Using mediated learning support strategies in psychological assessments

Denise Louw

2022

Using mediated learning support strategies in psychological assessments

by

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Submitted in partial fulfilment of the requirements for the degree

MAGISTER EDUCATIONIS
(Educational Psychology)

Department of Educational Psychology
Faculty of Education
University of Pretoria

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PRETORIA
December 2022

Declaration of Originality

I, Denise Louw (26246580) declare that the mini-dissertation titled: Using mediated learning support strategies in psychological assessments, which I hereby submit for the degree Master Educationis (Educational Psychology) at the University of Pretoria, is my own work and has not been previously submitted by me for a degree at this or any other tertiary institution.

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Denise Louw

Signed on the 8th day of December 2022, Pretoria, South Africa.

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INVESTIGATOR	Ms Denise Louw
DEPARTMENT	Educational Psychology
APPROVAL TO COMMENCE STUDY	29 October 2018
DATE OF CLEARANCE CERTIFICATE	21 November 2022
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The author, whose name appears on the title page of this thesis, has obtained, for the research described in this work, the applicable research approval. The author declares that she has observed the ethical requirements in terms of the University of Pretoria's Code of ethics for the researcher and the Policy guidelines for responsible research.

Denise Louw

December 2022

Acknowledgements

Without the assistance of crucial role players who helped me along the way, I would not have reached this important milestone in my life. I would like to sincerely thank the following individuals:

- To my husband Evert, thank you for your love and support during this challenging time. For each cup of coffee, you made for me to keep me going. For all the domestic chores, cooking, and cleaning I neglected during this period. For all the times you gave up sleep, while I was awake to work. Without your support, I would not have been able to balance being a mother, working full-time, going to school and to study. Thank you for all the times you supported me. From the bottom of my heart, I thank you.
- To my darling daughters, you gave me the motivation to press on in the days when I wanted to give up.
- To my supervisor, Prof Suzanne Bester, thank you for all your inspiration and guidance, throughout this journey. I sincerely appreciate your advice, patience, and “research recipes”. You taught me a lot. Even if I didn’t always believe in myself, I appreciate you believing in me. It was an honour to work with you.
- To my mother, Louise, for the prayers, support, and encouragement. I was motivated to keep going by you. I appreciate your confidence in me.
- To Lynette and Stephan, my parents, who supported me in reaching my goal. I was motivated by you to keep going and to keep my eye on the prize.
- Thank you to my co-workers for asking how I was feeling and if there was any way they could assist me during this process.
- My lifelong friends, I appreciate your unwavering love and support.
- To Nikki Watkins, for her editing as well as the supportive emails.
- Above all, to God who gave me the opportunity, ability and strength to see this journey through.

Abstract

Using mediated learning support strategies in psychological assessments

by

Denise Louw

Supervisor: Prof Suzanne Bester

Degree: M.Ed. (Educational Psychology)

The purpose of this descriptive case was to explore how mediated learning strategies were used in two purposefully selected educational psychological assessments. A deductive content analysis was used to analyse data that were generated through the transcribed video recordings, clinical reports and case notes of the two case files. The study was guided by Feuerstein's Mediated Learning Experience theory. Reciprocity and intent, meaning and transcendence which are essential mediational strategies were used in both case studies. The mediation strategies that were used in the assessments assisted with confirming a diagnosis and informed recommendations to the teachers and family for future intervention strategies. This study provides insight into how two learners responded when their learning and development was mediated or supported and how this informs their potential for learning.

Keywords: mediated learning; strategies; educational psychology; psychological assessment; dynamic assessment

Declaration – Language Editor

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7 December 2022

To whom it may concern

This letter serves to inform you that I have done language editing, proofreading and references on the master's thesis

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CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1 INTRODUCTION AND RATIONALE

Standardised tests are used for various reasons and can be useful for diagnostic and prognostic purposes (Baek & Kim, 2003; Green & Birch, 2019; Kovalková, 2015). However, test scores obtained on these measures at a specific point in time may not provide insight into the test takers learning processes (Baek & Kim, 2003; Mardani & Owusu, 2019; Petersen et al., 2018). For this reason, dynamic assessment as an alternative and complementary approach to standardise assessment can be used to identify a learner's potential to learn and to develop a learner's potential into independent performance (Bester & Kühn, 2016; Mardani & Owusu, 2019). This is useful when the results of standardised assessments are considered to be a less valid reflection of a learner's potential due to various challenges such as language and culture. Dynamic assessment, according to Bester and Kühn (2016), Haywood and Lidz (2007), and Poehner (2007), is an instructional-based approach to assessment that allows the assessor to mediate between the learner and the assessment task.

Mediation is an important concept in dynamic assessment. Mediation occurs when the mediator intervenes within the zone of proximal development and positions themselves between the learner and environmental stimuli to examine what the child is able to learn (Callicott et al., 2020). In studies examining the effect of early cognitive intervention, the effectiveness of mediated learning in enhancing cognitive and language development has been demonstrated (Keung et al., 2022; Tzuriel & Shomron, 2018). It has also been found that learning through mediation improves cognitive performance (Seabi & Amod, 2009) and that cognitive modifiability and information processing are closely linked to the mediation process which is not always assessed by using standardised assessment measures (Russel et al., 2008; Seabi, 2012; Seabi & Amod, 2009; Skuy et al., 2002; Tzuriel, 2013).

Mediated learning experience, as first described by Feuerstein, is thought to increase an individual's propensity to learn by allowing the learner to become more aware of their own cognitive processes, acquire cognitive strategies, and develop learning

behaviours that contribute to higher levels of functioning (Feuerstein et al., 2006, 1991). Feuerstein proposed two methods of mediating learning. The first is a direct method in which learners interact with environmental stimuli to learn and the second is a method in which adults scaffold children's learning (Keung et al., 2022).

A growing body of research has shown that mediated learning improves cognitive functioning in children with developmental issues (Lebeer, 2016; Haywood & Lidz, 2007; Murphy & Maree, 2006; Sternberg & Grigorenko, 2002; Tzuriel, 2021). International studies by Lantolf et al. (2015) and Sanaeifar and Nafari (2018) have also demonstrated that using mediation in dynamic assessment improves learners' understanding of their work and their ability to complete activities independently (Lantolf, 2011; Sanaeifar & Nafari, 2018). Learners may apply the mediation techniques they learn to other tasks to improve their performance (Sanaeifar & Nafari, 2018). Mediation can also be used to observe how learners respond to change as they progress from requiring the most explicit form of mediation to requiring more implicit forms, such as hints (Lantolf & Poehner, 2011).

In the South African context, where learners come from diverse educational, cultural and socioeconomic backgrounds, a dynamic assessment may offer learners the opportunity for an interactive form of assessment that helps to determine their developing skills (Amod & Seabi, 2013; Bester & Kühn, 2016). In this context, dynamic assessment can be used to overcome the cultural and educational biases that are typically present when using standardised assessments (Bester & Kühn, 2016; Murphy & Maree, 2006). When used as an accommodating and complementary form of assessment, dynamic assessment can assist learners who face learning barriers due to language and cultural differences or socioeconomic disadvantages to improve their performance (Bester & Kühn, 2016).

However, dynamic assessments are administered by psychologists less frequently than standardised assessments (Deutsch & Reynolds, 2000; Lidz & Elliott, 2000; Elliott, 2003; Lidz, 2003; Woods & Farrell, 2006). The reasons are that dynamic assessment demands more knowledge, experience, training and effort (Callicott et al., 2020). Another factor contributing to dynamic assessment's low prevalence is the lack of ongoing supervision and assistance for psychologists (Callicott et al., 2020). Under

supervision, mediators can practice their techniques. It encourages self-reflection and concept analysis (Callicott et al., 2020). Due to insufficient training and practice standards, educational psychologists, according to Green and Birch (2019), find it difficult to use dynamic assessments.

There is a need for a study that demonstrates how dynamic assessments and mediation can be used as complementary tools in psychological assessment to determine the learning potential of students with various learning difficulties or those who have had limited exposure to learning opportunities (Smit, 2010). During her time in training as an educational psychologist, the researcher observed that standardised assessments only provided a partial picture of a learner's abilities. Standardised tests revealed a student's current abilities but did not indicate whether those abilities could be improved with the right intervention. Although the researcher observed the value of standardised tests when used for diagnostic purposes without intervention, the results were limited and failed to demonstrate whether the learner in question would have benefited from instructional strategies.

1.2 PURPOSE STATEMENT

The purpose of this descriptive case study was to explore and describe how mediated learning strategies can be used during a psychological assessment to provide a more in-depth understanding of learners' learning difficulties when used in conjunction with standardised tests. Two case studies were selected at the Educational Psychology Training Facility of the University of Pretoria during January 2015 to December 2019. The case files the researcher selected included transcripts of intake interviews, DVD recordings of assessments, clinical reports, the assessor's case notes, record forms and media used to assess and obtain test results. Relevant, transcribed video segments combined with the student educational psychologist's case notes (assessor) and segments of the clinical reports were included in this study. At this stage of the research, mediated learning is defined as an interactional process in which an important role player intervenes between a learner and a set of stimuli to enable the learner to develop cognitive functions required for temporal, spatial and cause-effect relations (Tzuriel & Caspi, 2017).

1.3 RESEARCH QUESTIONS

The following primary research question guided this study.

1.3.1 Main Research Question

How were mediated learning support strategies used in two educational psychological assessments at the Educational Psychology Training Facility, University of Pretoria, from January 2015 to December 2019?

1.3.2 Secondary Research Questions

1. Which mediated learning support strategies were used in the assessments?
2. How were the mediated learning support strategies executed?
3. What were the outcomes of the strategies?

1.4 ASSUMPTIONS

The following assumptions underpinned this descriptive case study:

- Assessors have the capacity to identify and apply mediated learning strategies within assessment sessions.
- Mediation enables the client to demonstrate their potential for learning and it benefits intervention planning.
- Learners' academic performance in a psychological session can be influenced by applying mediated learning strategies.

1.5 CONCEPT CLARIFICATION

1.5.1 Mediated Learning

Mediated learning refers to the enrichment of a learner's learning experience through mediated learning strategies, which is a subtle social interaction between the mediator and the learner (Kozulin, 2002). By selecting and guiding the learning opportunities that are offered to learners, significant roleplayers can help learners acquire knowledge. This process is known as "mediated learning." (Williams & Burden, 1997).

1.5.2 Dynamic Assessment

Dynamic assessment is a “test-teach-retest” method. The focus is on a person’s ability to learn after instruction and is a method to identify the learners’ skills (Seabi, 2012). Through active instruction and an emphasis on the cognitive and affective aspects of learning, dynamic assessment measures a learners cognitive processes, perceptions, learning abilities, and problem-solving abilities (Green & Birch, 2019).

1.6 THEORETICAL OVERVIEW OF THE STUDY

Feuerstein’s Mediated Learning Experience Theory (MLE) as adapted by Lidz (2002) and revised by Tzuriel (2021) was used as the theoretical framework in this study. This adopted theory consists of 11 mediated learning strategies, as opposed to Feuerstein’s 10.

According to Tzuriel (2021), mediated learning involves mediator-learner interactions that result in the formation of new knowledge structures and cognitive modifiability. Feuerstein et al. (2002) discovered that a lack of mediated learning and proximal factors such as poverty, neurological impairment, emotional challenges and low socioeconomic status negatively influenced cognitive performance. Parental participation, children’s cognitive abilities, motivation, emotional needs, behaviour and situational factors influence the success of mediation (Haywood & Lidz, 2007; Tzuriel, 2021). Mediated learning enables students to own and master their ideas and skills (Nel & Nel, 2013).

According to the MLE theory, learners internalise external influences and mediation (Tzuriel, 2018). The learner internalises strategies, allowing the mediator to gradually withdraw input and mediation. In this process the learner gains independence and can implement these new strategies (Tzuriel, 2018). Mediated learning environments facilitate the development and adaptation of learners’ cognitive processing and thinking styles. Therefore, mediation requires interaction. These human interactions facilitate behaviour modification and the use of higher-order cognitive processes (Feuerstein, 1979).

Using the MLE framework, the researcher evaluated the mediation strategies used during the assessment sessions. The first three strategies are crucial to mediation:

intentionality, transcendence and meaning mediation (Tzuriel & Shamir, 2010). The remaining eight strategies are task- and culture-dependent (Lidz, 2002; Tzuriel, 2011). These strategies reveal teacher-student, mother-child and peer-assisted interactions (Tzuriel & Caspi, 2017). The 11 strategies to the MLE theory will be discussed in-depth in Chapter Two.

1.7 METHODOLOGICAL OVERVIEW OF THE STUDY

An interpretivist paradigm was used to direct the research inquiry. A descriptive case study design and a qualitative research approach were used to describe the mediated learning strategies used in assessments. To gain insight into the study's research problem, two case studies were purposively selected.

The researcher transcribed the relevant parts of assessment sessions which were video recorded. The case notes and clinical reports within these client casefiles were also used to generate data. A deductive content analysis was used to interpret data derived from the transcribed video recordings, clinical reports and case notes.

To identify the mediated learning strategies used, the researcher used qualitative content analysis. Credibility, transferability, dependability and confirmability are discussed in detail in Chapter 3 as part of the quality criteria for the trustworthiness of this study.

Permission from the research site and confidentiality were all considered ethical considerations in this study since the data sources that were used were secondary. In Chapter 3, these ethical concerns will also be covered in greater detail.

1.8 SUMMARY

The researcher gave an overview of the study in this chapter. In the following chapter, the researcher will investigate the existing literature on the topic of dynamic assessment and mediated learning as an alternative to standardised assessments.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter commences with a discussion on the advancement of psychological assessment in the South African context. Then follows the role that theorists such as Vygotsky and Feuerstein played in the advancement of alternative assessment methods such as dynamic assessment. The principles of mediated learning and the use of mediated learning strategies are then discussed as a construct of dynamic assessment. This section provides insight into how mediated learning support strategies can be used within assessments and it outlines the assumptions and criticism against mediated learning and dynamic assessment. The study is positioned within the MLE theory. The theoretical framework is discussed before the closing summary of the chapter.

2.2 ADVANCEMENTS IN PSYCHOLOGICAL ASSESSMENT

In terms of psychological assessment, dynamic assessment is not a novel idea. Although it has a long history, it just recently became a formal assessment method (Haywood & Lidz, 2007). Formal dynamic assessment draws its inspiration from the theories of Binet, Piaget, Vygotsky and Feuerstein; however, these theories were not put into practice until the 19th century (Murphy & Maree, 2006).

Pedagogical, psychological and physiological attributes of learners underachieving were disregarded in the 1900s (Mehrnoosh & Rassaei, 2015). Researchers found that standardised assessment measures tested what the learners had already learnt, their potential development was disregarded, and these measures were described as static measures (Feuerstein et al., 1980). For this reason, standardised psychological tests were used with more reservation and caution since they were primarily focused on the attitudes and ideals of a middle-class, Eurocentric society (Nell, 2000). An increased understanding of culture and diversity in terms of language, race and religion that have an influence on the results of psychological tests caused a growing dissatisfaction with standardised tests among psychologists worldwide (Tzuriel, 2000). It has been

highlighted that standardised tests do not accurately reflect some learners' learning capacity or abilities (Birjandi & Sarem, 2012).

The history of psychological testing in South Africa began in 1915. Between 1915 and 1929, researchers such as Martin, Leipoldt, Loades and Rich, Dunston, Macrone, and Fick, developed a variety of psychological tests during the Apartheid era. These tests were specifically targeted at English- and Afrikaans-speaking South Africans while excluding members of other racial/cultural groups, who made up most of the population. As a result, only a small segment of the population could access and use the assessment measures (Foxcroft et al., 2013).

To combat unfairness and bias, culture-free assessments were created in South Africa, however, these efforts failed (Birjandi & Sarem, 2012; Foxcroft & Roodt, 2019). The explanation for this is that South Africa's various cultures all have unique values, beliefs and worldviews (Foxcroft et al., 2013). When it comes to the use of alternative assessment methods, little progress has been made. These assessments still do not consider differing sociocultural backgrounds, languages or civilisations (Foxcroft et al., 2013). Psychologists in South Africa also make use of internationally standardised tests and tools that originated in other nations (Foxcroft & Roodt, 2019). However, these tools were not created to meet the diverse needs of South African learners (Carter et al., 2005).

Standardised psychometric measures are still regarded as valuable when making a diagnosis, identifying barriers to learning and recommending a support plan for learners (Haywood & Lidz, 2007). The focus of standardised measures is on the interpretation of the learner's results. The interpretation of the results and scores is objective, based on formal and structured interactions between the assessor and the child (Bester & Kühn, 2016; Haywood & Lidz, 2007; Tzuriel et al., 2016).

In addition, standardised tests are valuable in providing information regarding a learner's current ability and functioning (Foxcroft et al., 2013). The test scores of standardised tests provide objective information about a learner's abilities compared to their peer group (van Eeden & de Beer, 2013). These results are obtained to predict a child's future (Bester & Kühn, 2016; Haywood & Lidz, 2007; Tzuriel et al., 2016).

They determine the learner's strong and weak points as well as a qualitative evaluation of specific observations of behaviour (van Eeden & Visser, 1992).

However, these tests fail to explain discrepancies that may be present in a learner's potential for learning (Tzuriel, 2001). Standardised tests do not take non-intellectual aspects of a learner's behaviour, such as anxiety, intrinsic motivation, need for mastery or locus of control, into account (Foxcroft et al., 2013). These concepts are important factors to consider when obtaining information regarding a learner's current ability and potential for future learning.

Additionally, theorists claimed that psychological tests do not link evaluation and instruction (Amod & Seabi, 2013). Due to the high curriculum demands imposed on teachers, this could result in the information acquired during the assessment sessions not being helpful or practical for teachers (Tzuriel, 2018). Advancements in the development of assessment methods that provided an alternative to standardised measures were made, in response to the concerns that were being raised, questioning the effectiveness of standardised psychological assessment measures. According to a review of the literature on dynamic assessment, the term "dynamic assessment" is frequently used to denote a range of methodologies and is used to define a vast number of different types of assessments (Green & Birch, 2019).

Different approaches vary in how much they try to improve student cognitive functions and whether they focus on qualitative or quantitative descriptions of differences observed. Dynamic models and their theoretical beginnings can be separated, and this led to two different approaches to practice (Green & Birch, 2019). Lev Vygotsky (1978) and his concept of the Zone of Proximal Development (ZPD) and Reuven Feuerstein (1979) and his theory of MLE were two of the pioneers of alternative approaches and their influences are discussed in the following sections (Green & Birch, 2019).

2.3 CATALYSTS IN THE ADVANCEMENT OF PSYCHOLOGICAL ASSESSMENT

Lev Vygotsky and Reuven Feuerstein are regarded as major catalysts in the advancement of alternative psychological assessments (Amod & Seabi, 2013). These two theorists precipitated a paradigm shift in the way learning and assessment were viewed (Amod & Seabi, 2013).

2.3.1 The Influence of Lev Vygotsky

Vygotsky is well-known for his research on children's psychological growth. Additionally, he claims that social interaction and involvement are crucial for learning (Vygotsky, 1978). His idea holds that a person's capacity to perform tasks depends not only on their mental abilities but also on what they can accomplish with support (Vygotsky, 1978; Amod & Seabi, 2013). His theory's two main pillars are the ZPD and the vital role that social interaction and culture play in the development of cognition (Vygotsky, 1978). The following paragraphs will explain these two ideas.

The sociocultural learning theory places emphasis on how learning develops a learner's psychological functioning, how culture is passed down through generations and how social activities play a role in learning (Kozulin, 2003; Lantolf & Poehner, 2011). The principles of Vygotsky's theory are crucial to the administration of dynamic assessment, particularly the function of mediation in assessments. The sociocultural theory and dynamic assessment both place a strong emphasis on cognitive development, and both share concepts such as mediation, regulation, the ZPD and internalisation.

Vygotsky's concept of the ZPD is crucial for mediated learning (Vygotsky, 1978). It was created for use in cognitive (IQ) testing and afterwards for the development of cognitive skills (Summers, 2008). Because he discovered that conventional approaches to assessment did not accurately assess a learner's true potential, he regarded his study of the ZPD as an addition to the conventional methods of evaluation (Summers, 2008).

The ZPD relates to a child's capacity to perform future accomplishments, whereas the zone of actual development refers to a learners ability to perform independently without the guidance or support of a more knowledgeable person (Agheshteh, 2015).

To lead learners, a mediator must concentrate on three crucial factors. Firstly, a learner cannot pass through the ZPD without the guidance of a more experienced person. To complete the second component, the mediator must give the learners a chance to both see and practice the skills needed to complete a task. The third element is scaffolding, which is crucial for guiding the learner through the ZPD (Bester & Kühn, 2016). Vygotsky thought that rather than quantifying a learner's abilities, they may be described using the ZPD (Poehner & Lantolf, 2005).

Scaffolding and mediation are most closely related to the domain of knowledge structures being mediated (Lantolf & Poehner, 2014). The assessor will use mediation to assist learners in mastering their understanding and internalising the information. To make sure the learner understands the instructions, the assessor will engage with them. The scaffolding process requires active participation from the learner. Connecting new knowledge structures and experiences to earlier knowledge and experiences is essential (Nel & Nel, 2013; Lantolf & Poehner, 2014). In guided learning, also referred to as scaffolding, support is given by a more knowledgeable person. During an evaluation, the assessor encourages the learner and gives them feedback. The assessor will offer advice or make the student aware of their problem-solving abilities as they are addressing a challenge (Nel & Nel, 2013). However, it is crucial to understand the distinction between the ZPD and scaffolding. The ZPD takes place when someone engages in activities that are more advanced than what the learner can complete on their own and is made possible by scaffolding (Bester & Kühn, 2016).

To develop a successful intervention plan, the assessor needs extensive knowledge of learner support techniques, which Vygotsky's theory provides (Lidz, 2002). Learners may receive a diagnosis as a result of standardised testing, but without the use of scaffolding or the identification of their ZPD, the assessor may lack the skills necessary to create an intervention strategy that would support these learners (Laher & Cockcroft, 2013; Tzuriel & Caspi, 2017). Vygotsky's learning theory has led to increased research on alternative evaluation techniques.

2.3.2 The Influence of Reuven Feuerstein

Feuerstein showed an interest in Piaget's cognitive development theory and worked alongside Andre Rey, a close colleague of Piaget (Lebeer, 2016). Andre Rey had already published a few articles by then, of which one questioned the value of standardised assessments in determining the educational requirements and potential of learners (Lebeer, 2016). His work inspired Feuerstein to devise a diagnostic tool and cognitive platform allowing rehabilitation and intervention (Tzuriel, 2001). With the growing criticism of psychometric assessments, a need for complementary assessment measures became evident and led to the work of Feuerstein, Vygotsky and their colleagues (Feuerstein et al., 2002).

Feuerstein used his theory of cognitive development as a foundation for his theory on MLE (Klein et al., 2006). According to Feuerstein, MLE describes the special mentor-mentee relationship that may enhance a person's propensity to learn by allowing learners to better understand their cognitive processes, acquire cognitive strategies and develop learning habits that contribute to higher levels of functioning (Keung et al., 2022). Feuerstein proposed two types of learning: direct and mediated. Direct learning involves learners engaging directly with environmental stimuli, whereas mediated learning emphasises the significance of scaffolding by adults or more knowledgeable others (Keung et al., 2022).

Feuerstein used his hypothesis on deficient cognitive development to devise methods and instruments to improve basic cognitive functioning, suggesting that an individual's level of cognitive functioning has the potential to change (Hodges, 2013; Lebeer, 2016). Furthermore, his theory of cognitive modifiability argued that significant role players in an individual's life can influence their development and cognitive functioning (Hodges, 2013).

The cognitive modifiability of a learner may be influenced by the level of difficulty of the tasks provided to them. As the difficulty level rises, the success rate rises (Haywood & Tzuriel, 2002). Numerous factors affect both the processes of mediated learning and cognitive modifiability (Haywood & Tzuriel, 2002). The first of these elements is the accessibility of mediation. The child has the choice to accept or reject mediation; in the worst possible case, excessive mediation exposure to help the

learner overcome learning barriers may have a negative effect on their learning and earlier unpleasant experiences may lead to inaccessible mediation (Haywood & Tzuriel, 2002). Second, is the perseverance of a learner to endure a task or attempt to finish it by themselves (Haywood & Tzuriel, 2002). Third, a child's capacity to continuously seek new solutions and postpone fulfilment can be described as their level of dissatisfaction and tolerance (Haywood & Tzuriel, 2002). Fourth, the locus of control of a learner is defined as the child's understanding that they are accountable for their actions and the results of those actions (Haywood & Tzuriel, 2002). The child's capacity to deliver replies might be interpreted as the fifth factor, which includes confidence in appropriate solutions. It is vital to remember that these responses could be right or wrong. Although emotional-attitudinal factors do not contribute to a child's cognitive development, they can affect their confidence (Haywood & Tzuriel, 2002). These emotional-attitudinal factors include the learner's level of mobility, liveliness, vibrancy, focus and interest in the mediator (Haywood & Tzuriel, 2002).

According to Feuerstein's model of MLE theory, interaction takes place between a learner and an experienced mediator. The mediator provides the learner with the opportunity to choose, alter, enhance, elaborate and interpret circumstances or objects (Hessamy & Ghaderi, 2014). Feuerstein developed interactional guidelines that enable successful mediation (Amod & Seabi, 2013; Summers, 2008). Feuerstein claimed that the first three parameters or strategies are crucial in the establishment of mediated learning. The three strategies are transcendence, mediation of meaning and intentionality and reciprocity (Feuerstein et al., 1991). An overview of the strategies used to direct the mediator is given below in Table 2.1.

Table 2.1: Feuerstein's criteria for MLEs

Strategies of interaction	Definition
Intentionality and reciprocity	Intentionality includes the shift of a learner's focus, awareness, perception and processing, using deliberate activities (Russel et al., 2008; Tzuriel, 2013). This deliberate effort on the part of the mediator aims to shape the child's behaviour and involve them in the activity, such as explaining the task's goal, demonstrating interest, suggesting possible solutions, making eye contact and pointing. The learner's vocal or non-verbal response to the mediator's deliberate actions is referred to as reciprocity. The mediators make use of this component to adjust their tactics in response to the child's answers (Tzuriel, 2018). According to Feuerstein, the mediator does not deliberately use reciprocity with the learner as a strategy; instead, the mediator changes some strategies by making use of the learner's response (Lidz, 2002).
Meaning	Mediation of meaning occurs when a stimulus is poised to convey affective meaning, motivation and value to the learner (Tzuriel, 2013). This can be conveyed in a verbal (using voice modulation) or non-verbal (pointing to specific areas) manner, allowing children to be active learners. An active learner can connect newly acquired stimuli and previous knowledge structures to successfully apply meanings and information to new situations as they arise (Tzuriel, 2013).
Transcendence	Transcendence in mediation suggests that the mediator creates activities which are beyond the immediate capabilities of the child and allows for activities that extend beyond concrete concepts (Tzuriel & Shomron, 2018). The assessor can ask the learner if they have done similar tasks in the past to create a link to their current activity.
Praise and encouragement	Mediation of praise and encouragement occurs when a mediator expresses to a child that they are skilled in completing tasks successfully and independently (Tzuriel, 2013). It can also be referred to as mediation of feelings of competence (Tzuriel, 2013). The mediator lets the learner know when they are making successful or beneficial attempts to resolve the issue. Included is showing the learner proof of their growth and new knowledge.
Sharing joint regard/ controlled behaviour	Mediation for shared behaviour refers to the mediator sharing other significant responses with the learner to improve his experiences (Lidz, 2002). The mediator observes how engaged the learner is with the project and tries to understand it from their point of view. Mediation involves articulating the "we-ness" of the experience to the child and

	letting them know that you are all in this together. Tzuriel (2013) refers to mediation in shared behaviour as mediation of feelings of competence.
Sharing of experiences	The mediator may communicate personal experiences with the learner (Lidz, 1991; Lidz & Elliot, 2000), or share other thoughts, understandings, frames of mind and insights (Lebeer, 2016). This shared communication leads to the promotion of inferential and cause-and-effect thinking as well as a connection between the learner's current and past experiences (Russel et al., 2008). The mediator expresses their previous perceptions or ideas, for instance by remarking, "This reminds me of..."
Task regulation	In mediation for task regulation or self-regulation, the mediator creates exercises that help the learner do tasks more effectively and feel a sense of mastery. The entire process, from information input to output, is impacted by this mediation component (Tzuriel & Shomron, 2018). The mediator adapts the activity to the child's abilities using moving parts, breaking down instructions into simpler steps, explaining rules, modelling reflective thinking and self-talk, asking "what should we do first", and other techniques (scaffolding) (Lidz, 2002).
Mediation of Challenge	Mediation of challenge includes the mediator presenting challenging activities which are just above the learner's current level of functioning (ZPD). Doing so requires the learner to apply problem-solving skills to complete the task successfully (Lebeer, 2016). It is important that the mediator and the learner set attainable goals together as this allows the learner to experience a sense of accountability and ownership of his goals (Lebeer, 2016).
Psychological differentiation	Mediation of individuation and psychological differentiation refers to the extent to which the mediator maintains his role and provides a beneficial learning experience for the learner (Lidz, 1991; Lidz & Elliott, 2000). The learner is encouraged to take responsibility for their learning and to develop an internal locus of control (Russel et al., 2008). The mediator avoids intrusive behaviour that may negatively impact the learning experience of the learner (Lidz, 2002).
Contingent responsivity	Mediation of contingent responsivity allows for the mediator to respond in a timely and suitable manner (Lidz, 2002). This component is also referred to as the mediation of change (Lebeer, 2016; Russel et al., 2008). The learner considers themselves capable and adaptable due to the learning tendency created. This enables the learner to continue to investigate and learn in other environments.

Affective involvement	Mediation of feelings of belonging or mediation of affective involvement implies that the mediator responds to the learner in a caring and warm manner (Lidz, 2002).

Source: Adapted from Lidz (2003)

Tzuriel (2021) added another mediational strategy to this list, namely the mediational strategy for acceptance of mediation. For mediation to be accepted, learners might react negatively to the mediator's attempts to mediate a strategy. Possible reasons for this hesitant response include unpleasant past experiences.

Once mediators used the above-mentioned mediational strategies, placing themselves between the stimuli and the learner, the stimuli become part of the mechanism of change within the learner. Mediated support allows the child to furthermore modify their cognitive systems independently to benefit from upcoming learning experiences (Tzuriel, 2001). The interactional process or presented stimuli allows the adult to determine the regularity, order, strength and context of the stimuli (Tzuriel, 2001).

Through Feuerstein's work, it was evident that cognitive structures could be modified, and that mediated learning could be used as a tool to inform the support an individual needs for learning to occur. The debate on cognitive modifiability and Feuerstein's view on assessments to intervene also led to further research on dynamic assessment and mediated learning (Feuerstein et al., 2002).

2.4 MEDIATED LEARNING AS A CONSTRUCT OF DYNAMIC ASSESSMENT

It is essential to take mediation into account when attempting to comprehend what dynamic assessment is. Feuerstein et al. (1980) go into great depth about mediation and call it the core of dynamic assessment. The ability to meditate is both a necessary component and a challenging one to achieve (Callicott et al., 2020).

Extensive research has been done since 1980 on the use of dynamic assessment and mediation (Feuerstein et al., 2002). It has been found that dynamic assessment improves cognitive modifiability and provides an indication of future learning (Lidz,

2002; Tzuriel, 2013). Amod and Seabi (2013) also stated that mediated learning enhances cognitive functioning.

Dynamic assessment integrates mediational learning strategies and increases the assessor's ability to create and explore the child's ZPD (Lidz, 2003). When a mediator intervenes in a learning setting, they are doing so within the learner's ZPD. They are acting between the learner and the environmental stimuli and making changes to the environment to see what might be influencing the child's learning (Callicott et al., 2020). Due to the support or mediation given to the learners during dynamic assessments, mediated learning is considered a construct of dynamic assessment (Lidz, 2003). Ellis (2008) stated that for learning to occur learners need support from other individuals. Learning is then mediated using social interaction. Mediated learning enables the learner to apply newly attained skills in different situations. As stated earlier, the three core strategies needed for mediated learning to occur in the dynamic assessment are intentionality, reciprocity and transcendence (Mehrnoosh & Rassaei, 2015). In the paragraphs to follow, an explanation will be provided on how these components of a dynamic assessment are also used for mediated learning to occur.

Intentionality is the first component and implies that the mediator initiates interaction or creates opportunities with a certain goal in mind, to provide support for the learner to grow (Ableeva, 2008; Mehrnoosh & Rassaei, 2015; Summers, 2008). The way the mediator initiates interaction, using questioning, probes and clues based on the learner's needs or feedback, illustrates the reciprocity of the learner (Poehner, 2008).

Transcendence is the second component for mediated learning to occur to assess the learner dynamically. Transcendence is the goal of mediated learning and dynamic assessment (Mehrnoosh & Rassaei, 2015). Transcendence is the ability of the learner to apply newly acquired skills to new situations and opportunities (Feuerstein et al., 2002). The third strategy implies that the learner understands and searches for the meaning of mediational situations (Summers, 2008). These strategies play an important part in mediation and provide guidelines for the mediator to assess learners dynamically.

Mediation as a construct within dynamic assessment can be viewed as a sequence of stages (Haywood & Tzuriel, 2002). Dynamic assessment is used as an umbrella term for various methods. The methods are chosen using feedback from the learner after an assessment session (Elliott, 2003). Mediated learning is a process of moving backwards and forwards by applying certain mediational strategies and after assessing the outcome, adapting the strategy if the outcome of the assessment was not as desired. Dynamic assessment provides insight into a learner's emerging abilities and prioritises learning potential by implementing mediational strategies during the assessment process (Amiri & Saberi, 2016). The researcher will elucidate the sequence of mediated learning within the process of dynamic assessment in the paragraphs below. This is also outlined in Figure 2.1 (Haywood & Tzuriel, 2002).

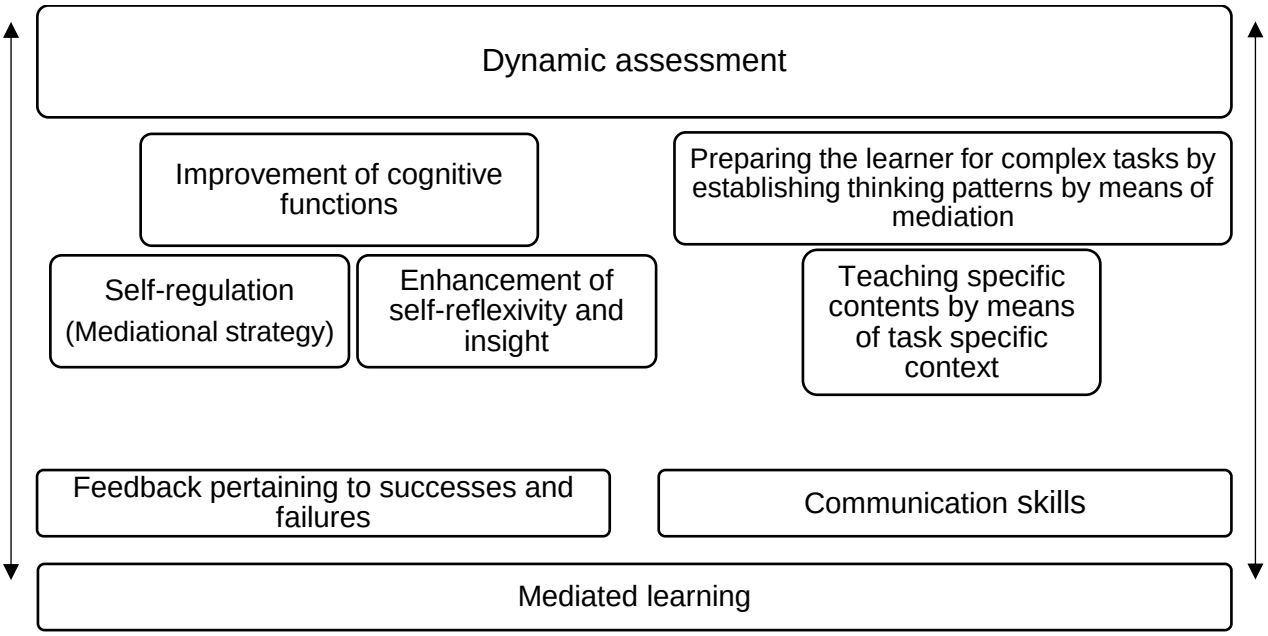

Figure 2.1: Mediated learning within dynamic assessment (Haywood & Tzuriel, 2002)

The first step in the mediation process includes the improvement of cognitive functions and implies that the mediator recognises the learner's cognitive functions pertaining to problem-solving and provides new learning tools using scaffolding (Haywood & Tzuriel, 2002). Secondly, the assessor identifies the necessary mediational strategies required to enhance the identified dysfunctional cognitive functions. This is done by establishing thinking behaviours to prepare a learner for more complex tasks (Haywood & Tzuriel, 2002). Mediational strategies, namely mediation in transcendence and self-regulation, are applicable within the third step of improving

cognitive functions. The assessor will ask the learner to repeat the activity a few times to form a pathway of solutions, allowing the learner to experience mastery and efficiency (Haywood & Tzuriel, 2002). Self-regulation occurs by supporting the learner to develop methods of planning and organising solutions (Haywood & Tzuriel, 2002). The fourth step in the process refers to the enhancement of reflexivity and insight and occurs when the assessor focuses on the relationship that the learner has between his thinking processes and significant cognitive enactments.

The emphasis with regards to mediation lies in the thinking processes and transference of learning and reflexivity of the learner (Haywood & Tzuriel, 2002). The thinking processes of the learner are considered more important than the intended activity or task. Transference of learning occurs when the learner can generalise information and insights to different situations. Reflexivity allows the learner to use metacognitive strategies to identify their growth areas or where they need to adapt. Important tasks to enhance reflexivity present the learner with deliberate uncertainties, strange situations and problems to solve (Haywood & Tzuriel, 2002).

In the next step, the mediator provides feedback to the learner on their achievements and areas of difficulty. This intentional feedback is seen as the foundation of dynamic assessment (Haywood & Tzuriel, 2002) and links mediated learning with the dynamic assessment approach. Learners may struggle, for example, to apply metacognitive skills, identify mistakes, make comparisons or communicate efficiently. Through feedback, the assessor focuses the learner's attention on behaviour and consequences, and both correct and incorrect answers, to develop these skills (Haywood & Tzuriel, 2002).

The last step of the mediated learning process includes the development of communication skills and response styles (Haywood & Tzuriel, 2002). It is important to note that the previous knowledge structures and communication style of the learner is then adapted and not replaced by a new knowledge structure (Haywood & Tzuriel, 2002). Learners independently solve problems by adapting knowledge structures and this adaptation of knowledge structures is one of the main goals of dynamic assessment.

Sufficient mediation is posited to aid the development of cognitive functions (Tzuriel, 2018). An indication of a learner's cognitive modifiability is the level of transference and learning that the learner experiences following the learning process (Haywood & Tzuriel, 2002). This indicates that the learner has internalised the new principles learnt and that these will become more crystallised with further use (Haywood & Tzuriel, 2002).

Mediated learning provides a framework for tools and adapting tasks for learners to enhance cognitive modifiability. These tools include directing the learner's attention, adapting the order and strength of the presented tasks and linking new knowledge to existing structures (Haywood & Tzuriel, 2018). They may also use the learner's motivation, curiosity and vigilance to focus the learner's attention on relevant aspects. This new focus enables the learner to attach new meaning to neutral stimuli.

2.5 MEDIATED LEARNING IN PRACTICE

Although dynamic assessment has many advantages, research indicates that educational psychologists employ it less frequently than standardised tests (Callicott, et al., 2020). Because dynamic assessment requires more expertise, better training and more experience and takes more effort than standardised testing, it seems to have a lower successful implementation rate than standardised tests (Callicott et al., 2020). Another reason for the low prevalence of dynamic assessment in this field is the challenge to get continual supervision and support for educational psychologists (Callicott et al., 2020). A suitable environment in which to practice mediation skills may be supervision. It creates a secure environment for reflection and idea analysis (Callicot et al., 2020). Green and Birch (2019) agree and stated that educational psychologists find it difficult to evaluate the quality of dynamic assessments because of the limited set out standards of training and practice.

For many psychologists in South Africa, access to standardised dynamic assessment instruments is a challenge. These evaluation tools are difficult to obtain from South African test distributors and administering some of the dynamic assessment examinations necessitates specialised training (Bester & Kühn, 2016). Some authors have developed dynamic methods and checklists to make dynamic assessment more accessible so that practitioners will use them to help with the connections between

assessment and intervention. The checklists can be used as recording tools or as timetables for observations. Among these checklists are Feuerstein's Learning Potential Assessment Tool and the Cognitive Abilities Profile (Callicott et al., 2020). The limited use of dynamic assessment in South Africa may be explained by these factors together with the cost of the tests (Bester & Kühn, 2016).

In a recent research study, the importance of video recordings of dynamic assessment sessions during supervision was highlighted (Callicott et al., 2020). This study concluded that the strain on dynamic assessors to analyse the needs of the learner, modify their answers accordingly and document both the assessors' interventions and the learners' responses in writing, is reduced with the use of video recordings of dynamic assessment sessions. These sessions allow the mediator to reflect on the sessions (Callicott et al., 2020).

2.6 THEORETICAL FRAMEWORK

In the present study, Feuerstein's (1979; Feuerstein et al., 1980, 1991) MLE theory, adapted by Lidz (2002) and again revised by Tzuriel (2021), served as the theoretical framework. The MLE theory refers to interactions that prompt individuals to develop and adapt their cognitive processing and thinking styles as they are exposed to opportunities for learning. It, therefore, refers to the interaction during which mediation occurs. These human interactions enable people to alter their behaviour and make changes that improve their ability to adapt and use higher-level cognitive processes (Feuerstein, 1979).

This theory posits that the learner acquires knowledge using two modalities, namely through direct exposure to the stimuli and through MLEs (see the model depicted in Figure 2.2 below). The first modality includes the following principles: S-O-R, meaning the organism (O) interacts with a stimulus (S) in the environment, and responds (R) to the stimulus (Tzuriel, 2013). Feuerstein refers to the learning that occurs through this approach as incidental.

The second modality is that of MLEs and ensures that learning takes place effectively. Feuerstein expanded on the S-O-R model to explain his theory: a mediator (H) intervenes in the process, thus mediating between the stimuli (S) and the organism's

(O) response (Tzuriel, 2013). His theory of mediation is thus illustrated as the S-H-O-H-R model (Figure 2.2).

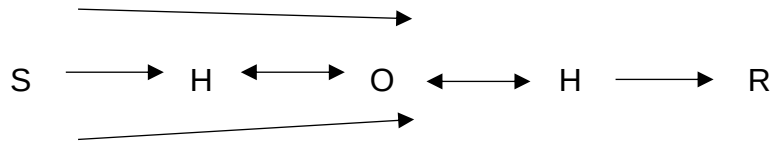

Figure 2.2: MLE model

Key: S = stimuli; H = human; O = organism; R = response

The two extended arrows represent the direct interaction between the stimuli (S) and the organism/learner (O) (Tzuriel, 2013). The human (H) is usually a more knowledgeable adult prompting the MLE interaction. This interaction is represented by the arrows moving from the (S) to the (H) and then to the (O). The mediator adapts the stimuli so that the learner is more receptive to the presented stimuli (Tzuriel, 2013).

Tzuriel (2013) stated that Feuerstein's MLE theory includes interactions between the mediator and the learner that leads to the acquisition of new knowledge structures and cognitive modifiability. As such, Feuerstein et al. (2002) identified a lack of exposure to mediated learning, as well as proximal factors such as poverty, neurological impairment, emotional challenges or low socioeconomic status, as having a negative impact on cognitive functioning. The proximal factors mentioned are correlation variables instead of causal factors in an individual with lower optimal cognitive development (Haywood & Lidz, 2007) suggesting that the success of mediation depends on various aspects such as parental involvement, children's cognitive abilities, motivation, emotional needs, behaviour and situational factors (Tzuriel, 2013). The goal of mediated learning is, that the learner becomes the owner of their ideas and must independently master their achievements (Nel & Nel, 2013).

Feuerstein stated that when a more knowledgeable person interacts with a child, this experience will be of value to the child (Bester & Kühn, 2016). This ties in with Vygotsky's theory of mediation. Mediation in the context of dynamic assessment refers to intervening or a teaching component within the assessment process (Bester & Kühn, 2016).

The MLE theory posits that the learner progressively internalises influences and mediation (Tzuriel, 2018). As a result, the learner develops internalised strategies, allowing the mediator to gradually withdraw mediation and input provided. The learner gradually becomes more autonomous and can independently apply these newly acquired strategies (Tzuriel, 2018). Suitable MLEs facilitate the development of numerous cognitive functions, learning sets, mental operations, strategies, reflective thinking, mental flexibility and need systems (Tzuriel, 2018).

There are 11 components of the MLE theory (Callicott et al., 2020). Of these, the first three components are considered crucial to the mediation process (Tzuriel, 2013), namely 1) intentionality, 2) transcendence and 3) mediation of meaning. The prominence of the other eight components is well-documented to be culturally related and task-dependent (Lidz, 2002; Tzuriel, 2011). These components provide valuable information about teacher and student interactions (Tzuriel, 2011), peer-assisted learning (Tzuriel & Shamir, 2010), and mother-and-child interactions (Tzuriel, 2011). The 11 strategies of the MLE theory are discussed in Section 2.3.2.

Feuerstein developed the MLE theory with 10 strategies that are applied in an assessment. The researcher applied the MLE theory which was adapted by Lidz (1991), based on 11 strategies instead of Feuerstein's initial 10. The strategies provided a structured and comprehensive approach to understanding mediation and how it is applied in psychometric assessments (Amod & Seabi, 2013; Lidz, 2002).

In this study, the MLE theory was used to describe the use of mediation within a psychometric assessment session. The 11 components of the framework were used as a guideline to observe the mediation used in the assessment sessions. By using this framework, the researcher was able to evaluate the extent to which mediational strategies were applied in the session. The theoretical framework was also used in the analysis of the data obtained.

An advantage of the MLE theory is that it treats reciprocity and mediation separately. This is beneficial because it is extremely difficult to measure the receptiveness of a child at a specific point in time, and as Feuerstein noted, limited mediation can be achieved without reciprocity by the learner (Lidz, 2002). Another advantage of this framework is that it does not emphasise the quantity or frequency of mediation but rather the quality of the mediational relationship (Lidz, 2002).

2.7 SUMMARY

The development of psychological testing in the context of South Africa was discussed. The role that theorists like Vygotsky and Feuerstein played in the development of alternative evaluation techniques like dynamic assessment was explained, followed by the principles of mediated learning and how they are used as a construct of dynamic assessment. The assumptions and objections to mediated learning and dynamic assessment offered insights into how mediated learning support strategies are used in assessments. Lastly, the theoretical framework was covered.

The next chapter provides a discussion on the research approach, data collection methods and the analysis and interpretation of the data. The quality criteria and ethical issues pertaining to the current study are also explained.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

An in-depth discussion of the research design and methodology is provided in this chapter. Furthermore, it describes the paradigmatic perspective, methodological paradigm and the research design used in the study. It includes a discussion of the data generation, collection and analysis techniques that were used. The final section of this chapter describes the quality criteria and ethical considerations of the study.

3.2 PARADIGMATIC PERSPECTIVES AND METHODOLOGICAL PARADIGMS

This research study was guided by an interpretivist paradigm and followed a qualitative research methodology. The following section includes a discussion of the principles and assumptions of this paradigm and methodology as well as the reasons for selecting them for this study.

3.2.1 Paradigmatic Perspective

Interpretivism is a philosophical discipline concerned with the science of interpretation and creating meaning (Friesen et al., 2012; Mack, 2010) and is occasionally referred to as constructivism. In general, interpretivism is used to identify approaches in social sciences that have ontological and epistemological assumptions (Blaikie, 2011). Phenomenology and hermeneutics predominantly influence interpretivism (Mack, 2010). Hermeneutic phenomenology can be used to gain insight into phenomena which are unexplored (Kumar, 2012; Webber, 2020). Such phenomena relate to the reality of human experiences and meaning attached to such experiences (Kumar, 2012; Suddick et al., 2020). Phenomenology focuses on studying the phenomenon as a whole and does not aim to gain insight into separate parts (Maree, 2016).

In interpretivism, subjective and interactional experiences within the naturalistic world are emphasised (Terre Blanche et al., 2006), with a focus on understanding the individual's social world and the meanings they attach to their lived experiences (Creswell, 2014).

Interpretivists assume that individuals create meaning through their lived experiences and it is, therefore, important for the researcher to take the individual's context into account when interpreting data (Willis, 2007). Interpretivists argue that by understanding an individual's direct experiences, one understands their social realities (Mack, 2010). Interpretivist researchers, therefore, attempt to gain insight into a phenomenon by understanding the participant's perspectives (Thành & Thành, 2015).

Interpretivism is based on ontological and epistemological assumptions. Ontological assumptions will be discussed first and refers to how the researcher views reality (Grix, 2004). Furthermore, ontology implies that the phenomenon has various interpretations. This paradigm is therefore referred to as a constructivist paradigm (Pham, 2018). Ontology is concerned with understanding the nature of a certain phenomenon's existence and is also the study of assumptions made about what is conceived of as a social reality (Junjie & Yingxin, 2022). Interpretivists argue that reality is subjective and based on individual experiences (Mack, 2010). Interpretivists believe that reality is interpreted differently by each individual and that multiple interpretations of reality may exist. As such, these interpretations and findings cannot be generalised, but acknowledge the presence of multiple perspectives and experiences of a phenomenon, including the cultural and historical settings of the participants (Willis, 2007).

The social world is created by individuals through actions and interactions (Goldkuhl, 2012), and refers to social relationships and organisations. According to interpretivism, which is based on the premise that social structures are not generated organically, human interaction and action drive social processes (Goldkuhl, 2012; Alharahsheh & Pius, 2020). Interpretivists aim to gain insight into how individuals create their realities through interactions (Orlikowski & Baroudi, 1991). Interpretivist researchers aim to make observations based on the participants' points of view (Mack, 2010).

From an interpretivist perspective, ontology and epistemology are linked because it is important to determine the ontological assumptions that govern the world (Goldkuhl, 2012). Epistemological assumptions refer to the view one has on newly acquired knowledge structures (Mack, 2010). Interpretivist researchers acquire new knowledge structures by respecting the uniqueness of human experiences and understanding the

subjective meaning attached to the realities (Grix, 2004). The researcher's reality cannot be separated from the researched (Weber, 2004) and new truths are, therefore, created through shared meanings between the researcher and the researched (Nieuwenhuis, 2007). Research data is collected and captured during the interactions between the researcher and research participants.

In the next section, the researcher will discuss criticisms of the interpretivist paradigm and how she addressed the criticism in the research study.

3.2.2 Criticisms of Interpretivist Approach

The interpretive paradigm has been criticised because the findings resulting from such a study cannot be generalised. This is due to the subjective nature of the interpretations and the fact that interpretivist researchers do not make use of positivistic procedures for verifying findings (Terre Blanche et al., 2006, Cohen et al., 2002). The smaller sample size and inability to achieve saturation associated with interpretivist research are also additional reasons that the findings cannot be generalised (Boddy, 2016; Mack, 2010).

Cranton (2001), however, stated that the primary goal of interpretivism is not to generalise the findings but instead to gain insight into a phenomenon and to understand the phenomenon within its context. Furthermore, interpretive researchers have responded to these criticisms by applying strategies that ensure that the results conveyed are rich and accurate (Wu & Chen, 2005). These strategies include peer reviews, multiple data collection techniques and gaining insight into the phenomenon before entering the field (Wu & Chen, 2005).

Interpretivist research has also been criticised for being subjective and biased, as the researcher's own experiences, understanding and perceptions might influence the research results (Koch, 1995). It is, therefore, argued that the researcher's engagement with the data may influence the way in which the information is interpreted (Whitehead, 2004). Mack (2010) reasons that by selecting a certain paradigm, the researcher has already purposefully and subjectively chosen a specific approach to the research. By setting aside one's assumptions and reviewing the data thoroughly, a researcher could produce unbiased interpretations (Mack, 2010).

Although the findings of this study may not be generalised to other contexts, the findings are useful in providing insight into the value of mediated learning strategies that can be applied within assessment sessions subjected to a review process that will be performed by the researcher's supervisor and the external examiners. To address these criticisms within this research study, the researcher gained insight into dynamic assessment and mediated learning as a construct of dynamic assessment before starting with the data collection process. The researcher also used multiple data sources to ensure that she collected data that is rich, saturated and unbiased. The data sources included case notes and transcriptions.

In the next section, the researcher will explain the methodological paradigm used in this study.

3.2.3 Methodological Paradigm

A qualitative methodological paradigm was used in this study. This methodology is often used for research studies that include rich information that aims to provide insight into the meaning individuals assign to a phenomenon (Creswell, 2014; Willis, 2007). A qualitative methodological paradigm aims to provide a holistic view that is complex, interactive, relative and explanatory (Staller, 2013). Researchers who use a qualitative paradigm emphasise that there is no single truth, but instead, multiple realities (Cohen et al., 2002).

Qualitative researchers are considered key role players in the data collection process, and collect data while observing behaviour, conducting interviews or exploring case studies (Creswell, 2014). Qualitative researchers focus on realities which are socially constructed and shaped by the researcher, the phenomenon being studied and the situational restrictions (Denzin & Lincoln, 2002).

Marshall and Rossman (2011) explain the main epistemological characteristics of qualitative research. Firstly, data is usually collected in a natural setting or where the phenomenon being studied occurs (Marshall & Rossman, 2011). Secondly, qualitative methodological approaches refer to the collection of data from various sources, such as observations, interviews and documents (Creswell, 2007). Thirdly, qualitative research is concerned with the researcher's interest in understanding the personal meaning that individuals have created about their realities and experiences (Creswell, 2014). Nieuwenhuis (2016) and Maree (2020) state that qualitative studies allow for a

phenomenon to be understood from the perspectives of the participants. These perspectives provide a thick and rich data set which is multi-dimensional and that enables the research to be exploratory in nature in order to gain new insight into the phenomena.

The fourth characteristic of qualitative research is that the design is emergent and cannot be predetermined (Marshall & Rossman, 2011). This implies that the process of data collection and the conceptual framework may change during the research process (Rossman & Rallis, 2012).

Lastly, the researcher is considered the most important instrument in the data collection process (Creswell, 2014). The qualitative research process allows for an interactive relationship between various data sources and the researcher (Nieuwenhuis, 2007).

In the section to follow, the researcher will justify the choice of the qualitative and interpretive paradigm for this study.

3.2.4 Justification for Using a Qualitative and Interpretive Inquiry

The purpose of this study was to gain an understanding of how mediated learning strategies were used in two psychological assessments conducted at the Training Facility of the University of Pretoria. These clinical case studies were used as a representation of the social realities of the assessors who conducted these assessments and who made sense of the way in which they were able to use mediation strategies in their attempt to provide fair and objective assessments of their clients.

Interpretive researchers gain knowledge by interacting with participants. The interactions in this study focused on the researcher's viewing of the video recordings of assessments that were captured by the assessors during the assessment processes. The researcher viewed the recordings of the sessions to specifically analyse the sections of the assessments where she was able to identify moments and instances where the assessor used mediated learning strategies to support/facilitate the assessment process. The researcher also immersed herself in the written notes of

the assessors regarding how they used such strategies and the effect that this had on the clients, as well as how this informed their clinical opinions.

The interpretivist paradigm and qualitative methodological paradigm enabled the researcher to collect data from multiple sources such as video recordings and clinical notes and to conduct a thematic data analysis that provided a thick and in-depth description of the various mediated learning strategies used by the assessors.

Although the findings of this study may not be generalisable, they may provide insight to other assessors who may want to explore the use of the specific mediation strategies that the researcher was able to identify and describe in this study. As such, this study will contribute insight regarding mediation strategies that may inform their assessments in the future.

3.3 RESEARCH DESIGN: DESCRIPTIVE CASE STUDY

In this study, the researcher used a descriptive case study design. Descriptive case studies are used to describe an intervention or phenomenon and the real-life context in which it occurred (Yin, 2014). Descriptive case studies use an existing theoretical model leading to the researcher working more decisively (Routio, 2007). Descriptive case studies are seen as experiential research using several data sources within real-life settings (Yin, 2018).

A descriptive case study design firstly engages with theory to describe what is already known about the phenomena, allowing the researcher to move closer to unique situations and to gain more insight or an in-depth understanding of the phenomena (Mills et al., 2010). Secondly, a descriptive case study design enables an in-depth study of an individual or group over some time in a real-life situation (Mills et al., 2010). Descriptive case studies answer “what and how” questions about phenomena using rich descriptions of the particular topic (Rule & John, 2011).

The main advantage of descriptive case studies is that the researcher can gain a deeper understanding of the phenomena by integrating the collected data sample with theory (Yin, 2018). Mills et al. (2010) posit that the identification of new variables could lead to the expansion of theories. It is also possible that descriptive case study designs allow the researcher to uncover patterns, connections and theoretical constructs.

Lastly, another advantage of a descriptive case study is that the findings and results could be stored for future use, interpretation and educational purposes (Cohen et al., 2002).

Subjectivity and different interpretations provided by various researchers are criticisms against a descriptive case study design (Murphy, 2013). It is, therefore, essential for researchers to be aware of their frame of reference and the influence that these subjectivities may have on the research findings (Murphy, 2013). The possible selection bias of the researcher can affect the credibility of a case study (Gravetter & Forzano, 2009). In addition to decreased credibility due to selection bias, the findings of descriptive case studies are seldom generalised to a wider population, as it is typically only relevant to a specific context or phenomenon (Gravetter & Forzano, 2009). After gaining a deeper insight into the phenomena, however, it may be appropriate to generalise the findings to other contexts (Cohen et al., 2002; Silverman, 2013).

The researcher selected a descriptive case study design because it enabled her to use theory initially to clearly define and describe the various mediation strategies that have been reported in the literature. A definition and description of the various mediational strategies provided the researcher with clear guidelines on identifying these strategies in the assessment sessions. It therefore enabled the researcher to focus her data collection in order to identify instances where mediational strategies that meet the definitions as described in the MLE theory were used.

3.4 BINDING THE CASE

Binding a case study implies that the researcher specifies the exclusion and inclusion criteria for a certain case (Baxter & Jack, 2008). Binding the case also ensures that the set out aim is rational and attainable. Creswell (2007) states that binding the case ensures clear boundaries. These boundaries include time, research site, definition and background.

The following sections will explain how the case was bound in this study.

3.4.1 Selection of the Research Site

The research site selected for this study was the University of Pretoria, Department of Educational Psychology Training Facility. This site was selected based on the fact that it is an assessment facility where master's students in educational psychology perform clinical assessments under the supervision of senior psychologists. This is a training and research facility where client cases are archived for various reasons among which is to perform secondary data analysis on the case studies.

The researcher purposefully selected this site because she was aware that mediated learning strategies are often used in the assessments that are conducted at this site. This site also had an element of convenience for the researcher as she is a student at the University of Pretoria and had completed her clinical training at this site during her coursework.

3.4.2 Selection of the Case Studies

Purposive sampling was used as the selection strategy. Purposive sampling is an approach used to select cases based on the detailed information they possess to enable an in-depth study of the phenomenon. Data sources are selected based on their value to attain the research purpose and thus to identify cases and data sources that are rich in information. The researcher relies on their judgement to select each sample as described by its unique characteristics. It can be seen as a non-probability selection method (Check & Schutt, 2012).

There are various forms of purposive sampling methods including case sampling, typical sampling, variation sampling and criterion sampling (Palys, 2008). The researcher used criterion sampling in this study as this method entails the identification and selection of cases that meet predetermined criteria (Palinkas et al., 2015).

The selection criteria for the case studies were as follows:

- Case files containing assessments conducted between 2010 and 2017
- Cases where reference was made in the clinical reports to the use of dynamic assessment
- Cases where mediated learning support strategies had been used
- Case files that contained video recordings of the assessment sessions

A limitation of purposive sampling is that a researcher might be biased during the selection of cases (Etikan et al., 2016). To manage selection bias, the researcher relied on the selection criteria to ensure that she included all the relevant cases that met the selection criteria.

The following sections explain the data sources that were used in this study.

3.4.3 Selection of Data Sources

The case files the researcher selected contained various data sources, including transcriptions of the intake interviews, DVD recordings of the assessments, clinical reports, the assessors' case notes, record forms and media used by the assessors to conduct the assessment and obtain the test results. For the purposes of this study, the researcher transcribed the relevant segments of the video recordings and used these as a data collection instrument, along with the case notes made by the student educational psychologists (assessors). The following section will describe the data sources the researcher used in this study.

3.4.3.1 Transcriptions of video recordings

The researcher wanted to ascertain how the student psychologists used mediated learner support during the assessment process. To do this, the researcher studied the video recordings to see where, during the sessions, the student psychologists used dynamic assessment and which mediated learning strategies were applied. Only these particular segments of the sessions were transcribed and later used to identify mediational strategies that were used as part of dynamic assessment. This process was not intrusive and offered the researcher the opportunity to view the recordings

multiple times, enabling her to identify which mediational strategies the student psychologists applied in the sessions. As the researcher selected data applicable to the research question, only the transcriptions were included and not the video recordings, to protect the identity of the client.

3.4.2.2 Case notes

Case notes are records documented by the assessor and presented with the audio recording and other media files (Caufield et al., 2018; Forrester, 2010). The case notes that formed part of the data included observations made by the assessors, the assessment process and the results of the assessments (Caufield et al., 2018). Some of the files included a detailed session plan and the assessors' notes on the dynamic assessment sessions. The notes were most valuable when read in conjunction with the transcriptions made of the video recordings. The researcher also perused the notes and observations that the psychologist had included in the report.

3.4.2.3 Clinical reports

Clinical reports can be used to share clinical observations (Caufield et al., 2018). The reports, however, lacked sufficient data to explain the clinical observations and the mediated learning strategies used. However, the clinical reports included sufficient background information for each case study, enabling the researcher to gain a comprehensive understanding of the case studies. The clinical reports together with the case notes provided the researcher information on the reason for referral, static assessments test results, the dynamic assessment process and the outcome of the assessments. The researcher used the clinical reports as an additional data source to gain more insight into each case study.

3.5 UNIT OF ANALYSIS

The unit of analysis is a particular element being analysed in a study (Fletcher & Plakoyiannaki, 2012). The unit of analysis in this study was how mediated learning strategies were used within psychological assessment sessions. Through the examining of the static assessments and the dynamic assessment sessions, the researcher could identify and gain more insight into the mediated learning strategies used.

3.6 PRESENTATION OF THE CLINICAL CASES

The presentation of clinical case studies that will be presented in Chapter 4 is based on Budgell's guidelines (Budgell, 2008). According to Budgell, case studies can be written in a narrative or structured manner (2008). A structured style includes an introduction, case presentation, management, outcome and lastly a discussion of the case study (Budgell, 2008). A thorough description of the context of the case is presented in the introduction. The case presentation follows, including the background information and relevant administered test results. It is also important to include the diagnosis, the actual test results, management, outcomes of the sessions and the duration, frequency and outcome of the intervention plan. This is followed by a discussion section. In this section, an integrative image of the case study is presented (Budgell, 2008).

The researcher used Budgell's (2008) guidelines for a structured format. The sections included are relevant background information, results of the standardised assessments, dynamic assessment, mediated learning strategies and a discussion. The relevant background of each case comprises the reason for referral and collateral information obtained from the parents and the teachers.

The tests administered and standardised assessment test results are included in the results section. The next section describes the dynamic assessment and mediated learning strategies that were used in the assessment. A summary of each case is presented under the sub-heading of 'discussions'. Here the insights into the learners' abilities to learn with mediation are presented. A detailed presentation of the clinical cases is presented in Chapter 4.

3.7 DATA ANALYSIS AND INTERPRETATION

Qualitative content analysis was used to analyse the case studies. Content analysis entails the coding of language to explain the context (Hsieh & Shannon, 2005; Mayring, 2014). It emphasises the analysis, description and interpretation of the qualitative data (Petty et al., 2012.) The use of multiple data sources such as transcriptions and case notes facilitated cross data analysis. Cross data analysis is used to ensure a rich data set and the cross-referencing of emerging data and themes (Petty et al., 2012).

Qualitative content analysis encompasses two methods, namely, inductive and deductive content analysis (Elo & Kyngas, 2008). Deductive content analysis was used in this research study by applying a systematic classification process. This process includes coding and theme identification (Hsieh & Shannon, 2005).

Deductive analysis is guided by theory, implying that the research is conducted from a broad angle to a more focused and specific theme. This approach is referred to as a top-down approach (Trochim, 2006). The deductive approach to analysis allowed the researcher to study already conducted research and existing theories and then evaluate whether the data in this study corresponded with the research question (Mayring, 2014; Trochim, 2006). A clearly defined theoretical framework ensures that the researcher focuses on the information needed that fits the research question (Mayring, 2014; Trochim, 2006).

Deductive analysis has several important steps as outlined by Mayring (2014). Table 3.5.1 provides an in-depth explanation of content analysis and how the researcher applied it to the study based on these steps. This theory-guided approach focuses on a broad spectrum of information down to more specific information. A clear set out theoretical framework ensures that the researcher focuses on the information that is needed to answer the research question (Mayring, 2014; Trochim, 2006). Step 1 is the selection of a theoretical framework by the researcher. Step 2 involves formulating categories, while defining code guidelines falls under step 3. Step 4 includes the researcher familiarising themselves with the dataset. Revision of the codes occurs in step 5. After step 5, the researcher works through the dataset. The last step requires the researcher to continuously interpret and analyse the data set.

The figure below discusses these steps in more detail, starting with the first step of devising a research question and theoretical framework, followed by setting out categories from the dataset, defining the coding guidelines, familiarisation with the dataset, the revision of codes, working through the dataset and lastly continuing with the analysis process.

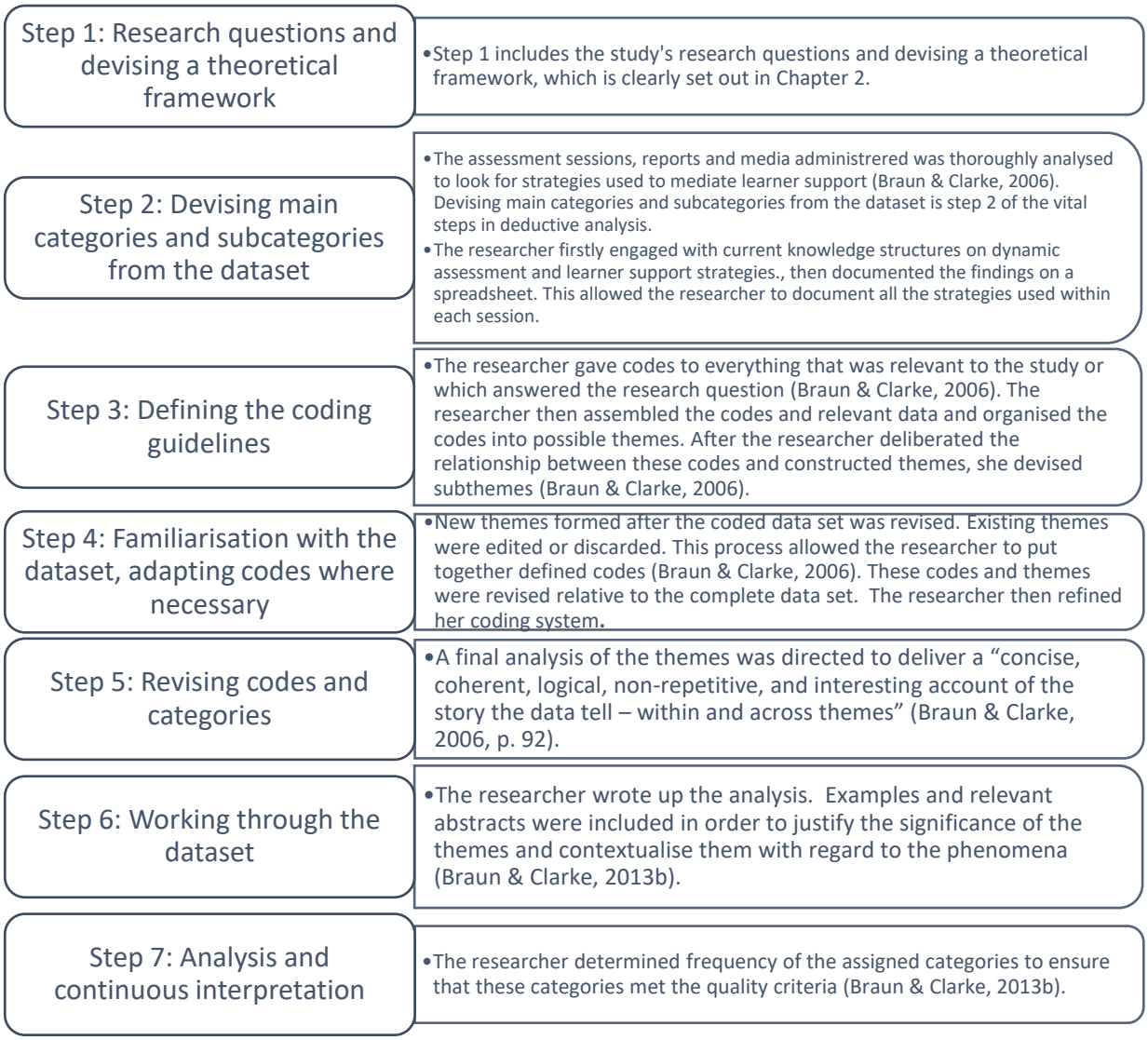

Figure 3.1: Phases of content analysis and how this is addressed in the current research study (Mayring, 2014)

Categories in a deductive analysis approach are defined using existing theory. These categories are reprocessed and used again based on studies conducted in the past (Mayring, 2014). The coding guidelines and definitions for the themes of this study were constructed from the framework outlined in Table 3.1 (Lidz, 2002). The codes and definitions are described in Table 3.1.

The themes were well-defined by the coding guidelines. The researcher included quotations from the transcriptions, compiled to assess whether the themes were appropriate to the study. The researcher evaluated whether the definitions and coding rules fit the content analysis process (Mayring, 2014). The table below (Table 3.2) describes the definitions and coding rules and provides some examples.

Table 3.1: **Coding rules, definitions and examples**

Strategies (adapted from Lidz, 2002)	**Definition**	**Examples**	**Coding rules**
Intent	*Intent* in mediation refers to the motivation, or value-orientated significance of the presented stimuli (Tzuriel, 2013). A mediator for example focuses the child's attention on a particular feature of an image.	Examples where the mediator anticipates a response, which is an important aspect of intentionality when the child reciprocates the intended answers (Tzuriel, 2018). This process promotes the child's self-regulation of attention (Lidz, 2002).	Refers to data that shows goal-directed actions after the mediator intentionally presented stimuli.
Meaning	*Meaning* focuses on the child's perceptual experiences. This enables the child to identify significant information and to realise the value thereof (Lidz, 2002).	Indicator of this sub-theme includes words such as "understand" and "sense" and the child might display feelings of self-actualisation.	Refers to data that demonstrates the clients' understanding and new insights.
Transcendence	*Transcendence in mediation*, enables the child to link current, previous and future experiences. The associations lead to casual and inferential connections between present, upcoming and previous events (Lidz, 2002).	Phrases presented in the raw data such as "in the past I did..." or "I will now attempt to do…" confirm this sub-theme.	Refers to data where the client integrates past and present knowledge structures.
Mediation of praise and encouragement	Lidz (2002) defines this component as *mediation of praise and encouragement*. Not only does the mediator encourage the child by using motivational statements but also, provides comments on what seems to support the child and what hinders the learning process of the child (Lidz, 2002).	The theme of encouragement is evident in this sub-theme. Motivational phrases used by the psychologist to praise the client are vital in this sub-theme.	Refers to data that includes motivational phrases

Mediation in joint regard	*Mediation in joint regard* (Lidz, 2002), is the mediator's ability to focus on a child's signals and prompts to empower the child to direct and express significant thoughts and reactions to experiences (Lidz, 2002).This component ties in with Vygotsky's ZPD (Russel et al., 2008). Behaviour control could be mediated by arousing responsiveness to features pertaining to a certain task (Tzuriel, 2013).	This theme is evident in the data where mediation strategies of controlled behaviour were displayed including modelling of self-control and the facilitation of metacognitive strategies.	Refers to data where the psychologist/ mediator challenges the client to achieve certain goals by reacting to the child's gestures.
Mediation in sharing	*Mediation in sharing*, focuses the child's attention on significant others' experiences and thoughts. This input of information might improve the child's current thought processes and experiences (Lidz, 2002).	Key words presented in the raw data endorsing the sub-theme are "Your mother/father/teacher/sibling mentioned that…"	Refers to data on the opinions of significant others in the client's life.
Mediation in task regulation/self-regulation.	*Mediation in task regulation/self-regulation*, denotes that the mediator presents information in such a new and exciting manner which would promote skill and mastery. This component of mediation ties in with Vygotsky's term of scaffolding (Lidz, 2002). Mediation in self-regulation allows the child to apply new strategies in presenting problem situations or everyday life occurrences.	Occurrences of the mediator displaying information in a new and exciting manner. The sub-theme includes phrases such as "look what I found that might help you", "this is an exciting new method", and "try this".	Refers to data where the mediator presents new and exhilarating strategies.
Mediation of challenge	*Mediation of challenge* entails that the mediator presents problems to a child which is just above their level of functioning or competence. This inspires or motivates a	Examples evident in the raw data settling the sub-theme included where the mediator presented new problem statements to the child	Refers to data that challenges the client to reach a higher-order level of thinking by presenting

	child to achieve goals beyond their current level of functioning (Lidz, 2002).	within an assessment session.	different problems to solve.
Psychological differentiation	A component of *psychological differentiation* as defined by Russel et al., 2008, entails that the mediator only intervenes on a level that will not affect the learning processes of the child by hindering them to solve problems independently (Lidz, 2002).	This theme was presented in the raw data and included non-verbal cues and observation of the mediator instead of certain phrases.	Refers to data that challenges/restricts the achievement of the clients.
Mediation of contingent responsivity	*Mediation of contingent responsivity* allows for the mediator to reply in an appropriate and suitable timeframe (Lidz, 2002) This component is also seen as the mediation of change (Russel et al., 2008).	This theme is presented in the data where the mediators respond to the client's statements or actions without causing uncomfortable situations.	Refers to data that displays the mediator's ability to respond appropriately.
Mediation of affective involvement	*Mediation of affective involvement* implies that the mediator responds to the child in a caring and warm manner (Lidz, 2002). The mediator and child enjoy the interaction irrespectively.	Instances in the data confirming the sub-theme included phrases of "I would come to the same conclusion", "That would frustrate me too", You are totally right".	Refers to data aimed at the mediator's response displaying care, warmth and empathy.

The researcher used the coding guidelines to define the identified themes based on the definitions of the mediated strategies and coding rules. The researcher included a text excerpt of how she identified the mediated learning strategies used within the sessions. Figure 3.2 is a clear example of the colour-coded identified strategies.

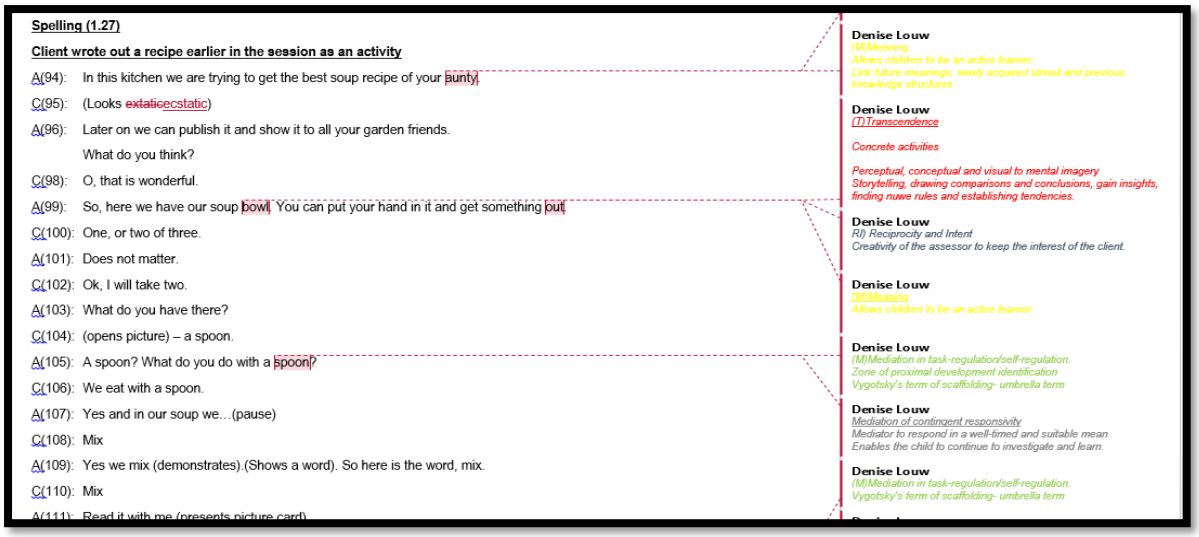

Figure 3.2: Text excerpt of the identified mediated learning strategies

The following sections explain the relevant quality criteria used in this study.

3.8 QUALITY CRITERIA

Quality criteria are used in qualitative research to evaluate the trustworthiness of the data and findings (Korstjens & Moser, 2018). The four most common quality criteria are those identified by Lincoln and Guba (1985), namely credibility, transferability, dependability and confirmability (Korstjens & Moser, 2018). These criteria and their application in this study are discussed in the sections below.

3.8.1 Credibility

The credibility of a study refers to the congruency of the findings of a study compared to reality (Creswell, 2007; Maree, 2016). Credibility implies that the research findings represent believable information that is drawn from the original data set, interpretations and participants' views (Korstjens & Moser, 2018).

A number of methods can be used to ensure the credibility of a study (Patton, 2002). These methods include prolonged engagement, persistent observation and triangulation (Korstjens & Moser, 2018).

The first method, prolonged engagement, means that the researcher invests sufficient time in the study to become acquainted with the context and the data. As a result, the researcher is able to become familiar with the data and obtain rich data (Korstjens & Moser, 2018). Persistent observation refers to identifying the elements of the data that are most relevant to the study (Korstjens & Moser, 2018). Triangulation is a third strategy used to ensure the credibility of a study and implies that the researcher uses various investigators, data sources and data collection methods (Korstjens & Moser, 2018).

The credibility of the study was enhanced through persistent observation of the characteristics and elements relevant to the research question. While it was not possible to ensure investigator triangulation, the data sources and methods were triangulated. To ensure methodological triangulation, the researcher selected multiple case files and used various data sources from within these, namely the recordings which she transcribed and the assessors' case notes. Lastly, the researcher made use of various data sets that emerged throughout the analysis process including raw materials, codes and concepts leading to theoretical saturation.

3.8.2 Transferability

Transferability refers to the extent to which the results of a study are transferable to a similar context (Bryman, 2001; Rule & John, 2011). Transferability is established when the researcher provides comprehensive contextual information regarding the participants, research process and research site. This contextual information should provide a thick description to the reader, allowing them to assess whether the findings are transferable to another setting (Korstjens & Moser, 2018).

The purpose of this study was not to produce findings that could be generalised, it was to analyse the use of mediated learning experiences within psychological assessment sessions. To enhance the transferability of this study, the researcher have provided comprehensive contextual information regarding the cases which included rich descriptions of the children assessed, the context within which the assessment occurred, and the behaviour of the assessor, as observed in the recordings. It will further allow researchers with similar studies to gain an understanding of how the

mediated learning experiences were applied and the impact thereof, as well as to evaluate the transferability of the findings.

3.8.3 Dependability

The dependability of a study refers to the extent to which comparable findings are obtained when the study is replicated using the same context, methods, and participants (Shenton, 2004). This can be described as a criterion of consistency (Shenton, 2004).

The documentation and description of a research study are crucial in ensuring dependability. The procedures of the research should be documented to provide an audit trail for other researchers to follow (Schwandt & Halpern, 2011). This should include the purpose of the study, selection criteria used, analysis procedures and research findings (Thomas & Magilvy, 2011).

The researcher has provided an audit trail of the study by documenting the steps and procedures throughout the study.

3.8.4 Confirmability

Confirmability refers to the neutrality of the study (Korstjens & Moser, 2018), or the degree to which the findings are free from a researcher's perspectives and frame of reference (Mills et al., 2010). As Korstjens and Moser (2018, p. 121) state, it implies that the "interpretations of the findings are not figments of the inquirer's imagination but clearly derived from the data".

An important strategy used to ensure confirmability is reflexivity. Reflexivity is a "process of critical self-reflection about oneself as a researcher" (Korstjens & Moser, 2018, p. 121). It is important to take note of the research relationship and how this relationship affects participants' responses (Korstjens & Moser, 2018). Keeping a research diary is one of the strategies used to enhance a researcher's reflexivity (Korstjens & Moser, 2018). The research diary includes the examination of one's

conceptual lens, explicit and implicit expectations, fixed ideas and how these ideas affect research decisions (Korstjens & Moser, 2018).

The researcher did not use the strategy of keeping a diary. The researcher did, however, consistently reflect on the research process and discuss the research process and findings with her supervisor and peers. This supported the researcher's aim to be objective and to accurately report on the information obtained.

3.9 ETHICAL CONSIDERATIONS

A researcher needs to maintain ethical standards throughout the research process. Important aspects of ethical research are ethical values, principles and standards (Check & Schutt, 2012). The researcher has a responsibility to produce research that is integrous and that adheres to the standards of the institution's ethical committee (O'Leary, 2008). In addition to a moral responsibility to conduct ethical research, researchers, who are registered at the HPCSA, also need to adhere to the ethical guidelines prescribed by the Health Professions Council in South Africa (HPCSA, 2008). These guidelines will form the outline of the discussion on ethical considerations in relation to the current research study and include informed consent, confidentiality, anonymity and the accessing of the data (Maree, 2016).

3.9.1 Permission From The Site

Prior to commencing research, researchers need to obtain permission in writing from the research site where the research will be conducted (Maree, 2016). To fulfil this requirement, the researcher applied in writing to the Ethics Committee of the University of Pretoria for permission to conduct the study. The researcher also requested permission from the Head of the Department of Educational Psychology to access and conduct research on client files at the Training Facility. The client files were examined only after permission had been received, and the client files remained at the Training Facility at all times.

3.9.2 Informed Consent and Voluntary Participation

At the time of the assessments, the clients' parents were informed about and given adequate information regarding the assessment process and what it entailed by the student psychologist. It was clearly stipulated in the written consent form that the Training Facility is a research institution and that the files may be used for research purposes in the future, but that the data used will exclude their identity. The information was given to the client in an understandable manner and the clients were afforded the opportunity to ask questions. As the client gave written consent for the data to be processed for research purposes, the researcher was able to use all the client files that included the signed consent forms.

3.9.3 Confidentiality

Creswell (2007) states that privacy and confidentiality of data should be maintained and that clients have a right against intrusion. Confidentiality implies that personal information is safeguarded (Creswell, 2007; Gibson et al., 2013).

The researcher ensured confidentiality by removing all identifying information from the dataset. Secondly, the researcher used codes for the participants within the transcriptions, such as "C" for client and also ensured that she did not include any identifying information in the findings of the study when documenting the results. Lastly, the researcher upheld confidentiality by ensuring that the data was safeguarded in the Training Facility. Electronic data was password protected, and hard copy data will be stored for 15 years in a locked cabinet to which only the researcher's supervisor and the researcher have access.

3.10 SUMMARY

In this chapter, the researcher explained the research design and methodology used for this study. The chapter included the paradigmatic perspective, methodological paradigm and data collection techniques. Furthermore, this chapter included a discussion on how the data was analysed and the techniques used to interpret the data set. The chapter concluded with a discussion on the quality criteria used to ensure the trustworthiness of the study as well as the ethical considerations.

CHAPTER 4

FINDINGS OF THE STUDY

4.1 INTRODUCTION

The data and findings of this study will be presented in this chapter. In the first section the case studies will be presented, to illustrate how mediated learning support strategies were used during the assessments. In the second section of the chapter, the findings of the study will be presented in the context of existing literature.

4.2 CASE STUDIES

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

4.2.1 Case 1: Tom[1]

4.2.1.1 Relevant background

Tom, aged 12 years eight months, in Grade 5, was referred for an assessment because his parents were concerned about his academic performance. He did not meet all the requirements to pass Grade 4 in 2015 and 2016 and was promoted to Grade 5 in 2017. He achieved good results for History, Geography and Art. According to his teacher, he thrives on positive feedback, and he tries his best to complete his work in the given timeframe. He struggles with reading comprehension, spelling, basic mathematical concepts and to complete tasks. He was enrolled in the school's learner support class, but his teacher felt that he needed additional support.

He was assessed in Grade 2 by an educational psychologist. His test results during this assessment indicated that his verbal intellectual abilities were Average, and his non-verbal abilities were Low Average. He struggled to follow instructions, he was very impulsive and experienced difficulty with integration and organising tasks. He scored an Average score on the Grade 1 VASSI Mathematics Proficiency Test.

[1] Pseudonyms were used to ensure anonymity.

4.2.1.2 Results of the standardised assessment

Tom's intellectual ability was re-assessed using the Senior South African Individual Scale-Revised (SSIAS-R). Tom obtained a Full-Scale scaled score of 83. This placed his general intelligence score in the Low Average range. He obtained a scaled score of 116 on the non-verbal scale which falls in the High Average range. He scored a Cognitively Impaired intelligence score on the verbal scale, with a scaled score of 58.

Although a variety of perceptual, reading and spelling tests were included in the assessment, only the VASSI Mathematics Proficiency Test scores will be presented in this case study because the assessor only focused on his mathematics skills during the dynamic assessment. The assessor administered the Grade 5 VASSI Mathematics Proficiency Test and Tom scored a stanine of 2. This placed his mathematics skills in the Poor range. Tom achieved consistently low results on his school report for Mathematics (31%) in the third term of his second year in Grade 4.

After the assessment, Tom was diagnosed with a Specific Learning Disorder (SLD) in written expression, reading and mathematics.

4.2.1.3 Dynamic assessment and mediated learning strategies used

Dynamic assessment was used during the second assessment session after the standardised assessments were administered. A non-standardised curriculum-based dynamic assessment focusing on mathematics was used. The pre-test phase of dynamic assessment consisted of an error analysis of his schoolwork to identify areas in need of support. The assessor identified fractions as an area for support.

The teaching phase of the dynamic assessment commenced with the assessor having a conversation with Tom about his schoolwork and more specifically, fractions. He did not respond during this conversation. She then asked him if he understood the questions when his class teacher asked him to change a mixed number fraction to an improper fraction. Again, he did not respond. She then tried to use supportive methods such as using concrete objects. She used macaroni as concrete counters to focus his attention and to make him more at ease. The assessor took an example from his schoolwork and demonstrated with the macaroni counters how to change a mixed number fraction to an improper fraction by grouping the counters together. The

counters were used to calculate how many groups of macaroni counters would be needed to make up the numerator of the fraction.

At first, Tom did not seem to understand the support or explanation provided and was unable to solve the problem using the counters. The assessor then provided him with a new example, and she verbalised each step while he grouped the counters together. The assessor explained what fractions are and what mixed number fractions and improper fractions are. The assessor then observed how Tom grouped the macaroni counters together, still verbalising what he must do and why he is doing it. He again did not display much emotion. With the third example, the assessor continued providing him with support and guidance, but Tom had to group the macaroni and try to complete the sum on his own. The assessor, however, still provided support by using probes or concrete material when she thought that he needed it or when he paused.

With the fourth mixed number fraction he was still very hesitant to try it on his own, but the assessor explained the example again. She gradually provided less support and verbalisation of instruction. With the last example, he tried to complete the sum without waiting for any support from the assessor. He struggled, however, to solve the problem without concrete materials.

The assessor continuously motivated him when he seemed discouraged. She also presented him with other similar math problems to solve. She continuously encouraged him to verify his answers. Tom struggled at first but with probes, instructions and guidance from the assessor, he was later able to apply what he learnt by using concrete strategies.

4.2.1.4 Discussion of the case

Tom is a learner who has at least Low Average overall intellectual ability and yet he is currently failing his grade at school. He experiences significant difficulties in all areas of literacy and numeracy. He met the criteria for a SLD in reading, writing and mathematics and is clearly a learner who needs individual support. The standardised test results offered limited information in terms of what this support should look like and how Tom would respond to support. The dynamic assessment that was done,

however, offered more insight into the nature and extent of Tom's difficulties specifically in mathematics.

The assessor used the three mediational learning strategies which are essential for mediated relationships in the dynamic assessment process. The three mediated learning strategies were reciprocity and intent, mediation of meaning and mediation in transcendence. The assessor relied on mediation in task regulation throughout the entire session. She also focused on the other mediated leaning parameters during the final stages of the dynamic assessment process. These parameters included mediational strategies of praise and encouragement, challenge, change and responsivity as well as the mediation of psychological differentiation.

The assessor used the mediational strategy of intentionality and reciprocity during the initial phases of the dynamic assessment process. In this case study, the assessor had a clear intention that she wanted to teach Tom how to do fractions. The intention was communicated by asking Tom what he had learnt from his teacher about doing fractions and whether he understood how to perform calculations with improper fractions. Tom did not respond to any questions and did not participate in the conversation. The assessor used reciprocity by being alert and aware of Tom's non-verbal non-responsive behaviour and took this as an indication that she had to change her strategy to be able to assess his ability to do fractions. The assessor thus introduced the use of concrete objects to enable him to participate in the assessment. She verbalised the steps as she grouped the concrete counters. She identified more opportunities for support when he paused and displayed feelings of uncertainty and doubt. She was aware and sensitive to how Tom responded to her intentional interactions with him.

During the initial phase of dynamic assessment, he was still very hesitant to try a second example on his own. She then used the mediational strategy of meaning when he paused. The assessor tried to create relevance and meaning in the session by allowing him to engage by trying to group the counters on his own. She tried to link previous knowledge structures with what he had learnt during the teaching phase of the dynamic assessment process by asking him what he understood of fractions, revisiting an example in his books and also explaining the first example used in the

dynamic assessment session again. She allowed opportunities for him to be an active learner in the learning process by providing less support, probes and verbalisation of steps when he gradually tried to complete more examples on his own. The assessor responded in a well-timed and suitable manner and allowed Tom to also try and solve problems on his own.

During the next phase, the assessor applied the mediational strategy of task regulation and self-regulation by providing Tom with other examples to complete on his own. Tom completed a few examples on his own when he became more proficient. She also used the mediational strategy of challenge to facilitate his thinking by providing more learning opportunities. He was motivated to recall, think and apply his skills.

The assessor used positive reinforcement techniques using the mediational strategy of praise and involvement. The assessor continuously motivated him by using the strategy of praise and encouragement and a sense of belonging when he seemed discouraged. Tom completed more complex tasks and she provided him with examples which gradually became more difficult. She wanted him to experience success without experiencing fear of failing. Tom was pushed by the assessor to assume ownership of his learning and to establish an internal locus of control.

The assessor used psychological differentiation and individuation mediation. She tried to stay true to her role as an educational psychologist and tried to provide the learner with a positive learning experience. The assessor did not present Tom with examples which were just above his level of functioning to challenge him, instead, she only presented him with different examples of fractions which were not more challenging than the examples they did together.

The mediational strategy of transcendence was used during the final stages of the dynamic assessment session where the assessor tried to provide new examples where Tom could apply his new knowledge. It is, however, difficult to predict if Tom would have been able to apply his skills in different contexts because Tom's assessment occurred in a controlled environment such as the assessment room at the Training Facility. The assessor, however, made recommendations in her report on the support strategies she used during dynamic assessment which could also be used in the school context that would enable Tom to solve mathematical problems.

The dynamic assessment indicated that Tom responded well to the use of concrete materials as an instructional method to scaffold his learning. The probes and instructions provided by the assessor and the gradual withdrawal of support allowed Tom to solve more maths problems on his own. He also flourished when the assessor encouraged and praised him for his efforts.

4.2.2 Case 2: Lily[1]

4.2.2.1 Relevant background

Lily was 12 years and 11 months and in Grade 6 at the time of the assessment. Her mother requested an assessment to determine her scholastic progress and to explore possible learning difficulties that she might be experiencing with reading, spelling and Mathematics.

Lily attended a German school in Grade 1. She was diagnosed with peritonitis in Grade 2 and was at home most of the year. She was also assessed by an occupational therapist at that time and was diagnosed with severe dyslexia. She struggled with writing, reading and Mathematics in Grade 1. She also had trouble reading familiar and unfamiliar words and passages in English and German. With written exercises, she struggled to finish within the prescribed time. Difficulties with Mathematics included poor number concepts, poor problem-solving skills and memory and sequencing. Other areas of difficulty included poor concentration and perseverance, limited class participation, overall neatness of classwork, lack of general knowledge and applying practised techniques.

She started Grade 3 at an English medium school where she experienced difficulties with reading, writing and Mathematics and finishing her tests and exams in the prescribed time. She was not promoted to Grade 4 and the mother decided to home-school her for Grade 4 and 5. There were no school reports for Grade 4 and 5. She then attended an Afrikaans-medium school in Grade 6. Her mother supported her with her homework and did most of the writing for her. She fell behind in most of her subjects. She struggled to read and even with accommodations (a reader) during exams she struggled to perform academically. Her teacher at the time of the assessment described Lily as proficient in languages (expressive and spelling) but she

struggled to comprehend basic mathematical concepts. Her first term report indicated average to high average grades in most of her subjects. She achieved 74% for Afrikaans, 82% for English First Additional Language, 62% for Mathematics, 68% for Nature-Science and Technology, 68% for Social Sciences and 73% for Life Orientation.

The occupational therapist's report stated that at the age of seven years and one month, she struggled with distractibility, paying attention and work speed partly because of difficulties with multi-sensory processing and praxis problems. A clinical psychologist assessed Lily when she was eight years old and reported that she experienced difficulties with auditory processing. A third assessment was done by a speech therapist at the age of nine years and five months who also concluded that she struggled with auditory perception and written language skills.

4.2.2.2 Standardised assessments

The Wechsler Intelligence Scale for Children – Fourth Edition UK (WISC-IV) was administered to obtain an intellectual image of Lily. She obtained a scaled score of 87 on the Verbal Comprehension Index which falls in the Low Average range. She obtained an Average score on the Perceptual Reasoning Index, with a scaled score of 115. She obtained a scaled score of 99 on the Working Memory index which falls in the Average range. She scored a Low Average score on the Processing Speed Index, with a scaled score of 80.

Her performance on the Perceptual Reasoning and Processing Speed Indexes could not be interpreted as unitary Indexes as the differences between the highest and lowest subtest scores were too large. However, because her performance on the Verbal Comprehension and Working Memory Indexes were similar enough, these Indexes could be combined to give a General Ability Index scale, not influenced by her performance on Perceptual Reasoning and Processing Speed. This score indicated that her general intellectual ability fell within an Average range with a scaled score of 100. To conclude, her results on the WISC-IV indicated that her processing speed is her weakness and her working memory a strength.

The Cognitive Assessment System (CAS) is intended to predict academic achievement in children. The individual PASS Scales of the CAS have relevance to successes and failures in specific areas of academic performance. The four scales are the Planning, Attention, Simultaneous and Successive scales. Lily obtained a Full-Scale standard score which falls within the Average range with a scaled score of 95. Lily obtained scores that ranged from Well Below Average on the Planning Scale, with a scaled score of 65, to Low Average for the Attention Scale with a scaled score of 84. Lily obtained a scaled score of 116 for the Simultaneous Scale, which falls in the High Average range. The Successive Scale falls within a High Average range with a scaled score of 119. The Planning and Attention Scale scores were significantly lower than the mean of the four PASS Scales and are thus weaknesses. The Simultaneous and Successive Scale scores were significantly higher than the mean of the four PASS Scales which indicates strengths. The Simultaneous Processing scale indicated as a weakness for her and implied that she might be experiencing difficulties in integrating information and comprehending a holistic picture. She also struggled to remember and recall information.

The Wechsler Individual Achievement Test – Second Edition UK (WIAT-II) was used to assess Lily's broad range of academic skills. Lily's overall performance falls within a Low Average range with a scaled score of 80. Only the scaled scores of the Reading Composite and the Written Composite are presented in this case. The reason for the inclusion of the aforementioned tests is that the first dynamic assessment session administered by the assessor consisted of spelling and reading. The Reading Composite falls within the Borderline range with a scaled score of 78. The tasks within the Reading Composite required her to correctly read a series of printed words, read sentences and paragraphs (Word reading subtest) and answer questions about what was read (Reading comprehension subtest), and correctly apply phonetic decoding rules when reading a series of nonsense words (Pseudo word decoding subtest).

She scored in the Low Average range with a scaled score of 82 on the Word Reading subtest, which assesses the ability to decode isolated words of increasing difficulty without measuring comprehension. Lily obtained a scaled score of 82 which falls in the Low Average range for Reading Comprehension. She also struggled to effectively make inferences, draw conclusions and define unfamiliar words using context. She

scored in the Borderline range for the Pseudo word Decoding subtest with a scaled score of 78, indicating that she has difficulties using phonetic knowledge to sound out nonsense or unfamiliar words.

Lily furthermore scored in the Extremely Low range on the Written Language Composite with a scaled score of 59. The Written Language Composite comprised Spelling and Written Expression subtests. Lily scored a scaled score of 81 in her Written Expression subtest which falls in the Low Average range. Lily had trouble with tasks related to writing such as alphabet writing, word fluency, sentences, paragraphs and essays. Lily obtained an Extremely Low score on the Spelling subtest with a scaled score of 59 raising a significant concern for her academic performance. The assessor hypothesised difficulties with spelling because of proficiency difficulties in both English and Afrikaans as languages of instruction. In relation to her ability score on the WISC-IV, Lily's achievement on the Written Language Composite is significantly lower than what could be expected from her.

The ESSI spelling and reading test was done in Afrikaans. Lily's spelling in Afrikaans was equivalent to that of a Grade 1 learner. She obtained a stanine score of 4, which placed her within the Average range on a Grade 1 level. Her highest level of reading in Afrikaans is equivalent to that of a Grade 2 learner. She obtained a stanine score of 6, which places her within the Average range on a Grade 2 level.

According to the DSM 5, Lily met the criteria for a Specific Learning Disorder. Her word reading was inaccurate and slow, and she had difficulty understanding the meaning of what she read. She struggled with spelling and had difficulty with written expression.

4.2.2.3 Dynamic assessment

Dynamic assessment was administered during the second assessment session after standardised assessments were concluded. The dynamic assessment session focused on spelling and writing.

The pre-test phase consisted of non-standardised curriculum-based assessment. Lily's schoolbooks were analysed and various spelling errors were identified. The teaching phase of the dynamic assessment started with a conversation with Lily to

reassure her that the session would not only consist of school and classwork but also enjoyable activities. Lily did not respond and did not display any emotions during this conversation. The assessor then explained to Lily that they would be writing difficult spelling words in the sand. The assessor would present the word on a flash card, which Lily would use to trace the word in a sand tray. Lily still did not respond. The assessor demonstrated the task by writing a word in the sand. Lily observed the assessor. She still looked confused and uncertain about what was expected of her and how to sound out the word. The assessor told Lily to sound out the word the assessor wrote in the sand. She sounded out the word incorrectly and after the assessor corrected her, she realised that the word was an Afrikaans word and not an English word. She then traced the word in the sand. Lily then wrote the word on a separate paper with the word on the flash card next to her. She wrote the word again on a piece of paper without the word present on a flash card.

With the second word on the list, the assessor modelled the word by writing it in the sand. She also supported Lily to sound out the word and provided her with an opportunity to write the word down on a piece of paper. Lily again struggled but understood the word better. With the third word, Lily looked confused when she tried to read the word. The assessor explained the meaning of the word while Lily wrote the word in the sand. She understood the word better after the explanation from the assessor. The assessor gave Lily another word to write in the sand. She read the word with some hesitance and wrote the word in the sand. Lily wrote the two new words on a piece of paper without any visual aids. With the second last word on the list, Lily read the word with a smile, but she still had to sound out the word. She was able to use the word in a sentence with confidence before writing the word in the sand. She was again able to write the word on a piece of paper without visual aids.

Unfortunately, the video recording stopped just after the assessor said that it was their last word. Information obtained from the case file indicated that Lily scored 10/10 in the test round when she had to trace the word in the sand, but scored 7/10 when she had to write the words based on memory. She enjoyed recalling the words and copying them in the sand but struggled to recall the words when more than one word was asked at a time.

4.2.2.4 Discussion of the case

The results of the standardised assessment indicated that Lily struggled with a slow processing speed and verbal comprehension, which in turn influenced her academic performance. Lily's difficulties are further compounded by not receiving tuition in her home language. She has been schooled in German, English and Afrikaans. She has also been absent from school due to illness in Grade 2 which could have resulted in gaps in her knowledge in the various learning areas. She met the criteria for a Specific Learning Disorder. The standardised assessments, furthermore, provided information regarding Lily's strengths and weaknesses but provided little information on how Lily could be supported. The dynamic assessment sessions presented more information with regard to the difficulties Lily experienced and possible support strategies. The assessor planned these suggestions and support measures, and she shared them with various role players who are involved in Lily's support.

In the first dynamic assessment session, the assessor used the mediational strategies of intentionality and reciprocity, mediation of task and self-regulation and mediation in meaning. The assessor also used praise, encouragement, transcendence, joint regard, individuation, psychological difference and change and responsivity as mediational strategies.

The assessor used the mediational strategy of reciprocity and intent during the initial phases of the session by observing the non-verbal and verbal cues Lily displayed. These cues enabled the assessor to respond in a relevant manner or to adapt her strategy of support. The assessor intentionally stated that they would be writing and learning words to focus her attention, processing and reaction. She tried to reassure Lily by explaining that they would be practising some of the work done in her schoolbooks in an enjoyable manner. This intent was communicated explicitly by displaying the identified words that she struggled with. The assessor then started to write a word in the sand. At first, Lily did not understand the instruction presented by the assessor when the assessor started to write words in the sand. Lily's non-verbal cues and non-responsive behaviour were noted by the assessor and the assessor adapted her mediational strategies. The assessor responded by introducing the instructions in steps.

A pattern of the mediation strategy of task and self-regulation was identified throughout the entire session. The assessor allowed opportunities for Lily to become more proficient and to experience mastery by gradually withdrawing support and providing more opportunities to learn. The assessor used the mediational strategy of change and responsivity by relying on different scaffolding techniques such as providing support when she struggled to sound out the words, presenting the instructions in smaller more understandable instructions when she did not know what to do next or explaining the meaning of the words. The assessor withdrew her support as soon as she saw that Lily grasped a word or instructions. She also used the mediational strategies of task and self-regulation to determine where Lily's ZPD was.

During the next phase, the assessor used the mediational strategy of meaning to allow Lily to be active during the session. Lily had to write the words in the sand and on paper. The assessor supported her in attaching new meanings to the words, by encouraging her to use the word in a sentence and to connect the words to Lily's frame of reference. The assessor furthermore tried to respond in a caring and warm manner to provide her with some reassurance. The response can be described as a mediational strategy of affective involvement. Another positive reinforcement technique that was used was praise and encouragement. When she seemed disheartened when she struggled to pronounce the words, the assessor encouraged Lily to try and sound out the words, allowing her to experience some mastery.

Planning for shared behaviour, challenges and goals did not involve mediation on the part of the assessor. The assessor was discreet about her personal thoughts, opinions, perceptions and experiences. Lily was not pushed by the assessor to apply the spelling rules on new words, but rather she was asked to concentrate on the words in her schoolbooks that she had trouble spelling. Furthermore, Lilly did not require assistance in creating goals for learning new spelling words.

Lily's integrated image obtained from standardised tests and dynamic assessment sessions concluded that language difficulties interfered with Lily's ability to perform in the dynamic assessment. It was also found that she benefited from guided learning but experienced difficulties with auditory word recognition and short-term memory,

which influenced the process of the dynamic assessment sessions. It was evident that Lily benefited from scaffolding and mediational strategies.

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

The two case studies that were presented in this study demonstrated how standardised assessment and dynamic assessment can be used as complementary approaches to assessment. This assessment approach foregrounds the learner's process of learning and offers insight into possible interventions that could be used after the assessment. Callicott et al. (2020) stated that the value of the standardised assessment is that it provides baseline assessment results of learners' strengths and weaknesses while dynamic assessment, which is facilitated by using mediated learning strategies, provides insights into how learners respond when their learning and development are mediated or supported.

Mediated learning strategies were used in both case studies to scaffold learning. Both assessors used the three mediational strategies which are essential for mediational relationships. These mediational strategies align with Feuerstein's MLE theory (Feuerstein, 1979). These strategies were reciprocity and intent, mediation in meaning and mediation in transcendence. In the second case study, the assessor also used mediational strategies such as mediation in task self-regulation, mediation in affective involvement and praise and encouragement. Kozulin (2002) commented on the value of mediated learning strategies when used in psychological assessment sessions which provide the learner with adaptation tools to enhance and modify the learner's learning. Other scholars have also reported on the value of mediated learning in dynamic assessment for the improvement of cognitive functioning and academic performance (Laher & Cockcroft, 2013; Lidz, 2002). The three essential mediational strategies and how these strategies were used in this study will be discussed in the following paragraphs.

The mediational strategy of reciprocity and intent was used in both case studies. Both assessors intentionally stated the area of focus in the dynamic assessment. They made a conscious effort to alter the learners' focus, awareness, perception and response. For example, in the first case study, the assessor intentionally focused on

fractions, while in the second case study the area of focus was spelling. The assessors both used the mediational strategy of reciprocity when they observed the non-responsiveness of the learners when they were presented with examples of fractions and spelling words. In Tom's case, the assessor replaced the abstract concepts he had to solve by using concrete materials thus supporting him at the concrete operational stage based on Jean Piaget's theory of cognitive development (Brown, 2018). By using concrete materials, the assessor enabled Tom to solve various fraction problems which suggested that he could solve these problems successfully with continuous mediation and the use of concrete materials. The intentional exposure to stimuli and the creating of direct learning experiences were also used in Lilly's case. The assessor was able to adapt her instructional method of mediation by breaking the instructions into smaller more manageable parts.

The assessors in both case studies used the mediational strategy of meaning. The assessors focused on relevancy and enabling these learners to be active in their own learning processes by means of providing insights into the learners' current contexts by connecting current experiences to previous experiences. Mediation in meaning conveys the significance that the provided stimuli have in terms of affect, motivation, and values (Tzuriel, 2013). The assessor in the first case study used the strategy of meaning by presenting Tom with counters to actively take part in solving new mathematical problems. The assessor used facial expressions, a calm tone of voice and repetition of the steps to actively involve Tom. Lily's assessor created meaning by connecting the words to Lilly's frame of reference. The mediated learning theory states that when meaning mediation is used, learners will actively link recent experiences to earlier ones (Tzuriel, 2013). Feuerstein furthermore stated that direct exposure to stimuli and the use of various mediated learning strategies form the basis of his theory on MLE (Kozulin, 2002).

The mediational strategy of transcendence was used by presenting the learners with new opportunities to apply their knowledge. The mediated learning strategies that were used during the dynamic assessments appeared to have a positive and constructive influence on the learners functioning and their ability to demonstrate their skills. The first two techniques of meaning, reciprocity and intentionality are necessary for transcendence mediation. However, the three mediation techniques must be used

in combination for cognitive modifiability, which is another crucial point to note (Tzuriel, 2013). Tzuriel and Shomron (2018) found that if mediational strategies are used the possibility of the enhancement of learning skills and consequently the development of a higher level of cognitive modifiability in learners, exists.

The mediational strategy of task and self-regulation was used by both assessors. This strategy provided the learners with more opportunities to learn by using scaffolding techniques such as breaking the instructions into smaller understandable steps and explaining the meaning of words or solving fractions step-by-step. Lily's assessor was able to identify her ZPD and gradually withdraw support as soon as she observed that Lily understood the words and instructions. Tom's assessor, however, identified that his ZPD would involve using concrete objects to solve fraction problems. Vygotsky's conceptualisation of the ZPD and interaction is commonly used in dynamic assessments (Lidz, 2002). Dynamic assessment has a great deal of usefulness for forecasting learners' learning potential, according to evidence of its effectiveness (Fabio et al., 2022).

In Lily's case, the use of dynamic assessment and mediational strategies allowed the assessor to comment further on the diagnosis of a SLD, as was stated in the report. Symptoms of an SLD caused significant interference with Lily's academic performance. In Lily's case, the assessor observed during the dynamic assessment that she still experienced difficulties recalling spelling words and showed little improvement even after the assessor used mediational strategies. Research findings suggest that a lack of or limited improvement, after the use of mediation during an assessment may be indicative of a learning disability (Moore-Brown et al., 2006). Learners diagnosed with SLD, or dyslexia often experience poor phonological awareness and processing difficulties which are similar to the challenges Lily experienced (Riva et al., 2021).

In both case studies, the assessors made recommendations to the teachers and family members in the report, based on what they observed during the dynamic assessment. Mediation in learning can be useful for various role players in learners' lives such as parents and teachers who must provide support (Lidz, 2002).

Feuerstein describes two methods of learning. The first method entails direct interaction between the students and the environment and the stimuli. The second mediated approach highlights the value of more experienced people supporting learners' learning (Feuerstein et al., 1991). These two approaches allow the learners to become aware of their own cognitive processes and acquire new learning strategies and higher levels of functioning (Feuerstein et al., 1991). This study illustrates the importance of learners interacting with various role players and mediators in their lives to ensure that they get exposed to various mediational strategies.

In this study, the recommendations presented to the various role players, after the use of dynamic assessment, provided not only insight into the learners' growth areas but also their strong points. Researchers discovered that the outcomes of dynamic evaluations place more focus on the potential of the learners than on their deficits (Bosman & Resing, 2012; Freeman & Miller, 2001).

The potential value of using mediational strategies in dynamic assessment is evident from the preceding discussion of the two case studies. It is, however, important to also note the limitations of how mediated learning was used in the case studies. In both case studies, the assessors used their own, non-standardised assessment during the assessment sessions. Mediated learning has been criticised as a non-standardised assessment (Bouwer, 2014). Mediated learning as well as standardised measures convey important information based on the assessment results (Bester & Kühn, 2016; Tzuriel, 2000). However, the main goal of dynamic assessment and mediated learning in the case studies that were presented in this study was not to be valid or reliable to the same extent as one would expect a standardised test to be. It was individualised for each client to gain more insight during the test-retest phase after the assessors applied mediational strategies during the assessment sessions. The main goal of the assessment sessions was to gain more insight into the learners' learning and for intervention purposes. It was also not possible to determine if the mediational learning strategies that were used in the two case studies resulted in long-term cognitive modification because there were no follow-up assessment sessions conducted by the assessors.

The next section will readdress the theoretical framework applied in this study.

4.4. REVISITING THE THEORETICAL FRAMEWORK

The MLE theory as explained by Feuerstein posits that the learner progressively internalises influences and mediation. This framework was used to gain insight into the use of mediated learning strategies and how dynamic assessment addressed certain learning difficulties in this study (Tzuriel, 2018).

As a result of the study conducted by Tzuriel (2018), which is also consistent with the findings in this study, the learner developed internalised strategies, allowing the mediator to gradually withdraw mediation and input provided. The learner gradually became more autonomous and was able to independently apply these newly acquired strategies (Tzuriel, 2018). Suitable MLEs facilitated the development of numerous cognitive functions, learning sets, mental operations, strategies, reflective thinking, mental flexibility and need systems (Bavali et al., 2011; Tzuriel, 2018).

Feuerstein sets out components of the MLE theory (Lidz, 2002). Reciprocity and intentionality, transcendence and mediation of meaning are seen to be very crucial to the mediational process (Lidz, 2002). The other mediational strategies include encouragement and praise, joint regard/controlled behaviour, mediation in sharing, task regulation and self-regulation, challenge, psychological differentiation, contingent responsivity and affective involvement.

The suitable mediated learning strategies include various scaffolding techniques (Feuerstein, 1979). The results of the dynamic assessment sessions conveyed limited improvement but despite the diagnosis of neurodevelopmental disorders still conveyed their potential to learn and ability to interact (Lerner & Johns, 2012).

4.5 SUMMARY

This chapter discussed the data of the two presented case studies and the research findings. Chapter 5 will include a discussion of the findings and their relation to the literature and the research questions. The chapter will also include a discussion of the limitations and recommendations of the study.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The purpose of this descriptive case study was to explore and describe how mediated learning support strategies were used during two psychological assessments to provide a more in-depth understanding of the learning difficulties learners in these case studies experienced, their potential for learning, how they responded to support and how it augmented the results that were obtained by means of standardised tests.

Research on dynamic assessment suggests that mediation is crucial in the dynamic assessment process. Feuerstein et al. (1980) describe mediation as the core of dynamic assessment. Mediational learning strategies may enable assessors to explore learners' ZPD (Lidz, 2003). Adequate mediation may enable the development of cognitive functions, the process of mediation, how information is processed and how it may promote cognitive modifiability. These aspects of learning may not necessarily be examined sufficiently by psychometric tests.

The case studies presented in this study illustrated how mediated learning and standardised assessment were used as complementary approaches to assessment. This method of assessment places the learner's learning process in the foreground and provides information on potential interventions that could be used following an assessment.

5.2 REFLECTING ON THE RESEARCH QUESTIONS

In answering the primary research question, "How were mediated learning support strategies used in two educational psychological assessments at the Educational Psychology Training Facility, University of Pretoria, from January 2015 to December 2019?", the researcher first considered the secondary research questions which guided the study.

5.2.1 Secondary Research Questions

5.2.1.1 Which mediated learning support strategies were used in the assessments?

The three mediational strategies which are crucial for successful mediational interaction and cognitive modifiability that were used in the two case studies were reciprocity and intent, mediation in meaning and mediation in transcendence.

Other mediational strategies evident in the case studies were positive reinforcement strategies such as participation and praise and task- and self-regulation strategies.

5.2.1.2 How were the mediated learning support strategies executed?

The mediational strategy of reciprocity and intent was evident in the case studies in that both assessors intentionally stated to the learners the area of focus in each assessment. The assessors deliberately focused the learners' attention, awareness, perception and response. For instance, the assessor emphasised fractions in the first case study whereas spelling was the area of focus in the second. When the learners did not respond when given examples of fractions and spelling words, both assessors used the mediational approach of reciprocity. The assessor in Tom's case used concrete items to substitute the abstract concepts he had to answer, assisting him at the concrete operational level. The assessor aided Tom to solve several fraction problems by employing concrete materials, indicating that they might do the same with ongoing mediation using concrete materials. In Lilly's case, direct learning experiences were also created, and instructions were segmented into smaller, more manageable instructions.

The assessors applied the mediational technique of meaning in both case studies. The assessors concentrated on relevance and encouraging these learners to take an active role in their own learning processes by giving them information about their current surroundings and by making the learners aware of the connections between recent and earlier experiences. In the first case study, the assessor applied the strategy of meaning by providing counters which Tom could manipulate and to actively participate in resolving new mathematical puzzles. Tom was also engaged by the use

of facial expressions, a calm tone of voice and repeating the processes. Lily's assessor gave the spelling words significance by relating them to Lilly's context.

By giving the learners other opportunities to apply their knowledge, the mediation strategy of transcendence was used. The learners' functioning and their capacity to exhibit their skills appeared to be positively and constructively influenced by the mediated learning methodologies used during the dynamic assessments.

Both assessors used the task and self-regulation mediational technique, by employing scaffolding strategies, such as breaking instructions down into more manageable steps and deriving the meaning of words or resolving fractions step-by-step. This strategy gave the learners additional opportunities to learn. As soon as the assessor saw that Lily understood the words and instructions, they gradually withdrew support. However, Tom's assessor determined that using concrete objects to solve fractions fell within his ZPD.

5.2.1.3 What were the outcomes of these strategies?

In both case studies, the assessors were able to provide more detailed information on the learners' challenges that could augment the diagnosis made during the assessment. The assessors were able to identify the growth areas of the learners to support the learner. In Lily's case, the assessor was able to reflect further on the diagnosis of a SLD, as it was indicated in the report, due to the use of dynamic assessment and mediational strategies. Lily's academic performance was significantly hampered by SLD symptoms. In Lily's case, the assessor found that even after using mediational techniques, she was still having trouble remembering spelling terms and failed to demonstrate improvement which aligned with her diagnosis.

With Tom's case study, the use of mediation and dynamic assessment enabled the assessor to modify strategies to meet his needs thus enabling him to actively participate in the learning processes. In both case studies, the use of concrete objects was beneficial as it enabled testing in a way that is different from the conventional academic setting.

Following the use of dynamic assessment, the recommendations made to the various role players provide information on both the learners' areas for improvement and their strengths. The identification of the learners' potential also allowed the assessors to compile intervention plans to provide the necessary support for the learners.

5.2.2 Primary Research Question

This section will present the conclusions relating to the primary research question as stated in Chapter 1: "How were mediated learning support strategies used in educational psychological assessment?"

Mediation in this study was observed to be helpful in gaining a deeper understanding of the challenges the two learners experienced, identifying the types of interventions that may be conducive to their learning and giving assessors important information to consider when making support recommendations to other role players.

In case studies in this study, mediation within dynamic assessment was one more approach in a comprehensive assessment process. Mediated learning within dynamic assessment was used as a complementary approach to standardised testing.

5.3 POTENTIAL CONTRIBUTIONS OF THE STUDY

This study has the potential to increase awareness about the benefits, and limitations of mediated learner support when used to augment standardised test scores in psychological assessment. This may make it conceivable for assessors to employ different evaluation methodologies, which may then lead to improved practice.

5.4 LIMITATIONS OF THE STUDY

A limitation of the study was that the case studies were not created and documented with a view to researching dynamic assessment and mediation strategies specifically. This meant that some information needed for the research process was incomplete, not explicitly stated or absent. Fortunately, having access to multiple sources of data such as the video recordings, the case notes and the formal reports, the researcher was able to extract sufficient data that could be used to answer the research questions posed in this study.

5.5 RECOMMENDATIONS FOR RESEARCH

This qualitative study has the potential to serve as a starting point for guiding future research into how mediated learning could be used in psychological assessment sessions. As such, the following recommendations for future research emanated from this study:

- A qualitative study similar to this study but with a clear intent to plan, implement and evaluate how mediated learning could be used as part of a dynamic assessment approach.
- A survey study to investigate if educational psychologists use mediated learning support during their assessments of clients and the type of strategies they use.
- An intervention study to evaluate a structured mediated learning support approach to assessment.

5.6 CONCLUDING REMARKS

The findings of this study suggest that mediated learning strategies are valuable in psychological assessments, especially in contexts where more clarity is needed about the potential of a learner to learn and to augment static results that offer only one element in the complex process of conceptualising a learner's potential to learn. The value and potential advantages of using assessment strategies that support and intervene in ways that promote inclusivity and accommodation in the South African context should not be underestimated and are much needed. It is hoped that the findings of this research can be used as a springboard for further investigation into the use of mediated learning for the South African population during psychometric assessment sessions.

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APPENDICES

Appendice A: Codes

Codes:	
Report evidence	RE
Case notes	CN
Strategies: (Recording transcriptions (RT)) 1. Reciprocity and intent 2. Meaning 3. Transcendence 4. Encouragement and praise 5. Joint regard/ controlled behaviour 6. Mediation in sharing 7. Task regulation and self-regulation 8. Challenge 9. Psychological differentiation 10. *Contingent responsivity* 11. *Affective involvement* 12. *Goal seeking*	 RI M T EP JR R C D CR AI GS

Appendice B: Case notes

022017	Schoolwork was analysed to determine an area in need of support in maths. Fractions were identified. None of the questions had been attempted and no answers had been provided. A structured step-step process was used to facilitate this process. Each step was verbalised. During the retest phase, the client calculated the answers on the whiteboard and transferred it to his answer sheet while verbalising each step ((R) Mediation in task regulation/self-regulation, Become more proficient and to experience some mastery).
022015	Dynamic assessment is described as: • Guided assessment. • Adaptable and closely aligned with approaches used in tests of potential where learning opportunities are provided as part of the teaching process. • Deliberate departure from standardised assessment procedures to elicit additional qualitative information about the participant. • Assess to establish a baseline functioning and provide a clear idea of what learning experiences should be facilitated. • Assessment will determine what nature of learning outcomes should be. • Reassessment will guide further interventions until goals have been attained. Observations – Spelling (Participant scored 10/10 in the test round when he/she had to traced the word in the sand, but scored 7/10 when the participant had to write the words from memory.) She enjoyed recalling the words and to copy it in the sand but struggled to recall the words when more than one word were asked at a time. The participant benefits from guided learning, but her auditory word recognition and visual short-term memory made it difficult for her to recall the words. Observations – Mathematics. It was identified from the participant's schoolwork that he/she struggled with rounding numbers to the nearest 10, 100 or 1000. The metaphor of a plane were used. The plane needed to make an emergency landing, where the closest point for landing will be depending on where the plane is flying above the numbers. The participant quickly understood the concept. During the retesting, the participant could identify the nearest 10/100, however had some difficulty. The participant learnt well with DA but it seemed that he/she had trouble with short-term memory.

Appendice C: Report evidence

022017 (Transcription; DVD, ass 5, 5.08)	6.Met die tweede assesering het die assessor gebruik gemaak van dinamiese assessering. In hierdie proses word die leerder getoets, geleer, gehertoets om 7.te kyk of daar 'n verbetering is en wat die leerder se potensiaal met ekstra steun is. Hy het goed met die dinamiese assessering gevorder wanneer konkrete 8.tellers ((T) Trancendence: concrete material) gebruik is en kon self nog twee meer ingewikkelde voorbeelde korrek op sy eie voltooi ((C) Mediation of challenge) Rede vir aanmelding: Leerder se moeder het die assessering versoek omdat sy besorg is oor sy lees-en leervaardighede. Sy is bekommerd omdat hy Graad 4 nie geslaag het nie en het vermeld dat hy sukkel om aan die slaag vereistes van Afrikaans, Engels en Wiskunde te voldoen, alhoewel hy presteer in die vakke soos Geskiedenis, Aardrykskunde en Kuns.
022015 (Transcription; Spelling: DVD 134218 – 1.52)	9.Dynamic assessment was done with her regarding spelling and mathematical abilities. Dynamic assessment can be describe as guided assessment. This 10.kind of assessment is adaptable and closely aligned with approaches used in tests of potential where learning opportunities are provided as part of the 11.testing process. During this assessment it was found that she benefits from guided learning but difficulties experienced with auditory word recognition and 12.short term memory interfered with this process.(Case notes) Reason for referral: The mother requested an assessment tot determine her scholastic progress and also to explore possible learning and developmental difficulties that she might be experiencing.

Appendice D: Transcription

Appendices D: Transcriptions

022017

Assessor (A): Ek het gesien dat jy my daardie ene wys (wys). Het jy gesukkel met die gemengde getalle – breuke?

Kliënt (K): Geen terugvoer.

A(line 1) : Weet jy wat hulle bedoel as hulle vir jou vra, skryf die gemengde getal. Ek wil weet, soos verstaan jy nie wat die woord bedoel nie of……

K (3): Geen terugvoer.

A (4): ….. soos weet jy nie hoe om dit te doen nie, want dan kan ek dit vir jou nou leer. Dan kan jy actually beter, op so iets doen as ek jou weer vra om 'n sommetjie of twee te doen. Dan kyk ons of jy beter vaar. Partykeer verstaan ons nie Wiskunde nie want ons het dit nie die eerste keer begryp nie. OK so sê nou maar hulle sê vir ons…..(Skuif rond en kry apparaat reg)

OK ons gaan dit met macaroni oefen. Hulle sal sê 29/7 skryf en dan moet jy dit in 'n gemengde getal skryf. (Assessor skryf die som op 'n vel wit papier om dit vir hom te demonstreer). So 'n gemengde getal beteken daar is 'n groot getal en 'n breuk.

Wat hulle actually bedoel (haal die macaroni uit) (Vra kliënt om solank die tellers uit te tel). (Assessor sien 'n gebreekte een), Moenie die halwe een uit tel nie.

K (13): (Glimlag vir haar grappie)

A (14): (Help om hom te organiseer, skuif die tellers weg wat hy nie gebruik nie, en sy tel die tellers weer hardop saam met hom). 'n Gemengde getal kan so iets lyk (assessor skryf 'n voorbeeld van 'n gemengde getal neer). As hulle dan vra om 29/7 as 'n gemengde getal te skryf vra hulle eintlik hoeveel groepies van sewe kan jy hieruit maak.(Assessor demonstreer).

(Observeer hoe hy die klein groepies maak.)

Kyk, die groot getal gaan dan eerste wees as 4, want 7 gaan daar presies 4 keer in hierdie getal. (demonstreer oop die wit papier). Hoeveel bly dan oor? (wys na die tellers), en hierdie getal bly altyd dieselfde (wys na 7). Ok so dan sê jy 4 1/7 en daar is jou gemengde getal. Jy verstaan dit actually nou beter ne?

K (21): Toon steeds min emosie, maar hy lyk ingenome met die som wat hy bemeester het.)

A (22): OK, kom ons kyk na die twee somme. (Gee oefen voorbeeld op die wit bladsy)…OK so wat gaan jy eerste doen?

(Sy gee weer leidrade, vir wat hy wanneer moet doen) Jy het nou 33 voor jou, wat moet jy nou maak?

K (24): Kyk hoeveel pakkies ek kan kry? (Hy tel die macaroni en hy sorteer die groepies)

A(25): (Kyk steeds waar sy kan ondersteuning bied maar gee nie meer leidrade nie).

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Commented [DL18]: (RI)Reciprocity and intent: Reads nonverbal cues of the client to mediate

Commented [DL19]: (RI)Reciprocity and intent: Keeps client interested by using creative methods (input)

Commented [DL20]: (TR)Task-regulation: Scaffolding

Commented [DL21]: (M)Meaning: Provides opportunity to apply new knowledge structure

Commented [DL22]: (J)Joint regard/controlled behaviour (goalsetting), see case notes.

Commented [DL23]: (TR)Task-regulation: Scaffolding

Commented [DL24]: (RI)Reciprocity and intent: Ellaboration

K(26): Ses?

A(27): Wat beteken die 6? Waar kom die 6?

K(28) (Skryf die antwoord.)

A(29): …en dan hoeveel bly oor?

K(30): (Hy skryf die antwoord.)

A(31): As easy as pie! Ek sê jou macaroni doen die ding.

(Sy gee nog 'n voorbeeld)

K(33): (Kliënt spring weg en probeer die volgende sommetjie sonder ondersteuning. Hy wag nie eers vir 'n leidraad van die assessor af nie.)

A(35): Baie mooi, jy verstaan dit nou mooi.

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Spelling (1:52)

Teach

A(36): This is schoolwork, but schoolwork with a fun side.

C(37): Ok

A(38): I am going to write words in the sand and you are going to trace them after me.

Ok, let me start.

(Writes words in the sand tray, clients stands next to the assessor and observes the assessor).

C(41): So what must I do?

A(42): Read it to me?

What does it say?

C(44): B-R-O-P (broad)

A(45): Brood

C(46): Brood, o it is afrikaans.

A(47): Ja, sorry (touch her shoulder), ons doen nou afrikaans, want jy gaan skool in afrikaans.

Brood – ok, now you can trace them.

Trek dit na met jou vingers, kom ons praat afrikaans.

(Glimlag vir die kliënt)

(Observeer vanaf 'n afstand)

Ok, you can do this with a pencil, I want to get you a nice pencil.

I want you to trace it there and there (shows client were to trace the word "brood" on a paper) and copy it.

Commented [DL25]: (J)Joint regard – encourage to use meta-cognitive strategies

Commented [DL26]: (C)Mediation of challenge: Apply problem-solving skills

Commented [DL27]: (RI)Reciprocity and intent: Output

Commented [DL28]: PE)Praise and encouragement: positive reinforcement
(AI)Mediation of affective involvement:

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Commented [DL29]: (M) Sharing: Allows children to be an active learner

Commented [DL30]: *(R) Reciprocity: Verbal and nonverbal reactions from the client based on the assessors input – reciprocity.*

Commented [DL31]: *Reciprocity and intent - Input,.*

Commented [DL32]: *(AI) Mediation of affective involvement Mediator responds to the child in a caring and warm manner*

Commented [DL33]: *Reciprocity and intent - elaboration,*

Commented [DL34]: *(R) Mediation in task-regulation/self-regulation;*
°Vygotsky, scaffolding

Now I am going to take it away and I want you to write it there without seeing it. (Assessor takes a page and puts it in front of the client to write the word without any visual aids). Write it here. (Brood)

C(56): Client writes the word "brood" on the paper.

A(57): Ok, let's do the next one. Let's write smaller. (Writes the word in the sand tray while the client observes.

What does it say?

C(59): (Tries to sound out the word)

A(60): (Say the word) Een keer, een keer, een keer. (Steps aside).

Now you write the word.

C(62): (Writes the word in the sand)

A(63): Now you can write it there. (Provides a page where she can trace the word, assessor observes)

Ok, say that word again. (Een keer)

(She provides a blank page again to write the word down without any visual aids.)

Ok, lees vir my daardie woord.

(Wys na 'n woord op die wit bladsy)

C(68): (Sounds out), ge-ge….(and struggles)

A(69): Gereed (guide client by pointing to the word with her fingers). Gereed!

C(70): Gereed

A(71): Weet jy wat beteken gereed. Jy is gereed om te gaan. (Writes the word in the sand)

C(72): (Trace the word while the assessor observes)

A(73): Ok, die keer gaan ons twee woorde doen.

C(74): Ok

A(75); Nou trace dit vir my en skryf dit vir my en voordat jy dit oorskryf dan doen ons twee woorde.

C(76): (Trace and write the words)

A(77): (Observes). Ready to provide support.

Ok, lees hom gou vir my.

C(79): Hardloop.

A(80): (Writes word in the sand and the client observes)

Nou kan jy trace en skryf.

C(82): (Writes the word, trace)

A(83): Nou kan jy vir my skryf. (Assessor gives a paper to the client, and the client needs to write the words without any visual aids.)

Gaan jy nou jou bladsy skoonmaak.

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Commented [DL35]: *Reciprocity and intent - output.*

Commented [DL36]: *(R) Mediation in task-regulation/self-regulation.*
°Become more proficient and to experience some mastery.

Commented [DL37]: *Reciprocity and intent - Input,.*

Commented [DL38]: *(R)Reciprocity and intent - output.*

Commented [DL39]: *Reciprocity and intent - Input,.*

Commented [DL40]: *R) Mediation in task-regulation/self-regulation.*
Vygotsky, scaffolding

Commented [DL41]: *Reciprocity and intent - output.*

Commented [DL42]: *Reciprocity and intent - elaboration,*

Commented [DL43]: *R) Mediation in task-regulation/self-regulation.*
Vygotsky, scaffolding

C(86): (Cleans up the sandtray)

A(87): (Shows a word). Wat staan daar?

C(88): Lekker (repeats the word with a smile, struggles to sound out the word)

Dit is lekker in die sand.

C(90): (Writes the word)

A(91): (Observers). You can trace and write.

C(92): (Writes the word.)

A(93): Now you write the word there. (gives the paper to write the word, without visual aids).

Ok, last one.

Video stopped.

Commented [DL44]: *Reciprocity and intent - Input,.*

Commented [DL45]: *Reciprocity and intent - output.*

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Spelling (1.27)

Client wrote out a recipe earlier in the session as an activity

A(94): In this kitchen we are trying to get the best soup recipe of your aunty.

C(95): (Looks ecstatic)

A(96): Later on we can publish it and show it to all your garden friends.

What do you think?

C(98): O, that is wonderful.

A(99): So, here we have our soup bowl. You can put your hand in it and get something out.

C(100): One, or two of three.

A(101): Does not matter.

C(102): Ok, I will take two.

A(103): What do you have there?

C(104): (opens picture) – a spoon.

A(105): A spoon? What do you do with a spoon?

C(106): We eat with a spoon.

A(107): Yes and in our soup we…(pause)

Commented [DL46]: *(RI) Reciprocity and Intent*
Creativity of the assessor to keep the interest of the client.

Commented [DL47]: *(M)Meaning*
Allows children to be an active learner
Link future meanings, newly acquired (ideas) and previous knowledge structures

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Commented [DL48]: *(T) Transcendence*

Concrete activities

Perceptual, conceptual and visual to mental imagery
Storytelling, drawing comparisons and conclusions, gain insights, finding nuwe rules and establishing tendencies.

Commented [DL49]: *RI) Reciprocity and Intent*
Creativity of the assessor to keep the interest of the client.

Commented [DL50]: *(M)Meaning*
Allows children to be an active learner

Commented [DL51]: *(M)Mediation in task-regulation/self-regulation.*
Zone of proximal development identification
Vygotsky's term of scaffolding- umbrella term

Commented [DL52]: *Mediation of contingent responsivity*
Mediator to respond in a well-timed and suitable mean
Enables the child to continue to investigate and learn.

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C(108): Mix

A(109): Yes we mix (demonstrates).(Shows a word). So here is the word, mix.

C(110): Mix

A(111): Read it with me (presents picture card)

C+A(112):Mix

A(113): So, what it is important, to remember that here is two spoons and here is the word mix. (leaves the visual aids on the table). Please write the word mix and spoon. (provides a paper and a pencil to the child).

C(115): (The client refers back to the word cards). Done.

A(116): Ok, pick something else from the mixing bowl.

C(117): (Draws card from the mixing bowl). I have got…huh, I cant really see now?

A(118): What is this? This is garlic. Have you tasted garlic before?

C(119): No I have not.

A(120): If you taste it, your mouth goes rrrrrrr.

C(121): I have never tasted garlic, I have only tasted soup.

A(122): So if you taste garlic, how is your mouth going to taste? (Assessor points to the picture). How does gaRlic taste? RRRR

C(123): Rrrrrr, gaRlic.

A(124) And then look at all this garlic pieces….they are like?

C(125): R-R-R-R

A(126): "c", look at the letter c in garlic.

Can you see it?

C(128): Yup.

A(129): So, garlic always end with a…. (pause so that the client finishes her sentence).

C(130): "c"

A(131): Now, you write the word for me.

C(132): (Client writes the word). Done.

A(133): Ok, so now we have mix (shows the word card), garlic (shows the word card). Now we can get something else. (Takes out a new word out of the mixing bowl).

Let's see what does it say?

C(136) Soup

A(137): So, if your aunts making soup, she does not want anyone to say shhh. Do you know how to write shhh? (demonstrates on a piece of paper). That is not how your aunty wrote it. She wants to say; "sop-tyd". What is she saying?

Commented [DL53]: *(M)Mediation in task-regulation/self-regulation.*
Vygotsky's term of scaffolding- umbrella term

Commented [DL54]: *RI) Reciprocity and Intent*
Input, elaboration, output.

Commented [DL55]: *(M)Mediation in task-regulation/self-regulation.*
Vygotsky's term of scaffolding- umbrella term

Commented [DL56]: *RI) Reciprocity and Intent*
Creativity of the assessor to keep the interest of the client.

Commented [DL57]: *(T)Transcendence*
Activities which is goes beyond the immediate needs of the child
Reach higher and additional goals

Commented [DL58]: *RI) Reciprocity and Intent*
Input, elaboration, output.

Commented [DL59]: *(M)Mediation in task-regulation/self-regulation.*
Become more proficient and to experience some mastery.

Commented [DL60]: *(MM)Meaning*
Link future meanings, newly acquired refined and previous knowledge structures

Commented [DL61]: *Transcendence*
Concrete activities

Links past experiences with current experiences.

Commented [DL62]: *(M)Mediation in task-regulation/self-regulation.*
Vygotsky's term of scaffolding- umbrella term

Commented [DL63]: *RI) Reciprocity and Intent*
Creativity of the assessor to keep the interest of the client.

C(139): Sop-tyd!!!!

A(140): Ok, so for soup there is now silence. There is no…(pause)

C(141): h?

A(142): Your aunty don't want to be silent about it. Your aunty wants to scream it out loud. Dit is SOP_TYD!!!

Can you write the word soup for me?

(Revise previous words). Mix has many spoons (visual aid is still present)

C+A(145):Spoon, gaRlic with the many c, and we don't want to keep…..

C(146): Shhhh!

A(147): Quite, we just want the "sop-tyd".

C(148): SOP-TYD!!!!

A(149): Pick something else. (provides the mixing bowl)

C(150): (Reads the word), Onion

A(151): Onion, ok look at this picture.

C(152): It can really burn your eyes.

A(153): Yes, it can really burn your eyes.

C(154): Ooo!!

A(155): Let's look here (shows a real onion and peals away the layers). There is a layers and layers and it goes around and round (demonstrates by peeling away the layers) (Points to the n-n in the word onion).

Do you see it?

Here is our onion. See the circle and there is the layer. (points to the picture and word card)

(Revise the word cards again, with the visual cards on the table). They also use their arms for the two mixing spoons in the word mix.

C+A(161):Mix it, garrrrrlic, no shhh, SOP TYD!!!

A(162): And for the onion, there must be a layer.

C(163): Draws another word. (out of the mixing bowl)

Suger (smiles)

A(165): Remember you told me that your aunt puts sugar in?

C(166): Yes.

A(167): And this is a spoon full of sugar, and this is also what letter?

C(168): "S"

A(169): So, before you write, what does sugar start with….an s and then a u.. Write the word sugar on your paper.

C(170): (client writes down the word.)

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Commented [DL64]: *Transcendence*
Activities which is goes beyond the immediate needs of the child Reach higher and additional goals

Commented [DL65]: *RI) Reciprocity and Intent*
Creativity of the assessor to keep the interest of the client.

Commented [DL66]: *(M)Mediation in task-regulation/self-regulation.*
Vygotsky's term of scaffolding- umbrella term

Commented [DL67]: *(M)Mediation in task-regulation/self-regulation.*
Vygotsky's term of scaffolding- umbrella term

Commented [DL68]: *RI) Reciprocity and Intent*
Creativity of the assessor to keep the interest of the client.

A(171): Ok, so here is our spoon (demonstrates) our spoon full of sugar. Let's put it in our soup.

Let's go through the list again. They also use their arms for the two mixing spoons in the word mix.

C(172): Mix it, garrrrlic, no shhh, SOP TYD!!! Lastly sugar starts with an s and then an u.

A(173): (Assessor keeps quite. She does not repeat the words with the client, but she provides a demonstration with the visual aids – flash cards)

Ok, put all the ingredients into our soup bowl.

C(176): (Through all the picture cards into the mixing bowls)

A(178): Wait, I hear someone at the door? (Assessor looks to see who it might be).

It is one of my fairy friends. She wants to write down the soup ingredients, or the five words that we have learnt for our soup recipe.

Can we write it?

C(182): Yes

A(183): I am going to say the words and then you are going to write it. (provides paper and pen)

Commented [DL69]: *(M)Meaning*
"Verbal or non-verbal manner"
"Allows children to be an active learner"

Commented [DL70]: *(M)Mediation in task-regulation/self-regulation.*
Vygotsky's term of scaffolding- umbrella term

Commented [DL71]: *RI) Reciprocity and Intent*
Input, elaboration, output.

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