interventions (Weiss, 2016).

Although standardised assessments provide important comparative information, this information could be at the expense of understanding individual differences since they do not allow for a full exploration of learners' abilities (Donovan, 2016). Standardised assessments cannot identify the underlying reason for a learner's difficulty with some tasks and success with other tasks. These tests can only measure a learner's performance at the time of assessment and cannot do at a specific point in time (Donovan, 2016). To supplement the limited information that standardised test results produce, dynamic assessment has emerged as an alternative evidence-based assessment used to explore the learner's individual differences. This interactive assessment approach casts light on how an individual learns at an optimal level by indicating the learner's learning process and their learning strategies (Donovan, 2016).

Effective assessment of reading ability requires three kinds of information to determine an appropriate intervention: learners' strengths and weaknesses in reading, their potential to progress in reading, and the conditions under which progress can be made (Cioffi & Carney, 1983, Cioffi & Carney, 2010). Dynamic assessment can be used to gather such information to determine the most suitable form of instruction to improve reading ability (Donovan, 2016). The next section discusses dynamic assessment as an effective complementary method to assess reading.

2.3 DYNAMIC ASSESSMENT AS A COMPLEMENTARY METHOD TO STANDARDISED ASSESSMENT

Dynamic assessment is a form of assessment that allows for mediation by an assessor during the assessment process (Bester & Kühn, 2016; Haywood & Lidz, 2007; Poehner, 2007). Dynamic assessment can be used as part of a holistic psychological assessment. It can inform standardised test results to determine the

specific challenges that may be hindering the learner's independent performance (Sadeghi & Khanahmadi, 2011).

Dynamic assessment focuses on learning processes and enabling cognitive modifiability (Mardani & Tavakoli, 2011). It enables an assessor to determine a learner's learning potential and additional information on the learner's learning ability and their capacity for cognitive modifiability (Dörfler et al., 2009; Mardani & Owusu, 2019). As the assessor and the learner interact during the assessment process, the learner is allowed to ask questions and receive appropriate guidance (Bester & Kühn, 2016).

Dynamic assessment can help an assessor to gain insight into the current level of reading competence of a learner and how their competence can be improved through support (Dörfler et al., 2009). Dynamic assessment can be used to determine the learner's performance without assistance as well as his achievement when he obtains guidance (Dörfler et al., 2009).

2.4 DYNAMIC ASSESSMENT

Dynamic assessment emerged as a result of the limitations that were noted by professionals when using standardised assessments alone (Smit, 2010). The next section covers the history of the emergence of dynamic assessment as well as the differences between dynamic assessment and standardised assessments. The section ends with a discussion of the different approaches to dynamic assessment.

2.4.1 HISTORY OF DYNAMIC ASSESSMENT

Dynamic assessment is a concept that originated from the work of Binet, Piaget, Vygotsky, and Feuerstein in the 20th century (Lidz, 2003; R. Murphy, 2011). Alfred Binet contributed to the field of assessment when he was commissioned by the French government to develop an assessment that could be used to identify learners with special education needs (Weiten & Hassim, 2018). Together with his colleague, Theodore Simon, he developed the first assessment for measuring intelligence – the Binet-Simon Scale (Foxcroft & Roodt, 2009; Weiten & Hassim, 2018). The scale was administered under standardised conditions, which led to the development of norms and the use of comparative scores for the interpretation of performance in intelligence tests (Foxcroft & Roodt, 2009; Haywood, 2012).

Binet later published a list of learners' individual differences that could affect their school performance negatively and called for an assessment approach that considered learners' potential (Haywood, 2012). Binet also introduced the notion of examining ability during the test process and continuously developing dormant ability. While investigating ability, he described the correct responses in a test as an indication of ability (R. Murphy, 2011). In contrast to Binet's focus on correctness, Jean Piaget focused on the importance of recording errors made in assessments (R. Murphy, 2011). His major contribution to dynamic assessment was his constructivist theory in which he maintained that learners learn optimally by actively engaging in the process of playing/learning (Piaget, 1962).

Russian psychologist Lev Vygotsky (1978) developed the concept of the ZPD in his sociocultural theory (SCT). From the ZPD, the assessment of an individual's potential was determined by the improvement in cognitive performance observed after mediation (Haywood, 2012; R. Murphy, 2011).

Following Vygotsky's work on dynamic assessment, Feuerstein et al. (1979) developed his theory of MLE, which led to the addition of an interactive component in assessment between learner and assessor. The interactive component helped improve a learner's capabilities – capabilities that could be observed through the learner's responses during the interactions (Lidz, 2003). Feuerstein developed the Learning Potential Assessment Device (LPAD) to reconcile the differences in learners' test performances with the cognitive level he believed they could achieve academically (Lidz, 2003). He also introduced his theory of structural cognitive modifiability (SCM) in which he hypothesised that human beings are open systems with cognitive structures that can be modified when exposed to certain conditions (Feuerstein, 1990). These conditions are human-environment interactions such as MLEs and direct exposure learning (Feuerstein, 1990).

Through Binet's theory of intelligence and individual differences, the foundation for dynamic assessment was laid in terms of the identification of individuals' unique strengths, weaknesses, and learning styles (Haywood & Lidz, 2007). Together with Piaget's theory of cognitive development and Vygotsky's sociocultural theory, human cognitive development through social interactions was further theorised (Weisi & Bahramlou, 2017). Feuerstein's work on the improvement of cognitive functioning through MLEs subsequently provided insight into how dynamic

assessment can be used to help learners internalise the cognitive skills they acquire through interaction (Kozulin, 2011).

2.4.2 MAJOR DIFFERENCES BETWEEN DYNAMIC ASSESSMENT AND STANDARDISED ASSESSMENT

As stated earlier, the value of dynamic assessment is the role it plays as a complementary assessment to standardised assessment (Mardani & Owusu, 2019). These two types of assessment can be used together to gain a comprehensive understanding of learners' abilities and challenges. Where standardised tests aim to determine how much learners have learnt in terms of a particular criterion or comparison to their peers, dynamic assessment augments the standardised test results by providing additional information on the learners' difficulties (DBE, 2014). The results are augmented by explaining how learners learn and whether their performance can be improved to meet a particular criterion or reach their peers' level of performance (Haywood & Lidz, 2007). Dynamic assessment provides a platform to evaluate the instructional factors that play a role in reading performance (Carney & Cioffi, 1992).

Before one can fully comprehend how these two assessments can be used together, it is important to understand their differences. Dynamic assessment differs from standardised assessment in terms of the goals of assessment, the focus of assessment, the context of assessment, and the interpretation of the results (Bester & Kühn, 2016; Carney & Cioffi, 1992; Tzuriel, 2013). These differences can be seen in Table 2.1.

Table 2.1: Difference between dynamic assessment and standardised assessment (adapted from Bester & Kühn, 2016; Haywood & Lidz, 2007; Tzuriel, 2013)

	Dynamic assessment	Standardised assessment
Goals of assessment	• Assesses learning potential • Assesses the type of mediation required • Assesses non-intellective factors, e.g., attention and social responsiveness	• Assesses current performance • Assesses learner's performance in comparison to peers • Predicts learner's future achievement
Focus (orientation) of assessment	• Learner's learning processes, e.g., method of approaching tasks	• Objective scores (end products) obtained

	• Learner's metacognitive processes	• Deductions can be made based on the profile obtained from test scores
Context of assessment	• Interactive and open process between learner and assessor • Guidance and support are provided during feedback and assessment • Parents and teachers can observe assessment	• Formal and structured interaction between learner and assessor • Standardised, limited support provided • Parents and teachers are not usually allowed to observe assessment
Interpretation of results	• Subjective interpretation • Actual performance level • Response to mediation	• Objective interpretation • Focus on learner's average performance

Standardised assessment has shown its value in providing the information required for diagnostic purposes and for determining whether a learner's performance is below the age-appropriate level (Donovan, 2016). However, a learner's individual differences cannot be determined using standardised assessment alone. Dynamic assessment has the potential to reveal important information regarding a learner's thinking and learning strategies and can also provide useful strategies for teaching (Donovan, 2016; Nazari & Mansouri, 2014).

2.4.3 TYPES OF DYNAMIC ASSESSMENT

Dynamic assessment approaches can be categorised into two major approaches, namely the interventionist approach and the interactionist approach (Birjandi et al., 2013; Lantolf & Poehner, 2011). The next section discusses these two approaches.

2.4.3.1 Interventionist dynamic assessment

The interventionist approach uses standardised instruments designed in various ways to modify a learner's test performance (Hessamy & Ghaderi, 2014; Losardo & Notari-Syverson, 2011). Its focus is on quantifying the assistance the learner received and the amount of time required for the learner to learn the skill (Lantolf & Poehner, 2011). The interventionist approach enables the systematic documentation of a learner's performance and progresses towards the learner's independence due to the level of mediation decreasing over time (Lantolf & Poehner, 2011). The approach also yields quantifiable results that can be used to make comparisons between groups (Hessamy & Ghaderi, 2014).

The approach can be divided further into two models (Bester & Kühn, 2016; Sternberg & Grigorenko, 2002). Budoff's (1987) standardised sandwich model, also known as the "sandwich" format model, uses a pre-test, train, post-test approach (Dörfler et al., 2009). A learner is presented with a task in a standardised format, followed by an intervention that addresses the learner's observed challenges identified by the assessor during the first test (Kapantzoglou et al., 2012). The intervention offers the learner beneficial strategies for problem-solving. The instruction can be provided in many different forms according to the needs of the learner (Grigorenko, 2009). The assessment is repeated using a similar version of the first test (Dörfler et al., 2009; Kapantzoglou et al., 2012).

The second model is Campione and Brown's (1987) graduated prompt cake model or "cake" format. During the test administration, the learner receives standardised intervention immediately after an error is made in an assessment item (Dörfler et al., 2009). Using a variety of prompts, ranging from implicit to explicit, the "cake" format enables the assessor to support the learner in correcting the errors identified in each assessment item (Kapantzoglou et al., 2012; Poehner, 2008). The approach is quantifiable in terms of the number of hints or prompts the learner receives before they can answer the questions correctly (Lidz, 2003).

As the interventionist approach as a whole is time-limited, it requires brief, straightforward interventions to allocate time efficiently (Dörfler et al., 2009). Its time limitations affect the level of quality of the feedback provided to the learner regarding the errors they made. The feedback assists in the development of the learner's metacognitive processes, which are important in reading development (Dörfler et al., 2009).

The next section discusses the interactionist dynamic assessment approach.

2.4.3.2 Interactionist dynamic assessment

The interactionist approach is qualitative in nature and focuses on the processes that take place in a learner, rather than on the product or result (Kapantzoglou et al., 2012). The approach focuses on how the learner develops during the assessment process. This includes the cognitive processes the learner uses when performing a task (Losardo & Notari-Syverson, 2011). It focuses also on the types of support required by the learner to enable them to demonstrate their potential for

learning (Losardo & Notari-Syverson, 2011). The assistance provided to the learner occurs in response to the interaction between the assessor and the learner. This mediation improves the learner's cognitive functioning and, therefore, their understanding of the task. Mediation can be in the form of stimulating questions or suggestions (Kapantzoglou et al., 2012; Omidire et al., 2011).

The interactionist approach can be further divided into two models. These are Feuerstein's intuitive clinical model and Lidz's curriculum-based model (Bester & Kühn, 2016). Feuerstein developed a Learning Potential Assessment Device (LPAD) (Feuerstein et al., 1979) that consists of a series of paper-and-pencil tasks that evaluate cognitive functioning with the help of interventions for the different tasks (Lidz, 2003). It is used to determine the specific intervention a learner requires to answer test problems by determining their responsiveness to the various types of mediation provided (Lidz, 2003). The LPAD aims to identify the causal factors that may be preventing a learner from performing well (Jensen & Feuerstein, 1987).

Lidz's curriculum-based approach (1991) can be implemented by using a learner's classroom curriculum content as dynamic assessment tasks (Haywood & Lidz, 2007). Lidz's approach is based on the pre-test-mediation-post-test approach as well as Feuerstein's mediated learning experience to improve metacognitive skills (Lidz, 2003). The tasks the learner struggled with and made errors in are analysed (Haywood & Lidz, 2007). The analysis is conducted as part of a five-step procedure that includes examining the learner as well as processes such as metacognition and the learner's knowledge (Lidz, 2003). Curriculum-based dynamic assessment (CBDA) enables the modification of the assessment to meet the needs of the learner. This occurs through matching the processing demands of the selected tasks with the learner's processing capabilities (Haywood & Lidz, 2007).

Due to the lack of standardisation in interactionist dynamic assessment, the assessor has the challenge and responsibility of correctly interpreting a learner's needs during mediation (Hessamy & Ghaderi, 2014). Interactionist dynamic assessment is often labour intensive as it requires the assessor to identify the learner's difficulties and determine the appropriate feedback during the interactions. Interactionist dynamic assessment also promotes the learner's development through interactions (Lantolf & Poehner, 2011).

Figure 2.1. shows the abovementioned models as summarised by Bester and Kühn (2016).

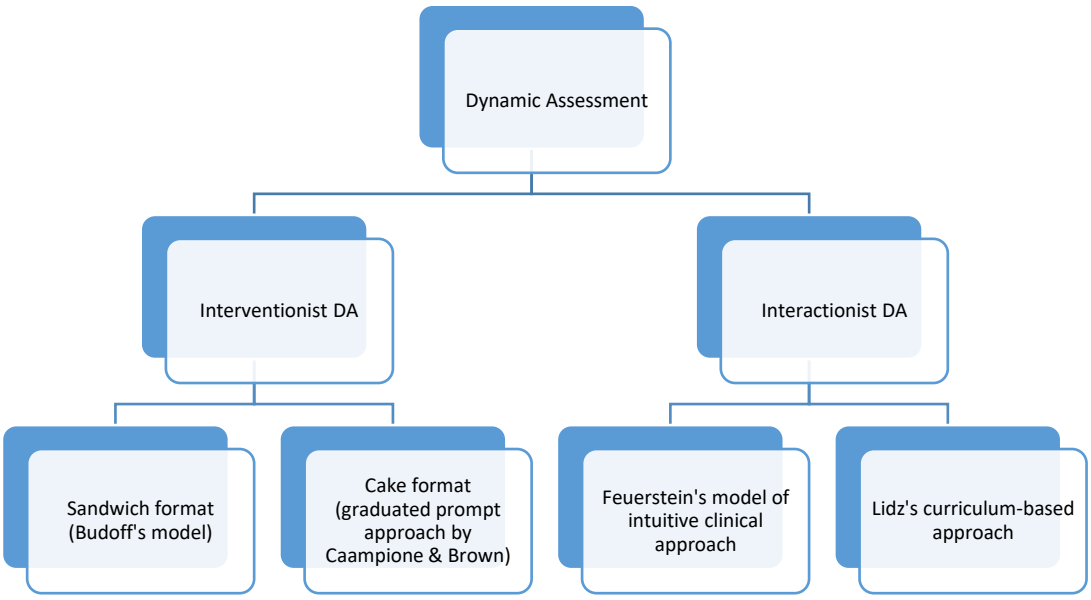

Figure 2.1: The four models of assessment categorised in the interventionist and interactionist approaches of dynamic assessment (Bester & Kühn, 2016)

Table 2.2 also provides a comparison of the interventionist and interactionist approaches to dynamic assessment (Thouësny, 2010).

Table 2.2: The two approaches to dynamic assessment (Thouësny, 2010)

Interventionist	Interactionist
Quantitative approach	Qualitative approach
Mediation determined in advance	Mediation determined by the learner's response
Psychometric reliability and validity Hints range from implicit to explicit	Insufficient reliability of psychometric measures
Individual or group settings	Individual setting
Computer-based assessment	Human-based assessment

The use of dynamic assessment in assessing reading difficulties is discussed in the next section.

2.5 USE OF DYNAMIC ASSESSMENT IN THE ASSESSMENT OF READING DIFFICULTIES

Dynamic assessment is used to complement the results of standardised assessments. Not only does it integrate assessment and intervention, but it also improves the assessor's understanding of a learner's abilities (Haywood & Lidz, 2007). As an instructional approach, dynamic assessment can also be used to determine a learner's ZPD. Through hints, cues, feedback, and other mediation strategies, a learner's developing abilities can be systematically measured when the learner provides correct or incorrect responses during the assessment process (Birjandi et al., 2013; Haywood & Lidz, 2007).

In situations where learners struggle to perform in a manner that shows their true capabilities, dynamic assessment provides an environment that is conducive for them to display their actual potential (Mardani & Tavakoli, 2011). The interaction of learner and assessor during the mediation phase of dynamic assessment enables the learner to perform at an optimal level (Birjandi et al., 2013; Mardani & Tavakoli, 2011).

Dynamic assessment can be used as a component in diagnostic assessment to distinguish learning disabilities from learning difficulties (Moore-Brown et al., 2006). It can also be used in the diagnosis of specific challenges through the comparison of the test items in which a learner performed well, with and without assistance (Daneshfar & Moharami, 2018; Nazari & Mansouri, 2014). The results of dynamic assessment can be used to develop intervention plans for learners with various learning barriers (R. Murphy, 2011).

The next sections discuss the benefits of dynamic assessment as well as the limitations of the approach that may deter some assessors from using it.

2.6 BENEFITS OF DYNAMIC ASSESSMENT

Since dynamic assessment assumes that cognitive behaviour is modifiable, it is used to identify the conditions under which a learner's ability to learn can be modified (Cioffi & Carney, 1983; Cioffi & Carney, 2010). This change, modifiability, provides insight into the learner's potential by revealing their strengths and difficulties. (Donovan, 2016). During the assessment process, the learner is observed and the observations are recorded. Mediation then takes place based on the recorded

observations (Cioffi & Carney, 1983). This process helps identify factors that facilitate or prevent learning and the conditions under which the learner's behaviour can be changed. The assessor gains insight into how instructional strategies affect the learner, based on the learner's response to the instructional strategies used (Cioffi & Carney, 1983). This interaction between assessor and learner provides an opportunity to systematically assess and determine the instructional factors that influence the learner's reading performance (Cioffi & Carney, 1983).

Dynamic assessment yields results that take into consideration the disadvantages faced by learners from low socio-economic backgrounds or with learning difficulties (Tzuriel, 2001). It provides these learners with learning opportunities and shows their learning potential through the assistance of an adult or a more knowledgeable peer (Tzuriel, 2000). Dynamic assessment gives assessors insight into how and why learners have not performed well in a standardised test (R. Murphy, 2011). It indicates their learning processes, growth areas, and the specific learning strategies that can be used to help them improve their performance (Tzuriel, 2000).

Dynamic assessment is also in line with the current education policy of bridging the gap between assessment and instruction by integrating standardised test results with interventions. As an additional assessment to standardised assessment, it offers a fair method of assessing South African learners with language barriers by emphasising the role of the assessor during assessments (Amod & Seabi, 2013). The differences observed in learners' performances through interaction with an assessor can then be used to develop an individualised intervention programme (Donovan, 2016).

2.7 LIMITATIONS OF DYNAMIC ASSESSMENT

Dynamic assessment can be time-consuming to use as it requires an assessor's engagement in lengthy periods of mediation with a learner (Dörfler et al., 2009; Losardo & Notari-Syverson, 2011). In addition to this, the pre-test and post-test phases are usually administered on different days, often resulting in increased financial costs (Dörfler et al., 2009; R. Murphy & Maree, 2006). However, the time invested yields valuable information regarding a learner's learning potential and the mediational strategy that can be used to improve the learner's performance (Bouwer, 2011).

Since assessors can create their own assessment material for a specific learner, this raises questions regarding the validity and reliability of dynamic assessment, as it may then not provide a normative score (Bouwer, 2011). Assessors are also required to have clinical experience and additional training to respond effectively to the specific needs of the learner (Losardo & Notari-Syverson, 2011; R. Murphy & Maree, 2006). The lack of experience of many dynamic assessment assessors may negatively affect the frequency of its implementation and use in South Africa (Smit, 2010).

As the validity of dynamic assessment is more complex to determine than the validity of a standardised assessment, this highlights the importance of not using dynamic assessment in isolation (Amod & Seabi, 2013). To demonstrate the effectiveness of dynamic assessment, the following section discusses research studies that have been conducted on dynamic assessment compared to other assessments of reading ability.

2.8 STUDIES ON THE EFFECTIVENESS AND VALIDITY OF DYNAMIC ASSESSMENT

Numerous studies have shown the effectiveness and validity of dynamic assessment. These include Hamavandi et al.'s study (2017) on the effectiveness of dynamic assessment in determining reading comprehension. The study aimed to investigate the use of dynamic assessment in improving morphology knowledge as well as English as a Foreign Language (EFL) learners' English reading ability and vocabulary. The researchers found that the learners' morphological awareness improved significantly using dynamic assessment. The improvement in reading comprehension could have been a result of varying forms of graduated prompting by the assessor combined with the learners' morphology knowledge. This knowledge could have improved their vocabulary knowledge and, in turn, their reading comprehension (Hamavandi et al., 2017).

Navarro and Lara's study (2017) on the predictive and incremental validity of dynamic assessment made use of a dynamic assessment device that evaluates processes involved in reading (EDPL device) and the Personal-Social Adjustment (APSL) scale. The EDPL device was defined in an earlier study by Navarro and Mora (2011) as a device for the continuous assessment of the processes involved in reading. The EDPL device was used to determine the learners' attitudes towards

reading and the dialogue/participation strategies used during the application period of the assessment (Navarro & Lara, 2017). The EDPL device was found to have higher predictive validity than the APSL scale. Using graduated prompting, the EDPL device provided additional information regarding the difficulties experienced by learners during the process of solving tasks as well as the effectiveness of the mediation guidelines used (Navarro & Lara, 2017).

In contrast to Navarro and Lara's findings regarding the validity of dynamic assessment, Thatcher Kantor et al. (2011) found that dynamic assessment did not have higher reliability or validity in comparison to standardised assessments of phonological awareness (Thatcher Kantor et al., 2011). The study aimed to compare two forms of dynamic assessment – scaffolding and direct instruction – with a standardised assessment of phonological awareness (Thatcher Kantor et al., 2011). Although dynamic assessment was found not to be effective in their study, Thatcher Kantor et al. (2011) did find that it might assist the expediting of the response-to-instruction process for learners in the first grade.

The abovementioned studies point to inconsistent findings regarding the validity and reliability of dynamic assessment; however, dynamic assessment has shown its benefits in improving the reading ability of many learners after mediation. Birjandi et al.'s (2013) study investigated the practicability of using dynamic assessment to improve reading comprehension and metacognitive awareness regarding EFL. Using the sandwich model, the study indicated that dynamic assessment procedures had a significant effect on reading comprehension achievement. The information from the assessment made it possible to determine the reason for the learners' low scores and assisted in determining suitable remediation (Birjandi et al., 2013).

The following section discusses the conceptual framework for the study.

2.9 CONCEPTUAL FRAMEWORK

As stated earlier in this chapter, dynamic assessment is a form of assessment based on different theories on learning experiences, learning potential, and the modifiability of individuals' cognitive abilities (R. Murphy & Maree, 2006). These theories are Piaget's theory of cognitive development (Piaget, 1962), Vygotsky's sociocultural theory (Vygotsky, 1978), and Feuerstein's theory of mediated learning experiences

(Feuerstein et al., 1979). The various constructs from these theories that informed the conceptual framework for this study on dynamic assessment are discussed in the following section.

2.9.1 PIAGET'S THEORY OF COGNITIVE DEVELOPMENT

Jean Piaget's (1962) theory of cognitive development holds that human beings cannot be given information – they learn through the active construction of their own knowledge through experiences (Bavali et al., 2011; DeVries, 2000). These experiences enable human beings to form schemas that can change, be expanded, and become more complex (Bavali et al., 2011).

Through explanations or observing other people, new information is added to the existing information a learner has (Pritchard & Woollard, 2010). The change occurs through processes of assimilation and accommodation (Bavali et al., 2011). Assimilation is the process of incorporating new knowledge into current mental structures, thereby increasing existing knowledge (Pritchard & Woollard, 2010). For learners to cope with the new knowledge they receive, which is at variance with their existing knowledge, their mental structures must be altered (Pritchard & Woollard, 2010). This process of altering mental structures is known as accommodation (Pritchard & Woollard, 2010). It leads to the modification of learners' cognitive structures through their interaction with their environment (Bavali et al., 2011; Piaget, 1962).

Accommodation also enables equilibration (equilibrium) or cognitive balance. This is the tendency of all human beings to maintain a balance between themselves and their environment (Bavali et al., 2011). Equilibration is achieved through reaching a stable mental state where new knowledge no longer conflicts with existing knowledge (Pritchard & Woollard, 2010). When the new knowledge can be assimilated into a learner's current cognitive structure, a new mode of thinking is created (Bavali et al., 2011).

Piaget's theory focuses on how learners, as individuals, learn through exploring their environment in order to reach conclusions about the world around them. It does not emphasise the role of the people learners interact with while learning (Pritchard & Woollard, 2010). Learning occurs through the interaction of learners with the stimuli in their environment (Tzuriel, 2001). In contrast to Piaget's theory of cognitive

development (1962), Vygotsky's sociocultural theory (1978) emphasises the role of social interactions during the learning process. This theory is discussed in the next section.

2.9.2 VYGOTSKY'S SOCIOCULTURAL THEORY

Vygotsky's sociocultural theory arose from the notion that psychological functioning develops through participation in activities where there is a mediation of the learner's interaction with the environment (Lantolf & Poehner, 2011). This development occurs through learning, the transferring of culture from one generation to another, and participating in social activities involving mediation (Kozulin, 2003; Lantolf & Poehner, 2011). Learning begins before learners start attending school. Any form of learning that they experience at school follows what they have learnt before school (Vygotsky, 1978). Learners can learn in a variety of ways: by asking them leading questions, through assistance during problem-solving, and through repetition (Vygotsky, 1978).

Learning enables a range of internal developmental processes to take place when the learner interacts with people in their environment. As these developmental processes become internalised, they become part of the child's independent developmental achievement (Vygotsky, 1978). The interactions that enable children to learn are known as mediation. Mediation is the process where a more knowledgeable person interprets information for children in a manner they can understand and internalise (Snowman & McCown, 2011).

Vygotsky (1978) defines ZPD as the distance between a child's "actual developmental level determined by independent problem solving" (zone of actual development [ZAD]) and "the level of potential development determined through problem solving under adult guidance or in collaboration" (p. 86) with more knowledgeable peers. The ZPD of a child can be determined through the provision of support to the learner by a more knowledgeable individual (Bester & Kühn, 2016).

ZPD enables the evaluation of a child's capability when the child is given the support of a more experienced person (Bester & Kühn, 2016; Dörfler et al., 2009). The ZPD provides information about the psychological functions of a child which have not yet fully developed (Kozulin, 2003). The ZPD introduces assisted performance as a legitimate parameter of the assessment procedure. It assists in the

conceptualisation of the difference between the level of actual performance and the learning potential of a child (Kozulin, 2003).

Vygotsky describes two types of mediation: mediation in the form of organised learning activities and mediation through another human being (Vygotsky, 1978). When a human mediator interacts with a child, this promotes an internalised form of development. The interaction transitions from an interpersonal (intermental) plane to an intrapersonal (intramental) plane where children internalise the knowledge they are gaining, thereby enhancing their cognitive development (Kozulin, 2003; Vygotsky, 1978). During dynamic assessment, the assessor mediates between the child and the assignment by assisting the child when necessary (Bester & Kühn, 2016). Mediation can lead to the emergence of abilities that have not fully developed, which helps in understanding and diagnosing the learning challenges the child may have.

Mediation can also be provided through explanations and hints, which are also forms of scaffolding (Hessamy & Ghaderi, 2014; Snowman & McCown, 2011). Scaffolding enables children to acquire skills and knowledge they were not able to acquire independently. Other scaffolding techniques include modelling, prompts, feedback, suggestions, and rules that help children organise information (Hessamy & Ghaderi, 2014; Snowman & McCown, 2011). Scaffolding is further discussed in the next section, Feuerstein's theory of mediated learning.

2.9.3 FEUERSTEIN'S THEORY OF MEDIATED LEARNING EXPERIENCE

Feuerstein's theory of meditated learning experience (MLE), from the theoretical framework of cognitive modifiability, provides a platform for understanding Vygotsky's theory in practice (Feuerstein et al., 1979; Tzuriel, 2000). It rests on the assumption that individuals' cognitive abilities can be modified through interaction with their environment using two methods: through direct exposure to stimuli and MLE. A mediated learning experience (MLE) occurs when the mediator provides the meaning of the stimulus in a manner the child can understand through verbal as well as nonverbal communication (Klein, 2013). The emphasis is on the method of the interaction and the quality of the interaction rather than on the content of the interaction (Feuerstein et al., 1988; Kaniel & Feuerstein, 1989).

For children with learning difficulties, dynamic assessment approaches can assist in identifying the specific areas of difficulty. This occurs by using techniques such as instrumental enrichment to bring about cognitive modifiability (Feuerstein et al., 1988). Another construct that informs dynamic assessment is scaffolding. Scaffolding, as described above, is support given in the form of demonstrations of tasks and hints for solving problems. The support is gradually withdrawn as the child independently completes the tasks successfully (Snowman & McCown, 2011). As the mediator teaches the child, this leads to structural modifiability resulting in the child being capable of responding adequately to particular stimuli (Kaniel & Feuerstein, 1989). Because the MLE approach is based on interaction, it can be adapted for use in different cultural contexts (Klein, 2013).

Feuerstein et al. (1979) maintain that a high-quality mediated learning experience can be achieved only when MLE criteria are met. The three universal criteria of mediation are (i) mediation of transcendence, (ii) intentionality and reciprocity of interaction, and (iii) mediation of meaning (Kozulin, 2003). In the context of dynamic assessment, mediation is the intervention provided during the assessment process. Through explanations and comparisons (Klein, 2013), the mediator enhances the child's learning experiences by relating the tasks being learnt to the environment the child interacts with (Losardo & Notari-Syverson, 2011). The objective is to expand beyond the child's immediate surroundings (Klein, 2013). This results in an experience that transcends the task so that it can be relevant in the child's everyday life and be internalised.

Intentionality and reciprocity of interaction can be observed when the mediator intentionally adjusts the conditions to stimulate the child's participation (Losardo & Notari-Syverson, 2011). The adjustments can be made by focusing the child on important stimuli through verbal and nonverbal communication. When the child responds adequately to the mediator's instruction, reciprocity is achieved (Klein, 2013). The mediator emphasises the importance of the activities as well as the reason for approaching them in a specific manner (Losardo & Notari-Syverson, 2011). The meaning and value of the task are conveyed by the mediator to the child. The mediator communicates the meaning of the stimuli through facial expressions, emotions, sounds, and verbal expressions (Klein, 2013).

2.10 SUMMARY

This chapter explored the types of reading assessments used in different contexts. The use of dynamic assessment in supporting standardised assessments has proven beneficial in the development of effective instructional interventions for learners with reading difficulties. It provides feedback on learners' learning processes and skills and the reasons for their specific growth areas (weaknesses). The following chapter discusses the research approach in the study, including the methodology, data analysis, and ethical considerations.

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Chapter 3
Research Design and Methodology

3.1 INTRODUCTION

The first chapter of this study provided an overview of the study's research methodology. This chapter provides an in-depth discussion of the epistemological and methodological paradigm that was used in the study. This chapter includes a discussion of the research design, the data collection and documentation techniques as well as the data analysis procedures that were followed. The final section of the chapter describes the quality criteria that were adhered to and the ethical considerations of the research study.

3.2 PARADIGMATIC PERSPECTIVE AND THE METHODOLOGICAL PARADIGM

The study adopted interpretivism as the epistemological paradigm and followed a qualitative approach. The following section outlines the principles and characteristics of these paradigms, the challenges associated with these paradigms, and the researcher's justification for using them in the study.

3.2.1 PARADIGMATIC PERSPECTIVE: INTERPRETIVISM

Interpretivism is a philosophy that involves the interpretation of a social phenomenon (Lewis-Beck et al., 2004). It seeks to understand the context in which the phenomenon occurs, and it considers the context critical in the interpretation of the research data collected. Interpretivists subscribe to the belief that reality is socially constructed (Willis, 2007). The interpretivist paradigm is used to gain insight into a phenomenon through understanding the perspectives of those who experience the phenomenon (Kivunja & Kuyini, 2017; Thanh & Thanh, 2015).

Interpretivism is a general term that is used to identify approaches in social sciences that have common ontological and epistemological assumptions (Blaikie, 2011). The assumptions of the interpretivist approach are based on the philosophy of phenomenology and hermeneutics (De Vos et al., 2011; Lewis-Beck et al., 2004). Hermeneutics focuses on the study of text to gain a deeper understanding of a phenomenon (Neuman, 2014). In phenomenology, the emphasis is on studying the

phenomenon as a whole instead of attempting to understand the phenomenon as separate parts (Maree, 2012).

Interpretivism adopts a relativist ontology in which the phenomenon in question has multiple interpretations; as a result, the paradigm is occasionally referred to as the constructivist paradigm (Kivunja & Kuyini, 2017; Pham, 2018). Ontology is the study of the assumptions that are made regarding what is considered as social reality (Grix, 2010). It refers to an individual's view of reality (Mack, 2010). Interpretivists believe that reality is subjective, and that reality is based on the perception of the individual's experiences (Weber, 2004). Therefore, each person interprets reality differently. Interpretivists accept that there are multiple interpretations of reality (Mack, 2010; Weber, 2004).

The social world (referring to social relationships and organisations as the elements in the world), is created by humans through their actions and interactions (Goldkuhl, 2012). Interpretivists aim to understand how the members of social groups, through their interactions, create their own reality (Orlikowski & Baroudi, 1991). For researchers to understand the experiences of the participants, they are required to make their observations from the participants' point of view (Mack, 2010). Therefore, the researchers' goal is to understand the phenomenon instead of attempting to explain it (Mack, 2010). The researcher can understand the meaning of the participants' actions through understanding the intentions behind their actions (Denzin & Lincoln, 2000).

From an interpretivist perspective, ontology and epistemology are connected because knowledge is important in determining the ontological assumptions that govern the world (Goldkuhl, 2012). Epistemology refers to the perspective one has of how knowledge is acquired (Mack, 2010). It focuses on the process of gathering knowledge (Grix, 2010). Interpretivists subscribe to a subjectivist epistemology in which knowledge is created based on the researcher's experiences, culture, and cognitive processes (Punch, 2005). Interpretivist researchers interpret the existing knowledge that is shared by a group of people through an interactive process of engaging with the studied data (Orlikowski & Baroudi, 1991; P. Y. Thomas, 2010). Research data is therefore collected and recorded through the interactions of the researcher and the research participants (Kivunja & Kuyini, 2017).

The interpretivist approach is based on naturalistic approaches of data collection such as interviews and observations. Secondary data research is also popular with interpretivist philosophy. In this type of study, meanings emerge usually towards the end of the research process (Dudovskiy, 2018).

In the next section, I will provide criticisms of the interpretivist approach and how these can be managed.

3.2.2 CRITICISMS OF INTERPRETIVIST APPROACH

The interpretivist approach is mostly criticised by positivists because it does not make use of positivistic procedures and findings of interpretivist studies may not be generalised to other contexts in the same way positivistic results can be (Cohen et al., 2007; Mack, 2010). Positivists emphasise that real events are observed empirically and understood through logical analysis. The observations can be generalized to other settings as well (Kaboub, 2008; Lee & Baskerville, 2012). An additional reason the research findings may not be generalised to other contexts is due to the smaller sample sizes being used, which may be too small to achieve theoretical saturation, which occurs when there no additional information that can emerge when analysing data (Boddy, 2016; Low, 2019; Mack, 2010).

Although the interpretivist approach does not make use of the positivistic procedures of verification, methods such as triangulation of data and an audit trail can be used for verifying the findings. Despite the research findings not being generalisable to other contexts, they may still be useful to other researchers with similar studies (Mack, 2010). Interpretivists argue that the goal of the approach is not to generate results that can be generalised, rather, it is to understand the phenomenon within its context and create theories that can be used for practical use (Delmar, 2010; Mack, 2010).

The second criticism concerns the ontological perspective of subjectivism. Due to subjectivism, the researcher's interpretations may be incomplete and biased (Cohen et al., 2007; Mack, 2010). However, Mack (2010) argues that all research approaches may be considered subjective to a certain extent. When a researcher selects a specific paradigm, it shows that they are already subjectively oriented towards that specific approach to research (Mack, 2010). For a researcher to

produce unbiased interpretations they are required to set aside their assumptions and look at the data thoroughly (Mack, 2010).

Although the findings of this study may not be generalisable to other contexts due to the limitations of the chosen philosophical stance, other researchers and practitioners may still be able to use the findings to gain a better understanding of how dynamic assessment complements standardised assessments. To ensure that the interpretations were not biased, the researcher set aside any assumptions of dynamic assessment being a valuable assessment tool so that the interpretations would be based on the data and not on any assumptions. To set aside these assumptions, the researcher used a research journal to document past experiences and views of dynamic assessment. This process enabled the researcher to practice reflexivity by reflecting on whether the interpretation of the data was influenced by past experiences and views of the assessment. The study's supervisor also read all the documents and data related to the study and informed the researcher whenever any data were documented and interpreted in a manner that might be considered biased.

The next section will explain the methodological paradigm used in the study.

3.2.3 METHODOLOGICAL PARADIGM: QUALITATIVE

The methodological paradigm for this study was qualitative. The qualitative approach is an interpretive and naturalistic approach (Denzin & Lincoln, 2005) that is used to study and gain an understanding of a social phenomenon (Mohajan, 2018; Punch, 2014). It seeks to explain the "how" and "why" of a social phenomenon using multiple methods (Mohajan, 2018). It is used to investigate and provide comprehensive descriptions of people's behaviour, perspectives as well as interpretations of their experiences and reality (Merriam, 2009; Mohajan, 2018).

Qualitative research consists of multiple characteristics. The main characteristics as identified by Marshall and Rossman will be described (2011). Firstly, qualitative research is usually applied in a natural setting (Marshall & Rossman, 2011). This is the site where the participants experienced the problem or where the phenomenon that is being studied occurred (Creswell, 2013; Marshall & Rossman, 2011). Secondly, it makes use of multiple sources of data, such as observations, interviews, and documents (Creswell, 2013). Thirdly, qualitative research focuses

on the participants' meaning making of the problem or phenomenon (Creswell, 2013) and the contextual meaning (Marshall & Rossman, 2011).

The fourth characteristic states that qualitative research is emergent and not predetermined (Creswell, 2013; Marshall & Rossman, 2011). This means that aspects of research such as the conceptual framework and data collection methods may change during the research (Rossman & Rallis, 2012). Lastly, qualitative research is interpretive in nature (Marshall & Rossman, 2011). For qualitative researchers to make sense of a phenomenon they must interpret various data sources that are generated from the research study (Rossman & Rallis, 2012).

Although qualitative research may produce detailed descriptions from the data analysed, the approach is time-consuming (Rahman, 2017). Another criticism of qualitative research is that the findings of the study cannot be generalised to a larger population because of its use of a small sample size (Rahman, 2017).

The justification for using the interpretivist and qualitative paradigms in this study will be explained in the following section.

3.2.4 JUSTIFICATION FOR USING INTERPRETIVIST AND QUALITATIVE PARADIGMS

As stated in Chapter 1, the purpose of this descriptive case study was to analyse clinical case studies of the learners assessed at the Training Facility of the University of Pretoria to describe how dynamic assessment can provide a more detailed understanding and a clearer framing of learners' reading difficulties if done as a complementary assessment to standardised assessments. The case studies used in the study represented the observations and perspectives of the assessors during the dynamic assessment of process difficulties.

Interpretive researchers gain knowledge about a phenomenon by interacting with the research participants. Through engaging with the secondary data in the selected case studies, the interpretivist paradigm enabled the researcher to gain insight into how dynamic assessment was used by assessors to complement the standardised assessment of reading ability. To understand the assessors' observations and perspectives, it was important for me to read and analyse the clinical reports and case notes from the selected case studies. These clinical reports and case notes contained information on how the assessors made use of dynamic assessment as a supplementary tool that would inform the results of standardised reading tests.

The interpretivist paradigm enabled the researcher to use a qualitative approach to conduct a thematic analysis of the reports, and case notes, of the selected case studies. Qualitative research enabled the researcher to obtain thick and in-depth descriptions of reading difficulties according to the assessors' description of the phenomenon. These thick descriptions were obtained from reading and analysing the reports and case notes of the assessment process, including the results when the dynamic assessment was included in the assessment of reading.

Although the findings of qualitative research cannot be generalised to all contexts, they can still be generalised for specific contexts (Rahman, 2017). For the reading assessment context, the findings of this study can be used to broaden one's understanding of how dynamic assessment can inform the results of standardised assessments. The findings may provide professionals with insight when assessing reading difficulties.

3.3 RESEARCH DESIGN

A descriptive case study design was used as the research design for this study. A descriptive case study is defined as an in-depth analysis of a phenomenon or intervention within the context it occurs. It can be used to describe and gain insight into a phenomenon (Merriam, 1998; Willig, 2008; Yin, 2003). A descriptive case study was chosen because it enabled the researcher to describe in-depth, the role dynamic assessment played when it was used to support standardised tests results of reading ability.

A descriptive case study provides thick descriptions of a phenomenon when it is used in a qualitative approach (Merriam, 1988). It is used to answer "how" and "why" questions in situations where the researcher cannot influence or change the behaviour of the research participants. Additionally, it is used when the researcher considers the context in which the phenomenon occurs in their analysis of the phenomenon to gain a comprehensive understanding of the phenomenon (Baxter & Jack, 2008; Yin, 2003).

The main advantage of a descriptive case study is that it enables the researcher to gain an in-depth understanding of the case through the assessment and integration of the data collected (Mills et al., 2010a; Yin, 2018). Using a descriptive case study, patterns and connections of theoretical constructs may also be uncovered and new

variables can be identified, which allows for the expansion of theories (Mills et al., 2010a).

The descriptions generated in a descriptive case study can be stored as archival material; since these descriptions are comprehensive, they may be used in the future for reinterpretation and other educational purposes (Cohen et al., 2007). Lastly, it enables the reader to see the case from the perspective of the researcher by providing personal and vivid descriptions (Baxter & Jack, 2008; Mills et al., 2010a).

A limitation of the descriptive case study design is that different researchers may provide varying interpretations of the research because of their subjectivity (Gravetter & Forzano, 2009; J. Murphy, 2018). The researcher is required to be constantly aware of their influence on the findings of the study (J. Murphy, 2018). The credibility of a descriptive case study is also affected by the possible selection bias of the researcher in the cases selected (Gravetter & Forzano, 2009). In addition, to the reduced credibility, the findings generated may not be generalisable because they are for a specific situation (Gravetter & Forzano, 2009). However, the generalisation of the findings to other cases is not necessary in a situation where a descriptive case study aims to understand the phenomenon since case studies have unique circumstances (Stake, 1995).

Since the purpose of the study was not to produce findings that can be generalised, the researcher ensured thick descriptions of how dynamic assessment was used were provided. This enabled the researcher to achieve the purpose of the study and to provide a comprehensive analysis of dynamic assessment's role in framing reading difficulties.

3.4 BINDING THE CASE

Binding the case ensures that the study is not too broad and that the objectives of the study are achievable (Baxter & Jack, 2008). Placing boundaries provides an indication of what will be studied as well as what will not be studied (Baxter & Jack, 2008). The aspects that will be studied may include the time and place, activity, definition, and context (Baxter & Jack, 2008; Creswell, 2003; Miles & Huberman, 1994; Stake, 1995).

The following section provides details of how the case was bound in this study – in terms of selecting the research site and the clinical case studies.

3.4.1 SELECTION OF RESEARCH SITE

The research site, where the study was conducted, was the Training Facility of the Department of Educational Psychology at the University of Pretoria. The Training Facility was selected as a suitable research site because it is the location where master's students conduct clinical assessments of learners. Often, these clinical assessments include academic achievement assessments such as reading assessments and dynamic assessments of reading.

The case files came into existence as a result of clinical assessments of the learners who were referred to the Training Facility. Learners are referred to the Training Facility for various reasons, which may include the assessment of reading difficulties. This site was thus suitable because it is in this environment where the information of the case studies was documented and stored. This is also the site where the assessments were conducted, and the learners agreed to be research participants. As a student in the Department of Educational Psychology, the researcher also had access to the case studies and an understanding of the procedures followed during the documentation of the case studies.

3.4.2 SELECTION OF CASE STUDIES

Purposive selection[2] was used in this research study to select specific cases. Purposive selection is an approach used for the selection of specific cases based on the detailed information they possess that will assist in studying the phenomenon (Patton, 2002). It is a type of non-probability selection method where the researcher uses his or her own judgement to select each sample element, due to its unique characteristics (Check & Schutt, 2012).

Purposive selection is used to select information-rich cases that enable the researcher to gain more insight into the phenomenon being studied. The selection of specific cases enhances the depth of the information that can be obtained (Fletcher & Plakoyiannaki, 2010).

[2] In quantitative research studies, we refer to sampling, whereas in qualitative research study, selection is the preferred term referring to how participants are identified.

There are various forms of purposive selection; these include extreme case selection, typical selection, maximum variation selection, criterion selection, among others (Palys, 2008). For this study, I used criterion selection (Palys, 2008). Criterion selection is the process of identifying and selecting cases that meet a predetermined criterion (Palinkas et al., 2015).

The criteria that the researcher used to select the cases were:

- Firstly, cases where learners were assessed for reading difficulties.
- Secondly, the assessment included both sections on standardised tests and dynamic assessment of reading to determine how the assessments informed each other.
- Lastly, case studies from the last five years were selected, from 2019 to 2015, to ensure that the use of the most recent clinical cases.

Table 3.1 below details a summary of the case studies that were selected.

Table 3.1: The cases that met the criteria of the research study

Learner's pseudonym	Age	Gender / Ethnicity	Were standardised tests of reading administered?	Was dynamic assessment administered?	Year assessments were administered
Thabo	8 years 3 months	Male / Pedi	Yes NARA	Yes	2015
Mathapelo	9 years 7 months	Female / Pedi	Yes NARA	Yes	2015
Katlego	11 years 6 months	Male / Tswana	Yes NARA	Yes	2015

A limitation of purposive sampling is selection bias during the selection of the cases (Etikan et al., 2016). In this instance, there was no selection bias because I used the selection criteria only; this ensured that I included three cases that met the criteria for this limited scope.

3.4.3 SELECTION OF DATA RESOURCES

The client files that the researcher used consisted of various sources of data; these included the transcribed intake interviews of the guardians of the learners with the

educational psychologists, the digital versatile disc (DVD) recordings of the assessments, the clinical reports as well as the case notes of the assessors. The data sources that were selected were the clinical reports and case notes that were documented by the educational psychologists (the assessors) from the Training Facility. These were selected because they provided descriptions of how the assessors used dynamic assessment and their observations of how the learners responded to it. The following sections will describe these selected data sources.

3.4.3.1 Clinical reports

The clinical reports served as the main data source because they consisted of the standardised reading test results, the dynamic assessment of the reading process as well as the integrated discussion of how the two types of assessments were used by the assessor to gain a comprehensive understanding of the learners' reading difficulties.

Clinical reports can be used to share clinical observations of a disorder; however, they may lack sufficient data to explain the clinical observations (Caufield et al., 2018). In this study, to broaden the understanding of the data documented in the clinical reports, the researcher used the case notes as an additional data source.

3.4.3.2 Case notes

Case notes that were documented by the assessors who conducted the clinical assessments were used. The case notes were the documented observations of the assessors. These observations were of the learner, the assessment process, and the results of the assessments that were administered. The notes can be used as additional observations in a research study (Caufield et al., 2018). In this study, the case notes provided information with regard to how the learners with reading difficulties were assessed using dynamic assessment and observations of the assessors during the dynamic assessment process. In this way, the case notes informed the assessors' understanding of the learners' reading difficulties after the use of dynamic assessment.

3.5 UNIT OF ANALYSIS

The unit of analysis is the entity being analysed in a study. It focuses on the "what" or "who" that is being studied (Fletcher & Plakoyiannaki, 2010, p. 838). The unit of

analysis in this study was how dynamic assessment provided a deeper understanding of the learners' reading difficulties. Through investigating the reading assessment results, which included the use of dynamic assessment, the researcher was able to determine how dynamic assessment informed standardised test results of reading and the assessors' insight into reading difficulties.

3.6 PRESENTATION OF THE CLINICAL CASES

Budgell's (2008) guidelines for writing clinical case studies in research were applied in the presentation of the case studies in Chapter 4. According to the author, case studies can be written in a narrative or structured style. When writing a case study using a structured style, the following information may be provided: introduction, case presentation, management, and outcome as well as the discussion (Budgell, 2008). The introduction may consist of a description of the context of the case. This is followed by the case presentation, which contains the history and results of the examinations administered. Budgell (2008) emphasises that it is important to describe only the relevant information that assisted the clinicians to make a diagnosis. The actual results of the tests administered should be provided as well as the working diagnosis. In the management and outcome section of the case study, the duration and frequency of the treatment provided may be discussed (Budgell, 2008). Following the description of the treatment, an objective presentation of the outcome of the treatment should be provided. In the discussion section, a summary of the lessons from each case should be provided (Budgell, 2008).

Based on Budgell's (2008) guidelines, the researcher used the following sections to structure the case studies in Chapter 4: relevant background, standardised assessments, dynamic assessment, and discussion. The introduction section was provided under the sub-heading, "relevant background" since it consisted of only the relevant information that informed the assessors, in each clinical case, which assessment would be appropriate to administer. The relevant background included the reason for referral, the learner's scholastic difficulties including the reading difficulties and the emotional or behavioural difficulties that were mentioned by the learner's caregivers and teachers.

The results of the assessments that were administered will be presented under two separate sections in Chapter 4, firstly, as part of the case presentation under the sub-heading "standardised assessments". This section consists of the actual results

that were determined from each standardised test of reading as well as the intellectual ability scores of each learner. These results provided a relevant presentation of each learner's static abilities and enabled the assessors to consider a working diagnosis.

The second part of the results is presented under the sub-heading "dynamic assessment". This section will detail the management and outcome of each case. The pre-test, mediation phase, and post-test phases will be presented in this section. The mediation phase served as the treatment used to improve the learners' reading assessment results. The post-test phase results provided the objective presentation of the outcome of treatment provided. In the final section of each case, a brief discussion will be provided to summarise what the assessors learnt about the learner's reading abilities and how their understanding of the learner's standardised assessment results was informed after the use of dynamic assessment. The detailed presentation of the cases will follow in Chapter 4 of the research study.

3.7 DATA ANALYSIS AND INTERPRETATION

To systematically analyse the data for the exploration of the underlying meaning of the text, qualitative content analysis was used to analyse the data in this study (Hsieh & Shannon, 2005; Mayring, 2014; Zhang & Wildemuth, 2009). Qualitative content analysis is a systematic method that is used to analyse, describe, and interpret the meaning of qualitative data (Schreier, 2012). It involves determining the frequency with which specific themes appear (Schreier, 2012).

Qualitative content analysis consists of two approaches: inductive and deductive content analysis (Elo & Kyngäs, 2008). In this research study, deductive content analysis was used to analyse the data (Hsieh & Shannon, 2005; Moretti et al., 2011). In deductive content analysis, prior knowledge, theory, or previous research findings are used to derive the thematic codes (Elo & Kyngäs, 2008; Moretti et al., 2011). The thematic codes are derived before and during the data analysis process are used to determine themes that are relevant to the phenomenon (Bowen, 2009; Hsieh & Shannon, 2005). Deductive content analysis was a suitable approach to use because it enabled the researcher to analyse the data using the thematic codes that were identified from the conceptual background of the study.

Deductive content analysis consists of several steps in its procedure (Elo & Kyngäs, 2008). The steps include the distinguishing of categories formulated from the theory being used (Mayring, 2000). These categories may be revised during the process of analysis (Mayring, 2000). The first step, as mentioned above, is the formulation of the research questions and the selection of the theoretical background on which the analysis of the data will be based (Mayring, 2014).

The second step of deductive content analysis is defining the categorisation matrix (the main categories) from the theory (Elo & Kyngäs, 2008; Mayring, 2000). In the third step, the coding rules are defined (Elo & Kyngäs, 2008; Mayring, 2014). The data is coded based on the categories defined. The anchor examples are provided for each category and coding rules are revised, if necessary, in the fifth step (Elo & Kyngäs, 2008; Mayring, 2000). The final working through of the material is accomplished in the sixth step (Mayring, 2014). Lastly, the data is analysed and interpreted. The frequency with which categories occur is determined (Mayring, 2014).

Table 3.2: Illustration of the seven phases that were used for this research study to analyse the data according to Mayring (2000)

Stage	Description of process
1. Research question	In Chapter 1, the research questions that were considered relevant in helping to solve the research problem were formulated. In Chapter 2, a summary of the key principles of the theories that were relevant to the research study were provided.
2. Definition of the categories	From those key principles that were summarised from the theoretical background in Chapter 2, some of those key principles were selected as the categories for data analysis. Data categories were defined based on existing literature that was similar to the research study.
3. Coding guideline	A table with the data categories, their definitions, an example from the transcribed excerpts and the coding rules was formulated. See Table 3.3 below this table.
4. Coding	The material was colour-coded according to a specific category that each colour represented. For example, all the information related to the ZPD was colour-coded yellow. See Figure 3.1. The theoretical definitions and rules to guide my coding process were used.
5. Revision of the categories	After coding 50% of my data, all category definitions and coding rules were compared to the research questions to ensure that the coding guidelines corresponded to the research questions.

	Where the coding guideline did not correspond to the research question, the coding guidelines were edited.
6. Final work through	The edited coding guidelines were compared to ensure that they were still applicable to the assigned categories.
7. Analysis	The category assignments were examined to make sure they met the standard of the quality criteria, then the frequency of the assigned categories was determined.

Table 3.3 provides the themes that were derived from the theory and the constructs of the study that were described in Chapter 2. The definitions of these themes as well as the coding rules were included to compare and ensure that the themes corresponded to the data excerpts.

Table 3.3: Coding guideline table

Theme	Definition	Excerpts – example	Coding rules
Zone of proximal development (ZPD)	The ZPD is the distance between a learner's "actual developmental level as determined by independent problem solving" and the higher level revealed in "potential development as determined through problem-solving under adult guidance or in collaboration with more knowledgeable peers" (Vygotsky, 1978, p. 86).	This theme was evident in the data through the identification of phrases such as "Thabo's performance within the context of dynamic assessment indicated his potential to learn when assessed and taught at his level of functioning and understanding".	Refers to data regarding the learner's difference in performance before and after mediation.
Mediated Learning Experiences (MLE)	MLE refers to the interactions that create the capacity with an individual to modify themselves towards greater adaptability and use their higher cognitive processes (Feuerstein et al., 1979).	"The assessor made use of guided reading strategies to teach Mathapelo to read the words".	Refers to data related to different types of MLE provided, e.g., explicit and implicit hints, concrete instruction, and guided reading strategies.
Cognitive modifiability	Cognitive modifiability is the flexibility observed through the alteration of an individual's functioning, in terms of perception, thinking process, memory, motivation and learning ability (Feuerstein et al., 1988).	"Thabo was able to distinguish between words such as hug and huge".	Refers to data concerning a learner's improvement and mastering of activities.

The coding guidelines defined the themes, and these themes were determined based on the definitions and coding rules. The text excerpts that had been colour-

coded enabled the researcher to determine if the themes identified were a true reflection of the key concepts of the data. Figure 3.1. below provides an example of the colour-coded themes.

Line no.	Case 1: Thabo; Gender: Male **Diagnosis:** Attention-Deficit/Hyperactivity Disorder: Combined Presentation type; moderate.	Theme	Reason for Theme
22	indicated his potential to learn when assessed and taught at his level of	ZPD	Indicates the improvement/ internalization observed after mediation.
23	functioning and understanding, making use of visual and concrete	MLE	This indicates the mediated learning strategy.
24	manipulation of teaching materials. Based on Thabo's performance on	MLE	This indicates the mediated learning strategy used.
25	this occasion, it appears that the process of dynamic assessment was		
26	effective, and Thabo was able to distinguish between words such as hug	Cognitive modifiability	This indicates the specific change in development observed after mediation.
27	and huge, however at first he did rush into assuming all the words had the	ZPD	This indicates the child's difficulty/growth area that was not improved after mediation.
30	he may be experiencing impulse control.	ZPD	This indicates the child's difficulty that was not improved after mediation.

Figure 3.1: Screenshot of the text excerpts colour-coded according to their themes, along with the reason for coding

After a final run-through of the data using the coding guidelines, the themes and sub-themes found in each clinical case were determined. Figure 3.2. on the following page provides a screenshot of the themes and sub-themes from each case.

Client	Standardised assessments' error analysis	Dynamic assessment themes
Thabo	Faulty pronunciation; omission of letters and initial sounds; difficulty with the final silent 'e' sound; guesses words.	Zone of proximal development
		Mediated learning experiences
		Cognitive modifiability
Mathapelo	Incorrect reading while sounding out words; guessing of words after reading the first letter; mispronunciations, substitutions, reversals.	Zone of proximal development
		Mediated learning experiences
Katleho	Poor decoding abilities; guesses words; unable to read sight words, limited English vocabulary, lack of acknowledgement of punctuation marks, confuses vowel sounds, low reading speed, low reading comprehension skills.	Zone of proximal development
		Mediated learning experiences
		Cognitive modifiability

Figure 3.2: The themes identified in some of cases

Deductive content analysis enabled the researcher to determine the relevance and validity of the development theories in Chapter 2 when they were applied in an assessment to gain a better understanding of learners' reading difficulties (Kyngäs & Kaakinen, 2020). By using the predetermined themes derived from the conceptual framework of this study, the researcher was able to determine if the theories applied to the study when analysing pre-existing data (Kyngäs & Kaakinen, 2020). This process of analysis can also be used to extend the conceptual framework (Zhang & Wildemuth, 2005).

3.8 QUALITY CRITERIA

Naturalistic researchers believe that their research should be judged on its authenticity, the value of its contribution, and the meaningful coherence of its findings (Shenton, 2004; Walby & Luscombe, 2017). They use quality criteria to determine the trustworthiness of the qualitative data (Lincoln & Guba, 1985). The four components of trustworthiness used are credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985; E. Thomas & Magilvy, 2011).

3.8.1 CREDIBILITY

Credibility refers to the congruency of the findings with reality (Mills et al., 2010a; Shenton, 2004). It is used to ensure that the study determines what it is intended to (Mills et al., 2010a; Shenton, 2004). Credibility is determined by the extent to which the researcher appropriately identifies the presence or absence of constructs or the relationships among those constructs (Mills et al., 2010a). The findings and interpretations should be perceived as credible by the participants who provided the original data (Schwandt & Halpern, 1988). Credibility can be ensured by the researchers investing sufficient time engaging in the field with the participants and familiarising themselves with the research site and context to ensure that rich data is generated (Korstjens & Moser, 2018).

Previous research findings may be examined to assess whether the findings of the study are consistent with the previous studies (Shenton, 2004). These previous studies may serve as a valuable source to address similar topics (Shenton, 2004).

Credibility was enhanced in this study by engaging with the client reports and case notes for prolonged periods to ensure that the understanding of their descriptions was accurate. Creating thick descriptions that were focused on how dynamic assessment provided insight into reading difficulties in the context of assessments, also enhanced the credibility of the study. To determine if the descriptions and findings were consistent with the current knowledge of dynamic assessment and reading difficulties, the researcher also compared the findings with those from previous studies that were similar.

3.8.2 TRANSFERABILITY

Transferability refers to the extent to which the findings of the study can be applied to other contexts and larger populations (Anney, 2014; Mills et al., 2010b; Shenton, 2004). Conventional generalisability is not possible since the phenomenon is studied with consideration to its specific context (Erlandson et al., 1993; Shenton, 2004). It is the responsibility of the researcher to ensure that sufficient contextual information regarding the research site is provided to enable the reader to transfer the information to other studies (Lincoln & Guba, 1985).

Transferability can be established by providing a thick description of the sample studied with regard to the demographics and the geographic boundaries of the study

(E. Thomas & Magilvy, 2011). It is provided by comprehensive descriptions of the method and context of the research to enable other researchers who would like to make a transfer of findings to decide for themselves whether a transfer is possible (Lincoln & Guba, 1985; O'Leary, 2004; Treharne & Riggs, 2015).

The purpose of this study was not to provide results that could be generalised but rather to gain a deeper understanding of how dynamic assessment provided a more detailed understanding and a clearer framing of learners' reading difficulties. Thick descriptions of the cases were generated, which included the descriptions of the learners assessed as well as the context they were assessed in. This will enable other researchers with similar studies to gain a comprehensive understanding of the role of dynamic assessments as an additional assessment during the assessment of reading difficulties and, for critical readers, determine whether the researcher provided sufficient information to enhance transferability in this study.

3.8.3 DEPENDABILITY

Dependability is observed when similar findings are obtained during the replication of a research study using the same context, methods, and participants (Shenton, 2004). This is a criterion of consistency (Schwandt & Halpern, 1988). The analysis process should be according to the accepted standards of specific design (Korstjens & Moser, 2018).

Dependability is ensured by the processes of the research study being reported in detail so that other researchers will be able to replicate the study and obtain similar results (Shenton, 2004). The procedures used should be carefully documented (Korstjens & Moser, 2018; Schwandt & Halpern, 1988). This will enable other researchers to follow the audit trail of the researcher by knowing the following: the purpose of the study, the selection criteria used, the data collection and analysis procedure as well as the research findings (E. Thomas & Magilvy, 2011). The audit trail also enables the auditor to determine the transparency of the research path (Korstjens & Moser, 2018).

An audit trail of the study was provided by documenting the steps and thought processes in a research journal during the study.

3.8.4 CONFIRMABILITY

Confirmability refers to the extent to which the researcher's biases and perspectives influenced the findings (Mills et al., 2010a). This is the criterion of neutrality (Korstjens & Moser, 2018; Schwandt & Halpern, 1988). The interpretation of the data should not be based on the researcher's bias and viewpoints (Korstjens & Moser, 2018). As determined by the outcomes of an inquiry, the interpretations provided should be based on and be consistent with the data (Schwandt & Halpern, 1988).

Confirmability is ensured by producing findings that are consistent with the experiences of the participants and not the researcher's preferences. Confirmability can be determined by the extent to which the researchers state their biases (Miles & Huberman, 1994). The researcher should state the reason for the selection of the approaches as well as the weaknesses of those approaches (Shenton, 2004). The researcher should practise reflexivity; this requires the researcher to be self-critical of how their preconceptions influenced the research (E. Thomas & Magilvy, 2011).

In this study, the researcher provided explanations of the approaches selected, and addressed how the limitations of the approaches were managed.

3.9 ETHICAL CONSIDERATIONS

Certain guidelines need to be followed to ensure that research is conducted ethically. Underlying these guidelines are the ethical values, principles, and standards of the Health Professions Council of South Africa (HPCSA, 2008). Every researcher has an ethical responsibility to produce research that is based on integrity and follows the ethical guidelines. This requires researchers to examine all aspects of their research to determine if it has been conducted ethically according to the standards of their institutions' ethical committee (O'Leary, 2004). These ethical standards include ensuring that informed consent, confidentiality, anonymity and the accessing of the data was achieved according to the ethical guidelines (Maree, 2012).

3.9.1 PERMISSION FROM THE SITE

Before a researcher can commence with their research, they are required to request permission from the site where the research will be conducted and should be

obtained in writing (Maree, 2012). The ethical standards of the University of Pretoria were adhered to by applying to the Ethics Committee to be granted access to the data from the Training Facility. The Ethics Committee reviews and monitors research to ensure that research participants are protected. Permission was requested from the Head of the Department of Educational Psychology to gain access to the existing data from the Training Facility. The client files were examined with all their contents after access was given, and the researcher ensured that the case studies remained in the Training Facility at all times.

3.9.2 INFORMED CONSENT

Since the families of the learners who were assessed in the Training Facility had already given informed consent for their case studies to be used in secondary data studies such as this, the researcher was able to use all the files that included signed consent forms.

3.9.3 CONFIDENTIALITY

Confidentiality ensures that personal information is protected and is excluded from the research study (Gibson et al., 2013). Confidentiality in this study was ensured through the following actions: firstly, by removing all the identifying information of the learners whose specific case studies were selected (Vanclay et al., 2013). Secondly, the researcher used pseudonyms such as “Mathapelo” during the data analysis phase and when the findings of the study in my dissertation were documented. Lastly, confidentiality was maintained by storing the data in the Training Facility, specifically, in a locked cupboard in the study supervisor’s office, which will be stored for the next 15 years, to ensure that only the supervisor and the researcher can access the data.

3.10 SUMMARY

In this chapter, the paradigmatic and methodological perspective used to understand reading difficulties in the context of dynamic assessment was reviewed. The use of a descriptive case study as the research design was justified, and the deductive content analysis as the method of data analysis was outlined. The measures were taken to ensure that the quality criteria were adhered to as well as the ethical considerations which have been discussed. The next chapter will provide a review of the research study’s findings.

Chapter 4
Findings of the Study

4.1 INTRODUCTION

In this chapter, the research data and findings of the study are presented. In the first section, the clinical cases will be presented as described in Chapter 3. The second section of this chapter provides a discussion of the findings of the study based on data extracted and integrated from all three case studies and how these findings were supported or contradicted by existing research.

4.2 CLINICAL CASE STUDIES

In the following section, I will present the three case studies.

4.2.1 CASE PRESENTATION: THABO[3]

4.2.1.1 Relevant background

Thabo, aged eight years and three months, was referred to the Training Facility for an assessment because his parents were concerned about his academic performance. His performance and the quality of his work as a Grade 2 learner was inconsistent. He appeared to lose interest quickly when performing tasks, and he also rushed through tasks. His parents also explained that Thabo was experiencing language and concentration difficulties. His home language was Sepedi. The assessor also interviewed Thabo's teacher who explained that he was easily distracted and that he struggled with impulsivity, which led to him making frequent errors. His teacher also reported that he demonstrated inadequate fine motor skills.

4.2.1.2 Standardised assessment

In the standardised assessment of Thabo's reading difficulties, the Neale Analysis of Reading Ability (NARA) was used. According to the results on the NARA, his standardised reading accuracy score was 85, his reading comprehension score was 80 and his reading rate score was 94. Although Thabo's reading rate appeared to be higher than the other scores, the assessor explained that his overall reading

[3] Pseudonyms have been used to maintain anonymity.

ability was below his expected chronological age because the reading accuracy and comprehension standardised scores were both one standard deviation below his chronological age.

The NARA assessment results demonstrated Thabo's strengths and difficulties. His strengths were his willingness to try and read the words he did not know, and his willingness to read without encouragement. He phonetically sounded out the words that he did not know in an attempt to decipher them. He was also able to differentiate between the initial and the final sounds of the words.

An errors analysis was done to determine the specific difficulties that Thabo experienced during the reading assessment. According to this analysis, Thabo omitted letters and initial sounds in words. He also demonstrated difficulty grasping vowel digraphs. The assessor explained that these difficulties may have been caused by visual memory difficulties. Thabo also displayed incorrect pronunciation of words on numerous occasions, which the assessor hypothesised could be due to visual discrimination difficulties, a lack of experience, or poor knowledge of the spelling rule of the silent "e" sound as well as the soft and hard "c" sound. The words may also have been too difficult for Thabo, which could suggest that he was experiencing second language difficulties.

In addition to Thabo's reading achievement score, the assessors also assessed his intellectual ability as part of the comprehensive clinical assessment (American Psychiatric Association, 2013). Thabo's intellectual ability was assessed using the Wechsler Intelligence Scale for Children – Fourth UK Edition (WISC-IV), which revealed that Thabo's Full-Scale Intelligent Quotient (FSIQ) score was 81. This score placed Thabo's intelligence quotient (IQ) score in the Low-Average range. Thabo's standardised scores on the achievement test and the intellectual assessment were both one standard deviation below his chronological age.

4.2.1.3 Dynamic assessment

In Thabo's case, the assessor used the results of the standardised achievement test as the pre-test for dynamic assessment. The errors that were noted during the assessment were extracted and the assessor used this information to design an intervention to determine Thabo's ability to learn. The silent "e" was used as the focus of the intervention phase of dynamic assessment. During this phase, the

assessor used visual and concrete materials to stimulate Thabo's learning. This provided him with the opportunity to manipulate the concrete materials. The assessor also used a scaffolding strategy by using flashcards of words without the final "e" sound to guide Thabo in gaining an understanding of the sound of words with and without the letter "e" at the end of the word. She provided him with feedback to help him learn the silent "e" rule and its effect on changing the middle vowel sound of a word.

During the post-test phase of dynamic assessment, Thabo had to read a list of words, appropriate at Grade 2 level, which was similar to the initial assessment reading list from the standardised reading test. The list consisted of words with and without the silent "e". Thabo demonstrated an improvement in his ability to distinguish between words such as "hug" and "huge". Although at first, he rushed into assuming that all the words had the silent "e" at the end, as the list went on, he began to grasp the concept. The dynamic assessment process provided the assessor with insight, revealing that Thabo experienced difficulties with focused attention and that he might have been experiencing impulse control challenges. The assessor further explained in the case notes that Thabo responded well to positive reinforcement. This was done using a token economy system where he was able to visually track his progress towards completion.

4.2.1.4 Discussion of the case

The assessment of Thabo's reading difficulties commenced with a standardised assessment of his academic achievement abilities in reading and his intellectual abilities. The standardised assessment results offered insight into the fact that his reading level, at the time of assessment, aligned with his "Low-Average" intellectual abilities. The standardised test results also provided baseline results of how the learner was performing and responding to the assessment on the day of testing. An error analysis of the standardised reading test offered additional insight into areas of weakness and strengths that Thabo demonstrated. It demonstrated his difficulty with the spelling rule regarding the silent "e" sound as well as the soft and hard "c" sounds. What the standardised tests did not provide, was an insight into how Thabo would respond to interventions to support his reading abilities. Standardised tests only indicated how he tested on the day of assessment. The standardised reading test results informed the specific area that had to be focused on in dynamic

assessment and intervention that could be used during the dynamic assessment process.

The sandwich approach to dynamic assessment was used in the following manner: the standardised reading test served as the pre-test, and the errors identified were used as the focus of mediation during the teaching phase. A non-standardised form of the post-test was used where the assessor provided Thabo with a list of similar new words to determine if his reading skills had improved. As stated in Chapter 2, this approach is known as Budoff's sandwich model because it uses a pre-test, train, post-test approach.

Dynamic assessment of his reading abilities foregrounded that Thabo responded positively when he received individual and scaffolded support and that he was able to become aware of the reading errors that he made. The use of dynamic assessment further informed the assessor's understanding that Thabo's consistent difficulties with focused attention and impulse control may have contributed to his low standardised reading test results. This means that if his attention and impulse control difficulties could be managed, his standardised reading tests results may improve.

Dynamic assessment further indicated that Thabo responded positively to the use of visual stimuli and concrete materials as instructional methods to scaffold his learning. After Thabo showed an improvement with his reading, as a result of the mediation that was provided, the assessor was in a stronger position to make recommendations for intervention strategies that could be used during reading support.

Dynamic assessment as a complementary assessment – in Thabo's case where second language learning challenges may also be present – demonstrated his potential to learn and to overcome his reading challenges. A weakness of this case study was that there was no longitudinal data in the case study to demonstrate if the gains made during the assessment were sustained and how these gains translated to his reading in the classroom context.

4.2.2 CASE PRESENTATION: MATHAPELO[3]

4.2.2.1 Relevant background

A comprehensive developmental and scholastic assessment was requested for Mathapelo, aged nine years and seven months, due to concerns about her poor scholastic performance. She attended three different schools in seven years. Her mother mentioned that she was struggling to retain what she had learned and demonstrated inconsistency in her academic performance. Due to her scholastic difficulties, Mathapelo experienced feelings of sadness. Mathapelo's parents mentioned that her teacher, who taught her in Grades 1 and 2, had informed them that although Mathapelo's overall performance was satisfactory, she required additional support in reading and writing. Her parents further explained that her teacher informed them that Mathapelo was struggling with reading, writing, and Mathematics in Grade 3. Her father also explained that she was forgetful and lacked concentration. During the time of assessment, Mathapelo was in Grade 4. She had been attending remedial classes four times a week for language subjects and Mathematics for the past four months. Her home language was Sepedi. Her teacher mentioned that Mathapelo was able to answer questions verbally; however, she struggled to express herself in writing.

4.2.2.2 Standardised assessment

Mathapelo's reading ability was assessed using the NARA. The standardised test scores indicated that Mathapelo experienced difficulties with reading accuracy, reading comprehension and reading rate. Her standardised reading accuracy score was 70. The assessor explained that her reading accuracy directly affected her reading comprehension. Subsequently, her reading comprehension score was 74, and her reading rate score was 71. Her standardised reading score for reading accuracy was two standard deviations below the mean score expected for her chronological age. Her standardised scores for reading comprehension and reading rate was almost two standard deviations below the mean score for her chronological age.

Error analysis indicated that Mathapelo attempted to read words by sounding out the letters of the word but incorrectly synthesised the words. The assessor reported that her difficulty to read words correctly after using this strategy might have been

an indication that she did not know the words. It was further mentioned that Mathapelo read the first letter of the word but then guessed the rest of the word. She also made mistakes with mispronunciations, substitutions, and reversals. The assessor hypothesised that Mathapelo made reading errors that were associated with visual memory, imagery, and emphasis. She also demonstrated problems with converting from visual to the auditory equivalent as well as problems with auditory discrimination and memory.

The assessor used the Senior South African Individual Scale-Revised (SSAIS-R) to determine Mathapelo's general intellectual ability. She obtained a Full-Scale standard score of 88. This placed her general intelligence in the Low-Average range. A comparison between her standard scores for reading performance and her IQ score indicated that her reading score was at least one standard deviation lower than her IQ score. The assessor decided to use dynamic assessment to determine if her reading difficulties were a result of a specific learning disorder, inadequate instruction, and assessment opportunities – as she was not assessed in her mother tongue – or a lack of exposure to sufficient learning opportunities.

4.2.2.3 Dynamic assessment

The assessor used CBDA by using Mathapelo's school reader to select the reading content that Mathapelo would be required to read during the pre-test phase of the dynamic assessment. After analysing the errors Mathapelo made during the pre-test, she used guided reading strategies to teach Mathapelo to read the words that she struggled with. The assessor separated the words into syllables and then read the words as a whole. This instructional strategy is known as chunking. The assessor then asked Mathapelo to read after her.

During the post-test phase, the assessor observed that Mathapelo still mostly relied on oral reproduction instead of actual reading. Mathapelo continued to rely on her oral reproduction strategy instead of using the chunking strategy that the assessor had exposed her to. This suggested that she found it difficult to retain the knowledge she had gained, and she struggled to use metacognitive skills effectively. The assessor also observed that Mathapelo's reading skills were affected by concentration difficulties and language confusion.

4.2.2.4 Discussion of the case

The assessment of Mathapelo's reading difficulties commenced with a standardised test to determine her academic achievement in reading and her intellectual abilities. The standardised reading test results indicated that her reading skills were one standard deviation below her intellectual ability score. Standardised assessments did not provide insight into whether Mathapelo's reading skills could be improved with the appropriate intervention.

A CBDA approach based on Mathapelo's school curriculum was administered to determine if her reading ability could improve with support. Mathapelo showed limited improvement in her reading of sentences after the use of the guided reading strategy of chunking words. She was not able to internalise the reading strategy and transfer it to reading other sentences that the assessor exposed her to during mediation. This suggested that she did not respond to the intervention she was provided with.

Mathapelo's difficulty to transfer the skills she was taught during mediation to other readings tasks that were performed during the post-test phase may suggest that Mathapelo has a specific learning disorder in reading. Mathapelo's struggle to learn how to read despite intervention was also demonstrated in her lack of improvement after four months of reading support that had been provided in her remedial classes. Mathapelo had been struggling with reading difficulties since she was in Grade 3. According to the *Diagnostic and statistical manual of mental disorders – 5th edition* (DSM–5), she met the criteria for a specific learning disorder in reading since she had been experiencing difficulties in learning and using academic skills for at least six months – despite the intervention she had been provided to address her difficulties with word reading (American Psychiatric Association, 2013). Her reading abilities were well below her chronological age and her reading accuracy score was two standard deviations below the mean score of 100.

Mathapelo also experienced difficulties during assessment with the language of instruction and assessment. Her limited proficiency in the language of instruction prevented the assessor from making a diagnosis of a specific learning disorder in reading. In addition, Mathapelo demonstrated concentration difficulties. The assessor explained that when an individual experiences language difficulties or a specific learning disorder, these difficulties may present with concentration

difficulties. Following the assessment process, the assessor recommended addressing her language difficulties through intensive support first, and an International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) diagnosis of Academic and Educational Problems (Z55.9) was made.

A limitation of this case study was the lack of a follow-up intervention by the assessor to determine if repeated exposure (repetition) to the reading strategy that the assessor had taught Mathapelo, would have enabled her to retain the skills that she was taught – enough to use them independently to read. Considering how the mediation that was used during dynamic assessment did not seem to improve her reading skills, it may be that other ways of mediating her learning needs have to be explored, or she may need more time to assimilate these skills. Given that she may also experience second language learning difficulties, it may be necessary to address this first before teaching her certain reading strategies. It could also be suggestive of a learner with specific learning disorder, which means that the challenges she experienced with the retention of these strategies may be as a result of neurologically based processing skills.

4.2.3 CASE PRESENTATION: KATLEGO[3]

4.2.3.1 Relevant background

Katlego was 11 years and six months old during the time of the assessment. Katlego was previously assessed at the Training Facility in 2014. The educational psychologist who previously assessed him reported that his scholastic abilities were significantly delayed, and he showed signs of specific learning disorders in reading, written expression, and mathematics. A diagnosis was not made at the time of the assessment since English was Katlego's second language; his home language was Setswana. A reassessment was requested for Katlego due to continued concerns with his poor academic progress as a Grade 4 learner. His parents mentioned that he was first exposed to English as a language of instruction in Grade 1. As a result, he repeated Grade 1 as he was still adjusting to the change in the language of instruction. He also failed Grades 2 and 3; however, he was promoted to Grade 4. Katlego was repeating Grade 4 during the time of assessment. His teachers mentioned that he was experiencing language challenges and difficulties with mathematical academic vocabulary. His remedial teacher mentioned that he required individualised attention.

4.2.3.2 Standardised assessments

The NARA assessment was used to assess Katlego's reading ability. These NARA results revealed that Katlego's standard reading accuracy score was 70. His comprehension score was 77 and his reading rate score was 97. His reading comprehension and accuracy demonstrated that Katlego's reading ability was below what is expected of a learner of the same chronological age.

The assessor further mentioned that Katlego struggled to read most of the sight words. He guessed the words and replaced the words he was struggling to read with words that he knew. Katlego swopped letters around, which resulted in the loss of meaning of the words and sentences. He also demonstrated limited knowledge of conventions or digraphs, and he confused vowel sounds. He displayed poor decoding abilities and his overall knowledge of English vocabulary was limited.

Katlego displayed little acknowledgement of punctuation; this resulted in difficulties with understanding the text and keeping his place. He struggled to connect the words he read into meaningful information when he was required to answer questions regarding what he had read. The assessor explained that he may have been struggling to gain adequate meaning of the information that he read in the classroom as well, which may have contributed to his poor scholastic achievement.

To gain a more comprehensive understanding of Katlego's reading difficulties, his intellectual abilities were assessed using the SSAIS-R. His Full-Scale standard score was 63, which placed him in the Intellectually Impaired range according to the SSAIS-R. His intellectual score was two standard deviations below the mean score expected for his age. According to the DSM-V, individuals with intellectual disability have scores approximately two standard deviations or more below the population mean. Although IQ scores are approximations of conceptual functioning, they are not the only determining factor of adaptive functioning in practical tasks. A comparison between his standardised reading scores and intelligence scores indicated that his reading scores were higher than his IQ score. Due to Katlego's significantly lower intellectual abilities, it was important to determine if his standardised assessment results were affected by a lack of proficiency in the language of instruction and assessment.

4.2.3.3 Dynamic assessment

In Katlego's case, the assessor used the results from the standardised tests as the pre-test phase for dynamic assessment. The errors that were noted during the assessment were extracted, and the assessor used this information to design an intervention to evaluate Katlego's potential to learn how to distinguish between the vowels "a" and "u". The assessor reported that he struggled to verbally state the difference between "a" and "u". The assessor further mentioned that Katlego did not appear to hear the difference between the sounds of the letters. The assessor hypothesised that this may have been indicative of auditory discrimination difficulties.

From the teaching phase in dynamic assessment, the assessor reported that Katlego showed a limited understanding of the language of instruction, which made the learning process difficult for him since he could not fully understand the content that he was being taught. The assessor used nonverbal descriptions and pictures to improve his understanding. The assessor provided instruction in the form of a game. The assessor reported that winning seemed to motivate him. He also enjoyed being praised for his achievements.

During the post-test phase, the assessor developed a list of words that Katlego had to read and determine if there was a difference between the pairs of words that contained the vowels "a" and "u". He was required to indicate if they sounded the same or different. Examples of words he was given included "run" and "ran" as well as "tub" and "tab". The assessor noted that Katlego was still showing difficulties with hearing the "a-u" sound, even after the assessor had emphasised the vowel and selected easier words with a focus on the vowels.

He struggled with decoding longer words such as "tunnel" and sounded out the words. The assessor also indicated that with the inclusion of the visual aids, Katlego was able to read some of the words correctly. As the activity progressed, his familiarity with the words improved and he could quickly identify and match them to the image. It appeared that the use of visual aids and repetition enhanced his visual memory and reading ability.

The assessor reported that Katlego was able to learn metacognitive skills that improved his short-term performance but that he struggled to apply the

metacognitive skills correctly and without confusion. The assessor explained that due to time constraints, it was not possible to assess whether Katlego had retained the new skills over a longer period; therefore, his improved performance could only be considered as short-term learning. Although Katlego was not able to apply metacognitive skills consistently, he showed some improvement in reading skills after the intervention was provided.

4.2.3.4 Discussion of the case

The assessment of Katlego's reading difficulties commenced with a standardised assessment of his reading and intellectual abilities. The standardised reading test results provided his reading ability during the time of assessment, which was two standard deviations lower than the mean for reading accuracy. His IQ score was slightly more than two standard deviations below that of his chronological age's mean. However, the standardised test did not indicate if Katlego's reading skills could be improved by appropriate instruction and language exposure, since he had language difficulties which may have affected his standardised test results negatively. The error analysis of the standardised reading test showed his growth areas, which were in his English vocabulary, the swopping of letters, and vowel sound confusion. The error analysis of the standardised reading tests informed the assessor's understanding of which growth areas to focus on for improving and reassessing using dynamic assessment.

The sandwich approach to dynamic assessment was used as the basis for assessing and improving Katlego's difficulties with distinguishing the vowels "a" and "u". The sandwich model includes a pre-test, train, post-test approach was used. After the standardised reading test results were used as the pre-test phase of dynamic assessment, the assessor used pictures to improve his understanding during the teaching phase. The assessor used a game where Katlego had to distinguish whether a pair of words with the vowels "a" or "u" were the same or different. Thereafter, a non-standardised form of the post-test phase was developed and used where the assessor provided Katlego with a list of new words that contained the vowels "a" and "u" to determine if his ability to read and distinguish between them had improved.

The use of mediation led to a limited improvement in his reading skills, and he continued to struggle with distinguishing the "a" and "u" sounds. Visual aids were

used to improve his understanding of the language of instruction. From Katlego's responses, the assessor was able to confirm that he had a limited understanding of English as the language of instruction. The assessor hypothesised that his auditory discrimination skills may have been underdeveloped, which may have been hindering his learning progress of vowel sounds and concepts. These difficulties may have negatively affected his standardised reading test results. This shows that his test results may not have been a true reflection of his ability but a result of a lack of sufficient support and intervention strategies. The assessor's use of a matching game and positive reinforcement led to Katlego responding positively to the instruction he was exposed to.

A limitation of this case study was the lack of mediation in Katlego's home language. Supporting him in his home language would have enabled the assessor to determine if his standardised assessment results were a result of language difficulties or a result of limited intellectual abilities. Although Katlego showed minimal improvement in his reading, the use of strategies such as visual material to teach Katlego language skills appeared to have improved his understanding and visual memory.

In the next section, by integrating the cases and linking them to literature, I present the findings of this study.

4.3 PRESENTING THE FINDINGS OF THE STUDY WITHIN THE CONTEXT OF LITERATURE

The clinical case studies that were described in this study followed a similar assessment approach to Hamavandi et al. (2017), Hidri (2019), and Thatcher Kantor et al. (2011) who used both standardised assessments and dynamic assessment when they assessed various literacy skills in learners.

In this study, the assessment process that was followed in all three clinical cases was to perform a standardised assessments first, thus determining baseline quantitative data. Based on the standardised test results and the information the assessors gained from the standardised assessments, the pre-test for the dynamic assessment was tailored to address each learner's specific difficulties and to determine how the learners responded to the intervention they received during the dynamic assessment. Their responses were informally evaluated using non-

standardised procedures to determine if the interventions assisted the learners to overcome their reading difficulties. This assessment approach is referred to as the sandwich format of dynamic assessment (Thatcher Kantor et al., 2011).

In one of the cases, CBDA was used. This approach is based on the pre-test-mediation-post-test approach applied to the learner's school curriculum (Haywood & Lidz, 2007; Lidz, 2003). In Barrera's study (2003), CBDA was found to be a useful approach to distinguish learners with learning disabilities from learners with difficulties caused by their linguistic background by using their classroom-based learning tasks. Barrera (2003) recommends the inclusion of assessments such as CBDA to be used with other assessments to identify and assist learners with learning disabilities.

The information obtained from the standardised tests enabled the assessors in this study to determine the reading difficulties that the learners were experiencing, which became the focus in mediation during dynamic assessment. Similar to a study conducted by Sopandi and Sutinah (2016), this study found that dynamic assessment provided insight into the learners' potential to learn how to read when the appropriate mediational strategies were used to support their reading skills. By supporting the learners with the content that they were not able to master on their own, the assessors in this study, like Sopandi and Sutinah (2016), were able to use the assessment results efficiently to address the learners' learning needs and determine their learning potential.

Dynamic assessment in this study appeared to enable the assessors to observe specific learning behaviour that also offered insight into the learners' low standardised test results. Therefore, the findings of this study suggest that dynamic assessment can be used as a complementary assessment to standardised assessment. By using mediation in dynamic assessment, the assessors were also able to confirm that some of the learners' reading skills could be improved by using individualised support strategies. In this way, dynamic assessment provided an additional perspective of the learners' reading skills. Hamavandi et al. (2017) also found that dynamic assessment can be a valuable approach to help assessors gain insight and pinpoint the specific areas of reading difficulties that learners are experiencing.

Dynamic assessment in this study offered a deeper insight into the learners' low standardised test results. In two of the three cases, the observations that were noted during dynamic assessment suggested that the learners' reading difficulties were not necessarily indicative of a specific learning disorder in reading. For example, in Thabo's case, the observations during dynamic assessment suggested that Thabo's attention and impulse control difficulties were hindering his learning process. In Katlego's case, the assessor's observation of a limited improvement in his reading ability after intervention suggested that his low intellectual ability may have been limiting his improvement in reading after mediation. His low achievement on the standardised tests was also evident during dynamic assessment of his reading skills.

In Mathapelo's case, a lack of improvement after mediation in the face of a Low-Average intellectual ability suggests that she may have a specific learning disorder in reading. Similar insights were gained in studies conducted by Peña and Iglesias (1992) as well as a follow-up study by Peña et al. (2001). These studies were conducted to determine how dynamic assessment could be used to distinguish language differences caused by a lack of exposure to instruction from true language impairment. In both studies, the MLEs that were provided during the use of dynamic assessment enabled the researchers to observe a significant improvement in the reading abilities of learners without language disabilities in comparison to those with language disabilities. Furthermore, Moore-Brown et al. (2006), who reviewed these studies, added that a lack of improvement or limited improvement as well as observed difficulties during mediation, may indicate learning disabilities.

Although Thabo and Katlego were experiencing significant learning barriers that affected their standardised reading test results, dynamic assessment suggested that they showed some improvement in their reading skills when support through mediation was offered. This suggests that they had the potential to improve their reading ability when the appropriate and intensive support was provided. These findings are consistent with a study conducted by Cho et al. (2017) where dynamic assessment was used as a complementary method to standardised assessment to predict the learners' word reading skills that could potentially develop as a result of the use of appropriate mediation.

The mediational strategies that were used in this study to improve the learners' reading skills were visual stimuli and scaffolding. Although visual stimuli and

scaffolding were used in all three cases, these strategies were used differently in each case to address each learner's needs. To assist Thabo and Katlego with their difficulties in distinguishing between words, in addition to the visual material, Thabo was given concrete material in the form of flashcards whereas Katlego was supported by playing a matching game. Both Thabo and Katlego responded well to the use of visual aids and scaffolding in the form of the verbal feedback that they received. These mediational strategies appeared to motivate them to participate in the learning activities. In Thabo's case, the visual and concrete materials enabled him to focus his attention on the learning tasks. In Katlego's case, where he experienced difficulties, the visual matching game improved his understanding, and it may have improved his visual memory as well; however, the improvement was limited. These findings of the benefits of scaffolding are consistent with Stright et al.'s (2009) study, which found that scaffolding enabled the learners in their study to internalise the skills they were exposed to, which improved the learners' reasoning skills as well as predicting factors such as language development in learners with developmental delays (Stright et al., 2009).

In Mathapelo's case, scaffolding in the form of chunking was used. Although Knight-McKenna (2008) explains that an explicit instructional strategy such as chunking promotes reading fluency and independent reading, this did not seem to be of benefit to Mathapelo. She was not able to adopt these reading strategies after mediation due to her severe reading difficulties. Various hypotheses for this may exist, namely that in Mathapelo's case, the use of the mediational strategy was not suitable for her specific needs or that she may have difficulty retaining information that is learnt as a result of neurodevelopmental processing difficulties. Hidri (2019) found that the use of dynamic assessment did not enable cognitive modifiability in the learners assessed in his study. Hidri (2019) further mentions that a lack of significant improvement in performance after using dynamic assessment may be influenced by the mediational strategy used.

All three learners in this study were not assessed in their home language. According to Mogashoa (2014) children learn with more ease when they are taught in their home languages, this has to be considered as an important factor when interpreting low standardised test results. In one of the three cases, language difficulties were observed by the assessor during mediation. Katlego's difficulty in comprehending the language of instruction led the assessor to use visual aids to improve his understanding. In a study by Camilleri et al. (2014), it was found that using various

mediational strategies during dynamic assessment to improve the learners' language skills, enabled the researchers to distinguish language disorders from language difficulties as a result of the learner's bilingual language learning context.

Although the cases studies that were analysed for this study provided insight into the use of dynamic assessment to offer a more comprehensive understanding of the nature and extent of the learners' reading difficulties, the study was limited in offering insight into the long-term effects and gains for these learners after only one session of dynamic assessment. Although the potential gains of long-term engagement when using dynamic assessment is made clear in the findings of a longitudinal study conducted by Gellert and Elbro (2018), this could not be corroborated by the current study due to the aforementioned limitation.

It is also important to reflect on the validity and reliability of the dynamic assessment that was used in the case studies presented in this study due to the non-standardised approaches to dynamic assessment that were used in the three case studies. Bouwer (2011) cautions against using non-standardised dynamic assessment since it has limited validity and reliability for the entire population. However, the aim of dynamic assessment in each of these case studies was to inform the results of the standardised reading tests to enable the clinicians to better understand the individual learner's reading difficulties and determine whether or not their reading skills could be improved with mediation. In this study, dynamic assessment was used as a form of learning support to improve the learners' reading difficulties. The value of dynamic assessment as an informative assessment and learning support strategy is supported by Birjandi et al. (2013), who found dynamic assessment to be a valid approach to observing learners' reading behaviour during mediation. They found that dynamic assessment informs the results of the standardised assessment by providing additional information regarding learners' reading abilities that were observed when various reading strategies were used (Birjandi et al., 2013).

Some of the standardised tests that were used in these case studies were not standardised for the South African population and, therefore, the results need to be interpreted and used with caution. The use of standardised tests, that were not normed for learners in the South African population, underscores the need to augment the results from these tests with the information gained from dynamic assessment that accords test-takers the opportunity to demonstrate their responses

to instruction and their potential to learn (Laher & Cockcroft, 2013; Mardani & Tavakoli, 2011).

In the next section, I readdress the use of the conceptual framework for this study.

4.4 REVISITING THE CONCEPTUAL FRAMEWORK

As stated in Chapter 2 of this study, concepts from Piaget's theory of cognitive development (Piaget, 1962), Vygotsky's sociocultural theory (Vygotsky, 1978) and Feuerstein's theory of mediated learning experiences (Feuerstein et al., 1979) were used as the conceptual framework to understand how dynamic assessment can be used to gain deeper insight into the nature and extent of the reading difficulties that the learners in this case study experienced.

Vygotsky's (1978) concepts of ZAD and the ZPD were illustrated in the two assessment approaches that were followed in the clinical cases. The use of the standardised assessments revealed the learners' abilities without assistance, i.e., their ZAD. The ZPD enabled the assessors to determine the learners' capabilities when they were completing the tasks with assistance from the assessor during the mediation phase of the dynamic assessment (Agheshteh, 2015; Dörfler et al., 2009). This enabled the assessors to determine the learners' potential. Various mediational strategies were used to scaffold the learners' learning (Feuerstein et al., 1979). These methods included the use of verbal prompts as well as visual and concrete teaching materials.

The learners' varying responses to mediation were observed in their ability to assimilate and accommodate the new information that they were learning (Bavali et al., 2011). Although the benefits for each learner varied due to internal factors in each learner, their ability to learn while interacting with the assessor offered additional information on these learners' potential to learn how to read if their learning was supported by using appropriate mediational strategies (Lerner & Johns, 2012). Similarly, the process of dynamic assessment foregrounded the limitations imposed on their learning as a result of language confusion, intellectual ability and/or specific learning disabilities.

4.5 SUMMARY

This chapter covered the data and research findings of the study. In the next chapter, Chapter 5, the research questions of the study will be answered. The chapter will conclude with a discussion of the limitations, recommendations, and contributions of this study.

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Chapter 5
Conclusions and Recommendations

5.1 INTRODUCTION

The purpose of this descriptive case study was to describe how dynamic assessment can provide a more detailed understanding, and a clearer framing, of learners' reading difficulties when used as a complementary assessment to standardised assessments. To achieve this goal, the clinical reports and case notes of three learners who were assessed with both standardised tests and dynamic assessment – at the Training Facility at the University of Pretoria during the period of January 2015 to December 2019 – were analysed.

Dynamic assessment, as a complementary assessment to standardised assessments, is an effective approach to gain insight into learners' specific difficulties. It has also been found to be a valuable approach to use in conjunction with standardised assessments when distinguishing specific reading disabilities from second language difficulties and insufficient exposure to appropriate instructional strategies. In the South African context – where learners from diverse educational, cultural, and socio-economic backgrounds have limited learning opportunities – dynamic assessment may provide many of these learners with an opportunity for their reading difficulties to be understood, and to determine the appropriate instructional strategies that can develop their reading skills.

In this chapter, the primary and secondary research questions that were posed in Chapter 1 will be answered, and the contributions, challenges, and limitations of the study will be discussed. Finally, the chapter will conclude with recommendations for future research and practice.

5.2 REFLECTING ON THE RESEARCH QUESTIONS

In this section, the primary research question will be answered by firstly answering the secondary research questions below.

5.2.1 SECONDARY RESEARCH QUESTIONS

5.2.1.1 Secondary research question 1

How did dynamic assessment inform the standardised test results of the three learners who were assessed with both standardised reading tests and dynamic assessment?

Dynamic assessment in this study offered a more comprehensive understanding of the nature and extent of the reading difficulties of the three learners who formed part of this case study. While standardised reading tests in this study offered insight into each learner's reading level and the types of errors or reading mistakes they made, dynamic assessment extended the assessment process to the next level where error analyses became starting points to explore interventions for reading difficulties. By using those areas of difficulties that the learners experienced during standardised assessment – insight could be gained into how these learners responded to mediation, and what intervention could be most suitable to each learner to overcome their difficulties. Dynamic assessment also offered insight into those learners who may experience reading difficulties as a result of second language difficulties – or other neurodevelopmental disorders such as attention deficit hyperactive disorder – and those who seem to experience a more severe form of reading difficulties that can lead to the diagnosis of a specific learning disability.

5.2.1.2 Secondary research question 2

How did dynamic assessment influence the conceptualisation of these learners' reading difficulties?

Dynamic assessment provided a more comprehensive understanding of the learners' reading difficulties. It facilitated the observation of the learners' language difficulties, concentration difficulties, and various learning difficulties that may have negatively affected their reading abilities. Through mediation in dynamic assessment, most of the learners responded positively to individual and scaffolded support, which suggested that they could improve their reading if they received intensive individual support. This provided an alternative view of the learners' reading difficulties instead of viewing their reading difficulties only as significant barriers. The appropriate recommendations could be made for intervention

strategies to improve the learners' reading skills since there was a better understanding of the underlying factors that affected each learner's reading difficulties.

5.2.2 PRIMARY RESEARCH QUESTION

What role did dynamic assessment play in providing a clearer framing of the reading difficulties of the three learners who were assessed with both standardised tests and dynamic assessment at the Training Facility at the University of Pretoria during the period of January 2015 to December 2019?

Dynamic assessment in this case study was found to be a valuable supplementary assessment to standardised assessment. In addition to the test scores of the standardised tests, dynamic assessment provided a more detailed and descriptive understanding of both the nature and the extent of the reading difficulties the three learners in this case study experienced. Dynamic assessment supplemented the standardised test results by demonstrating how the use of mediational strategies could further explore the learners' potential for learning reading skills when provided with an intervention that was aligned to their individual needs, and how they responded to these interventions. Dynamic assessment also provided a clearer insight into the potential limitations or challenges that each learner faced during the learning process. Ultimately, the true value of the information gained from the dynamic assessment was how it informed the recommendations for intervention strategies that could be further applied in educational contexts, and how it had the potential to give direction to individual support plans.

5.3 POTENTIAL CONTRIBUTIONS OF THE STUDY

This study provided insight into the use of dynamic assessment as a complementary assessment to standardised assessment of reading difficulties. Insight from this study may encourage assessors to use dynamic assessment to gain a deeper understanding of learners' reading difficulties by integrating assessment and instruction. This study may assist educational psychologists on how to use dynamic assessment in their practices to assess reading difficulties and make the appropriate recommendations regarding interventions that will support individual learners with their reading skills.

5.4 CHALLENGES AND LIMITATIONS OF THE STUDY

An unforeseen challenge that impacted this research study was the Coronavirus disease 2019 (COVID-19) pandemic. Due to the pandemic, the researcher had limited access to the clinical reports that were stored at the University of Pretoria. This imposed a challenge on the completion of the research study since the client reports and case notes could only be accessed on a limited number of days each week. To overcome this challenge, the researcher had to change the timeline for the completion of the study in order to have more time to access the clinical reports and case notes at a time after the lockdown restrictions were lifted.

Another limitation was that the clinical reports and case notes were not generated with a view to research. As a result, the descriptions of the dynamic assessment processes that were followed and the mediational strategies that were used were not as detailed as was hoped. The use of the case notes added some value; however, they were still not as detailed as the researcher would have wanted. However, the researcher still believes that the essence from the assessments were extracted to provide answers to my research questions. This, however, was a motivation for thinking of future research ideas in terms of how other researchers could learn from this experience and perhaps address this shortcoming in future studies.

An additional limitation that the researcher experienced was the lack of South African literature from previous studies in the field of dynamic assessment and reading difficulties. As a novice researcher in this complex study area, this limitation was overcome by relying on the study's supervisor, an experienced researcher and educational psychologist, who guided the researcher in gaining an understanding of the value of dynamic assessment as a complementary assessment to standardised tests when assessing reading difficulties. By working closely with the supervisor to understand the learners' cases, the researcher was able to improve the discussions for each case.

5.5 RECOMMENDATIONS FOR RESEARCH

For further understanding of the role dynamic assessment in framing reading difficulties, further research could include:

- A longitudinal study of the effects of mediation on learners who were assessed for reading difficulties. This might enable researchers to determine the long-term benefits of dynamic assessment, and the effective interventional strategies to improve the reading skills of learners.
- A comparative study on the use of various mediational strategies to compare their influence on improving reading difficulties.
- A quantitative study involving a large sample of psychologists who have used dynamic assessment for assessing reading difficulties in South African English as a second language (ESL) learners. This study might enable researchers to determine the effectiveness of the assessment approach for South African ESL learners.
- A survey study to investigate effective standardised forms of dynamic assessment used to assess reading difficulties. Given the informal use of dynamic assessment in this study, a survey study might provide insight into the approaches that are currently used in practice.

5.6 CONCLUDING REMARKS

The purpose of this study was to describe how dynamic assessment can provide a more detailed understanding and a clearer framing of learners' reading difficulties if used as a complementary assessment to standardised assessments. Dynamic assessment proved to be a valuable assessment approach when used to augment standardised reading test results. It provided a deeper understanding of the learners' reading difficulties and the mediational strategies that could be effective in teaching learners with various learning disabilities how to improve their reading skills. The findings of this study may encourage other practitioners to consider using dynamic assessment more frequently to assist learners with reading difficulties.

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References

Abrie, M., Blom, N., & Fraser, B. (2016). Theoretical foundations. In N. Jacobs, N. C. G. Vakalisa, & N. Gawe (Eds.), *Teaching-learning dynamics* (5th ed., pp. 1–37). Pearson Education South Africa.

Afflerbach, P. (2016). Reading assessment: Looking ahead. *The Reading Teacher, 69*(4), 413–419. https://doi.org/10.1002/trtr.1430

Agheshteh, H. (2015). Dynamic Assessment for better placement: Implications of Vygotsky's ZAD and ZPD. *International Journal of Applied Linguistics & English Literature, 4*(5), 190–197. https://doi.org/10.7575/aiac.ijalel.v.4n.5p.190

Ajideh, P., & Nourdad, N. (2012). The immediate and delayed effect of dynamic assessment on EFL reading ability. *English Language Teaching*, *5*(12), 141–151. https://doi.org/10.5539/elt.v5n12p141

Alderson, J. C. (2000). *Assessing reading.* Cambridge University Press.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). American Psychiatric Publishing.

Amod, Z., & Seabi, J. (2013). Dynamic assessment in South Africa. In S. Laher & K. Cockcroft (Eds.), *Psychological assessment in South Africa: Research and applications* (pp.120–136). Wits University Press.

Anney, V. N. (2014). Ensuring the quality of the findings of qualitative research: Looking at trustworthiness criteria. *Journal of Emerging Trends in Educational Research and Policy Studies*, *5*(2), 272–281. http://196.44.162.10:8080/xmlui/bitstream/handle/123456789/256/Ensuring%20the%20Quality%20of%20the%20Findings%20of%20Qualitative%20Research%20NEW.pdf?sequence=1&isAllowed=y

Baek, S. G., & Kim, K. J. (2003). The effect of dynamic assessment based instruction on children's learning. *Asia Pacific Education Review*, *4*(2), 189–198. https://doi.org/10.1007/BF03025361

Barrera, M. (2003). Curriculum-based dynamic assessment for new- or second-language learners with learning disabilities in secondary education settings.

Assessment for Effective Intervention, 29(1), 69–84. https://doi.org/10.1177/073724770302900107

Bavali, M., Yamini, M., & Sadighi, F. (2011). Dynamic assessment in perspective: Demarcating dynamic and non-dynamic boundaries. *Journal of Language Teaching and Research*, *2*(4), 895–902. https://doi.org/10.4304/jltr.2.4.895-902

Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report, 13*(4), 544–559. https://doi.org/10.46743/2160-3715/2008.1573

Bester, S., & Kühn, L. (2016). Dynamic assessment as an alternative avenue when intervening with children. In R. Ferreira (Ed.), *Psychological assessment: Thinking innovatively in contexts of diversity* (pp. 117–131). Juta.

Birjandi, P., Estaji, M., & Deyhim, T. (2013). The impact of Dynamic Assessment on reading comprehension and metacognitive awareness of reading strategy use in Iranian high school learners. *Iranian Journal of Language Testing, 3*(2), 60–77. https://www.ijlt.ir/article_114384_2ed175b83c6dd4c12270ce9033539972.pdf

Blaikie, N. (2011). Interpretivism. In M. S. Lewis-Beck, A. Bryman, & T. F. Liao (Eds.), *The Sage encyclopaedia of social science research methods* (pp. 509–514). Sage.

Boddy, C. R. (2016). Sample size for qualitative research. *Qualitative Market Research*, *19*(4), 426–432. https://doi.org/10.1108/QMR-06-2016-0053

Bouwer, C. (2011). Identification and assessment of barriers to learning. In E. Landsberg, D. Krüger, & E. Swart (Eds.), *Addressing barriers to learning: A South African perspective* (2nd ed., pp. 51–67). Van Schaik.

Bowen, G. A. (2009). Document analysis as qualitative research method. *Qualitative Research Journal, 9*(2), 27–40. https://doi.org/10.3316/QRJ0902027

Brown, G. T. L., & Hattie, J. (2012). The benefits of regular standardized assessment in childhood education: Guiding improved instruction and learning. In S. Sebastian & E. Reese (Eds.), *Contemporary debates in childhood and development* (pp. 301–306). Routledge.

Budgell, B. (2008). Guidelines to the writing of case studies. *The Journal of the Canadian Chiropractic Association, 52*(4), 199–204. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2597880/pdf/jcca-v52-4-199.pdf

Budoff, M. (1987). The validity of learning potential assessment. In C. S. Lidz (Ed.), *Dynamic assessment: An interactional approach to evaluating learning potential* (pp. 53–81). Guildford Press.

Camilleri, B., Hasson, N., & Dodd, B. (2014). Dynamic assessment of bilingual children's language at the point of referral. *Educational & Child Psychology, 31*(2), 57–72.

Campione, J. C., & Brown, A. L. (1987). Linking dynamic assessment with school achievement. In C. S. Lidz (Ed.), *Dynamic assessment: An interactional approach to evaluating learning potential* (pp. 82–115). Guilford Press.

Carney, J. J., & Cioffi, G. (1992). The dynamic assessment of reading abilities. *International Journal of Disability, Development and Education, 39*(2), 107–114. https://doi.org/10.1080/0156655920390203

Caufield, J. H., Zhou, Y., Garlid, A. O., Setty, S. P., Liem, D. A., Cao, Q., Lee, J. M., Murali, S., Spendlove, S., Wang, W., Zhang, L., Sun, Y., Bui, A., Hermjakob, H., Watson, K. E., & Ping, P. (2018). Data descriptor: A reference set of curated biomedical data and metadata from clinical case reports. *Scientific Data, 5*(1), Article 180258. https://doi.org/10.1038/sdata.2018.258

Check, J., & Schutt, R. K. (2012). *Research methods in education*. Sage.

Cho, E., Compton, D. L., Gilbert, J. K., Steacy, L. M., Collins, A. A., & Lindström, E. R. (2017). Development of first-graders' word reading skills: For whom can dynamic assessment tell us more? *Journal of Learning Disabilities, 50*(1), 95–112. https://doi.org/10.1177/0022219415599343

Cioffi, G., & Carney, J. J. (1983). Dynamic assessment of reading disabilities. *The Reading Teacher*, *36*(8), 764–768.

Cioffi, G., & Carney, J. J. (2010). Dynamic assessment of composing abilities in children with learning disabilities. *Educational Assessment, 4*, 175–202.

Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education* (6th ed.). Routledge.

Creswell, J. W. (2003). *Research design. Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Sage.

Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Sage.

Daneshfar, S., & Moharami, M. (2018). Dynamic Assessment in Vygotsky's sociocultural theory: Origins and main concepts. *Journal of Language Teaching and Research, 9*(3), 600–607. https://doi.org/10.17507/jltr.0903.20

De Beer, M. (2006). Dynamic testing: Practical solutions to some concerns. *SA Journal of Industrial Psychology, 32*(4), 8–14.

Dednam, A. (2005). First language problems. In E. Landsberg, D. Krüger, & N. Nel (Eds.), *Addressing barriers to learning: A South African perspective* (pp. 119–148). Van Schaik.

Dednam, A. (2019). First language problems. In E. Landsberg, D. Krüger, & N. Nel (Eds.), *Addressing barriers to learning: A South African perspective* (4th ed., pp. 119–148). Van Schaik.

Delmar, C. (2010). "Generalizability" as recognition: Reflections on a foundational problem in qualitative research. *Qualitative Studies*, *1*(2), 115–128. https://doi.org/10.7146/qs.v1i2.3828

Denzin, N. K., & Lincoln, Y. S. (2000). Introduction: The discipline and practice of qualitative research. In N. K. Denzin & Y.S. Lincoln (Eds.). *Handbook of qualitative research* (2nd ed., pp. 1–32). Sage.

Denzin, N. K., & Lincoln, Y. S. (2005). Introduction: The discipline and practice of qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.). *The Sage handbook of qualitative research* (3rd ed., pp. 1–32). Sage.

Department of Basic Education. (2011). *Action plan to 2014: Towards the realisation of schooling 2025*.

Department of Basic Education. (2014). *Policy on screening, identification, assessment and support 2014*.

https://wcedonline.westerncape.gov.za/Specialised-ed/documents/SIAS-2014.pdf

Department of Education. (2001). *Education White Paper 6. Special needs education: Building an inclusive education and training system.* https://www.gov.za/sites/default/files/gcis_document/201409/educ61.pdf

Department of Education. (2008). *National reading strategy*. https://www.education.gov.za/Portals/0/DoE%20Branches/GET/GET%20Schools/National_Reading.pdf?ver=2009-09-09-110716-507

De Vos, A. S., Strydom, H., Schulze, S., & Patel, L. (2011). The sciences and the profession. In A. S. De Vos, H. Strydom, C. B. Fouché, & C. S. L. Delport (Eds.), *Research at the grass roots for the social sciences and human service professions* (4th ed., pp. 3–26). Van Schaik.

DeVries, R. (2000). Vygotsky, Piaget, and education: A reciprocal assimilation of theories and educational practices. *New Ideas in Psychology*, *18*(2–3), 187–213. https://doi.org/10.1016/S0732-118X(00)00008-8

Donovan, J. (2016). Exploring Dynamic Assessment – an alternative approach to enhance our support for learners with dyslexia? *Dyslexia, Autumn,* 6–9. https://allicc.files.wordpress.com/2017/01/j-donovan_dr-winter-2016-copy.pdf

Dörfler, T., Golke, S., & Artelt, C. (2009). Dynamic assessment and its potential for the assessment of reading competence. *Studies in Educational Evaluation, 35*(2-3), 77–82. https://doi.org/10.1016/j.stueduc.2009.10.005

Dudovskiy, J. (2018). *The ultimate guide to writing a dissertation in business studies: A step-by-step assistance*. http://research-methodology.net/about-us/ebook/

Dunn, M. W. (2006). It was written all over him: Classroom teachers' referral criteria for special education services. *International Journal of Special Education, 21*(2), 124–139. https://files.eric.ed.gov/fulltext/EJ843612.pdf

Dunn, M. W., Cole, C. M., & Estrada, A. (2009). Referral criteria for special education: General education teachers' perspectives in Canada and the United States of America. *Rural Special Education Quarterly, 28*(1), 28–37. https://doi.org/10.1177/875687050902800105

Elliott, J. (2003). Dynamic assessment in educational settings: Realising potential. *Educational Review, 55*(1), 15–32. https://doi.org/10.1080/00131910303253

Elliott, J. G., Grigorenko, E. L., & Resing, W. C. M. (2010). Dynamic assessment. In P. Peterson, E. Baker, & B. McGaw (Eds.), *International encyclopedia of education* (Vol. 3, pp. 220–225). Elsevier.

Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing, 62*(1), 107–115. https://doi.org/10.1111/j.1365-2648.2007.04569.x

Ensing, A., Van der Aalsvoort, G. M., Van Geert, P., & Voet. S. (2014). Learning potential is related to the dynamics of scaffolding: An empirical illustration of the scaffolding dynamics of 5-year-olds and their teacher. *Journal of Cognitive Education and Psychology, 13*(3), 375–391. https://doi.org/10.1891/1945-8959.13.3.375

Erlandson, D. A., Harris, E. L., Skipper, B. L., & Allen, S. D. (1993). *Doing naturalistic inquiry: A guide to methods*. Sage.

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics, 5*(1), 1–4. https://doi.org/10.11648/j.ajtas.20160501.11

Feuerstein, R. (1990). The theory of structural cognitive modifiability. In B. Presseisen (Ed.), *Learning and thinking styles: Classroom interaction* (pp. 68–134). National Education Association. https://files.eric.ed.gov/fulltext/ED327322.pdf

Feuerstein, R., Rand, Y., Hoffman, M., Hoffman, M., & Miller, R. (1979). Cognitive modifiability in retarded adolescents: Effects of instrumental enrichment. *American Journal of Mental Deficiency, 83*(6), 539–550.

Feuerstein, R., Rand, Y., & Rynders, J. E. (1988). *Don't accept me as I am: Helping "retarded" people to excel.* Plenum Press. https://doi.org/10.1007/978-1-4899-6128-0

Fletcher, M., & Plakoyiannaki, E. (2010). Sampling. In A. J. Mills, G. Durepos, & E. Wiebe (Eds.), *Encyclopedia of case study research* (Vol. 2, pp. 837–839). Sage.

Foxcroft, C., & Roodt, G. (2009). *Introduction to psychological assessment in the South African context* (3rd ed.). Oxford University Press Southern Africa.

Gellert, A. S., & Elbro, C. (2018). Predicting reading disabilities using dynamic assessment of decoding before and after the onset of reading instruction: A longitudinal study from kindergarten through grade 2. *Annals of Dyslexia, 68*(2), 126–144. https://doi.org/10.1007/s11881-018-0159-9

Gibson, S., Benson, O., & Brand, S. L. (2013). Talking about suicide: Confidentiality and anonymity in qualitative research. *Nursing Ethics, 20*(1), 18–29. https://doi.org/10.1177/0969733012452684

Goldkuhl, G. (2012). Pragmatism *vs* interpretivism in qualitative information systems research. *European Journal of Information Systems, 21*(2), 135–146. https://doi.org/10.1057/ejis.2011.54

Grabe, W., & Jiang, X. (2014). Assessing reading. In A. J. Kunnan (Ed.), *The companion to language assessment* (Vol. 1, pp. 185–200). John Wiley & Sons. https://doi.org/10.1002/9781118411360.wbcla060

Gravetter, F. J., & Forzano, L. B. (2009). *Research methods for the behavioural sciences* (4th ed.). Cengage Learning.

Grigorenko, E. L. (2009). Dynamic assessment and response to intervention: Two sides of one coin. *Journal of Learning Disabilities, 42*(2), 111–132. https://doi.org/10.1177/0022219408326207

Grix, J. (2010). *Palgrave study skills: The foundations of research* (2nd ed.). Palgrave Macmillan.

Hamavandi, M., Rezai, M. J., & Mazdayasna, G. (2017). Dynamic assessment of morphological awareness in the EFL context. *Cogent Education, 4*(1), Article 1324254. https://doi.org/10.1080/2331186X.2017.1324254

Haywood, H. C. (2012). Dynamic assessment: A history of fundamental ideas. *Journal of Cognitive Education and Psychology, 11*(3), 217–229. https://doi.org/10.1891/1945-8959.11.3.217

Haywood, H. C., & Lidz, C. S. (2007). *Dynamic assessment in practice: Clinical and educational applications.* Cambridge University Press.

Health Professions Council of South Africa. (2008). *Guidelines for good practice in the health care professions: General ethical guidelines for health researchers. Booklet 6.* https://www.up.ac.za/media/shared/6/files/hpcsa-ethical-guidelines-for-researchers.zp158370.pdf

Hergenhahn, B. R., & Olson, M. H. (2001). *An introduction to theories of learning* (6th ed.). Prentice Hall.

Hessamy, G., & Ghaderi, E. (2014). The role of dynamic assessment in the vocabulary learning of Iranian EFL learners. *Procedia - Social and Behavioral Sciences, 98,* 645–652. https://doi.org/10.1016/j.sbspro.2014.03.463

Hidri, S. (2019). Static vs. dynamic assessment of students' writing exams: A comparison of two assessment modes. *International Multilingual Research Journal, 13*(4), 239–256. https://doi.org/10.1080/19313152.2019.1606875

Hill, K., & McNamara, T. (2012). Developing a comprehensive empirically based research framework for classroom-based assessment. *Language Testing, 29*(3), 395–420. https://doi.org/10.1177/0265532211428317

Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*(9), 1277–1288. https://doi.org/10.1177/1049732305276687

Jennings, J. H., Caldwell, J. S., & Lerner, J. W. (2014). *Reading problems: Assessment and teaching strategies* (7th ed.). Pearson.

Jensen, M. R., & Feuerstein, R. (1987). The Learning Potential Assessment Device: From philosophy to practice. In C. S. Lidz (Ed.), *Dynamic assessment: An interactional approach to evaluating learning potential* (pp. 379–402). Guildford Press. https://www.researchgate.net/profile/Mogens-Jensen-2/publication/318081646_The_Learning_Potential_Assessment_Device_From_philosophy_to_practice/links/5957d496a6fdcc2beca6c53f/The-Learning-Potential-Assessment-Device-From-philosophy-to-practice.pdf

Johnson, E. S., Pool, J., & Carter, D. R. (2013). *Screening for reading problems in grade 1 through 3: An overview of select measures*. RTI Action Network. http://www.rtinetwork.org/essential/assessment/screening/screening-for-reading-problems-in-grades-1-through-3

Kaboub, F. (2008). Positivist paradigm. *Encyclopaedia of counselling, 2*(2), 343.

Kaniel, S., & Feuerstein, R. (1989). Special needs of children with learning difficulties. *Oxford Review of Education, 15*(2), 165–179. https://doi.org/10.1080/0305498890150205

Kapantzoglou, M., Restrepo, M. A., & Thompson, M. S. (2012). Dynamic assessment of word learning skills: Identifying language impairment in bilingual children. *Language, Speech, and Hearing Services in Schools, 43*(1), 81–96. https://doi.org/10.1044/0161-1461(2011/10-0095)

Kempe, C., Gustafson, S., & Samuelsson, S. (2011). A longitudinal study of early reading difficulties and subsequent problem behaviors. *Scandinavian Journal of Psychology, 52(3)*, 242–250. https://doi.org/10.1111/j.1467-9450.2011.00870.x

Kivunja, C., & Kuyini, A. B. (2017). Understanding and applying research paradigms in educational contexts. *International Journal of Higher Education, 6*(5), 26–41. https://doi.org/10.5430/ijhe.v6n5p26

Klein, P. S. (2013). *Early intervention: Cross-cultural experiences with a mediational approach.* Routledge.

Knight-Mckenna, M. (2008). Syllable types: A strategy for reading multisyllabic words. *Teaching Exceptional Children, 40*(3), 18–24.

Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice, 24*(1), 120–124. https://doi.org/10.1080/13814788.2017.1375092

Kovalčíková, I. (2015). From dynamic assessment of cognitive abilities to educational interventions: Trends in cognitive education. *Journal of Pedagogy, 6*(1), 5–21. https://doi.org/10.1515/jped-2015-0001

Kozulin, A. (2003). Psychological tools and mediated learning. In A. Kozulin, B. Gindis, V. S. Ageyev, & S. M. Miller (Eds.), *Vygotsky's educational theory in cultural* context (pp. 15–38). Cambridge University Press.

Kozulin, A. (2011). Learning potential and cognitive modifiability. *Assessment in Education: Principles, Policy & Practice, 18*(2), 169–181. https://doi.org/10.1080/0969594X.2010.526586

Kyngäs, H., & Kaakinen, P. (2020). Deductive content analysis. In H. Kyngäs, K. Mikkonen, & M. Kääriäinen (Eds.), *The application of content analysis in nursing science research* (pp. 23–30). Cham, Switzerland: Springer. https://doi.org/10.1007/978-3-030-30199-6_3

Laher, S., & Cockcroft, K. (Eds.). (2013). *Psychological assessment in South Africa: Research and applications*. Wits University Press.

Lantolf, J. P., & Poehner, M. E. (2011). Dynamic assessment in the classroom: Vygotskian praxis for second language development. *Language Teaching Research, 15*(1), 11–33. https://doi.org/10.1177/1362168810383328

Lee, A. S., & Baskerville, R. L. (2012). Conceptualizing Generalizability: New Contributions and a Reply. *MIS Quarterly, 36*(3), 749–761. https://doi.org/10.2307/41703479

Lerner, J. W., & Johns, B. (2012). *Learning disabilities and related mild disabilities: Characteristics, teaching strategies, and new directions* (12th ed.). Houghton Mifflin.

Lerner, J. W., & Johns, B. (2015). *Learning disabilities and related mild disabilities: Characteristics, teaching strategies, and new directions* (13th ed.). Houghton Mifflin.

Lewis-Beck, M. S., Bryman. A., & Liao, T. F. (2004). *The Sage encyclopaedia of social science research methods* (Vol. 3). Sage.

Lidz, C. S. (1991). *Practitioner's guide to dynamic assessment.* The Guilford Press.

Lidz, C. S. (2003). *Early childhood assessment.* John Wiley & Sons.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.

Losardo, A., & Notari Syverson, A. (2011). *Alternative approaches to assessing young children* (2nd ed.). Paul H. Brookes Publishing.

Low, J. (2019) A pragmatic definition of the concept of theoretical saturation, *Sociological Focus, 52*(2), 131–139, DOI: 10.1080/00380237.2018.1544514

Mack, L. (2010). The philosophical underpinnings of educational research. *Polyglossia, 19,* 5–11.

Mardani, M., & Owusu, E. (2019). Dynamic assessment, a versatile tool for teaching and assessing critical reading. *European Journal of Alternative Education Studies*, *4*(2), 103–118. https://doi.org/10.5281/zenodo.3533925

Mardani, M., & Tavakoli, M. (2011). Beyond reading comprehension: The effect of adding a dynamic assessment component on EFL reading comprehension. *Journal of Language Teaching and Research, 2*(3), 688–696. https://doi.org/10.4304/jltr.2.3.688-696

Maree, J. G. (2012). The ultimate aim of your studies: Getting a manuscript published. In J. G. Maree (Ed.), *Complete your thesis or dissertation successfully: Practical guidelines* (pp. 210–243). Juta.

Marshall, C., & Rossman, G. B. (2011). *Designing qualitative research* (5th ed.). Sage.

Mayring, P. (2000). Qualitative content analysis. *Forum: Qualitative Social Research, 1*(2). https://www.qualitative-research.net/index.php/fqs/article/view/1089/2385

Mayring, P. (2014). *Qualitative content analysis: Theoretical foundation, basic procedures and software solution*. https://www.ssoar.info/ssoar/bitstream/handle/document/39517/ssoar-2014-mayring-Qualitative_content_analysis_theoretical_foundation.pdf

McPhillips, M., & Sheehy, N. (2004). Prevalence of persistent primary reflexes and motor problems in children with reading difficulties. *Dyslexia, 10*(4), 316–338. https://doi.org/10.1002/dys.282

Merriam, S. B. (1988). *Case study research in education: A qualitative approach.* Jossey-Bass.

Merriam, S. B. (1998). *Qualitative research and case study applications in education* (2nd ed.). Jossey-Bass.

Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. Jossey-Bass.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded source book* (2nd ed.). Sage.

Mills, A. J., Durepos, G., & Wiebe, E. (Eds.). (2010a). *Encyclopedia of case study research* (Vol. 1). Sage.

Mills, A. J., Durepos, G., & Wiebe, E. (Eds.). (2010b). *Encyclopedia of case study research* (Vol. 2). Sage.

Mogashoa, T. (2014). The impact of language of learning and teaching in primary schools: A case study of the Gauteng Province. *Mediterranean Journal of Social Sciences, 5*, 295–301. 10.5901/mjss.2014.v5n1p295.

Mohajan, H. K. (2018). Qualitative research methodology in social sciences and related subjects. *Journal of Economic Development, Environment and People, 7*(1), 23–48.

Moore-Brown, B., Huerta, M., Uranga-Hernandez, Y., & Peña, E. D. (2006). Using dynamic assessment to evaluate children with suspected learning disabilities. *Intervention in School and Clinic, 41*(4), 209–217. https://doi.org/10.1177/10534512060410040301

Moretti, F., Van Vliet, L., Bensing, J., Deledda, G., Mazzi, M., Rimondini, M., Zimmermann, C., & Fletcher, I. (2011). A standardized approach to qualitative content analysis of focus group discussions from different countries. *Patient Education and Counseling*, *82*(3), 420–428. https://doi.org/10.1016/j.pec.2011.01.005

Murphy, J. (2018). *Strengths and weaknesses of descriptive research*. https://classroom.synonym.com/descriptive-research-techniques-8422856.html

Murphy, R. (2011). *Dynamic assessment, intelligence and measurement.* John Wiley & Sons.

Murphy, R., & Maree, D. J. F. (2006). A review of South African research in the field of dynamic assessment. *South African Journal of Psychology, 36*(1), 168–191. https://doi.org/10.1177/008124630603600110

Nation, K., & Snowling, M. (1997). Assessing reading difficulties: The validity and utility of current measures of reading skill. *British Journal of Educational Psychology, 67*(3), 359–370. https://doi.org/10.1111/j.2044-8279.1997.tb01250.x

Navarro, J.-J., & Lara, L. (2017). Dynamic assessment of reading difficulties: Predictive and incremental validity on attitude toward reading and the use of dialogue/participation strategies in classroom activities. *Frontiers in Psychology, 8,* Article 173. https://doi.org/10.3389/fpsyg.2017.00173

Navarro, J.-J., & Mora, J. (2011). Analysis of the implementation of a dynamic assessment device of processes involved in reading with learning-disabled children. *Learning and Individual Differences, 21*(2), 168–175. https://doi.org/10.1016/j.lindif.2010.11.008

Nazari, B., & Mansouri, S. (2014). Dynamic assessment versus static assessment: A study of reading comprehension ability in Iranian EFL learners. *Journal of Language and Linguistic Studies, 10*(2), 134–156. https://dergipark.org.tr/en/pub/jlls/issue/9939/122972

Neuman, W. L. (2014). *Social research methods: Qualitative and quantitative approaches* (7th ed.). Pearson Education. http://74.208.36.141:8080/jspui/bitstream/123456789/167/1/Social%20Research%20Methods%20%28Eng%29%205MB%282%29.pdf

Nieuwoudt, S., & Reyneke, M. (2016). Assessment. In M. Jacobs, N. C. G. Vakalisa, & N. Gawe (Eds.), *Teaching-learning dynamics* (5th ed., pp. 312–341). Pearson.

O'Leary, Z. (2004). *The essential guide to doing research*. Sage.

Omidire, M. F., Bouwer, A. C., & Jordaan, J. C. (2011). Addressing the assessment dilemma of additional language learners through dynamic assessment. *Perspectives in Education, 29*(2), 48–60.

Orlikowski, W. J., & Baroudi, J. J. (1991). Studying information technology in organizations: Research approaches and assumptions. *Information Systems Research, 2*(1), 1–28. https://doi.org/10.1287/isre.2.1.1

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research [Special section]. *Administration and Policy in Mental Health and Mental Health Services Research, 42*(5), 533–544. https://doi.org/10.1007/s10488-013-0528-y

Palys, T. (2008). Purposive sampling. In L. M. Given (Ed.), *The Sage encyclopedia of qualitative research methods* (Vol. 2, pp. 697–698). Sage.

Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Sage.

Peña, E., & Iglesias, A. (1992). The application of dynamic methods to language assessment: A nonbiased procedure. *The Journal of Special Education, 26*(3), 269–280. https://doi.org/10.1177/002246699202600304

Peña, E., Iglesias, A., & Lidz, C. S. (2001). Reducing test bias through dynamic assessment of children's word learning ability. *American Journal of Speech-Language Pathology, 10*(2), 138–154. https://doi.org/10.1044/1058-0360(2001/014)

Petersen, D. B., Gragg, S. L., & Spencer, T. D. (2018). Predicting reading problems 6 years into the future: Dynamic assessment reduces bias and increases classification accuracy. *Language, Speech, and Hearing Services in Schools, 49*(4), 875–888. https://doi.org/10.1044/2018_LSHSS-DYSLC-18-0021

Pham, L. (2018). *A review of key paradigms: Positivism, interpretivism and critical inquiry*. University of Adelaide.

Piaget, J. (1962). *Play, dreams and imitation in childhood*. W. W. Norton.

Poehner, M. E. (2007). Beyond the test: L2 dynamic assessment and the transcendence of mediated learning. *The Modern Language Journal, 91*(3), 323–340. https://doi.org/10.1111/j.1540-4781.2007.00583.x

Poehner, M. E. (2008). *Dynamic assessment: A Vygotskian approach to understanding and promoting L2 development.* Springer.

Poehner, M. E., & Infante, P. (2018). Dynamic assessment in the classroom. In D. Tsagari & J. Banerjee (Eds.), *Handbook of Second Language Assessment* (pp. 275-290). De Gruyter.

Pritchard, A., & Woollard, J. (2010). *Psychology for the classroom: Constructivism and social learning*. Routledge.

Punch, K. F. (2005) *Introduction to social research: Quantitative and qualitative approaches* (2nd ed.). Sage.

Punch, K. F. (2014). *Introduction to social research: Quantitative and qualitative approaches* (3rd ed.). Sage.

Rahman, M. S. (2017). The advantages and disadvantages of using qualitative and quantitative approaches and methods in language "testing and assessment" research: A literature review. *Journal of Education and Learning*, *6*(1),102–112. https://doi.org/10.5539/jel.v6n1p102

Rea-Dickins, P. (2001). Mirror, mirror on the wall: Identifying processes of classroom assessment. *Language Testing, 18*(4), 429–462. https://doi.org/10.1177/026553220101800407

Rossman, G. B., & Rallis, S. F. (2012). *Learning in the field: An introduction to qualitative research* (3rd ed.). Sage.

Russell, G., Ryder, D., Norwich, B., & Ford, T. (2015). Behavioural difficulties that co-occur with specific word reading difficulties: A UK population-based cohort study. *Dyslexia, 21*(2), 123–141. https://doi.org/10.1002/dys.1496

Sadeghi, K., & Khanahmadi, F. (2011). Dynamic assessment of L2 grammar of Iranian EFL learners: The role of mediated learning experience. *International Journal of Academic Research, 3*(2), 931–936.

Sanaeifar, S. H., & Nafari, F. N. (2018). The effects of formative and dynamic assessments of reading comprehensions on intermediate EFL learners' test anxiety. *Theory and Practice in Language Studies, 8*(5), 533–540. https://doi.org/10.17507/tpls.0805.12

Schreier, M. (2012). *Qualitative content analysis in practice.* Sage.

Schwandt, T. A., & Halpern, E. S. (1988). *Linking auditing and meta evaluation: Enhancing quality in applied research*. Sage.

Seabi, J. (2012). Feuerstein's mediated learning experience as a vehicle for enhancing cognitive functioning of remedial school learners in South Africa. *Australian Journal of Educational & Developmental Psychology, 12,* 35–45. https://files.eric.ed.gov/fulltext/EJ1002245.pdf

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information, 22*(2), 63–75. https://doi.org/10.3233/EFI-2004-22201

Smit, M. (2010). *Educational psychologists' views on the relevance of dynamic assessment for their practice* [Unpublished master's thesis]. Stellenbosch University. http://scholar.sun.ac.za/handle/10019.1/5299

Cruz, K. (2018). *Are both the TOWRE-2 and the WIAT-III basic reading composite needed to accurately identify characteristics of Dyslexia?* [Unpublished master's thesis]. Middle Tennessee State University. https://jewlscholar.mtsu.edu/server/api/core/bitstreams/9c38d3ee-e239-45b3-bd13-22f937a7144d/content

Snowman, J., & McCown, R. (2011). *Psychology applied to teaching* (13th ed.). Wadsworth Publishing.

Sopandi, W., & Sutinah, C. (2016). Optimize the increase of students' conceptual understanding by learning at the Zone of Proximal Development. In *Proceeding of the International Seminar on Science Education* (Vol. 2, pp. 52–59). http://pps.uny.ac.id/sites/pps.uny.ac.id/files/ISSE%202016.pdf

Stake, R. E. (1995). *The art of case study research.* Sage.

Sternberg, R. J., & Grigorenko, E. L. (2002). *Dynamic testing: The nature and measurement of learning potential*. Cambridge University Press.

Stright, A. D., Herr, M. Y., & Neitzel, C. (2009). Maternal scaffolding of children's problem solving and children's adjustment in kindergarten: Hmong families in the United States. *Journal of Educational Psychology, 101*(1), 207–218. https://doi.org/10.1037/a0013154

Thanh, N. C., & Thanh, T. T. L. (2015). The interconnection between interpretivist paradigm and qualitative methods in education. *American Journal of Educational Science, 1*(2), 24–27.

Thatcher Kantor, P., Wagner, R. K., Torgesen, J. K., & Rashotte, C. A. (2011). Comparing two forms of dynamic assessment and traditional assessment of preschool phonological awareness. *Journal of Learning Disabilities, 44*(4), 313–321. https://doi.org/10.1177/0022219411407861

Thomas, E., & Magilvy, J. K. (2011). Qualitative rigor or research validity in qualitative research. *Journal for Specialists in Pediatric Nursing, 16*(2), 151–155. https://doi.org/10.1111/j.1744-6155.2011.00283.x

Thomas, P. Y. (2010). *Towards developing a web-based blended learning environment at the University of Botswana* [Unpublished doctoral thesis]. University of South Africa. https://uir.unisa.ac.za/handle/10500/4245

Thouësny, S. (2010). Assessing second language learners' written texts: An interventionist and interactionist approach to dynamic assessment. In J. Herrington & C. Montgomerie (Eds.), *Proceedings of ED-MEDIA 2010--World Conference on Educational Multimedia, Hypermedia and Telecommunications* (pp. 3517–3522). Association for the Advancement of Computing in Education (AACE).

Treharne, G. J., & Riggs, D. W. (2015). Ensuring quality in qualitative research. In P. Rohleder & A. C. Lyons (Eds.), *Qualitative research in clinical and health psychology* (pp. 57–73). Palgrave Macmillan.

Tzuriel, D. (2000). Developmental perspectives of mediated learning experience theory. In A. Kozulin & Y. Rand (Eds.), *Experience of mediated learning: An impact of Feuerstein's theory in education and psychology* (pp. 217–239). Pergamon.

Tzuriel, D. (2001). *Dynamic assessment of young children*. Kluwer Academic/Plenum.

Tzuriel, D. (2013). Dynamic assessment of learning potential. In M. M. C. Mok (Ed.), *Self-directed learning oriented assessments in the Asia-Pacific* (Vol. 18, pp. 235–255). Springer. https://doi.org/10.1007/978-94-007-4507-0_13

Tzuriel, D., & Remer, R. (2018). Mediation with a puppet: The effects on teachers' mediated learning strategies with children in special education and regular kindergartens. *Language and Instruction, 58*, 295–304. https://doi.org/10.1016/j.learninstruc.2018.08.001

Tzuriel, D., & Shomron, V. (2018). The effects of mother-child mediated learning strategies on psychological resilience and cognitive modifiability of boys with learning disability [Special issue]. *British Journal of Educational Psychology, 88*(2). https://doi.org/10.1111/bjep.12219

Vanclay, F., Baines, J. T., & Taylor, C. N. (2013). Principles for ethical research involving humans: Ethical professional practice in impact assessment Part I. *Impact Assessment and Project Appraisal, 31*(4), 243–253. https://doi.org/10.1080/14615517.2013.850307

Van Staden, A. (2018). Individualised learner support. In I. Eloff & E. Swart (Eds.), *Understanding educational psychology* (pp. 191–201). Juta.

Vaughn, S., & Fletcher, J., & Francis, D., & Denton, C., & Wanzek, J., & Wexler, J., Cirino, P., Barth, A., & Romain, M. (2008). Response to intervention with older students with reading difficulties. *Learning and individual differences, 18,* 338–345. 10.1016/j.lindif.2008.05.001.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Harvard University Press.

Walby, K., & Luscombe, A. (2017). Criteria for quality in qualitative research and use of freedom of information requests in the social sciences. *Qualitative Research, 17*(5), 537–553. https://doi.org/10.1177/1468794116679726

Wanzek, J., & Vaughn, S., & Roberts, G., & Fletcher, J. (2011). Efficacy of a reading intervention for middle school students identified with learning disabilities. *Exceptional children, 78*, 73–87. 10.1177/001440291107800105.

Weber, R. (2004). Editor's comments: The rhetoric of positivism versus interpretivism: A personal view. *MIS Quarterly, 28*(1), iii–xii. https://doi.org/10.2307/25148621

Weisi, H., & Bahramlou, K. (2017). Dynamic assessment: Mechanisms underlying cognitive modifiability. *Abnormal and Behavioural Psychology, 3*(1), Article 130. https://doi.org/10.4172/2472-0496.1000130

Weiss, L. G. (2016). *Standardized assessment for clinical practitioners: A primer*. https://www.naset.org/fileadmin/USER_UPLOADS_PROTECTED/Advocacy/Module_2/Unit-10/Standardized_Assessment.pdf

Weiten, W., & Hassim, J. (2018*). Psychology: Themes and variations* (3rd ed.)*.* Cengage Learning.

Willig, C. (2008). *Introducing qualitative research in psychology.* Open University Press.

Willis, J. W. (2007). *Foundations of qualitative research: Interpretive and critical approaches*. Sage.

Yin, R. K. (2003). *Case study research: Design and methods* (3rd ed.). Sage.

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.)*.* Sage.

Zhang, Y., & Wildemuth, B. M. (2005). Qualitative analysis of content. *Human Brain Mapping*, *30*(7), 2197–2206.

Zhang, Y., & Wildemuth, B. M. (2009). Qualitative analysis of content. In B. M. Wildemuth (Ed.), *Applications of social research methods to questions in information and library science* (pp. 309–319). Libraries Unlimited.

Zurakat, G. O. (2018). *Dynamic assessment of cognitive ability: Investigating the construct validity of the learning potential computerised adaptive test (LPCAT) within an academic context* [Unpublished master's dissertation]. University of KwaZulu-Natal. https://ukzn-dspace.ukzn.ac.za/bitstream/handle/10413/16898/Zurakat_Ganiyat_Olushola_2018.pdf?sequence=3&isAllowed=y

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APPENDICES

Appendix A:
Permission Letter to Use Data for the Training Facility, Educational Psychology

Appendix B:
Categories in their Colour Codes

Appendix C:
Themes in Each Case

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APPENDIX A: PERMISSION LETTER TO USE DATA FOR THE TRAINING FACILITY, EDUCATIONAL PSYCHOLOGY

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Education

The Head of Department of Educational Psychology
University of Pretoria
Groenkloof
Pretoria

REQUEST TO CONDUCT RESEARCH USING THE SECONDARY DATA FROM THE TRAINING FACILITY IN THE DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

Dear Professor Ruth Mampane

I am conducting a research study as part of the requirements for a Master's degree in Educational Psychology at the University of Pretoria. I hereby request your permission to conduct research using the case file reports of children who have been assessed in the Training Facility of the Department of Educational Psychology.

The purpose of the research study is to understand how dynamic assessment can be used in a psychological assessment in framing reading challenges. The information to be obtained will be used to describe reading challenges and abilities. This will lead to a better understanding and explanation of the reading phenomenon.

I would like to access the clinical files of the clients who were assessed in the Training Facility of the Department of Education. These clinical files consist of the video recordings of the psychological assessments, the case notes and reports documented by the psychologists and students who performed the assessments. I would like access to only the sections of these documents related to reading and dynamic assessment. I will only focus on analysing the strategies of the assessor and not the clients who were assessed. Confidentiality and anonymity will be maintained by only using the relevant sections of the file reports, and excluding all identifying information in the study.

Thank you for your kind consideration with regards to the request.

Yours sincerely,

_____
Miss Mapule Mashapha

I, Professor Ruth Mampane, Head of Department of Educational Psychology, hereby grant permission for this research to be conducted in the Department of Educational Psychology's Training Facility.

_____ _____

Prof. R. Mampane Date

APPENDIX B: CATEGORIES IN THEIR COLOUR CODES

Zone of proximal development (what the learner can do with assistance)

- Actual development level (what the learner can do without assistance)
- Internalization (improvement observed)
- Difficulty (what the learner cannot do with assistance)

Mediated learning experience strategies

- Intentionality and Reciprocity,
- Mediation of meaning,

Cognitive modifiability

- Assimilation
- Accommodation

Line no.	Case 1: Thabo; Gender: Male	Theme	Reason for Theme
1	**Standardised assessments** In terms of Thabo's reading ability Thabo displayed on numerous occasions		
2	faulty pronunciation which could be due to visual discrimination difficulties,		
3	lack of experience, the words being too difficult, or poor knowledge of the		
4	spelling rule of silent e sound, and soft and hard c sound. This could be		
5	indicative of second language difficulties. Thabo at times omitted letters and		
6	initial sounds. Thabo also showed difficulty grasping vowel digraphs. Visual		
7	memory difficulties could be a possible cause. Thabo showed confusion		
8	with vowel digraphs and with the long and short vowels, and therefore had		
9	difficulty with the final e sound. The final silent "e" rule was ignored during		
10	reading. This was used as a basis for dynamic assessment.		
11	Thabo does not need encouragement to begin reading. He is willing	ZPD	This indicates the learner's actual development level (abilities without assistance).
12	to try unknown words, and sounds out words phonetically that he does not know.	ZPD	Indicates learner's actual development level
13	Thabo is able to discriminate between the initial and final sounds of words.	ZPD	Indicates learner's actual development level.

14	He is able to recognise both lower case and capital letters by sound and name.	ZPD	Indicates learner's actual development level.
15	**Dynamic assessment** Dynamic assessment for reading focused on teaching and then		
16	reassessing Thabo's ability to grasp the silent "e" rule. Visual stimuli was	MLE	This indicates the type of mediation provided.
17	utilised to scaffold and guide Thabo to visually and manually grasp the concept.	MLE	Indicates the type of mediation used to help the learner learn.
18	Reassessment was implemented during the second assessment		
19	which consisted of Thabo reading a list of words, similar to the initial reading		
20	assessment list, which is appropriate for Grade 2 level, with and without the		
21	silent e. Thabo's performance within the context of dynamic assessment		
22	indicated his potential to learn when assessed and taught at his level of	ZPD	Indicates an improvement observed after mediation.
23	functioning and understanding, making use of visual and concrete	ZPD; MLE	This indicates the mediated learning strategy.
24	manipulation of teaching materials. Based on Thabo's performance on	MLE	This indicates the mediated learning strategy.
25	this occasion, it appears that the process of dynamic assessment was		
26	effective, and Thabo was able to distinguish between words such as hug	Cognitive modifiability	This indicates the specific change in development.
27	and huge, however at first he did rush into assuming all the words had the	ZPD	This indicates the learner's growth area that was not

			improved after scaffolding.
28	final “e” at the end. As the list went on he began to grasp the concept. This is	Cognitive modifiability	Indicates an observed change in development after mediation.
29	possibly indicative of his difficulty with focussing his attention and the difficulty	ZPD	This indicates the learner’s growth area that was not improved after scaffolding.
30	he may be experiencing impulse control.	ZPD	This indicates the learner’s growth area that was not improved after scaffolding.
Line no	**Case 2: Mathapelo; Gender: Female**		
	Standardised assessments		
31	An error analysis of the reading mistakes made by Mathapelo indicated		
32	that she sounds out the letters of a word in an attempt to read the word.		
33	However even when using the aforementioned strategy, she reads words		
34	incorrectly. This suggests that she does not know her sounds. A reading		
35	mistake Mathapelo constantly made was reading the first letter of the word and		
36	then guessing the rest of word. The types of reading mistakes Mathapelo made		
37	are often associated with difficulty with visual memory, imagery, analysis and		
38	emphasis as well as problems with converting visual to auditory equivalent.		
39	Problems with auditory discrimination and memory also play a role.		
40	The results of the NARA suggest that Mathapelo’s reading abilities in		
41	reading accuracy, reading comprehension and reading rate are problematic.		
42	Poor accuracy has a direct effect on the ability to understand what is being		
43	read. Mathapelo has a tendency of guessing words by looking at the first letter		
44	of the word. Other types of mistakes made were mispronunciations,		
45	substitutions and reversals.		
	Dynamic Assessment		
46	Mathapelo read the three sentences and then the assessor identified the		
47	words that Mathapelo struggled with. During the teaching phase, the assessor		
48	made use of guided reading strategies to teach Mathapelo to read the words that	MLE	This indicates the type of MLE that

			occurred between the assessor and the learner.
49	she struggled with in the pre-test. For each word the assessor asked	MLE	
50	Mathapelo to read after her, she would break the words into syllables and then	MLE	Indicates the assessor's mediated learning strategy and the learner reciprocating the assessor's mediation.
51	read the word as a whole. During the retest phase Mathapelo's reading of	MLE	Indicates the assessor's mediated learning strategy.
52	sentences improved, however it should be taken into account that she could	ZPD	Indicates the learner's improvement after mediation was provided.
53	have relied on oral reproduction rather than actual reading.	ZPD	Indicates a lack of improvement/ growth area in her reading.
Line no	**Case 3: Katleho; Gender: Male**		
	Standardised assessments		
88	Overall it was noted that Katleho has poor decoding abilities and often		
89	guesses words or replaces words he is reading with words he knows. He was		
90	not able to read most of the sight words he encountered and his overall knowledge		
91	of vocabulary in English is limited. He also swopped letters around which		
92	resulted in the meaning of words and sentences being lost.		
93	When reading, Katleho showed little acknowledgement of punctuation which		
94	further resulted in difficulty comprehending a text and keeping his place. Katleho		
95	has limited knowledge of conventions or digraphs and confuses vowel sounds.		
96	His reading speech is much slower than what is required for functioning at a		
97	grade 4 level. Katleho was often confused when reading and struggled to was		
98	connect the words he had read to meaningful information when he		

99	required to answer questions about what he had read. When considering the		
100	various difficulties, Katleho experiences in reading and spelling it is likely that		
101	he is unable to obtain adequate meaning from the majority of what he		
102	reads in the classroom and this contributes to low scholastic achievement.		
103	The NARA was used to assess Katleho's reading accuracy,		
104	comprehension and reading rate or speed. Both his reading accuracy and		
105	comprehension age scores are less than 6 years and 0 months.		
106	**Process notes:** The child used the pictures to be able to say the words and	MLE	The learner's response to the mediational strategy used.
107	struggled with decoding the longer words such as tunnel but seemed to enjoy	MLE	Indicates the learner's response the mediational strategy used.
108	the matching process. Perhaps the reading of the words was less stressful with	MLE	The learner's response to the mediational strategy used.
109	the added visual aids. The child was motivated by the game aspect and winning	MLE	The learner's response to the mediational strategy used.
110	and seemed to enjoy being praised for his accomplishments.	MLE	The learner's response to the mediational strategy used.
111	This familiarity with the words was much better at this stage and he could very	Cognitive modifiability	This indicates the change in development after mediation.
112	quickly identify if either of us had the word. Visual memory? Enhanced by the	MLE	Indicates the mediational strategy used.
113	use of the pictures? He could easily say the words and would emphasise the	Cognitive modifiability	This indicates the change in development

			after mediation.
114	sounds but required a couple of repetitions in order to get the sound entirely correct.	MLE	Indicates the mediational strategy used.
115	**Dynamic Assessment** Katleho paid close attention when learning the Mathematics and language	MLE	The learner's response to during mediation.
116	skills that were taught. However, his understanding of English as the medium		
117	of instruction, made it difficult for him to fully understand instructions. He	ZPD	This indicates the learner's growth area revealed after mediation.
118	struggled to understand the content being taught. Nonverbal descriptions and	ZPD	This indicates the learner's growth area revealed after mediation.
119	pictures were necessary in order to increase his understanding. Additionally, it	MLE	This indicates the mediational strategy to improve the learner's understanding .
120	became clear that his auditory discrimination skills were under-developed	ZPD	This indicates the learner's growth area after mediation was provided.
121	which hindered the learning of vowel sounds.	ZPD	This indicates the learner's growth area after mediation was provided.

APPENDIX C: THEMES IN EACH CASE

Learner	Standardised assessments' error analysis	Dynamic assessment themes
Thabo	Faulty pronunciation; omission of letters and initial sounds; difficulty with the final silent "e" sound; guesses words.	Zone of proximal development
		Mediated learning experiences
		Cognitive modifiability
Mathapelo	Incorrect reading while sounding out words; guessing of words after reading the first letter; mispronunciations, substitutions, reversals.	Zone of proximal development
		Mediated learning experiences
Katleho	Poor decoding abilities; guesses words; unable to read sight words, limited English vocabulary, lack of acknowledgement of punctuation marks, confuses vowel sounds, low reading speed, low reading comprehension skills.	Zone of proximal development
		Mediated learning experiences
		Cognitive modifiability

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