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Assessing and supporting an underachieving anxious child : using a constructivist ecosystemic approach in a South African university training context.

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CHAPTER ONE: INTRODUCTION

Much of the research presented in this study is used to support an argument in favour of an alternative approach to the medical model for assessing and treating children with inadequate development. In addition, it is also suggested that this argument is particularly relevant to newly democratic South Africa.

1. Statement of the problem

Since research (Spann, 2005; Harcombe, 2003; Donald in Engelbrecht, Green, & Naiker, 1999) suggests that the majority of South African children experience fairly negative contextual factors, which largely interferes with scholastic and emotional development, it is obvious that there is a need to look more carefully at how we assess and support our children (Harcombe, 2003). In addition, the implementation of inclusion within the South African education context challenges teachers, schools, parents and professionals with a great transition regarding the way they view scholastic and emotional development. Inclusion theory posits the notion that every child can learn and those who experience barriers to learning can positively benefit from regular classroom placement, as long as the environment is adaptive and accommodative of the learner and his or her needs (Engelbrecht, Green, Naiker and Engelbrecht, 1999). This is in opposition to traditional forms of educational segregation where many learners with special needs were placed in special education schools. These children were diagnosed with pathology and treated by an expert. This practice is underpinned by the psycho-medical model which considerable research has shown to be ineffective and detrimental in assessing and supporting children. It is argued in this study that the historical and current application of the psycho-medical model as an area of concern in general and in South Africa in particular.

2. Rationale

Prior to the introduction and adoption of inclusive education policy in South Africa, South African Education White Paper 6 (Department of Education, 2001) education was largely delivered to the advantaged sections of the population through the modes of mainstreaming and special education (Engelbrecht, et al., 1999). A psycho-medical

model was largely used to underpin the assessments used in this mode of delivery to diagnose, categorise and place learners with disabilities into the various forms of special education available (Department of Education, 2001; Van Rooyen, Le Grange and Newmark, 2002).

The categorisation system also often only allowed access to support programmes for those learners with diagnosed medical, physiological and neurological disabilities, thereby excluding learners who experienced learning difficulties because of severe poverty and other contextual factors (Van Rooyen, et al. 2002). The impact of such policies in South Africa for example, meant that only 20% of learners with learning difficulties were allowed access to special education and educational support, leaving the majority of the population who experience barriers to learning, unsupported (Department of Education, 2001).

The accumulation of research (Shuttleworth-Edwards, Kemp, Rust, Murihead, Hartman and Radloff, 2004; Coffey and Orbringer, 2000; Gunderson and Siegel, 2001; Fagan, 2000; Espy, 2001; Lawlor, Najman, Batty, O'Callaghan, Williams and Bor, 2006) indicating the inadequacy of psycho-medical model assessments and resultant interventions, as well as the move towards inclusion and human rights concerns gave rise to a search for more equitable assessment and intervention modes. Accordingly, there is evidence to support the notion that using a constructivist, ecosystemic approach to assessment and intervention was a move in the right direction, aligned to the philosophy of education (Chia-hua, 2006; Hruby, 2001; Harcombe in Engelbrecht and Green, 2001; Sattler, 1982; Skuy, Westaway and Hickson, 1986; Adelman and Taylor, 1979). A constructivist, ecosystemic approach is a theoretical underpinning that takes various interacting factors into consideration when analysing children's emotional and learning needs (Schur, Skuy, Zietsman and Fridjhon, 2002). The approach highlights the notion that each child comes from a uniquely different set of interacting systems. In addition, this approach also highlights the need for an optimal amount of mediation for the most favourable emotional and scholastic development to occur. Therefore, a disability is not viewed as lying within the child but rather within the child's environment, which includes the amount of mediation they received (Harcombe in Engelbrecht and Green, 2001).

One of the most convincing reasons for using a constructivist, ecosystemic framework as a basis for assessment and support is that the psycho-medical model is very simplistic and therefore precludes the examination of many factors that have been found in numerous studies to cause differences in learning and development (Spann, 2005; Harcombe, 2003). Furthermore, social constructivism defines the way humans develop and learn as a process in which knowledge is constructed by, for and between members of a discursively mediated community (Hruby, 2001). In other words, if learners are not part of an ongoing mediation process, they will appear to be disabled and will score inadequately on psycho-medical assessment procedures (Schur, Skuy, Zietsman and Fridjhon, 2002). Research done by Adelman and Taylor (1979); Kriegler and Skuy (1996); Amod (2003); Donald et al. (1997); and Lerner (1993), proposes that we should be viewing the child holistically as part of a system, and not exclusively, that is in isolation from his or her context and environment. This research further highlights the need to collaboratively consult with the family, the school and the child when undertaking assessment procedures and when engaging the child in the relevant support interventions.

3. Definition of Keywords

Before delving into the research report, it is necessary to clearly define some of the commonly used concepts and related terms used.

Medical model or psycho-medical model approach/framework: This approach is often used to underpin psychological interventions. This model has also often been adopted in education and psychology and been applied to children who have historically not managed to keep up with mainstream education (Lerner, 1993). From this viewpoint such learners are considered to be patients with a disease that needs diagnosis and treatment and such treatment is usually given by a professional often in the context of special education schools (Harcombe, 2003).

Ecosystemic approach/framework: Ecosystemic models are often seen by theorists as being less reductionist than medical models, i.e. they do not focus on only one or two contributing factors to a situation or condition. This approach views a learner holistically i.e. as being affected by the context in which he or she functions, such as

society, schools, homes, etc. This approach also takes into account the genetic endowments of learners in interaction with contextual factors (Spann, 2005; Harcombe, 2003; Donald in Engelbrecht, Green, Naicker & Engelbrecht, 1999).

Learning disabilities, learning difficulties, learning problems, learning needs, barriers to learning and learning diversity: These terms have all been used interchangeably in this research, as they are terms that have been commonly used over the years in identifying learning problems. In addition it will be noted that some terms will be used more frequently when a particular theoretical underpinning is being discussed. For example, when psycho-medical models are discussed, it is more likely that the term learning disabilities is used, whereas when an ecosystemic model is under discussion, it is more likely that that the terms learning diversity or barriers to learning are used.

Collaborative consultancy: The term collaborative consultancy refers to a process whereby a consultant joins a team of stakeholders who then collaborate together to problem solve etc. This process suggests that problem-solving occurs between the stakeholders in a collaborative, supportive ethos in which each party has knowledge to offer (Levac, 2004).

4. Main focus and context of the study

The focus of this study was to present the case of Matthew (fictitious name) in order to examine the usage of an ecosystemic approach to assessment and intervention. Prior to this research Matthew was assessed and supported using the constructivist ecosystemic approach, at a university community centre. Through this approach, those in Matthew's immediate environment became part of the collaborative process. Matthew's interactions with these parties were examined, through a process called Initial Assessment and Consultation (IAC). The IAC aimed to assess Matthew not only through intelligence and projective testing but through information provided regarding his scholastic and emotional difficulties. In turn intervention was aimed at addressing those interactions which were seen to hinder Matthews's development. The main focus of this study was to examine firstly the perceptions that all these stakeholders had in terms of the constructivist, ecosystemic approach as well as

focusing on the promotion of Matthew's emotional and scholastic development, in ascertaining if in fact this constructivist, ecosystemic approach was effective.

5. Structure of the research report

An outline of the structure of this report follows.

This current chapter, Chapter 1, is an introduction to the research report, which covers the statement of the problem, a rationale, main focus of the study, context of the study, a description of keywords and the structure of the research report.

Chapter 2 presents a survey of the literature reviewed regarding the different approaches and theoretical underpinnings of the assessment and intervention process.

Chapter 3 presents the methodology used in this research report. This includes the aim of the research, the research questions and research design. In addition methods of data analysis and collection used in this study are explained. The context of the study and the participants are then described. This chapter is then concluded by a discussion of research ethics.

Chapter 4 presents the findings of the research. This is done by presenting the themes that emerged from the content analysis.

Chapter 5 presents the discussion of the findings of the study. This is done in terms of examining the findings in relation to the studies reviewed in the literature review.

Chapter 6 is the concluding section of the report and examines the implications and the limitations of the study. This is followed by a discussion of the areas highlighted for future research.

CHAPTER TWO: LITERATURE REVIEW

This research report investigates the principles and practices of two assessment and intervention processes for school-age children and youth. And since the research methodology is based on a case study, it was decided that this information would be used as the structure around which the literature review is organised.

1. Case study: Introduction

Matthew (not his real name) was eight years old at the time of the intervention. He was born in Johannesburg, South Africa, to parents Cliff and Sue (not their real names) and had a younger sister Jennifer (not her real name). Cliff had two children from a previous marriage, who were living in England at the time of the intervention.

Matthew's strengths and concerns were reported as follows. He loved anything to do with nature and animals. He enjoyed working with his father, fixing things with tools and riding his four-wheeler. Matthew and his sister enjoyed baking together. However, Matthew lacked self-confidence, was very hyper-vigilant and anxious. He also showed a low motivation towards school and life. In addition, his reading writing and maths skills were very below average for his grade.

The first few years of Sue and Cliff's marriage were not easy. Shortly after getting married, Matthew's parents started their own business. About the time that Sue found out she was pregnant with Matthew, the business collapsed. The pregnancy was extremely difficult and the labour long and complicated.

At Sue's two-month post-natal check-up, she found out she was pregnant with Jennifer who was born 11 months after Matthew.

During this period, the family moved in with Sue's parents. The house was small and cramped and was not a suitable environment. Just after Matthew's birth, Cliff found work in Botswana and moved there for four months. Sue and Matthew visited him in Botswana every second week. Cliff eventually found work closer to home and the family then moved into their own accommodation.

So it can be seen that the family went though a very turbulent time during Matthew's toddler years. From the age of two, Matthew attended a day care centre. His parents hoped it would provide an educationally stimulating environment for Matthew, but later discovered that it had not in fact provided him with a strong basic learning foundation at all.

Matthew's younger sister Jennifer was then diagnosed with a rare bone disease that manifested with reoccurring cysts. The disease was considered high risk because if the cysts got too large, they could cause brain damage or seizures.

An additional stressor that had a profound impact on the family was when Matthew was four years old. Cliff was informed that his daughter from his first marriage, who had been living in London, had been molested for seven years by her step-father. This caused huge stress for Cliff and Sue. Sue was then diagnosed with depression and was placed on medication. Even though these events were kept from Matthew, his parents feel that Matthew picked up on this stress.

Marital discord became evident during this time. Sue, wanting to escape the ongoing stress at home, worked long hours, taking on an ever-increasing workload. Cliff was drinking excessively at this stage and Sue soon found what she perceived to be comfort and support by engaging in a romantic relationship with her manager. The affair, however, soon became public and caused great turmoil between Sue and Cliff. Cliff consequently took an overdose of anti-depressants.

The couple then separated and Sue and her two children moved in with her parents once more. Cliff promised he would stop drinking and the family reunited after six months apart. Cliff found employment, but as his salary was not enough to sustain the family, they decided to again start their own company. The first few years were difficult, but after five years the company became financially viable. They both felt that because their business operated from home, they were able to spend a significant amount of time with Matthew. It seemed as if they were again a close family unit, spending quality time together, especially outdoor camping and fishing.

It is evident from Matthew's story that his parents came from a previously advantaged background, having had many opportunities and experiences. Both parents had received a good education and because of this, understood the value of education. Socio-economically, at the time of the assessment, Matthew's family was characterised as middle class. Both parents were self-employed and provided Matthew and his younger sibling with a middle class home. Matthew attended a Model C government school situated in an upper to middle class suburb with most resources available to him. Nonetheless, finances had no doubt been the cause of great stress in the family's life.

At the end of Matthew's Grade R year, his parents felt, due to an occupational therapy assessment, that he was not yet ready for Grade 1. He therefore repeated Grade R and started Grade 1 at a local primary school. Matthew's teacher took the time to understand his processing style, temperament and overall needs and he managed well. However, he struggled at school thereafter, especially in 2007.

That same year (2007), aware of Matthew's struggle at school, Sue contacted the university community centre to seek guidance. The family was brought in for an initial interview and it was decided that Matthew would undergo the university's assessment process at the community centre. At this time, his current teacher did not appear able to provide an environment wherein Matthew felt supported and understood. It was apparent to Matthew's parents that the teacher was overwhelmed and could not cope with Matthew's scholastic needs. In addition, Matthew did not seem able to make many friends and struggled to form relationships with those around him. Although he was large for his age, he was bullied quite often at school. He subsequently tended to bottle up his feelings until a certain point where he would 'explode' aggressively.

During the time of the assessment at the university (2007), Sue and Cliff separated again for two months and considered divorce. The separation occurred after a three-month visit from Cliff's son from London. For the duration of the visit, according to Cliff, his son had lazed around and had been opinionated. This put enormous strain on Cliff and Sue, with Sue having to take on the disciplinary role. When Matthew was told of the separation, he said that "he would be strong" but Sue later found him sobbing in his room. Confusion within the family was clearly evident, as the parents had not yet proceeded with the divorce. This was significant, as the lack of a stable

parental unit seemed to be affecting Matthew's adjustment, causing feelings of instability and anxiety.

The challenging behaviours that Matthew reportedly experienced prior to the assessment and intervention process included shyness, social withdrawal, poor peer relations, anxiety and low scholastic performance in general. Furthermore, specific academic issues were raised, highlighting Matthew's difficulties with reading, writing and mathematics.

2. Frameworks that underpin the assessment and intervention process of school-age children and youth

Theorists, researchers and practitioners in the fields of development, psychology and education are engaged in debates regarding the understanding of a child's functioning and development, as well as regarding the assessment and support of young people (Harcombe in Engelbrecht & Green, 2001). Two of the most researched frameworks that guide such psycho-educational assessments and interventions will be discussed in this paper; namely the psycho-medical model and a constructivist ecosystemic framework. The following discussion aims at highlighting the major aspects of each of these frameworks, as well as exploring and evaluating some recent associated research. The aim of this study is to argue the need for an alternative view to the psycho-medical model of assessment and intervention, especially within a context that is diverse and multicultural. Since the context of this study is South Africa (SA), a review of current educational and assessment policies and practices follows in order to provide a context in which to locate the discussion of assessment and intervention.

3. South Africa and inclusive education with an emphasis on assessment and support practices

The change in South African educational policies from "exclusive" practices to "inclusive" practices, has called for a questioning of practices around psycho-educational assessment and intervention (Department of Education, 2001). In various countries, including South Africa, provision for special needs has been anchored in the notion of exclusion, i.e. those who were considered unable to function in a

mainstream educational setting were excluded from it and were provided with other forms of education and treatments (Harcombe in Engelbrecht & Green, 2001). However, additional knowledge, research, practice and changing political and social norms began to accumulate. The concept of inclusion thus came to be considered more democratic and applicable than the concept of exclusion, when applied to the child's social and educational environment. In addition, South Africa has embraced the notion of inclusion at policy level, which seems highly appropriate because of its previously exclusive and undemocratic past (Harcombe in Engelbrecht & Green, 2001). However, this not only has considerable implications for education, but also for assessment and support within a South African context (Department of Education, 2001).

Since research (Spann, 2005; Harcombe, 2003; Donald in Engelbrecht, Green & Naiker, 1999) suggests that the majority of South African children experience fairly negative contextual factors which largely interfere with scholastic and emotional development, it is obvious that we need to look more carefully at how we assess and support our children (Harcombe, 2003). In addition, the implementation of inclusion within the South African education context challenges teachers, schools, parents and professionals to change the way they view educational and emotional development. Inclusion theory posits the notion that every child can learn and that children who experience barriers to learning can positively benefit from regular classroom placement as long as the environment is adaptive and accommodative of the learner and his or her needs (Engelbrecht, Green, Naiker and Engelbrecht, 1999). This principle is in opposition to forms of educational segregation where many learners with special needs were placed in special education schools.

Before the South African Education White Paper 6 (Department of Education, 2001) mandated inclusive education as a policy in South Africa, education was largely delivered to the advantaged sections of the population through the modes of mainstreaming and special education (Engelbrecht, et al., 1999). Assessments used for exclusive education were largely based on a psycho-medical model in order to diagnose, categorise and place learners with disabilities into the various forms of special education available (Department of Education, 2001; Van Rooyen, Le Grange & Newmark, 2002).

The categorisation system also often only allowed access to support programmes for those learners with diagnosed medical, physiological and neurological disabilities thereby excluding learners who experienced learning difficulties because of severe poverty and other contextual factors (Van Rooyen, et al., 2002). The impact of such racially discriminatory practices in South Africa for example, meant that only approximately twenty percent of learners with learning difficulties were allowed access to special education and educational support, leaving the majority of the population who experienced barriers to learning unsupported (Department of Education, 2001).

Prior to inclusive education, the approach that would have been used with Matthew would have been based on this categorisation system, which is underpinned by the psycho-medical model. This model traditionally treats the child individually, as an isolated entity, drawing on very little collaboration with the child, family, practitioners and organisations with which they interact. The following section reviews the assessment and intervention procedures that were usually practiced from a medical standpoint, and provides an analysis and critique of the underpinning theory of the medical model.

4. Assessment from a psycho-medical stance

Traditionally, the psycho-medical model has been used as a framework for assessment and intervention. It will be explained how it was and often still is used. Ultimately, both the positive and negative aspects of using this standpoint will be critically discussed with the aim of highlighting the need for an alternative approach within a South African context.

Such assessment procedures ultimately aim to analyse the child in terms of cognitive, academic and emotional achievement. The main thrust of this process is intelligence testing, which aims to understand the child's cognitive functioning, in order to ascertain if the child is 'capable' of learning. Further assessment procedures, known as projective testing, focuses on the child's emotional well-being. In some cases, temperament is also used to understand the child's development. Additional standardised testing which focuses on the child's current academic performance is also used.

Based on these largely standardised assessment findings, patients were categorised and labelled as being learning disabled, as having Attention Deficit Hyperactivity Disorder, as being dyslexic and so forth, highlighting within-person/internal factors, such as psycho-dynamic conflicts, 'minimal brain dysfunction', and biological antecedents (Snyder & Lopez, 2005). As previously mentioned, such categorisation depended largely on intelligence testing, which has for many years been common practice in assessment. Such assessment practices tended to emphasise terms like symptoms, disorders, pathologies, illnesses, diagnoses, treatments, doctors, patients, clinics and clinicians, all of which emphasise abnormality, maladjustment and sickness.

Through this model, the locus of human adjustment and maladjustment is largely viewed as being caused by biological characteristics. Finally, these terms portray the people who are seeking help as passive victims of intra-psychic and biological forces beyond their direct control who therefore should be passive recipients of an expert's cure (Snyder & Lopez, 2005).

a. Research on intelligence tests

A considerable number of studies have been conducted globally regarding the use of intelligence testing for assessing and categorising intellectual ability, all emphasising the validity of such measures (Pfeiffer, Reddy, Kletzel, Schmelzer & Boyer, 2000; Naglieri, 2005; Robinson and Harrison, 2005). However, when scrutinised, these studies reveal that many other contextual factors that could predict differences in development and learning are usually not examined.

In addition, some studies have provided considerable evidence that strongly queried the usage of intelligence quotient (IQ) scores alone in determining the causes for cognitive and scholastic differences (Velluntino, Scanlon, Lyon, 2000; D'Angiulli & Siegel, 2003; Donovan & Cross, 2002). These researchers argue that performance on intelligence tests alone is an ineffective predictor in the identification of learning and developmental difficulties. Furthermore, they argue that such testing procedures are

culturally biased, as certain cultural groups are disadvantaged due to the nature of the tests.

Other studies found that other causes of learning and developmental difficulties, such as inadequate learning opportunities and the development of reasonable motivation for learning, were stronger predictors of learning and developmental problems than IQ scores (Shuttleworth-Edwards, Kemp, Rust, Muirhead, Hartman & Radloff, 2004; Coffey & Orbringer, 2000; Gunderson and Siegel, 2001). Finally, Fagan (2000), Espy (2001), and Lawlor, Najman, Batty, O'Callaghan, Williams and Bor (2006) argue that factors such as parental education, income and other indices of socio-economic status, predict academic achievement as well as intelligence scores, which once again suggests that using intelligence test scores alone is not an appropriate practice.

Critics of traditional modes of assessment also included humanistic psychologists, who attacked standardised assessments on ethical grounds, arguing that the reliance on standardised information is dehumanizing and counter-therapeutic (Weiner, 1972).

b. <u>Projective test research</u>

Another form of testing that is traditionally used in medical-model assessments is projective testing, which is based on the notion that the examinee may reveal significant mental content without being aware that he or she is doing so. However, researchers became increasingly dissatisfied with projective testing as findings of studies indicated that the outcomes of these tests could be misinterpreted, were inconsistent and could not be used cross-culturally (Howes, 1981).

Due to various developments in psychology and psychiatry as well as changes in society at large, increasing scepticism toward projective tests was part of an overall change in attitude toward psychological assessment (Weiner, 1972). The anti-psychiatry views of Lang (1992) held that society was the cause of individuals' psychological difficulties, and that mental illness resided not in the individual, but in repressive social structures. From this point of view, the psychological testing of an individual was considered not only irrelevant, but also harmful, since it maintained the illusion that the problem lies within the individual.

Cronbach's (1951) publications on statistical methods for establishing test reliability, and Cronbach and Meehl's (1955) description of types of test validity also exerted a considerable influence on test development. Projective tests were attacked for their lack of reliability or validity (Anastasi, 1968; Jensen, 1959; Meehl, 1959), and the use of such methods to psycho-diagnose children was rejected vehemently (Anastasi, 1968). Projective testing was thus seriously affected by these developments.

c. Testing and categorisation

In summary, it is clear from the evidence cited that for many reasons a considerable number of researchers and theorists are dissatisfied with using a psycho-medical model for assessing learning and emotional difficulties. In addition, many critics have also expressed dissatisfaction with using the categories that are traditionally applied based on psychometric results (Wedell, 2003; Snyder & Lopez, 2005). For example, Wedell (2003) argues that children diagnosed with a category are just as similar as they are different, and need to be treated individually. Research (Snyder & Lopez, 2005) highlights that current over-reliance on test findings frequently results in highly unreliable and invalid data being used when making decisions about diagnostic classifications of intelligence and temperament. One particular aspect of research cited in Snyder and Lopez (2005), suggests that the misapplication of categories can be damaging to children and their families. It may also possibly prevent the implementation of meaningful interventions that could assist children with their learning and development, especially due to the question of the validity of such categories and the extent to which they serve the goals of those who categorise (Snyder & Lopez, 2005). In addition, Snyder and Lopez comment that all systems of classification are arbitrary and are social constructions that are only more or less useful (Snyder & Lopez, 2005, p.15).

Other theorists argue that labelling a child according to a specific category may send the message to the child that he or she is inferior, which in turn can adversely affect the child's self esteem (Ormrod, 2006). The label begins to become part of the child and significant people within the child's life will begin to treat them in ways which may be detrimental to his or her development (Donald, Lazarus & Lolwana, 1997), as he or she are often viewed through the lens of the label, thereby obliterating his or her other excellent qualities and strengths.

Considerable evidence has been presented that shows dissatisfaction with current standardised assessment procedures as well as dissatisfaction with the psycho-medical model that underpins it. In addition, some evidence suggests that using more comprehensive frameworks to underpin the assessment and intervention process may provide a more valid and ethical model. However, before such a model is discussed, studies that examine the efficacy and relevance of the traditional interventions that stem from psycho-medical models will be reviewed.

Before interventions are discussed, a description of the process of a psycho-medical assessment will be applied to the case study in order to provide additional evidence in critiquing traditional, standardised assessment procedures.

5. Case study: Psycho-medical assessment

If Matthew had been assessed using a psycho-medical model, the procedures would probably have been as follows:

a. Initial interview

Matthew's parents would have been interviewed in Matthew's absence. During this interview, Matthew's "problems" would have been discussed and relevant information about Matthew's history would have been collected. Such information would have focused on what was wrong with Matthew, but would not focus on Matthew's current environmental situation – just on his history of emotional and academic problems. With Matthew not being present, his perspective of the situation would not have been considered, and therefore the only source of information would be the perceptions of the interviewer of what the parents presented. The interviewer would furthermore not have an opportunity to observe the family dynamics, nor would Matthew's teachers have been contacted or interviewed in order to understand Matthew's current learning in the classroom situation.

b. Standardised testing

After the initial interview, Matthew would have been assessed using a battery of tests consisting of standardised cognitive and educational tests, along with some projective testing. The results from such an assessment would have focused mainly on delineating Matthew's intrinsic difficulties, which would have formed the basis of any relevant diagnostic categories. All this would have been done without considering any contextual factors that may have impacted on Matthew's cognitive, emotional and scholastic functioning. In effect, the 'expert' would have labelled Matthew according to his "problems".

c. Feedback

This 'expert' understanding and opinion would be collated into a report whereby the child's intelligence quotient (IQ) would be defined (the actual scores often reported), his current scholastic level stated and emotional functioning highlighted. This information would be given to the parents and the 'expert' would recommend the interventions.

6. Interventions from a psycho-medical model of assessment

It will be helpful at this stage to highlight and analyse what the literature says about interventions based solely on the medical model framework. The interventions normally used and which will be examined include what was known (and sometimes still is known) as remedial education as well as individual psychotherapy. These interventions are individualistic, i.e. they only treat the diagnosed patient.

a. Medical model interventions: Remedial therapy

Remedial approaches were characteristically used by those oriented to intervening and addressing underlying learning difficulties from the psycho-medical model. Those who pursue this orientation to learning and developmental differences attempt to address a range of developmental disabilities that are perceived to disrupt learning. However, some research indicates that the notion of focusing exclusively on the child

is flawed (Quirk & Schwanenflugel, 2004; Torgesen, Alexander, Wagner, Rasholte, Voeller, & Conway, 2001; Chia-hua, 2006).

The results of most of these studies show that diagnostic prescriptive instruction (a medical approach that aims to remediate intrinsic disabilities) may have some positive influences, but there is no clear indication from these studies that the use of prescriptive remediation based on a medical model diagnosis brings about a significant increase in scholastic achievement. In fact, it can therefore be questioned from the research cited that if such remediation does not bring about increased achievement, then perhaps it may be detrimental to the child's development, as alternative means could have been utilised to bring about change.

One such study investigated the feasibility and effectiveness of a Multi-Stage Dynamic Assessment (MSDA) model applied to develop alternative remedial instruction models (Chia-hua, 2006). Three groups were the focus of this study; the first group was mediated by multi-session dynamic assessment focussing on the participant's environment and allowing for collaborative consultation. This dynamic assessment group was part of the remediation process, and learners were active participants in their own learning. The second group was given direct instruction that followed a more psycho-medical 'exclusive' remedial model, the learners only passively participating in the learning process. The third group focused on self-practice. Thereafter, all three groups participated in post-testing. Only the dynamic assessment group showed significant improvement, highlighting the inadequacy of direct instruction, which is prominent in traditional remedial practice (Chia-hua, 2006). Chia-hua (2006) deduced from the findings of the study that the reason for such inadequacy is because remedial practices focus on what is wrong with the child, with the aim of fixing the child. He hypothesised that this occurs with direct instruction, where the teacher is the sole participant and the child the passive recipient of knowledge. A need to view the child as part of the process is therefore considered to be far more important (Chia-hua, 2006).

b. Medical model interventions: Psychodynamic psychotherapy

As mentioned earlier, the medical model operates from the premise that a biological cause exists for pathology in children with emotional and scholastic problems. According to this model, these problems may result in a child becoming maladjusted due to psychopathology. It is necessary at this stage to explore the role psychotherapy plays when using a psycho-medical framework. This view defines pathology as the scientific study of mental disorders, which should be treated by an expert (Hook, Watts & Cockcraft, 2002). The goal of the treatment is to promote the development of a well-adjusted personality so that the child can function "normally" in a "normal environment".

Since the late 1970's, strong criticisms have been raised against the medical model of psychopathology. As mentioned earlier, even though anxiety could be defined from both a psychodynamic framework as well as from a behavioural one, both emphasise the need to fix the deficit within the child through their specific therapy (Hook, et al., 2002). According to this view, Matthew's anxiety would be described as an inner-psychic conflict, without considering the effect that his parents' actions, amongst other things, may have had on his emotional development (Harcombe, 2003).

Tramontana (1981) described and critically evaluated studies published largely from 1967 through to 1977, which involved individual, group, and family therapy. The greater weight of available evidence on adolescents does point toward the superiority of psychotherapy over a no-therapy condition. However, additional reviews of literature were conducted by the American Psychological Association (APA) and Grunebaum (1975) and explored the effectiveness of psychotherapy with regards to group dynamics, the characteristics of the client and the therapist that promote or hinder a successful outcome, as well as issues around group cohesiveness and composition, the therapist's behavioural characteristics, and the patient's sociological characteristics. It was found that all these factors are implicated in therapeutic success (Grunebaum, 1975), thus suggesting that many factors other than individual psychodynamic therapy contribute to psychological wellness.

7. Case study: Interventions from a medical model stance

It would now be relevant to refer to Matthew's case once more. As highlighted earlier, the assessment procedure (the initial interview, standardised testing and feedback report) would have informed a specific course of action. Interventions that traditionally could have been instituted following such an assessment are briefly highlighted in the next section:

a. Cognitive and academic interventions

Matthew's IQ scores and standardised reading scores, which in isolation and without reference to prior inadequate social mediation, would have been significantly low. Such scores would have placed Matthew in a learning disorder category which would have required him to be integrated into a special education environment as he would have been deemed unfit for "normal" school. Such a school would be deemed fit as Matthew would be with children with the same category of learning disorder. This school would claim to deal with Matthew's "problems".

b. Emotional interventions

Emotional projective testing would have revealed Matthew to be inhibited, withdrawn and he probably would have been diagnosed with a mental disorder from the DSM - IV- TR. This diagnosis would have placed Matthew in the category of an anxiety disorder, highlighting his social phobia. Therefore, psychotherapy would have been prescribed for Matthew so as to "fix" his emotional instability of withdrawal and anxiety. As a biological basis would have been the premise of such a psychological diagnosis, an anti-anxiety medication would likely have been deemed necessary to adjust the biological response to social situations.

Matthew's parents would probably not have been considered for treatment in this process, as a huge focus would be placed on fixing and remediating Matthew to a state that would be regarded as socially acceptable.

In actuality, an alternative approach was used with regard to understanding Matthew's difficulties, which affected the consequent interventions. This constructivist, ecosystemic approach is discussed in the section to follow.

8. A constructivist ecosystemic approach to development, assessment and intervention

a. Post-modern philosophy

The constructivist ecosystemic model, in contrast to the psycho-medical model, is primarily based on post-modern philosophy. This philosophy denies the possibility of objective knowledge in the real world. Post-modernists argue that the notion of truth is a contrived illusion, misused by people and special interest groups to gain power over others (Harvey, 1990). According to post-modern thinking, truth and error are synonymous. Facts, post-modernists claim, are too limiting to determine anything (Harvey, 1990). According to post-modernism, the "therapist's" views are just as culture-bound as the "patient's", and therefore the "therapist" can claim no interpretation superior to the "patient's". The therapist never tries to "correct" the client's story or "narrative" by comparing it to any standard of "truth" (Harvey, 1990).

Karl Marx's theories as well as other sociological approaches had a profound impact on thinking in this area. Marx recognised the great effect that economic, social and political forces have on individuals (Ridener, 2000). In this way, theorists began to think about the influence political and socio-economic structures may have on other systems of which the developing child is a part (Harvey, 1990).

When using this philosophical stance, and when considering some of the literature reviewed that suggests that psycho-medical model assessment and interventions lack validity, it becomes clear that a theoretical underpinning that takes various factors into consideration, is essential. Factors such as the socio-economic environment, interpersonal support and intrapersonal characteristics are important when analysing a child's developmental needs, as they provide a comprehensive understanding of the various interacting variables that contribute to optimal development.

It is argued that a constructivist, ecosystemic framework, which is based on post-modern philosophy, will better fulfil the requirements of understanding Matthew's level of development, as well as providing him with relevant support. The aim of the argument will be to highlight that a study of this approach to assessment and support delivery is urgently required. Since constructivism underpins this approach, this theory will be discussed first.

b. Social constructivism

Constructivism is the main underpinning of the constructivist, ecosystemic approach. Piaget (Hruby, 2001) was the first theorist in modern times to bring the notion of how we construct our concepts of the world in our heads through experience. Therefore, people coming from a uniquely different place construct a different understanding of their worlds (Hruby, 2001). Vygotsky (1987) elaborated further on this notion, highlighting the need for mediation by more able others in order for optimal development to occur. For example, from this viewpoint, learning is conceptualised as being a process in which knowledge is constructed by, for and between members of an indirectly mediated community (Hruby, 2001). According to this view, therefore, inadequate development is not considered the fault of the child but rather lies with the child's environment and the inadequate mediation the child received (Vygotsky, 1987; Feuerstein & Rand, 1974).

However, when understanding a child, we cannot fully ignore the intrinsic, genetically determined, biological characteristics that exist. These differences and interpersonal components such as mediation cannot be divorced from each other. According to Vygotsky, a zone of proximal development (ZPD) exists, whereby the child's innate capabilities are highlighted. The mediator needs to be aware of the quality of mediation required with regard to the child's zone of proximal development in order to facilitate optimal development (Hruby, 2001). In other words, various forms of interpersonal support can achieve the potential of individual differences. This notion totally invalidates the use of standardised scores of any kind as a measure of potential.

An interesting study recently proved the efficacy of a constructivist curriculum in Israel, which showed significant increases in scientific thinking and knowledge by the experimental group over the control group (Schur, Skuy, Zietsman & Fridjhon, 2002).

This study focused on providing the mediation needed to achieve optimal growth of the experimental group's scientific thinking and knowledge, that is, achieve their potential in that area.

c. Constructivist ecosystemic frameworks

Constructivism can also be applied to understanding development in all its complexity. A particularly helpful framework for understanding development based on social constructivism has been developed over the years by many theorists, in which systems theory has been integrated for easier understanding (Adelman & Taylor, 1979; Harcombe, 2003). In other words, all development is conceptualised as being caused by the interactions between political, societal, economic, school, home and individual systems. When such a framework is used to understand children's development, it becomes clear that any learning and emotional developmental difficulties the child experience, are due more to the dysfunctional interactions between the various systems (home, school and the wider politico-socio-economic spheres) in which the child is embedded and with which the child interacts (Adelman & Taylor, 1992; Harcombe in Engelbrecht & Green, 2001; Edmondson, 2002; Harcombe, 2003), than being solely due to the child's individual differences.

In this research report, the constructivist, ecosystemic framework developed by Harcombe (1993; 2003) is used. This conceptualisation has been used for training, assessment and research purposes for many years in the university, and experience and some study data has shown that it is highly effective in helping students and other participants, such as teachers and parents, to move from a medical–model understanding to a constructivist understanding of human development (Blumenthal, 2007; Harcombe, 2003).

d. Ecosystemic approaches and the South African context

Applying constructivist, ecosystemic approaches to assessment and support procedures is more likely to provide valid understanding and support in South Africa for many reasons. For example, South Africa's political history has caused many families to be separated and many cultures to be devalued by society, causing many people to have been denied sufficient mediation from able adults and peers, generally

resulting in inadequate cognitive development in our children and youth (Schur, et al., 2002; Harcombe in Engelbrecht et al., 2001; Edmondson, 2002). In addition, poverty, oppression and discrimination meant that the majority were denied the experience that helps to build knowledge and problem solving skills (Engelbrecht, Green, Naicker, & Engelbrecht, 1999).

Furthermore, until 1994, the education system provided by the governing party was not equitable for all races, nor was there any provision for the support of the majority of children and youth who experienced barriers to learning (Department of Education, 2002). Finally, the education system was and still is largely built on the transmission method of teaching and learning, which has also delayed the cognitive and emotional development of many children and youth (Harcombe, 2003).

The reasons cited above show the necessity of using a constructivist, ecosystemic approach to assessment in South Africa particularly, as this approach enables practitioners to be aware of the inequitable contextual factors that have been detrimental to the development of many children.

In the following sections of this literature review, selected research is presented in order to give a brief overview of some evidence that provides additional support to the notion of using an ecosystemic approach when understanding development in general, and assessment and support provision in particular. The research deals mainly with the construct of temperament, which shows how one particular genetic, biological construct can influence the interactions between people so considerably that the quality of interpersonal relations is affected.

e. Ecosystemic frameworks and interpersonal support

A considerable body of research indicates that it is very likely that a child's genetic potential will be severely compromised on a developmental and therefore emotional and cognitive level if a child's temperament is not adequately accommodated by the adults and more able peers he or she interacts with (Thomas & Chess, 1977 in Rothbart, 2004; Farbach, 2006; Thomas, Chess & Birch, 1968; Keogh, 2003; Teglasi, 1998; Ghazinour, Richter, Emami & Eisemann, 2003; Lytton, 1990 in Sanson,

Hemphill & Smart, 2004; Donald in Engelbrecht, et al,1999; Harcombe, 2003; Harcombe, 1993; De Vries, 1984 in Strelau, 1998; Lerner, 1986 in Sanson, et al., 2004; Talwar, Nitz & Lerner,1990 in Sanson, et al., 2004; Burrows, Horton & Oakland, 1997; Guerin, Gottfried, Oliver & Thomas, 1994 in Sanson, et al., 2004; Carson & Bitner,1994; Rubin, Coplan, Fox & Calkins, 1995 in Sanson, et al., 2004; Smith & Prior,1995 in Sanson, et al., 2004; Werner & Smith, 1982 in Sanson, et al., 2004; Hagekull, 1994 in Sanson, et al., 2004; Katainen, Räeikköenen & Keltikangas-Järvinen, 1999 in Sanson, et al., 2004; Eisenberg, Fabes, Bernzweig, Karbon, Poulon, & Hanish, 1993 in Sanson, et al., 2004; Eisenberg, et al., 1993; Windle, 1990; Chen, Rubin & Li, 1995 in Sanson, et al., 2004; Skarpness & Carson, 1986 in Sanson, et al., 2004). Since temperament has been found to have such an effect on systemic interactions, some research regarding temperament itself is reviewed in the next section.

For many years, the notion of temperament has been studied from a psycho-medical perspective since it has largely been understood as having a biological basis. Due to this stance, temperament research became increasingly more experimental and physiological in nature (Farbach, 2006). Pavlov's laboratory studies were influential in indicating the role that the central nervous system (CNS) played in temperament (Pavlov in Hergenhahn, 1992). Other researchers concluded that temperament was inborn and stable (Ivanov-Smolensky, 1935; Teplov, 1964). Over the years, the view that temperament is biological and genetic has continued to receive considerable research attention, and many theorists posit that there is sufficient evidence to confirm this notion (Allport, 1937; Diamond, 1957; Thomas & Chess, 1977; Buss & Plomin, 1975; Rusalov, 1985).

However, in the 1970s, Thomas and Chess expanded their studies and examined the interactions between the individual's temperament and his or her environment (Thomas & Chess, 1977 in Rothbart, 2004). This meant that as researchers applied constructivist principles to the study of temperament, findings increasingly led to a growing agreement that temperament research regarding children needed to be understood from an ecosystemic approach. An example of such studies includes Thomas and Chess's landmark research (Thomas, Chess & Birch, 1968), which gave considerable insight into the role that temperament plays in child development. The findings of this study emphasised the view that the environment and temperament are

not independent entities, but rather that they interact and have the possibility to modify each other (Thomas, Chess & Birch, 1968). In other words, as any individual characteristic such as temperament, ability and motivation interact with influences and people in the individual's context, various outcomes occurred during the course of development, which were due to the quality of these interactions (Thomas, Chess & Birch, 1968, p. 182).

Thomas and Chess's revolutionary efforts led to the additional developmental notion of 'goodness of fit' (Keogh, 2003; Harcombe, 2003; Farbach, 2006). Goodness of fit refers to the match achieved between environmental demands and the individual's ability and characteristics, which may lead to positive or negative behavioural and/or developmental outcomes which can contribute to optimal or delayed development (Keogh, 2003, in Farbach 2006). These findings provide additional support for the use of an ecosystemic model when understanding development (Thomas, Chess & Birch, 1968; Keogh, 2003 in Farbach, 2006). Goodness of fit findings are also viewed as having implications for various psychological and educational interventions (Teglasi, 1998; Keogh, 2003).

The interactions between temperamental characteristics and various environmental influences have been particularly linked to interpersonal support, namely to the quality of interactions between the developing child and those more able adults and young people in the child's environmental niche. For example, some studies have shown how temperamental differences can affect parenting styles, thereby affecting social development (Ghazinour, Richter, Emami & Eisemann, 2003; Lytton, 1990 in Sanson, et al., 2004), while other studies examined the link between temperament and peer relationships (Chen, Rubin and Li, 1995 in Sanson et al., 2004; Skarpness & Carson, 1986 in Sanson et al., 2004).

Also linked to the interactions between temperament and environmental influences are social inhibition and delinquency (Eisenberg, Fabes, Bernzweig, Karbon, Poulon, & Hanish, 1993 in Sanson, et al., 2004; Fabes, et al., 1999; Windle, 1990). Researchers have also demonstrated links between early childhood temperament, environmental variables and later adjustment problems in adolescence (Hagekull, 1994 in Sanson, et al., 2004; Katainen, Räeikköenen & Keltikangas-Järvinen, 1999 in Sanson, et al., 2004). Children's coping abilities, resilience and their response to stress

have also been noted as being dependent on interactions between temperament and environmental influences (Carson & Bitner, 1994; Harcombe, 1993; Rubin, Coplan, Fox & Calkins, 1995 in Sanson, et al., 2004; Smith & Prior, 1995 in Sanson, et al., 2004; Werner & Smith, 1982 in Sanson, et al., 2004).

Important to this study are the links that have been made between temperamental interactions and the development of cognition (Harcombe, 1993). In other words, the interaction between adults' and learners' temperamental styles can affect the quality of mediation and support offered, which a limited study has shown can deter or promote cognitive development (Harcombe, 1993). In addition, interactive temperament research in education has focused mainly on exploring temperament interactions with academic achievement, some of which included a goodness of fit emphasis (Burrows, Horton & Oakland, 1997; Guerin, Gottfried, Oliver & Thomas, 1994 in Sanson, et al., 2004; Harcombe, 1993). Findings from these studies suggested that perceived positive temperamental styles influence the teachers' evaluations of academic achievement.

Finally, using temperament styles as a basis for academic instructional approaches, a few studies have shown positive findings (Barklay, 1983 in Sanson, et al., 2004; Keogh & Burnstein, 1988 in Sanson, et al., 2004; Orth & Martin, 1994 in Sanson, et al., 2004).

The wider social context, cultural variables, social economic status, gender and other group differences have also been found to affect development from a temperamental stance. For example, De Vries's research (1984 in Strelau, 1998) on temperament and infant mortality rates during a famine among the Masai in East Africa, is a well known example of how different temperament characteristics are valued in some contexts but not in others.

f. Ecosystemic frameworks and distress symptoms

The arguments presented show that when one moves from a positivist view to a constructivist one, the focus shifts from a problem or deficit being within the child; for example, low intelligence and intra-psychic anxiety and static personality traits, to understanding how barriers to learning and development stem from environmental

interactions. Such dysfunctional systemic interactions are often called poorness of fit (Donald in Engelbrecht, Green, Naicker and Engelbrecht, 1999; Harcombe in Engelbrecht & Green, 2001; Harcombe, 2003). When poorness of fit is evident; children develop many different kinds of behaviours that are indicative of their distress (Harcombe, 2003).

The more extreme the distress; the more extreme the symptoms appear to be (Harcombe in Engelbrecht & Green, 2001). From this point of view, symptoms of distress are termed as being challenging behaviours as opposed to placing symptoms into categories such as Generalized Anxiety Disorder and Learning Disorder. Instead of categorising the child as sick, these clusters of challenging behaviours are used as a method of determining the level of distress the child is experiencing. In this way, the behaviours are seen as the result of distress caused by dysfunctional systemic interactions, not as disease (Harcombe in Engelbrecht & Green, 2001). The treatment would then include interventions aimed at the improving the various systems interactions, which should reinstate a goodness of fit for the child and therefore eliminate much of the distress (Harcombe in Engelbrecht & Green, 2001). It must be noted here that using the ecosystemic model to underpin assessment and the support services does not imply that some persons may not have genetically based neurological/psychiatric disorders, but rather posits that some of these diseases may not manifest or may be optimally controlled with positive systemic interactions.

9. A constructivist ecosystemic view of assessment

Many theorists and practitioners consider constructivist approaches to assessment procedures and support delivery to be theoretically appropriate for use in any country (Sattler, 1982). However, due to the past and due to residual political and socio-economic disadvantages in South Africa, it is argued that this approach is especially suitable in the South African context. Using this framework ensures that maladaptive systems are identified and that thereafter, support is offered in order to institute more adaptive and supportive systemic interactions. Further, since South Africa's current education reform (inclusive education) requires that all children should be afforded equal rights to a quality education and should be protected from discrimination and inequity (Department of Education, 2001), it is clear that an assessment and

intervention approach is required to enable all parties to take responsibility and to request support in order to facilitate optimal development in a non-discriminatory fashion.

a. Ecosystemic assessment: The Initial Assessment and Consultation (IAC) approach

In the 1970's, due to dissatisfaction with medical model assessment procedures, an alternative, ecosystemic model to assessment called the Initial Assessment and Consultation (IAC) was developed by Adelman and Taylor (1979). The IAC approach offers a more interactive and empowering option than traditional assessment, transcending the bounds of the medical model, but not entirely excluding it (Amod, 2003). Instead of focusing only on the child's individual characteristics, as is done with medical model approaches to assessment, Adelman and Taylor's (1979) proposition of an alternative assessment approach highlights that assessment activity should be seen as the generation and evaluation of alternatives for the solutions of problems, once the interacting systems have been carefully understood. This "assessment through consultation approach" (Amod, 2003, p.5) aims at a joint understanding of the nature and causes of problems by the consultant, the family and where appropriate, the teacher.

The effectiveness of such an assessment procedure is evident in a study conducted by Amod, Skuy, Sonderup and Fridjhon (2000). Of particular importance were the findings that the IAC is an effective psycho-educational assessment approach across cultural groups within the client population of the university (Amod, 2003). The findings of this study showed that the effectiveness of the IAC is due to the active involvement of clients in choice and decision-making, based on an in-depth understanding of systemic interactions which creates a sense of self determination, ownership and competence with reference to any change processes in which they are involved (Adelman & Taylor, 1979; Kriegler & Skuy, 1996).

Other research conducted on the use of the IAC in South Africa in particular (Amod, 2003; Dangor, 1983; Skuy, et al, 1986; Sonderup, 1998) provides evidence that challenges the use of a psycho-medical model within a South African context, but does not exclude it in its entirety. Amod, (2003) highlights that the basic principles of active participation, self determination, joint decision making and a holistic and

systemic framework within the IAC are true to the values of transparency and democracy mandated in South African policies.

It is interesting to note that, apart form the IAC research, a broad survey of recent literature only revealed minimal studies which used ecosystemic thinking to underpin assessment procedures for determining the causes of learning and developmental delays. In fact, apart from the IAC studies, only one study was found in which this theory was applied to assessing behavioural differences, though this study was not related to learning *per se* (Tyler & Jones, 2000). This study utilised a program that trained educators to assess and understand how chronic behavioural problems occur as part of a dynamic, interactive process between the child and his or her environment. The findings indicated that although most teachers found the theoretical ideas difficult to understand, they obtained a practical knowledge of analysing and understanding ecosystemic interactions, which helped the respondents to show behavioural and learning improvements (Tyler & Jones, 2000).

It is concerning to note that there is such a dearth of studies using constructivist, ecosystemic thinking in relation to assessing learning and development, especially in relation to learning differences/disability. This means that children with learning problems are still, world around, largely being diagnosed using medical model instruments, such as IQ tests. As a result of this many learners are being relegated inappropriately to special educational settings and many of the underlying causes of learners' developmental and learning delays, such as inadequate education, poor socio-economic conditions, inadequate parenting and teaching, and inadequate resources, are not being addressed (Engelbrecht, et al., 1999).

The IAC assessment process has been used for many years at the university, with good results, as the research reviewed above has documented. The same assessment process was used with Matthew, in order to understand Matthew's challenging behaviour ecosystemically which would includes an understanding of how Matthew's history, socio-economic background, and the socio-political structures he has been exposed to, as well as his intrapersonal characteristics and the interpersonal support he experienced, have all interacted together to promote or hinder his development. In the next section, an explanation of the IAC assessment process follows as well as a

description of the ecosystemic interactions that promoted and hindered Matthew's development.

10. Case study: ecosystemic assessment (IAC)

An explanation of the IAC assessment process in relation to Matthew follows:

a. Initial assessment

The parents initiated the process by calling the clinic. They were invited to an initial family consultation, after filling in a Parent Questionnaire. The Parent Questionnaire provided information about Matthew's developmental milestones, strengths, interests, family history, school history and a brief description of current concerns. This information was used to inform the assessors of the situation prior to the initial interview. Those present at the initial interview were Matthew, his parents, his sister and step-brother.

The initial interview, which incorporated a problem-solving process, was initially undertaken to determine relevant strengths, interests and concerns, as well as relevant family, school, socio-economic and other systemic information. The family, including Matthew, were regarded as the experts, and provided detailed accounts of the current issues and concerns and a description of any relevant background information. Overall, the initial assessment procedure was used to gain a better understanding of Matthew's history, socio-economic background, socio-political structures, intrapersonal characteristics and interpersonal support, as well as the quality of the systemic interactions.

The outcome of this initial assessment phase provided a glimpse into Matthew's emotionally deprived history and previously privileged socio-economic background with access to many socio-political advantages. These were all presented at the beginning of this research report. Please refer to page 1 – 3. Regarding his temperament, both parents felt that Matthew struggled to concentrate, was easily distracted, and had difficulty forming relationships. They perceived him as extremely shy and anxious. They also felt that he became easily frustrated and thought that he was generally an unhappy child.

The above-mentioned history provided by the family allowed the assessors to begin to hypothesise about the quality of the interpersonal support Matthew had received from infancy through to the present. They could begin to formulate that his parents, overwhelmed by personal, relationship and financial issues, could not have provided Matthew with good quality emotional and cognitive support.

The family input also allowed the assessors to explore Matthew's issues at school, highlighting that his previous teacher had been supportive as she was equipped with knowledge to accommodate Matthew within the classroom. Matthew's parents felt that this teacher had understood Matthew very well. They highlighted that his teacher at the time of the interview, seemed to "miss" Matthew most of the time, and did not seem to give him enough personal attention. They felt this to be an issue. They highlighted concerns pertaining to his academic progress, as this seemed to be aggravating his extreme anxiety and withdrawal.

b. <u>Further assessment</u>

After the initial consultation, an ecosystemic assessment ensued, which began with collecting additional systemic information from the following sources:

(i) School investigation

This included a school visit and contact with the teacher, whereby the assessment trainee undertook school and classroom observation. School reports and copies of schoolwork were obtained. This investigation provided valuable information. On the whole, the school observation was conducted to gain information about Matthew's teacher's view of his intrapersonal characteristics, the quality of the interpersonal support he experienced at school, as well as the quality of his school work and the school's curriculum.

The teacher provided information about Matthew's temperament, which was in accordance with the perception of Matthew's parents. It was however observed that the teacher was teaching Matthew in direct opposition to what he needed. It was observed that the time given to complete a task restricted and pressurised Matthew.

There were very little breaks and it was observed that Matthew would need to remain seated for long periods of time. This proved to be difficult for Matthew, as he tended to become tired easily, losing concentration and becoming distracted. The high noise levels within the classroom did not seem to aid Matthew in any way. The teacher's loud pitch was in contrast to Matthew's meek and withdrawn approach. It was also evident that Matthew had very limited interpersonal support from his peers, preferring to do activities alone, while other children were found to be chatting away enthusiastically.

(ii) Formal assessment

A battery of standardised tests was used in this section of the assessment process. However, it must be noted that the standardised scores were not reported anywhere. This lasted approximately six hours and contained the following assessments: emotional, cognitive and educational, part of which was quantitative and part of which was dynamic and criterion-referenced. The results were integrated and an ecosystemic understanding of the child's development and learning was obtained.

Matthew's performance on the standardised intelligence test indicated that his verbal expression and vocabulary were an area of relative strength. On the other hand, his general knowledge scored below average. Scores also suggested that Matthew's visual processing and visual-spatial conceptualisation were significantly weak areas that need to be further developed. His psycho-motor speed was also found to be very slow, perhaps indicating why Matthew takes longer periods of time to complete tasks. Some of these cognitive differences were described as being due to inadequate successive processing. However, dynamic assessment indicated that he was a very intelligent boy, who just needed mediation to develop his excellent potential.

Academically, the criterion referenced educational battery of assessments revealed that Matthew was performing well below his grade level in most areas of literacy skills, though his comprehension of what he read was adequate, though still a little below average. It was noted that his successive processing difficulty was interfering with the acquiring of some literacy skills, such as word recognition, phonetic analysis/synthesis and literacy conventions such as spelling and punctuation. It was

also noted that he did not use many meta-cognitive strategies to help himself with his thinking and with literacy and numeracy tasks.

Emotionally, the assessment confirmed that Matthew evidenced considerable anxiety in general and performance anxiety in particular. In addition, his self-esteem seemed low. His temperament appeared to be at least average on task-orientation (though his anxiety on occasion would make it appear as if he could not concentrate); his personal social flexibility appeared to be low average, that is he took time to adapt to new situations, tasks, people etc; and he was quite intense and reactive. A temperament such as Matthew's is not usually understood too well, so poorness of fit can sometimes develop, such as with his current teacher.

c. Overall understanding of Matthew's development provided by the IAC

When considering and understanding Matthew from an ecosystemic viewpoint, based on an in-depth understanding from findings from multiple sources such as from the family's initial consultation, the school, the standardised assessment process, as well as from the assessor's qualitative observations, it became clear that his interactions with the interpersonal systems in his environmental niche seemed to be the prominent factors hindering his development and causing him distress. Firstly, the interaction between Matthew and the level of support his parents were able to give due to their personal issues was hindering Matthew's emotional development, thus forming a cycle of emotional insecurity and resulting low self-esteem and high anxiety levels. His temperament also played a part in this interaction too. Secondly, the interaction between Matthew's intrapersonal characteristics such as his innate cognitive style and temperament, and the social interaction demanded by a large school, seemed to be causing further stress. This is evident in Matthew's poor peer relations, his withdrawal, and the scholastic challenges he experienced. In this way, Matthew's social development had been hindered as he had not been able to obtain the social support (from teachers and peers) he needed at school, which contributed to increased anxiety and low self-esteem.

In addition, Matthew's current teacher seemed to be overwhelmed by Matthew's difficulties and by the large numbers she was required to teach, and because of this was incapable of addressing Matthew's needs adequately. A poorness of fit was

evident. The teacher's temperament and cognitive style did not seem to be the same as Matthew's. It seemed as if the teacher's ignorance of Matthew's temperament and learning style had caused her to misunderstand Matthew completely. Therefore, the interaction between his temperament, cognitive processing style (intrapersonal characteristics) and the teacher (interpersonal) had hindered Matthew's emotional and academic development

d. Feedback

The findings were presented to the family in such a way as to facilitate an understanding of the interaction between Matthew and all the systems in the environment. The assessors aimed to facilitate a problem-solving discussion. Initial issues raised could be given meaning, empowering the family to use their understanding of the issues to be part of the solution. Psychological and educational jargon was not used, rather a language that was accessible to all members of the family. Together, decisions were made regarding how to improve the quality of systemic interactions so that Matthew's development could be improved.

The problem-solving decisions and suggestions discussed between the family and assessors were negotiated. The intervention decisions included those that could be offered at the university's community centre (namely learning support, parent counselling, child counselling and teacher consultation), as well as agreeing on what the parents and child could do on their own. An integrated, ecosystemic report was then forwarded to the parents and the school (at the parents' request). The findings in this report were also used to help design an indivualised learning support programme, and to help with planning for counselling interventions.

11. A constructivist ecosystemic view of support

An overview of the constructivist ecosystemic view to the support that Matthew received will be explored in this section.

As we have seen, a medical model approach to intervention would probably involve the prescription of medication, placement in a special school, and individual therapy (remedial, speech and hearing, psychotherapy, etc.). If a child were to receive the

above treatments would they really be addressing his or her needs? All Matthew's challenging behaviours as illustrated above indicate a poorness of fit; that is, an inadequate interaction between the child's intrapersonal characteristics and the systems within his environment, such as parent and teacher support, stressful life events and so forth. Briefly, if we used the ecosystemic framework to help provide the suggested intervention/support, we would firstly address the inadequate interpersonal support through parent counselling, provide teacher support and some individual counselling and constructivist learning support for Matthew.

Therefore, when a constructivist, ecosystemic model is used to assess and understand learning diversity and differences in emotional and scholastic development, especially in an inclusive education context, it becomes clear that any interventions that are planned following the assessment process, should move away from solely providing support for the learner (as happened when psycho-medical models were used), towards also providing support to teachers, caregivers, specialists and socio-economic systems where necessary, in an effort to promote the optimal interactions between the various systems necessary for adequate development to take place (Department of Education, 2001).

Such support should enable teachers and other role players to manage the systemic interactions themselves, instead of being omitted from the expert loop as usually occurs with the psycho-medical model approach to support, where the learner alone was usually supported by the expert (Harcombe in Engelbrecht & Green, 2001). Such a supportive approach needs to use a collaborative consultancy approach, which has been researched fairly extensively over the last few years in various contexts (Denton, Hasbrouck & Sekaquaptewa, 2003), and particularly regarding inclusive education (Meck & Barrow, 2005). In general, these studies suggest that the collaborative consultancy approach is a highly effective model for providing support to participants in education and other contexts.

12. Case study: Ecosystemic interventions

During the IAC feedback session the family and the assessors agreed that in order to help promote Matthew's optimal development collaboration between all parties was necessary. Accordingly, the parents agreed to come for parent and possibly marital counselling, in order to promote a better emotional support for Matthew. The parent counselling would help the parents to understand Matthew better, e.g. his temperament, his learning style as well as the distress he was experiencing due to their financial and marital difficulties as well as providing the parents with personal support so they could have more empathy for their son. The parents also gave permission for the trainee specialists to offer support to the teacher, so that she could facilitate Matthew's learning better.

In addition, it was decided during the joint problem-solving process that Matthew needed a smaller school environment where his needs could be addressed, which the parents would pursue. It was further decided that Matthew would attend learning support as well as play therapy at the university's community centre. The interveners also agreed to collaborate and share information and problem-solve together where relevant. In addition, the learning support was based on constructivist, ecosystemic principles. However, the parent and child's counselling was psychodynamic in orientation, i.e. based on the medical model, due to the ethos of the counselling course.

13. A constructivist ecosystemic view of psychotherapy

When applying ecosystemic thinking to emotional development, a constructivist ecosystemic view to psychotherapy would then ideally focus on working with the child, the family and the school on an emotional/social level. Keeney (1979) states that to serve children well, we must work with their families; hypothesising that for a child to be helped by psychotherapy, one must first understand his or her families who are diverse in ways such as culture, sexual orientation, economic status, work, religious beliefs and composition. Single-parent families, families of divorce, blended families, extended families, homeless families, migrant families and gay and lesbian families represent some of the diversity of families. According to Keeney, (1979) no matter how different families appear to outside observers, all have certain

characteristics in common. Families just show them in different ways. Examining these characteristics helps engage families in ways that foster optimal child development (Keeney, 1979).

This sort of intervention has important bearing on the South African context. Indeed, one only needs to consider the role of apartheid in influencing all other spheres of development contained within it, particularly in the life of the black child (Hook, et al, 2002). Indeed, argues Hook, et al, (2002), the socio-politico-economic levels of racist ideology and segregation, as dictated by government policies, affected communities and the child's immediate world, where families were broken up by pass laws and migrant labour. Police and criminal violence and intimidation reached into children's homes and schools. Poverty and subsequent problems like malnutrition and inadequate education ensured development deficits on all levels of development (Hook, et al, 2002).

A few studies regarding counselling based on ecosystemic principles have been undertaken. For example, Hardin (1999) investigated an ecosystemic approach to assessment and intervention and found the need to assess the uniqueness of the child, and the influences within the school and within the home when formulating an intervention program. Hardin (1999) highlighted the need for further study on ecosystemic counselling.

However, largely, the literature regarding counselling for children is based mainly on psychodynamic, behavioural and humanistic principles. Within this body of research, however, some studies cited by Benson, Long and Sporakowski (1992) show that parent collaboration and parent psychotherapy ensure that optimal benefit for the child will be gained even from conventional psychodynamic therapy.

14. Case study: Ecosystemic counselling

The process undertaken with Matthew and his family was as follows:
Play therapy with Matthew took place under the psychodynamic orientation. The psychodynamic orientation follows a non-directive approach. Matthew was allowed to do exactly that which he wanted to do within the limits of the playroom. Matthew

struggled initially with the play therapy, as feelings and fears from his early childhood were evoked. He was also struggling to adapt to a new therapist and a new form of therapy (due to his low personal social flexibility). The therapist identified, reflected on and interpreted feelings that Matthew projected and which he communicated verbally and non-verbally through his play.

Parent and teacher support focused on a collaborative consultancy approach whereby parents and teachers were empowered to collaborate with the counsellors and the learning support specialist and the teacher where appropriate.

Furthermore, Matthew's mother was counselled whilst Matthew was in play therapy. The mother initially received parental support, that is, initially some help with understanding the kind of support Matthew needed(i.e. ecosystemic in orientation), but the sessions very quickly became psychodynamic in orientation, that is she was counselled for her own personal and emotional well-being. Again, the therapist identified, reflected on and interpreted feelings that the mother projected and communicated verbally and non-verbally. Through this process, the therapist aimed to provide containment to the parent.

Even though the therapy used with the child and the parent was psychodynamic in orientation, the process followed an ecosystemic framework. This ecosystemic framework was highlighted via collaboration with other student consultants and their supervisors, such as the assessors, learning support specialists and teacher. In addition, Matthew engaged in ecosystemic learning support with the trainee learning support specialist, who also gave informal support to the mother on helping her understand how to support Matthew's learning and emotional development. The constructivist, ecosystemic learning support used in this study is described in the next section.

15. A constructivist ecosystemic view of learning support

When applying ecosystemic thinking to learning, evidence has been provided previously in this report regarding how the environment impacts on learning. There are many political and socio-economic causes of South Africa's low literacy and learning rate as opposed to purely individual differences, and only an ecosystemic framework can begin to explain the causes and thereby enable the designing of useful learning support interventions (Harcombe, 2003). As mentioned previously, many remedial approaches are based on the medical model, which implies that the deficit is within the child. In comparison, an ecosystemic approach examines all interacting contextual and individual factors that may contribute to underdeveloped learning. One such approach is the Cognitive Approach to Literacy Instruction that was developed by Harcombe (2003) and is referred to hereafter as Harcombe's CATLI. This approach is underpinned by a constructivist, historical, ecosystemic framework, which examines the effects that a country's laws, policies and service delivery may have, in interaction with other systemic factors, on individual development and learning.

a. Ecosystemic learning support: Harcombe's Cognitive Approach to Literacy Instruction (CATLI)

Social constructivism is the foundation of Harcombe's CATLI. By applying constructivist theory to learning and development, one is made aware of the important gap in most models of literacy instruction. Based on constructivist principles, optimal teaching and learning is viewed is being promoted by the child's active process of exploration and construction of knowledge. Insights from Piagetian theory (Hruby, 2001) emphasise how cognitive development involves a continuous and active process of exploration of the world.

Furthermore, Vygotskian theory (Vygotsky, 1987) emphasises that the exploration should involve mediation by more able adults and peers. Therefore, teaching cannot be a one-way process and neither the learner nor the teacher can be passive (Donald, et al, 1997). In other words, the learner is as much part of the process as the teacher and the learner therefore is viewed as needing to actively develop his or her

knowledge with the help of a mediator, rather than learning teacher-funnelled knowledge by rote (Donald, et al, 1997).

In order for this optimal level of learning and knowledge construction to occur, the teacher needs to know the child's *zone of proximal development* (ZPD; Vygotsky, 1987). Vygotsky explained this zone as being the level at which the child needs mediation from a more able adult, so he or she can learn more optimally.

Accordingly, the CATLI aims at finding a child's ZPD, along with any other gaps they may have in knowledge, emotion and behaviour, so the correct level of mediation and social support can be achieved, and the child can develop his or her own metacognitive strategies, and thereby direct their own learning. Practically speaking, this means that children engage in doing tasks that match their ZPD, such as making a model of a castle. During this task, the appropriate language is used, as well as relevant metacognitive strategies mediated. All this is done in the context of literacy learning, i.e. reading and writing. The mediated strategies and constructed knowledge are then applied and used in other subjects.

The CATLI is very beneficial as it improves motivation, cognitive development, literacy learning and self-esteem, and as such targets all levels of the child's learning world and can be used in classrooms, in small groups and individually, as long as teachers are given adequate training (Harcombe, 2003). As opposed to the pull-out system, whereby children were placed in special education school or classes, this model rather leaves the child in the classroom and support is given in terms of helping the teacher to differentiate the curriculum to suit individual needs and strengths. Further support is provided after school if necessary, to children who are very behind (Harcombe, 2003).

16. Case study: Ecosystemic learning support

Harcombe's CATLI was undertaken with Matthew in the following way:

After assessment took place, a month and a half passed before learning support began, as the trainee support specialist in consultation with her supervisor spent the

time designing the CATLI intervention to suit Matthew. The learning support sessions took place once a week for 12 weeks. Supervision was offered once a week during this time regarding re-planning the sessions according to the child's need, i.e. in differentiating the curriculum as appropriate, as well as helping the trainee specialist to offer optimal emotional and motivational support, thereby enabling effective literacy instruction and mediation. The trainee learning support specialist consulted and interacted with the parents and with the teacher as much as possible.

The learning support process occurred as follows:

The learning support consultant was supervised in her planning of Harcombe's CATLI, which was based on the information obtained in the IAC. To do this she filled in graphic organisers, mapping out information and characteristics about Matthew's strengths, interests and needs gained from contact with the child himself, his parents and teacher. The supervisory process was aimed at providing the trainee learning support specialist with the necessary support in developing her own ecosystemic thought integrations and constructivist principles in literacy instruction by means of constant reviewing and re-planning the plans to suit the Matthew's ZPD.

In the following section, the steps in Harcombe's CATLI that were used with Matthew's case will be outlined. Step One occurred prior to the intervention, whereas the remaining steps all occurred in each session (For a more in-depth explanation of the CATLI, including a brief discussion of the application of constructivist principles such as metacognition and mediation of tasks, refer to Appendix E)

Step One: Theme planning
Learning occurred within a theme that captured Matthew's strengths and interests and each lesson was planned according to this child-chosen meta-theme.

Step Two: Theme initiation
Themes were introduced with videos, stories, visits, etc. which stimulated Matthew's interest in the meta-theme.

Step Three: Literacy experience
Reading to Matthew formed an integral part of Matthew's learning experience as he had many gaps in his literacy and vocabulary knowledge due to poor mediation and

little literacy experience. Metacognitive strategies such as using the context and problem-solving as well as literacy conventions were mediated in the process, while reading to him.

Step Four: Construction activities
These activities were largely practical, concrete tasks that related to the theme for example, making a lion mask, or a lion habitat, which improved knowledge (constructed schema) as well as providing an authentic purpose for writing and reading in the next step.

Step Five: Publishing
At this level the therapist helped Matthew to plan a story about what was done in the construction task, then the text was negotiated and scribed by the therapist. The story was then typed into a book for Matthew, which was then read by Matthew at least two or three times as a reader.

Step Six: Multilevel activities
Here the following activities were engaged in: a) Sentence matching; b) Word matching; c) Shared writing; d) Handwriting practice; e) Rhyming; f) Sound Families. All these activities promoted the usage of some metacognitive strategies as well as providing practice in areas such as word recognition as well as being a great deal of fun, and therefore motivating.

In addition to these six steps, establishing and maintaining rapport with Matthew and applying behaviour modification strategies were important aspects of the CATLI process.

17. Conclusion

Much of the research presented in this literature report is used to support an argument in favour of an alternative approach to the medical model for understanding and treating children with inadequate development. It can be concluded that one of the most convincing reasons for using a constructivist ecosystemic framework as a basis for assessment and support, is that the psycho-medical model precludes the examination of the factors that have been found in many studies to cause differences in learning and development (Spann, 2005; Harcombe, 2003). Furthermore, social

constructivism defines the way humans develop and learn as a process in which knowledge is constructed by, for and between members of a discursively mediated community (Hruby, 2001).

CHAPTER THREE: METHODOLOGY

1. Research questions

Aim 1: To examine the participants' perceptions regarding the constructivist, ecosystemic principles that underpin this holistic process to assessment and intervention

- What perceptions did the participants in this study (student psychologists, supervisors, parents and teacher) have of the IAC process in terms of assessing and understanding the child's strengths and barriers to development?
- What perceptions did the participants (student psychologists, supervisors, parent s and teacher) have of the combination of learning support, parent counselling and counselling/play therapy in terms of supporting the child?

Aim 2: To examine the usage of a constructivist, ecosystemic approach to assessment and support as a holistic means for promoting an anxious, underachieving child's emotional and scholastic development

- Was the child's emotional development promoted by using the holistic constructivist ecosystemic process?
- Was the child's scholastic development promoted by using the holistic constructivist ecosystemic process?

2. Research design

Since the intention of the research was to explore participants' perceptions of an ecosystemic, constructivist approach with regard to a child who attended a community centre, a qualitative, retrospective single case study involving purposeful sampling was deemed to be appropriate. An argument for the use of these research approaches follows.

a. Qualitative study

This study was qualitative with the aim of providing an in-depth exploration of the experiences of a child within a constructivist, ecosystemic approach. This particular framework agrees that the social world should be understood from the standpoint of the individuals who are part of the dynamic context being investigated (McBurney, 2001).

The following are five characteristics of qualitative research outlined by Bogden and Bilken (1982), namely:

1. It occurs in a natural setting and is fundamentally concerned with context.
2. It is descriptive, highlighting details rather than generalities.
3. It draws attention to processes rather than outcomes.
4. Data is examined inductively; the aim being to develop grounded theory rather than prove or disprove hypotheses.
5. The participant's perceptions of events and action are studies of importance.

Each of these characteristics will be discussed in relation to the research that was conducted.

This study occurred in a South African university training clinic and as such is an authentic, natural setting and seeks to understand the use of a constructivist, ecosystemic approach to assessment and support by improving an underachieving, anxious child's scholastic and emotional development.

Schumacher and McMillan (1993) caution that there is a difference in participants' understandings and responses to processes when studies are conducted in controlled laboratory settings on the one hand, and natural settings where no control exists. However, according to Bogden and Bilken, (1982), if one truly wants to understand the contextual influences on a natural setting, the natural setting must then be studied.

The research aimed to be exploratory and focused on the participants' individual and collective perceptions and thoughts on the efficacy of the constructivist, ecosystemic approach to assessing and supporting an underachieving, anxious child in particular. The intentions and meanings of the participants formed an integral part of the analysis so as to provide deep explanation regarding the child's development with regard to the processes that have already been implemented.

The researcher's concern with understanding practices of assessing and supporting a particular underachieving and anxious child necessitated a process approach. Nevertheless, the researcher was also concerned with outcomes to the extent to which the assessment and support interventions were or were not effective in promoting the child's emotional and scholastic development. However, from a Vygotskian framework, this outcome needs to be observed within the processes that produced it (Vygotsky, 1978).

Analysis which was grounded in the data required that the researcher's perspectives and the evidence were constantly challenging and influencing each other (Bogden and Bilken, 1982). Cohen and Manion (1994) emphasise that a researcher is not neutral but brings to the data a theoretical framework and unique experiences. In this study, the researcher was embedded in conceptions of the constructive ecosystemic approach. Schumacher and McMillan (1993) cautions against this, and remaining aware of participants' perspectives as well one's own perspectives and theoretical background through recording any perceptions within a diary, will aim to guard against bias.

Ultimately, this qualitative research seeks to give an account of the events and process that occurred from the points of view of the participants in order to ascertain if the child's scholastic and emotional development was promoted. The participants' intentions and meanings were central to the analysis.

b. A case study approach

A case study approach was used to provide a detailed description and analysis of the constructivist ecosystemic process with regard to the promotion of the child's development. An individual unit's behaviour can only be understood by understanding the unit's frame of reference as well as its interpretation of the social reality.

The essence of this case study was to investigate a contemporary approach within its real life context (Yin, 1994). The case study method was used because the study deliberately wanted to examine the interactions between the child and the support offered, and to what extent these interactions had promoted the child's scholastic and emotional development (Babbie and Mouton, 1998). Yin (1994) argues that whereas an experiment deliberately divorces a phenomenon from its context, the case study places focus on the context. In addition, he commented that within an experimental study, variables can be controlled within a laboratory, whereas the case study lacks this control. Therefore, a multi-method approach is applied in order to produce data that is as valid and reliable as possible.

The case study that was used is therefore further described as being a single-case design embedded in multiple units of analysis (Cohen and Manion, 1989). The case study represents a critical case in testing a well-formulated theory. The case study aimed to extend, perhaps challenge and confirm the use of an ecosystemic constructivist theory that underpins assessment and support in promoting a child's development.

c. Purposeful sampling

Sampling in qualitative research differs from quantitative sampling, in that it is not random. The researcher selected a university training clinic, which could provide information-rich situations to study in-depth for the purpose of the case study without desiring to generalise all such cases. This is termed purposeful sampling (Schumacher and McMillan, 1993).

As this is a retrospective case study, the chosen sample for this research was made up of participants who had all been in involved in one or more of the following processes: the IAC assessment process, the CATLI learning support process and the psychotherapy process within a university training community centre in South Africa. The participants who collaborated in this process included the child, his parents, the learning support supervisor, the counselling supervisors, the trainee learning support specialist, the trainee child counsellor, the trainee parent counsellor, the trainee assessors as well as the child's teacher.

The participants will be explained individually.

Participant A was an 8-year-old boy who had attended the centre for two consecutive years whilst taking part in the IAC process, including a full psycho-educational assessment, learning support (using the CATLI) as well as psychotherapy (play therapy based on a psychodynamic framework).

Participant 1 was the young boy's 38-year-old mother, who took part in the IAC assessment process and received psychotherapy of her own within the same centre.

Participant 2 was the young boy's teacher. She is an experienced remedial teacher working within a mainstream government-funded school.

Participants 3 and 4 were the student trainees who were involved in the IAC assessment process. Both students had been trained as Learning Support Specialists with B.Ed Honours qualifications. Both students were at the time of the study, in the first year of the Master's programme in Educational Psychology.

Participant 5 was the supervisor who had offered expertise, guidance and support to the student consultants involved in the IAC process. She is a middle-aged educational and clinical psychologist with extensive practical and research experience with the IAC assessment process and with considerable experience in using constructivist ecosystemic approaches.

Participant 6 was the author of this research. She was actively involved in the learner support process. She was at the time completing the Bachelors of Education Honours programme in Educational Psychology.

Participant 7 was the supervisor who offered expertise, guidance and support to the student consultant involved in CATLI learning support process. She is a young educational psychologist with both learning support (B.Ed Honours) and psychology (M.Ed) qualifications, who works primarily from an ecosystemic stance.

Participant 8 was the student trainee who took the young boy for play therapy. She is a young woman with a psychology background with Honours in Psychology. The student consultant was at the time in her first year of the Master's programme in Educational Psychology.

Participant 9 was the supervisor that had offered expertise, guidance and support to the student consultants involved in the psychotherapy (play therapy and parent counselling) process. She is an experienced educational psychologist who works primarily from a psychodynamic framework.

Participant 10 was the student trainee who was involved in providing psychotherapy to the young boy's mother. She is a middle-aged woman with a psychology background with Honours in Psychology. The student consultant was at the time in her first year of the Master's programme in Educational Psychology.

3. Data collection plan

a. Method of data collection

The following methods were employed in data collection

Questionnaires

- Teacher Questionnaire -Refer To Appendix C2
- Parent Questionnaire - Refer To Appendix C3
- Student Psychologists - Assessors Questionnaire - Refer To Appendix C4
- Student Psychologists Assessors' Supervisor Questionnaire - Refer To Appendix C5
- Student Psychologist - Child Counsellor Questionnaire - Refer To Appendix C7
- Student Psychologist Child Counsellor Supervisor Questionnaire - Refer To Appendix C9
- Student Psychologist - Parent Counsellor Questionnaire - Refer To Appendix C8
- Trainee Learning Support Specialist's Supervisor Questionnaire - Refer to Appendix C6

Extant Data

i. Psycho-educational report
ii. Report on school observation conducted by the author in 2007
iii. Learning support lesson plans compiled by the author in 2007
iv. Pre-intervention test data administered in 2007 by the assessors
v. Post-intervention test data administered in 2007 by the author
vi. Evaluation (exam equivalent) of learning support (CATLI) process compiled by the author for exam purposes in 2007
vii. Process notes from child and parent counsellors

Both questionnaires and extant data are types of research methods that require a system of anonymity so as to meet the requirements of confidentiality. This means

that no referral will be made to the university name or the child's name, and in so doing, all details that could identify the child will be excluded from this report. Consent has been obtained from and signed by the relevant participants, highlighting their right to withdraw and their right to confidentiality. This will be addressed further under Ethical Considerations.

Questionnaires

Questionnaires were used as they are appropriate for research questions which focus on self-reported beliefs or behaviours (Neuman, 1991). Interviewing was initially considered for this research since it is an essential part of most types of social research, allowing for one to maximise the chances of maintaining objectivity and achieving valid and reliable results (Cohen and Manion, 1989). However, due to time constraints, these were ruled out.

According to Cohen and Manion (1989), structured questionnaires involve a fixed set of close-ended questions. This type of structure yields information that is easily quantified, ensures comparability of questions across respondents and makes certain that the necessary topics are included (McBurney, 2001). However, this leaves little room for unanticipated discoveries. In unstructured questionnaires whereby open-ended questions are asked, the respondent is able to give their perceptions without restraint or structure, thus hopefully obtaining more valid answers (Cohen and Manion, 1989; McBurney, 2001). Open-ended questions were presented in the questionnaires so as to provide opportunities for respondents to answer in detail as well as to qualify and clarify answers. Furthermore, by using open-ended questions, it was hoped that unanticipated findings could be discovered, creativity and richness of detail could be expressed as well as a revelation of the respondents' frame of reference (Neuman, 1991).

Reliability and validity of survey data is an issue that needs to be taken into consideration. The survey method that was used relied upon respondents being willing and able to give accurate and complete answers to questions posed. However, respondents may have been motivated to lie; they may have wished to sabotage the research, been too embarrassed to tell the truth or were unable to answer accurately because they were unsure of the question (Cohen and Manion 1989; McBurney,

2001). These issues needed to be overcome and this could only be done by constructing a systematic set of questions that helped the respondent to understand, and provided evidence of consistency across responses. A pattern of questions that allowed for internal consistency was formulated (Cohen and Manion 1989; McBurney, 2001). Prior to and during the completion of the questionnaire, the researcher allowed for any necessary clarifications so that participants' fully understood the question or the context of the questions. The researcher did not direct the respondents' answers to their questions as the answers needed to be freely given.

Furthermore, problems existed with formulating the individual questions, as well as structuring the questions in the right order and getting the links between them absolutely right. Therefore, in order to overcome this, a questionnaire schedule was piloted. Firstly, this tested if the purpose of the interview was understood by a subject in the same population. It also tested comprehension of particular questions. Once the pilot was undertaken and the findings were compiled, necessary changes were made. During the run-through of this pilot questionnaire, the researcher established if the questionnaire was yielding answers that were pertinent to the focus of the research. The subject that was used was a willing student who worked in the clinic last year. Please refer to Appendix C1.

There were a total of nine questionnaires. It might have been noted that there was no questionnaire for the learning support specialist. This was due to the fact that the author of this report was in fact the trainee learning support specialist at the time of the intervention. However, as all the participants' perceptions are regarded to be of importance in qualitative research, the author's perceptions were analysed using data that had previously been compiled prior to the conception of this research. These data sources included an examination that focused on Matthew's progress as well as a critical examination of the CATLI process used with Matthew. These sources brought to light Matthew's experience of the CATLI, focusing on ecosystemic considerations as well as the emotional and academic progress he did and did not make.

Extant data

Extant data refers to research that is conducted using existing data (McBurney, 2001). Documentation/extant data that was useful for understanding the assessment process

was the psycho-educational assessment report, as well as a report compiled regarding the school observations conducted by the learning support specialist. These provided an understanding of the barriers to learning that the child may have experienced due to his environment.

Further documentation highlighted the learning support process. Such extant data included the twelve lesson plans drawn up in 2007 especially for Matthew, as well as a written evaluation drawn up for the student consultant's exam purposes in 2007, which highlighted the learning support (CATLI) process. This data revealed Matthew's experiences of the process.

Further data necessary for understanding the learning support process was the pre-intervention testing from the psycho-educational report as well as post-intervention testing compiled by the learning support specialist, after learning support was terminated. This provided quantitative and qualitative data with regard to Matthew's academic progress.

Process notes from the psychotherapy with the child and parent provided an understanding of the perceptions that both Matthew and his mother had about being in therapy.

Since it could be considered that this extant data is too subjective, provision was made to triangulate the information with data from parents and teachers, in an effort to provide additional validity.

b. Procedure

Extant data had already been made accessible to the researcher prior to conducting the research.

The researcher first contacted all the participants, inviting them to take part in the research. This was done using a participation letter, highlighting the procedure as well as what their role in the research would be. This letter was written in an unthreatening way, so that participation was voluntary.

Once permission had been granted, the researcher began the research by allowing a participant to complete one pilot questionnaire. The participant involved in this pilot was established within a similar setting. This allowed the researcher to ascertain validity and reliability of the questionnaire schedule. The questionnaire schedule was then appropriately modified and finalised. Once consent had been explained and given, the questionnaires were administered to all the relevant participants.

The extant data and the completed questionnaires were analysed using thematic content analysis along with quantitative data obtained from pre- and post-intervention testing. All the data obtained during the process of the research was kept locked in a cupboard in the researcher's office.

Once this research report has been examined, the researcher will destroy all data. This research report will ultimately be shared with the participants of the study in a feedback session, where all questions may be addressed.

4. Data analysis

Using surveys as a research tool often leaves the researcher with an enormous amount of information. One way to overcome this difficulty is to use thematic content analysis. Thematic content analysis was used to analyse the data collected in this study.

Thematic analysis is a method for identifying, analysing and reporting patterns (themes) within data (Braun and Clarke, 2006). This form of data analysis reduces the data to manageable proportions (Neuman, 1991). Thematic analysis can be defined as any technique for making inferences by objectively and systematically identifying specified characteristics (Braun and Clarke, 2006).

Although often framed as a realist/experiential method, thematic analysis is actually firmly compatible with constructionist paradigms (Braun and Clarke, 2006). Clarke and Braun (2006) identify that the advantage of using thematic analysis is that it is flexible. Through its theoretical freedom, thematic analysis provides a flexible and useful research tool, which can potentially provide a rich and detailed, yet complex,

account of data (Braun and Clarke, 2006). Thematic content analysis conducted within a constructionist framework does not seek to focus on motivation or individual pathology, but instead seeks to theorise the socio-cultural contexts and structural conditions that enable the individual accounts that are available (Braun and Clarke, 2006).

Implications of the researcher having been the child's learning support specialist meaning she had been actively involved in the child's progress, would involve a certain amount of bias, if not monitored. As the researcher was embedded in the process, it was necessary to endeavour to overcome inherent biases so as to promote the validity of the study. Therefore, an independent external analyst was employed by the researcher to extrapolate emergent themes from the raw data.

The different phases of thematic analysis that were conducted were as follows.

1. By engaging with the data, the researcher and external analyst familiarised themselves with the data. By reading and re-reading the data as well as noting down initial ideas, the external coder was able to engage easily with the data in the steps that followed.

2. Once the analyst was familiar with the data, she was able to produce initial codes from the data. Codes identify a feature of the data that appear interesting to the analyst and refer to the most basic element of the raw data that can be assessed in a meaningful way regarding the phenomenon (Braun and Clarke, 2006). When reflecting on the research questions, key-words in each question were described forming categories. Criteria for each category of analysis were then developed. Raw data was analysed transversely (interview transcriptions, session process notes and session evaluations) and statements assigned to the relevant categories. In this way, the data was coded.

3. The coded data was then brought together to form themes. Here the analyst sorted the different codes into potential themes and collated all the relevant coded data extracts within the identified themes.

4. The analyst began to refine the above themes by reviewing them. It became evident to the analyst that some themes were not really themes as there was not enough data to support them, while other themes collapsed into each other as apparently two different themes could in fact form one theme. In conducting thematic analysis, the analyst had to consider what was considered as a theme. A theme needed to capture something important about the data in relation to the research question and needed to represent some level of patterned response or meaning within the data.

5. The analyst ultimately defined the themes by identifying the essence of what each theme was about and determining what aspect of the data each theme captured.

An interpretation of these themes, which is to follow in the discussion, is based on the theoretical framework and literature review.

6. Ethical considerations

The Code of Ethics for Research on Human Subjects of the University of the Witwatersrand was followed and adhered to throughout the research process. The researcher aimed to respect and agree that participants' interests remained a priority.

Before any research could commence, all participants were informed about the rationale of the research and were provided with a description of the nature of the study. The researcher stated the objectives of the research to the participants in the information letter, as well as in the first contact session with the participants.

Confidentiality of the participants was guaranteed under all conditions. In so doing, none of the participant's names or identifying data was referred to in the report or on the transcripts.

All participants were asked to give informed consent in written form for their participation in the study, for transcription writing and for using direct quotes. Only

the researcher, her supervisor and employed coder had access to the transcripts. All this is clearly stated in the participation letters to the participants.

Matthew's parents were made aware that the focus of the study was on the process, and that nothing at all was expected from the child. This was done by inviting the parents to attend a meeting where all the above was explained. Permission from Matthew's parents was obtained. All the participants, including teachers, parents, supervisors and therapists were informed that participation was voluntary and, if at any point they wanted to withdraw, they were able to do so without prejudice.

A summary of the report can be provided on request.

It is important to note that the child was not actively involved in the research via any interviewing process. This was primarily due to ethical considerations. As the child and author had developed a particularly therapeutic relationship, it would be unfair to expose the child to a very different process than that of learning support. This is not a limiting factor however, as there appears to be enough data sources from which to establish the effects this process had on the child.

Contact numbers of support services in the university's community centre were given to the participants when required.

CHAPTER FOUR: RESULTS

This chapter presents the findings of this study. The procedure used to collate these findings from the surveys conducted and the extant data follows: An external analyst firstly engaged with the data, and familiarised herself with it. Then, by reflecting on the research questions, key-words in each question were described and placed into categories. Criteria for each category of analysis were then developed. Raw data was analysed transversely (interview transcriptions, session process notes and session evaluations) and statements were assigned to the relevant categories. In this way, the data was coded. The analyst then sorted the different codes into potential themes and collated all the relevant coded data extracts within the identified themes. This work, put together by the external analyst, can be found in Appendix F. The analyst and the researcher began to refine the above themes by reviewing them. It became evident that some themes did not qualify as there was not enough data to support them, while other themes collapsed into each other and could be combined into one theme.

Once the analyst had completed her work, the researcher ultimately redefined the themes by identifying the essence of what each theme was about and determining what aspect of the data each theme captured. This process was collated and is represented in Tables G1-G11 in Appendix G. Results from the quantitative and qualitative pre- and post- intervention testing were also collated and can be found in Appendix H.

In order to provide a comprehensive understanding of the findings, the following sources of data from surveys and extant data are coded according to the following key:

1. <u>Questionnaires</u>

Participant P: Parent
Participant E: Educator
Participant T1: Assessment trainee 1
Participant T2: Assessment trainee 2
Participant T3: Play therapy trainee

Participant T4: Parent counselling trainee
Participant S1: Assessment supervisor
Participant S2: Learning support supervisor
Participant S3: Counselling supervisor

2. Extant data

Report on school observation conducted by the author in 2007 - RSO
Learning support lesson plans and evaluations compiled by the author in 2007 – LSP
Pre-intervention test data administered in 2007 by Trainee Assessors – TD 1
Post-intervention test data administered in 2007 by the author – TD 2
Evaluation of learning support (CATLI) process compiled by the author for examination equivalent purposes in 2007 - ELS
Journal notes compiled by the author during the process of the learning support, during 2007 - J
Process notes from Child Counsellor – PN C
Process notes from Parent Counsellor – PN P

3. Overview of findings

In addressing and answering the first two research questions regarding the perceptions of ecosystemic principles used within the holistic process, the following was found:

The terminology used when referring to the child's development, application of ecosystemic principles, the collaboration between stakeholders for understanding and supporting the child, as well as the overall perceptions of the holistic process (Appendix G, table G1) were deemed to be important in forming a full understanding of the perceptions held regarding ecosystemic principles.

On the whole, the content analysis indicated that while some participants were conversant in using ecosystemic terminology; others were not, and in fact appeared to lean towards medical model terminology. Furthermore, discrepancies were noted in the participants' understanding and application of ecosystemic principles. Some participants showed a high level of understanding and application, whilst others

showed a poor application of ecosystemic principles. It was also noted that participants who were not easily conversant with ecosystemic terminology, still showed an understanding of ecosystemic principles. All these findings appeared to be in accordance with exposure to and experience with ecosystemic practice.

More than half of the participants seemed to have a good understanding of collaboration and how it was helpful in supporting the development of the child. However, a few participants expressed the notion that more collaboration would have been better, particularly with the school and between the interveners, and that insufficient time hindered the process of collaboration.

Taken as a whole, the overall process (i.e. IAC, collaboration and interventions provided etc.) was perceived as being helpful; primarily for understanding the child really well and for enabling appropriate, goodness of fit interventions.

Largely, participants commented on the high efficacy of the IAC process in providing a holistic understanding of the child and perceived this to be an important foundation upon which to base intervention programmes. The learning support process and parent counselling was also perceived to be highly effective. Both these interventions provided a form of support conducive to the child's emotional and scholastic development. On the other hand, the child's counselling was initially perceived by the child in a fearful way, and he needed time to adapt and become accustomed to the child counsellor and the process. Furthermore, it was noted that when an alternative approach to the non-directive psychodynamic one was applied, there appeared to be a more fitting match with the child's temperament.

In addressing and answering Research Questions 3 and 4 regarding the perceptions of the effects of the ecosystemic approach used within the holistic process on the child, the following was found:

Matthew's emotional development was apparent in his improved self-esteem, interpersonal relationships and anxiety. These emotional changes were attributed to the fact that he felt comfortable in the IAC, with the trainees focusing on his strengths, and to the counselling and learning support processes in general. These interventions

were perceived to provide an environment of unconditional positive regard and an environment conducive to emotional development.

Scholastically, improvements were seen in the child's development of cognitive strategies and general knowledge, and motivation, as well as in improved reading and writing skills. These changes were credited to the learning support process whereby the learning support trainee provided an optimal environment that accommodated the child's interests, strengths, cognitive processing style, temperament and knowledge levels by using the CATLI.

4. Findings

The analysis provided data in an attempt to address the aims of this research report.

Aim 1: To examine the participants' perceptions regarding the constructivist, ecosystemic principles that underpin this holistic process to assessment and intervention

1. What perceptions did the participants in this study (trainee psychologists, supervisors, parent s and educator) have of the IAC process in terms of assessing and understanding the child's strengths and barriers to development?

2. What perceptions did the participants (student psychologists, supervisors, parent s and educator) have of the combination of learning support, parent counselling and counselling/play therapy in terms of supporting the child?

Aim 2: To examine the use of a constructivist, ecosystemic approach to assessment and support as a holistic means for promoting an anxious, underachieving child's emotional and scholastic development.

1. Was the child's emotional development promoted by using the holistic constructivist ecosystemic process?
2. Was the child's scholastic development promoted by using the holistic constructivist ecosystemic process?

Findings regarding Aim 1, which are embodied in four themes, are presented as follows:

a. Theme 1: Terminology used when referring to the child's development

(Refer Appendix G, Table G1.)

The study aims to investigate, amongst other aspects, the participants' perceptions of the ecosystemic principles that underpin the ecosystemic assessment and intervention process, which includes the IAC, CATLI and the two counselling processes. Theme 1 triangulates data that refers to the terminology used by participants when referring to the child's development, as this provides information regarding the theoretical orientation of participants.

On the whole, the content analysis indicated that five participants were conversant in using ecosystemic terminology, whereas four were not, and in fact appeared to be leaning towards medical model terminology.

The two assessment trainees (T1 and T2), their supervisor (S1) and the learning support supervisor (T2) and learning support trainee (ELS) all seemed to be very conversant with ecosystemic terminology. For example:

"The ecosystemic approach helped identify contributors to problems." (T1)

"This approach is very helpful because it involves all stakeholders and dynamics between each member and involvement of their interests in the client concerned is gathered. A holistic picture is formed around the problems and one can address issues in a holistic manner and also involve the stakeholders."(T1).

"This stance is important to assess any child as one cannot attribute the child's difficulties to only a single factor. All factors influencing the child need to be considered." (T2)

"The IAC process assists in gathering information from all areas that form part of the clients system (family, school, social and other environments)." (T2)

"The IAC approach is based on a systemic framework and model which is crucial in conducting a psych-educational assessment. A shift from a medical model approach with the emphasis on the child

'with a problem' and its narrow view assessment is essential to conduct psycho-educational assessments in a meaningful and ethical manner."(S1)

"The child was seen ecosystemically, by allowing an analysis of the interactions between his temperament and cognitive style and his environment; the Learning Support Trainee encouraged a goodness of fit" (S2)

"The child was seen as interacting with many systems. Some of these interactions promoted development and some of them hindered development"
(ELS)

This finding is understandable, as the supervisors have had many years experience in training and supervising using the ecosystemic model at this university. In addition, these particular trainees had had a year's training and a year's supervision using the ecosystemic approach during their two B Ed Honours (Hons.) years at this university. The course materials and lecturing style used in first year Honours also applied ecosystemic principles constantly (refer to p 51-52 of Methodology).

In contrast, the counselling supervisor (S3) and the counselling trainee (T3) tended to use mostly psychodynamic terminology (medical model).

For example:

"I feel it went some way in addressing the intra-psychic difficulties he experiences." (T3)

"The assessment allowed me to factor this information into his therapy and assisted me neither over or under pathologising his behaviour and when forming a tentative hypothesis around his diagnosis"(T3)

"A [psycho]analytic framework allows Matthew to be contained by:
Introducing boundaries of time, e.g. starting and ending times, interpretation of personal questions, no personal disclosure on part of therapist and not gratifying Matthew."(S3)

This particular trainee (T3) had come through other universities' Honours programmes, and even though she had been instructed on a theoretical level regarding ecosystemic principles in the M. Ed programme in 2007, she had not had the practical, applied experience that the university's B.Ed Honours programme offered. In addition, the counselling supervisor tended to supervise from a psychodynamic, medical-model viewpoint. The counselling supervisor has had some training in the ecosystemic approach but it is known that she practices from a psychodynamic frame. (See Methodology, p. 50-51)

Finally, the content analysis indicates that the parent participant was not proficient in ecosystemic terminology, and was leaning towards medical model terminology. *"…we learnt exact problems my son has from a learning disability."(P).*

b. Theme 2: Application of ecosystemic principles to understanding the child's development

(Appendix G, Table G2)

Analysing the extent to which the participants applied the ecosystemic principles to understanding the child's development gives some indication of how they may have internalised these principles. (Appendix S)

Overall, it seemed evident from the data that even though some participants were not conversant with ecosystemic terminology (see Theme 1 above), they all seemed to understand ecosystemic principles (though to varying degrees) when thinking about child development. Once again, the level of understanding appears to be related to experience and exposure to ecosystemic approaches. A detailed analysis of the findings follows.

The parent (P) showed considerable understanding regarding ecosystemic principles, even though she was not conversant with ecosystemic terminology (see Theme 1 above). For example, she was able to identify that the problems that her child was experiencing were systemic in origin and were not only due to the child's individual differences. *"It was important for us to see that there was nothing actually wrong with him. Only that there were things standing in his way." (P)* In addition, she noted that the IAC *'really helped not only my son, but our family as a whole' (P)* and that the Counselling she received enabled her to understand her… *' son's strengths and needs…[which]… allowed me as a parent to help my son more as I now understand what he has needed and requires" (P).* These comments indicated that she has considerable insight into the ecosystemic causes of her son's difficulties.

The assessment supervisor (S1) showed good understanding of ecosystemic principles, as she commented, *"It defocuses from the child as the identified individual with a*

'problem' - but looks at the child's entire system to understand concerns " (S1); whereas the counselling supervisor (S3) showed some understanding as she commented, *"The process of the parent being in counselling…stops him from feeling as though he is the problem."(S3)* and *" I feel that it is imperative that one doesn't work with the child in isolation."(S3)*

What is noticeable is that even though the counselling supervisor had some understanding of ecosystemic principles, she did not seem to apply these when supervising her students. *"The supervision was psychodynamic in nature" (T3).* (See Appendix G, Table G3).

The learning support supervisor (S2) showed a good understanding of ecosystemic principles as she highlighted that, *"The child was seen ecosystemically, by allowing an analysis of the interactions between his temperament and cognitive style and his environment, the learning support trainee encouraged a goodness of fit" (S2)* In addition, she appeared to apply ecosystemic principles within the CATLI and within the supervision process. *"Through the use of graphic organisers, we were able to understand Matthew ecosystemically in supervision". (S2)*

This further highlights the difference in expertise, experience and use of ecosystemic principles between the two supervisors. The assessment supervisor has, as mentioned on p. 50-51 in the Methodology Chapter, practiced and used the ecosystemic approach for many years, whereas the counselling supervisor tends to be psychodynamic in theoretical orientation, perceiving the medical model to be adequate for understanding and addressing the child's development.

The assessment trainees (T1 and T2), show a fair to good understanding of ecosystemic principles; for example, referring to the holistic understanding they gained from various stakeholders. *"A holistic picture is formed around the problems".* (T1) *"The child is not the problem - one cannot attribute the child's difficulties to only a single factor. All factors influencing the child need to be considered"* (T2)

The learning support specialist (J, ELS and RSO) showed a good understanding of ecosystemic principles through journal entries, *"More and more do I realise that the barriers to learning Matthew is experiencing – his Educator doesn't seem to be aware of how his poor successive processing impacts on his learning and the classroom doesn't seem to match his temperamental style." (J)* and the learning support exam (ELS); *"Matthew needs to be*

understood in terms of the environment around him. It is apparent that those around have provided a poorness of fit and dysfunctional interactions seem to be the reason of his emotional and scholastic difficulties." (ELS) "The CATLI encouraged a goodness of fit between me and Matthew. This match seems to have been achieved as he is becoming less anxious around reading and writing tasks." (J).

All these comments highlight the learner support trainee's understanding and application of ecosystemic principles.

Trainee counsellors (T3 and T4) both appear to have applied some ecosystemic theory to thinking about Matthew's development as one commented *"However, operating in the real world, information from assessment and the parent's Counselling certainly assisted in my understanding how the environment impacts on the child."(T3)* and the other commented, *"The process was a link in the chain. The child's behaviour and social difficulties were directly linked to his relationship with his parents. He could only change in relation to change in the system. Educator's attitudes also needed to change."* (T4)

The child counselling trainee however, only showed some understanding of ecosystemic principles. She appears to use medical model applications such as "diagnosis" and "pathology". *"The assessment allowed me to factor this information into his therapy and assisted me neither over or under pathologising his behaviour and when forming a tentative hypothesis around his diagnosis" (T3)*. This is attributed to the psychodynamic nature of her supervision and perhaps previous training, as she did not take the B.Ed Honours programme. Her understanding of the ecosystemic approach, even if limited, is noted when she says, *"operating in the real world, information from assessment and the parent's Counselling certainly assisted in my understanding how the environment impacts on the child." (T3)*

The parent counsellor, (T4), seems to view the concerns and child's behaviour in relation to his parents only. *"The process was a link in the chain. The child's behaviour and social difficulties were directly linked to his relationship with his parents. He could only change in relation to change in the system. The teacher's attitudes also needed to change."*

This confirms that even though the counselling trainees do seem to understand what the ecosystemic approach is, they have not applied such principles broadly when understanding Matthew's development. This again highlights a preference for a medical model of thinking.

c. Theme 3: Collaboration between stakeholders for understanding and supporting the child's development

(Appendix G, Table G3.)

Collaboration is seen as an integral component of the ecosystemic approach. The participants' understanding of the process of collaboration and evidence of the use of collaboration indicates the extent to which they have internalised the principles of the ecosystemic approach in the assessment and intervention process.

The greater majority of the participants seemed to have a good understanding of collaboration and how it was helpful in supporting the development of the child, and the learning and development of parent, educator and trainees.

The parent (P) perceived that her collaboration with her counsellor was very helpful for her son's support, as was her collaboration with all those involved in the process. *"It was very helpful consulting with various consultants… I appreciate how everyone worked together*". Again, the Parent is seen to have an understanding of the ecosystemic approach and the resultant interventions that her family experienced, reinforcing her positive perception of the process.

The educator (E) also perceived that a somewhat helpful collaboration existed with the assessment trainees and the learning support trainee, through the psycho-educational report findings and recommendations, as well as from support from the Learning Support Trainee. *"She was able to advise me on the way the child learns [through collaboration with LS trainee]"(E).* However, she felt that the collaboration was not ongoing. *"The process was not ongoing, and so was difficult to always support and accommodate him".* This proved to be a limitation of an academic setting where examinations, holidays and academic pressures got in the way of full collaboration.

The parent, counselling trainee and the counselling supervisor (P,T4 and S3) also expressed the notion that more collaboration, particularly with the school and between the interveners would have been better, but expressed that insufficient time hindered this process. *"There was a high level of collaboration in that the Learning Support Specialist; Counsellors and Assessors were all in the same institution, so strategies could be discussed and ideas shared. However, limited time was a disadvantage and limitation to the collaboration."(T4).*

The assessment trainee perceived that the collaboration with the child was very helpful to his development. She felt that this was a positive aspect of the process. She also felt the collaboration invites families into the decision-making process by including them.

"A holistic picture is formed around the problems and one can address issues in a holistic manner and also involve the stakeholders [IAC]." (T1)

One of the assessment trainees, (T2), and the child counsellor trainee, (T3) showed only a limited understanding of collaboration as they did not seem conversant with the terminology and did not make comments on this theme. This may suggest that the notion of collaboration was not fully internalised or valued. For example, the assessment trainee (T2) seemed to view collaboration only in terms of involving the family… *"As the name of the model suggests it is integrative approach as one gets the entire family involved." (T2)* and *"The entire family is involved in making decisions for the client involved".* The play therapy trainee (T3) indicated that no collaboration was evident between the trainee students, and that the only form of useful collaboration was the information she received from the IAC and from supervision. *"However, operating in the real world, information from assessment and the Parent's counselling certainly assisted in my understanding how the environment impacts on the child."(T3) "Despite a few phone calls to the Learning Support Specialist, there was not much team collaboration."(T4)* She felt that the only collaboration that was evident was in terms of understanding Matthew.

Again, the assessment supervisor's (S1) experience with the ecosystemic approach was evident as she showed understanding of the notion of collaboration, using appropriate terminology such as, *"active inclusion", "consultation", "facilitation".* All these terms underpin the broad philosophy of the ecosystemic approach, i.e. that the assessor/counsellors are not experts diagnosing and prescribing a treatment, but rather consultants facilitating an understanding around a problem-solving approach to supporting the child.

The learning support supervisor (S2) and the counselling supervisor (S3) showed some understanding but gave minimal comment. The learning support supervisor did highlight the importance of collaboration in the success of the learning support process. *"Collaboration was an integral part of learning support success."* (S2). Both

supervisors highlighted that the supervision process was in fact a helpful form of collaboration amongst peers. *"Peer interaction…communication and sharing of ideas had a supportive impact on the process." (S2)*

The learning support trainee showed considerable understanding of collaboration (ELS and J). *"Collaboration was essential to the process, beginning with the assessors and parent s in helping me identify his needs and strengths as well as in supervision and with the play therapist." (ELS).* The learning support trainee found it helpful to consult with the play therapist (T3) regarding emotional difficulties the child was experiencing within the learning support. *"Matthew seems to have lost focus in learning support since commencing Play Therapy. The Play Therapist today suggested to me that I use emotion cards to help him to identify his feelings in a non intrusive way."(J)*

d. Theme 4: Perceptions of the holistic (assessment and support) process

(Appendix G, Table G4)

Findings regarding the perceptions of the holistic process provided an in-depth understanding of the participants' perceptions of the ecosystemic process. In addition, these findings provided an understanding of the perceptions of the participants regarding the different components of the approach.

Largely, the holistic ecosystemic process was perceived to be helpful in terms of assessing, understanding and supporting the child. The overall process (i.e. IAC, collaboration and interventions provided etc.) was believed to be helpful; both for understanding the child well and for enabling appropriate, goodness of fit interventions. Participants commented on the high efficacy of the IAC process in providing a holistic understanding of the child and the systems he interacts with. Furthermore, they found it effective in providing a detailed understanding upon which intervention programmes can be based. In addition, all relevant stakeholders commented very favourably on the CATLI's high efficacy in providing an emotionally and scholastically conducive environment for the child. The parent counselling was generally perceived to have been effective in supporting the mother, and also enabled the mother to further support her child. On the other hand, the child's counselling process was perceived to be a difficult process that required time and an alternative approach in order for anxiety to be relieved.

(i) Perceptions regarding the holistic process

Overall, the play therapy trainee (T3) and the parent counselling trainee (T4) commented that the process was too short due to academic constraints. *"The intervention was too short – limited by the reality that we were students having to accommodate academic needs as well. Within an academic setting this is likely to remain a difficulty due to the inflexible constraints such as examinations and holidays."* (T4)

The play therapy trainee (T3), the parent counselling trainee (T4) and the learning support supervisor (S2) all commented on the overall process (i.e. IAC, collaboration between participants and to some extent, the interventions provided). They saw the holistic process as being helpful; firstly for understanding the child really well, *"... operating in the real world, information from assessment and the parent's counselling certainly assisted in my understanding of the child" (T3);* and secondly for enabling appropriate interventions to meet the needs of the child. *"The process also allowed the learner support specialist to assess levels of knowledge and areas for development and thus plan activities according to Matthew's interests. In addition it also encouraged his family and school to support him." (S2)*

(ii) Perceptions of the IAC process

All participants commented on the high efficacy of the IAC process in providing a holistic understanding of the child and the systems he interacts with (P, E, T1, T2, S1) and for providing a detailed understanding on which to base LS plans (S2). This supports the notion that an ecosystemic assessment process was highly effective for giving accurate ecosystemic information regarding the child's development.

The IAC was perceived by the parent as accommodating Matthew's shy nature and making him feel comfortable (P). *"Matthew is a shy boy and was made to feel comfortable at all times…Drawing on my sons strengths, interests, etc. gave some/a lot of positive reinforcement"* She further highlighted that the focus the trainees placed on Matthew's strengths were positively reinforcing. Overall, she felt that as a family, they had gained a clear understanding of Matthew and the systems with which he interacts. This aided them in making decisions on how to proceed.

The assessment trainees (T1 and T2) were in agreement with the parent. *"The IAC is a phenomenal process to use in assessing a child."* (T2). Assessment trainee 1 (T1) felt the IAC encouraged that participation of the family and this was useful in gaining a holistic understanding of the child. *"This approach is very helpful because it involves all stakeholders and dynamics between each member and involvement of their interests in the client concerned is gathered. A holistic picture is formed around the problems and one can address issues on a holistic manner and also involve the stakeholders."* (T1)

She further added that the IAC provided a user-friendly approach to assessment that allows the family to become involved.

"The IAC allows the family insight into assessment which demystifies it and makes it more user-friendly and more collaborative."(T1)

(iii) Perceptions of the learning support process

The parent, educator and learning support supervisor (P, E and S2) (see Appendix G) and extant data (ELS, PT1, PT2 – Tables G5-G11) highlighted the high efficacy of the learning support process; especially in terms of addressing Matthew's needs. The learning support was seen to improve Matthew's reading and writing skills, accommodating his processing style and providing an environment that suited his temperamental style.

The parent found the learning support to be excellent. *"The learning support was excellent. He improved in leaps and bounds…helped him tremendously… He enjoyed it immensely, still misses it."* The educator considered it *"helped with reading and writing"* while the learning support supervisor (S2) *"found it very effective for the child as it was well planned".* Furthermore, the learning support supervisor felt that, "*The process also allowed the learner support specialist to assess levels of knowledge and areas for development and thus plan activities according to Matthew's interests. In addition, it also encouraged his family and school to support him."*

From the extant data, it was evident that the learning support was therefore seen to involve the family by providing examples of how to support Matthew. Therefore the learning support trainee was seen to provide parent support to the mother in terms of helping her to understand Matthew's temperament and cognitive style, providing her with means to help accommodate Matthew.

Furthermore, by the learning support trainee accommodating Matthew's temperament and by adjusting the levels of the lessons according to his cognitive processing style during learning support, the learning support trainee was perceived to be providing an environment conducive to change. This highlighted the notion that for optimal development of the child to occur, the environment needed to be adjusted. This holds true to ecosystemic principles.

The effects of the learning support were twofold. Matthew was seen to be understood and accommodated by both his mother and the learning support trainee. This in turn affected the quality of social support that Matthew received, promoting both his academic and emotional development.

The learning support trainee perceived the learning support process to be highly effective as the CATLI provided for an environment whereby Matthew's motivation could be increased. The learning support trainee felt this was integral to the process of lowering anxiety and promoting literacy skills. *"Matthew responded positively to an environment where unconditional positive regard was offered" (ELS)*

"The CATLI provided Matthew with an environment that is interesting, fun and wherein he can gain a sense of mastery. This increased his motivation to scholastic tasks, thereby lowering his anxiety and promoting much needed literacy skills" (ELS)

(iv) Perceptions of the counselling processes

The counselling interventions received by the mother and child were perceived differently.

It is evident (from P, T3 and S3) that the child initially and for most parts perceived the counselling as fearful. The mother noted that her son battled with the counselling at first, as he had to *"first build trust with a person before he will open up" (P)*.
The child's trainee counsellor confirmed the parent's perceptions, as she commented that *"The child barely spoke during the therapy sessions. Initially, it seemed that the play therapy was terrifying for him and that he was virtually paralysed by fear."* (T3). This, as the play therapy trainee (T3) noted, was due to the poorness of fit between the child's slow-to-approach-and-adapt temperament and the psychodynamic orientation of the play

therapy. *"Given the child's temperament and cognitive functioning, psychodynamic play therapy might not have been the easiest for him." (T3).*

The parent added that once the child was able to get used to the counselling trainee *"he began to enjoy the play therapy."* (P). It was further noted by the play therapy trainee and the counselling supervisor that the counselling trainee became more directive in her approach and subsequent to that, Matthew was seen to open up through the painting of pictures.

"Initially it seemed that the play therapy was terrifying for him and that he was virtually paralysed by fear. At Session 6, when he began painting [with guidance and direction], his anxiety lessened and it appeared he began to enjoy having a time and space to mess."(T3)

"Initially the child was frozen and I think the process felt excruciating for both the therapist and the child. But after a while once the child experienced the therapist as being able to survive him, together with the fact that the therapist became a bit more directive and placed paint and paper within his reach he started to "thaw".(S3)

On the other hand, the parent counselling was perceived by the relevant participants (P, T3 and T4) to have been highly effective. The parent felt that she needed the personal counselling (P). She believed that the process helped her to deal with the entire emotional trauma she had encountered. *"It taught me to relax a lot more and coping mechanisms which I still use today. It taught me how to control my anxiety." (P)* She further added that when her husband joined her it "*helped my husband and I to understand each other as well as dealing with our traumas and emotional issues." (P).* As a whole, she felt that the combination of counselling processes helped her family.

"We are more relaxed as a family. We all understand each other a lot more. The counselling helped for our whole family's well-being. My son is now a lot more relaxed and we talk about our problems and find solutions to the problems. We are definitely closer as a family. The counselling brought us together."(P)

The play therapy trainee (T3) and the parent counselling trainee (T4) perceived the parent counselling as useful as it provided an understanding into the child's context (through collaboration in supervision);

"It provided me with an accurate glimpse into the family life and dynamics of the child's context."(T3)

and also, *"It enabled them [the parents] to get in touch and begin to explore some of her own issues. It allowed her [the mother] hopefully to feel heard and understood."(T4)*

Findings regarding Aim 2, which are embodied in five themes, are presented as follows:

e. Theme 5: Emotions: Self-esteem

(Appendix G, Table G5)

Overall, four participants commented on how Matthew's self-esteem and confidence had markedly improved (P, S2, S3 and ELS). They attributed this improvement to a few components of the process, namely: being made to feel comfortable in the IAC; by all trainees focusing on his strengths; the learning support process and the counselling processes. A more detailed analysis follows.

The parent perceived that the assessment and support process *"definitely helped my son's strengths and needs as he gained a lot of confidence and he is more relaxed than what he was." (P).* With reference to the IAC process, she commented that *'Matthew is a shy boy and was made to feel comfortable at all times" (P).* Furthermore, she felt that, *"The learning support helped him cope, built his confidence and he learnt new ways to learn" (*P)

The learning support supervisor (S2), counselling supervisor (S3) and the learning support trainee (ELS) perceived that Matthew's self-esteem had improved. For example:

"It was clearly evident through observing Matthew, that there was a marked improvement in self-esteem, confidence, and motivation. He appeared relatively more emotionally secure."(S2)

"Matthew responded positively to an environment where unconditional positive regard was offered. Marked improvements were seen in his self confidence."(ELS)

The learning support supervisor noted that Matthew appeared more emotionally secure. She attributed this increased self-esteem and confidence to the success of the learning support. She felt that the CATLI was designed to address Matthew's emotional needs, cognitive processing style and knowledge levels and because of this, he felt capable of reading and writing, *"he felt capable of doing the reading and writing tasks as they were targeted at his level."(S2).* Furthermore, she felt that because the learning

support trainee had found a fit between hers and Matthew's temperaments the child felt more secure. *"Finding a fit in temperament between child and student was essential."* (S2)

The learning support trainee commented that Matthew's increased self-esteem was due to the…*" provision of an environment where unconditional positive regard was offered"(ELS),* as well as to a reconditioning process whereby he worked towards rewards, allowing him to be made aware of his accomplishments. She also revealed that… *"targeting his love for animals and the outdoors in lesson plans, his motivation increased".* Subsequent levels of performance increased and his self-esteem was built up. In this way, literacy skills were modeled as fun with Matthew not even realising how much reading and writing he was accomplishing.

It was apparent to the counselling supervisor that Matthew's increased self-esteem and confidence was due to fact that the trainee counsellor had heard and understood Matthew, which provided a holding effect. *"I believe that the child felt heard and understood which appeared to have a holding effect."(S3)*

The trainee counsellor (T3) made no comment with regard to Matthew's improved self-esteem. However, she commented that change was hard to measure, especially when using a psychodynamic orientation to therapy, as one cannot measure the "unconscious".

"Often change takes time to be internalised before it can be measured in behavioural change. It is also difficult to measure what was happening on an unconscious level."(T4)

It is interesting to note that the levels of improvement in Matthew's self-esteem was perceived to be due to using the IAC and CATLI, both ecosystemic approaches. On the other hand, however, no levels of improvement were perceived as being due to the personal counselling. As will be noted further on, the counselling offered within an ecosystemic framework, Parent counselling, was able to measure the effects on the child (see theme 6).

f. Theme 6: Emotions: Changes in interpersonal relationships

(Appendix G, Table G6)

Changes in interpersonal relationships were identified within this theme as being within the family, as well as being between the mother and the child. Notable and significant changes were evident in the child's relationship with his mother, with no changes in the child's relationship with the educator being perceived.

Participants (P, S3, T4 and ELS, J) considered that the family's cohesion and the mother's ability to support, understand and help her son had improved considerably.

The mother felt that as a whole the family was a lot more supportive of each other. *"We are more relaxed as a family. We all understand each other a lot more. The Counselling helped for our whole families' wellbeing. My son is now a lot more relaxed and we talk about our problems and find solutions to the problems." (P)*

However, it was specifically noted from the mother's comments that she felt she was better able to understand him and respond to his needs. *"By understanding my sons strengths and needs [through the IAC] it allowed me as a parent to help my son more as I now understand what he has needed and requires. We have learnt to give plenty positive reinforcement as we now fully understand to concentrate on the positives and work on the problem areas." (P)* The IAC appears to have facilitated an understanding of her child's needs, empowering her to help her son. Furthermore, the parent counselling also allowed for a sense of empowerment. *"It has helped me as a mother to help; Matthew speaks about his concerns, and gets things off his chest" (P).*

The counselling supervisor (S3) felt that the mother was more supportive of Matthew as the IAC process had allowed her to be more thoughtful and receptive to the child. The supervisor (S3) further attributed this improvement in social support to the parent counselling providing her with a "*good enough*" experience. In this way, a positive experience was modelled to her and subsequently she felt able to support her son.

"I believe that [due to the parent feeling heard and understood] the child felt heard and understood [by his mother] which appeared to have a holding effect." (S3)

The trainee learning support specialist's comments revealed that she particularly noticed considerable improvements in the mother-son relationship. For example, she noted changes from the initial meeting with the family where *"Matthew was silent hardly engaging with his parents and his parents hardly engaging with him"(J),* to Session 12 of the learning support*. "After 12 sessions, he was noticed chatting enthusiastically with his mother during an informal meeting between himself and his mom."*(ELS). The learning support trainee attributes this positive change to the combined effects of the Parent counselling and Matthew's increased self-esteem.

It is evident from the above data that the mother was better able to understand and respond to the needs of her son due to the IAC and her counselling process, respectively.

No changes were commented on in the relationship between Matthew and the educator. This can perhaps be linked to the lack of collaboration; therefore, no facilitation of change occurred. Of importance was the attribution of this lack of collaboration to the time constraints and academic pressures experienced by the trainees.

g. Theme 7: Emotions: Anxiety

(Appendix G, Table G7)

Two participants in particular noticed that Matthew showed a lessening of anxiety and a more relaxed state (P and E), while the trainee learning support specialist also commented on Matthew's lessened anxiety in general, as well as lessened performance anxiety. However, the play therapy trainee (T3) and the counselling supervisor (S3) felt that his anxiety was in fact intense within the counselling sessions, but the counselling supervisor highlighted that in general, by the end of the intervention, perceptions were that Matthew's anxiety had lessened.

The parent felt that Matthew was a lot more relaxed. She felt that he was not as anxious, as the counselling had taught him not to internalise his problems.

"He is much more relaxed, not as anxious as has learnt not to internalise his problems but to speak about them." (P), while the educator (E) noted *"his anxiety was lessened but that he was in fact still a very shy boy."*

The learning support trainee commented on lessened anxiety in general and lessened performance anxiety around reading and writing tasks (ELS). She noted that Matthew *"experienced less anxiety and significant improvement was seen in his identifying of emotions in Learner Support, using emotion cards."* and that *"Matthew's needs lay mainly in his anxiety and withdrawal; it was most rewarding seeing the change in confidence levels."*

This lessened anxiety was attributed to literacy skills being modeled with Matthew's interest and joys and being fun. *"By using an exciting approach it reinforces cognitive, linguistic and literacy knowledge and the learner does not fully realize how much reading and writing they are accomplishing. This in turn improves self-esteem, motivation and confidence levels and anxiety is contained."* (ELS). She felt that… *"The CATLI provided Matthew with an environment that is interesting, fun and wherein he can gain a sense of mastery. This increased his motivation to scholastic tasks, thereby lowering his anxiety and promoting much needed literacy skills" (ELS).*

Extant data revealing observations and pre- and post-test data from the Stanford Reading Test highlighted improvements in reading comprehension due to lessened anxiety. *"Post- testing observations from the Standford Reading Test revealed that Matthew is experiencing far less anxiety. Anxiety caused difficulties in Matthew completing two subtests during the pre testing phase. Post-testing observations made by the author revealed that Matthew was experiencing far less anxiety" (ELS*). During post-testing, Matthew was able to complete the Stanford Test, highlighting his improvement not only in reading comprehension, but also emotionally. This indicates, according to the extant data, that anxiety at post-testing had lessened considerably since the pre-assessment phase.

The play therapy trainee (T3) and her supervisor (S3) both agreed that initially, Matthew found the Counselling process terrifying. *"Initially it seemed that the play therapy was terrifying for him and that he was virtually paralysed by fear." (T3). "Initially he appeared frozen in the therapy."* They both also commented that by Session 6, when he began painting (with guidance and direction), Matthew's anxiety lessened and it… "*appeared he began to enjoy having a time and space to mess*" (S3). Further, the counselling supervisor attributed this lessened anxiety to the trust that grew from the reliability and consistency of both the frame and the therapist, coupled with the non-judgmental and

empathic attitude displayed by the therapist. She highlighted that… "*His artwork suggested that he felt held through the experience." (*S3)

h. Theme 8: Scholastic: Cognitive strategies and general knowledge

(Appendix G, Table G8; Appendix H)

The input of 4 participants and data gained from post-testing suggested that Matthew had learnt to think and learn better (P, T, S2, ELS, TD1, and TD2). Matthew's improved use of cognitive strategies which included *"thinking, problem-solving, retrieving information better, self-correcting, self-monitoring, planning and prediction"* (S2, ELS, TD1 and TD2) were also commented upon. Matthews's concepts/general knowledge and cognitive strategies improved considerably (ELS), and this was considered to have helped improve Matthew's reading, writing and maths skills (ELS, TD1, TD2).

The parent, the educator and learning support supervisor highlighted that Matthew was able to learn and think better. "*His learning is better."* (E). Additionally, the mother felt that Matthew had actually found 'ways' or strategies to learn and think. *"He learnt new ways to learn and think."(P). "[There appeared to be an] improved ability to think, problem-solve and retrieve information." (S2)*

Extant data (ELS) highlighted that "*improvement and usage of the following cognitive processing strategies were evident– self-monitoring, self-correcting, planning, prediction, sequencing and successive processing." (ELS)* and that "*Concepts development or general knowledge – schemes and concepts have significantly improved." (ELS*)

Furthermore, the learning support trainee noted that it was evident that Matthew was *"using the pictures during the informal reading test as well as using strategies such as prediction." (ELS)*

Pre- and post-intervention testing (TD1 and TD2; Appendix G, Table G8 and Appendix H,) revealed the improvement and use of many cognitive strategies. Sequencing and successive processing improvements were evident in Matthew's informal reading, where he read with a lot more ease and flow. Further indications of this improvement were evident in decreased errors in reading and writing activities requiring sequencing and successive processing. Visual discrimination tasks in

reading and writing also improved. Matthew seemed to notice more detail (punctuation and other literacy conventions) in his reading. These strategies were also seen in his writing sample.

Improvements of problem-solving strategies were evident in Matthew's mathematics. Marked improvement was seen between pre- and post-testing on a standardised test. For example, Matthew's numerical reasoning improved from below Grade 1 level to a Grade 2 level. His ability to solve word problems improved from a Grade 1 level to Grade 2 levels. These particular sub-tests depend largely on problem-solving ability, and since no direct support was given to mathematical problem-solving in the CATLI, it is clear that Matthew bridged a meta-cognitive strategy learned in the reading and writing support into mathematics, which is a significant finding.

Improvements in concepts/general knowledge were evident in the Stanford Reading Test, which is evident in Matthew's improved scores on the reading comprehension (6 months) and auditory vocabulary subtests (1 year)

The Learning Support Supervisor (S2) attributed… *"Matthew's improved reading, writing, mathematics, reduced performance anxiety, increased motivation to the increased usage of cognitive strategies"* which was directly ascribed to the application of components of the CATLI.

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i. Theme 9: Scholastic: Motivation

(Appendix G, Table G9. and Appendix H)

The input of 3 participants and data gained from post-testing revealed that Matthew's motivation to learn and to complete tasks requiring reading, writing and maths improved considerably (P, S2, ELS, TD1 and TD2).

The parent commented on Matthew's enjoyment of learning support suggesting his increased motivation to learn. *"The learning support was excellent. He improved in leaps and bounds…helped him tremendously… He enjoyed it immensely, still misses it." (P).*

The learning support supervisor and the learning support trainee were in agreement about Matthew's enjoyment and increased motivation. *"Yes [there were] considerable*

[improvements]. Improved self-esteem, confidence, and motivation levels." (S3). "Matthew's interests were targeted, thus increasing his motivation to most reading and writing tasks." (ELS).

It is clear that the participants and extant data (P, S2 and ELS) attributed this directly to using the CATLI.

"Reduced levels of performance anxiety were evident…Reduced anxiety was attributed to literacy skills being modeled with Matthew's interest and joys and being fun. By using an exciting approach it reinforces cognitive, linguistic and literacy knowledge and the learner does not fully realize how much reading and writing they are accomplishing. This in turn improves self-esteem, motivation and confidence levels and anxiety is contained."(S2) "The CATLI addressed the anxiety and difficulty with reading by allowing Matthew to be slowly introduced to content through the use of picture cues, paired, shared and repeated reading activities."(ELS)

The learning support supervisor (S2) attributed this increased motivation to the use of the CATLI, as the lessons were developed out of the child's interest accommodated within a meta-theme. *"Allowing for the monitoring of performance, understanding the child, and flexibility in meeting the child's needs, all improved the child's motivation to learn" (S2).* She further felt that "*by finding a fit in temperament and cognitive style between child and the lessons",* the child was made to feel capable. It is evident from S2's comments that motivation, lessened anxiety and improved self-esteem appear to be linked.

The learning support trainee noted in extant data (ELS), that the improved motivation to read and write was attributed to the CATLI, as it firstly allowed Matthew to become aware of his achievements and work towards rewards, and secondly, it provided a vehicle which was used to design a form of instruction that suited Matthew's cognitive style. Thirdly, the activities and books chosen were all authentic, meaning-based and of high interest to Matthew. *"Matthew's interests were targeted and thus increasing his motivation to most reading and writing tasks." (ELS) "Matthew is very shy and doesn't seem to like talking. He needs a lot of motivation to overcome anxiety and so one of his needs is to focus on his individual interests by targeting his love for animals and the outdoors. Matthew has poor social skills; and therefore needs for his unique temperament to be understood. In so doing he needs to be part of a group that would accommodate his low PSF. Furthermore, as anxiety also seems to be a factor contributing to Matthew's poor peer relations, he needs a lot of unconditional positive regard, providing him the right emotional environment, to help develop emotionally" (ELS)*

j. Theme 10: Scholastic: Reading

(Appendix G, Table G10,and Appendix H)

The input of 3 participants and data gained from post-testing revealed that, in general, Matthew's reading skills had improved considerably (E, S2, ELS, TD1, and TD2).

The educator (E) and the learning support supervisor (S2) commented on how the learning support improved Matthew's reading.

"It helped him with his reading and writing." (E)

Generally, the test data (TD1 and TD2) highlighted the improvement of the following skills; improved word recognition, improved comprehension, and slightly improved literacy conventions.

Improvements in instant word recognition were noted in Matthews's informal reading test. Reading fluency increased from 51% instant word recognition to 65% instant word recognition at a Grade 2 level. This highlights an improvement in word recognition as well as improved motivation to read aloud. Matthew's improved word recognition is also attributed to better phonics use as seen in his Stanford post-test results where his phonetic analysis scored at a Grade 3 level. Reading activities often require skills that aid in instant word recognition such as visual memory. Matthew's visual memory test showed an improvement from a Grade 1 level to above Grade 2.

Matthew's use of literacy conventions improved slightly. Reading activities that highlighted improved use of literacy conventions focused on noticing details such as punctuation, titles, visual discrimination and the use of phonics. Observations reported by the learning support specialist (in the ELS) highlighted that Matthew seemed to notice more detail (punctuation and other literacy conventions) in his informal reading post-test (ELS). Post-testing data highlighted that improvements were also seen in the visual discrimination test, which is indicative of improvements in the noticing of detail. Use of phonics was seen to be at Grade 3 level on the Stanford reading subtest of phonetic analysis (PT 1 and PT2) and a high motivation towards the Sound Family Approach, evidenced from observations by the learning support specialist (in the ELS).

Improvements in reading comprehension were observed and noted by the learning support trainee (in the ELS) and post-test data (PD2). These are closely correlated to improvements in general knowledge and concepts as already highlighted, as well as Matthew's enhanced ability to use meta-cognitive strategies such as using context, linking etc. Post-testing data from the Stanford reading test highlighted improvement from below a Grade 1 level (as during the pre-resting phase, Matthew failed to complete the reading comprehension subtest) to a Grade 1.5 for reading comprehension. (Appendix T; PT1 AND PT2)

The learning support supervisor (S2) highlighted that…"*Matthew's improved reading, reduced performance anxiety, increased motivation and increased usage of cognitive strategies, were attributed to the application of the certain components of the CATLI,'* such as the negotiated meta-theme, the construction tasks, repeated and shared reading, as well as the Sound Family approach to teaching phonics.

It was evident according to the learning support supervisor (S2) that the learning support worked because lessons were developed from the child's interest accommodated within a meta-theme. Monitoring performance, understanding the child and allowing for flexibility in meeting his needs, all benefitted Matthew. Finding a fit in temperament between child and student was also essential in the success of reading in learning support.

k. <u>Theme 11: Scholastic: Writing</u>

(Appendix G, Table G11 and Appendix H)

Some improvement in writing skills was noted (T, S2, ELS, TD1 and TD2) namely planning, development of meaning and the use of literacy conventions when writing. Motivation to write also improved, as noted by the Educator and the learning support trainee (ELS), with the educator commenting that the learning support "helped with his [reading] and writing".

Extant data (ELS, PT1 and PT2) reveals that Matthew was unable to complete any written piece in the pre-assessments. After the learning support intervention however, he was able to write at a Grade 1 level.

Planning and the ability to sequence events of a story were only evident during the learning support process (ELS). *"Matthew thoroughly engaged with the writing process including the planning and sequencing of his story on the graphic organisers provided to him. He enjoyed this as I scribed the words he so wanted to say. It was a non-threatening process" (ELS).* However, during the post-testing phase, Matthew showed no signs of planning and sequencing in his informal writing (PT2). As highlighted by the learning support trainee (in the ELS), the learning support process was less threatening and hence less anxiety-provoking than the testing situation.

Use of literacy conventions, such as phonics, punctuation and use of titles were seen to be limited during post-testing. Improvements were mainly seen in Matthew's spelling and use of phonics during the post-testing, as well as during the learning support process. Matthew's spelling errors in the Schonell Spelling Test decreased between pre- and post-testing, even though he was still below a Grade 1 level. Furthermore, *"Matthew increasingly enjoyed copying the sentences from the Sound Family activity [of the CATLI]. Such an activity provided Matthew with a sense of mastery thus increasing his motivation to write" (ELS).*

According to both the learning support trainee (ELS) and her supervisor (S2), this motivation to write was attributed to the CATLI writing process, involving scribing of text by the trainee so as to reduce performance anxiety. Writing activities were based on meaningful authentic tasks. All writing activities including the publication of the small books and the copying of Sound Family sentences provided Matthew with a sense of mastery, thus increasing his motivation to write.

The learning support trainee felt that limitations to achieving full writing success were attributed to his hesitance and anxiety towards writing. She further felt that addressing his motivation and anxiety towards writing was of primary importance before any further development of writing skills could occur.

"It appears that Matthew and his writing are emotionally attached. He finds it one of the most challenging of tasks. It was very rewarding to see the first layer of success and that is his increased motivation and decreased anxiety towards writing. This should lay a foundation for further development" (ELS)

3. Conclusion

The results of this study will now be set in the context of the findings of the studies reviewed in Chapter 2. As hypothesised, the participants in this study appeared to find the ecosystemic approach studied as helpful in understanding and supporting the child, which suggests that this approach may be a viable alternative to using medical model applications such as intelligence testing, diagnoses and medically-inclined treatments focusing exclusively on the child.

CHAPTER FIVE: DISCUSSION

In this chapter, the results of this study are contrasted with the findings of studies reviewed in Chapter 2. As hypothesised, the participants in this study appeared to find the ecosystemic approach (the IAC) helpful in understanding the child's development. This suggests that this approach may be a viable alternative to using intelligence and projective testing as a means of identifying developmental diversity and needs. In addition, as hypothesised, using an ecosystemic intervention program such as the CATLI in combination with parent counselling, educator support and play therapy was found to have helped the child to develop emotionally and scholastically.

1. A call for an alternative model

Since research (Spann, 2005; Harcombe, 2003; Donald in Engelbrecht, Green & Naiker, 1999) suggested that the majority of South African children experience fairly negative contextual factors which tend to interfere considerably with scholastic and emotional development, it was obvious that we need to look more carefully at how we assess and support our children (Harcombe, 2003). The case study aimed to present results that could in fact argue for an alternative to traditional psycho-medical models of assessing and supporting children, one that could in fact observe and address the many interactions between the child and his environment. Matthew's story provided some evidence that supports the efficacy of the constructivist, ecosystemic approach.

2. Using a constructivist, ecosystemic approach in understanding Matthew

a. Research highlighting the inadequacy of intelligence and projective testing

The study aimed to show that using an alternative approach to understanding the case study's development was ethically and comprehensively more appropriate. This was undertaken as many studies have found that using a psycho-medical approach, such as IQ and projective testing to understanding emotional and scholastic development was

argued as being too simplistic a framework (Anastasi, 1968; Jensen, 1959; Meehl, 1959; Vellutino, Scanlon & Lyon, 2000; Lyon, Fletcher, Shaywitz, Shaywitz, Torgesen, Wood, Schulte & Olsen, 2001; Donovan & Cross, 2002; D'Angiulli & Siegel, 2003). In fact, much research suggested that contextual and systemic interactions were far more likely to cause scholastic and emotional difficulties than genetic factors alone (Shuttleworth-Edwards, Kemp, Rust, Muirhead, Hartman & Radloff, 2004; Torgesen, Alexander, Wagner, Rashotte, Voeller & Conway, 2001; Espy, 2000; Fagan, 2000; Thomas & Chess, 1977 in Rothbart 2004; Farbach, 2006; Thomas, Chess & Birch, 1968; Keogh, 2003; Teglasi, 1998; Ghazinour, Richter, Emami & Eisemann, 2003; Lytton, 1990 in Sanson , Hemphill & Smart, 2004; Donald in Engelbrecht, Green, Naicker and Engelbrecht, 1999; Harcombe, 2003; Harcombe, 1993; De Vries; 1984 in Strelau, 1998; Lerner, 1986 in Sanson et al., 2004; Talwar, Nitz & Lerner 1990 in Sanson et al., 2004; Burrows, Horton & Oakland, 1997; Guerin, Gottfried, Oliver & Thomas, 1994 in Sanson et al., 2004; Carson & Bitner,1994; Rubin, Coplan, Fox & Calkins, 1995 in Sanson et al., 2004; Smith & Prior,1995 in Sanson et al., 2004; Werner & Smith, 1982 in Sanson et al., 2004; Hagekull, 1994 in Sanson et al., 2004; Katainen, Räeikköenen & Keltikangas-Järvinen, 1999 in Sanson et al., 2004; Eisenberg, Fabes, Bernzweig, Karbon, Poulon, & Hanish, 1993 in Sanson et al., 2004; Eisenberg et al., 1993; Windle, 1990; Chen, Rubin and Li, 1995 in Sanson et al., 2004; Skarpness & Carson, 1986 in Sanson et al., 2004). The majority of the findings of these studies indicated that there were stronger predictors of emotional and scholastic problems than intra-psychic causes such as those traditionally measured by IQ and projective tests. These more important causes of emotional and scholastic difficulties were found to be inadequate interpersonal support, inadequate learning opportunities and an underdeveloped motivation for learning.

b. <u>Support for an ecosystemic approach to assessment</u>

Consequently, this study investigated an alternative approach to assessment, namely the IAC approach, which is underpinned by constructivist, ecosystemic principles. The effectiveness of such an assessment procedure was documented in a previous study conducted by Amod, Skuy, Sonderup and Fridjhon (2000). The findings of this study corroborate the Amod et al (2000) study results, namely that the majority of the participants commented on the high efficacy of the IAC process in providing a holistic

understanding of the child, and deemed this holistic understanding as a very necessary element upon which to base intervention programmes.

Another study, namely one using an ecosystemic approach, similar to the IAC for the identification of behavioural problems (Tyler & Jones, 2000), yielded similar findings to this study. On the whole, participants in the Tyler and Jones study found that the ecosystemic approach used was effective in helping them to understand how ecosystemic interactions promoted or hindered a child's development. This was also evident in the findings of this study. However, unlike the participants in the Tyler and Jones study (2000), certain participants in this study demonstrated a well-developed, theoretical understanding of the ecosystemic framework as it relates to the causes of delays and/or advances in learning and development. The highly knowledgeable participants were those trainees and supervisors who had had at least two years experience in constructivist, ecosystemic theory and practice through ongoing lecturing, experience and supervision. This study documented that five of the participants were highly conversant in ecosystemic terminology and were able to soundly apply ecosystemic principles.

It is interesting to note that the few participants, who had not been trained in constructivism and did not use ecosystemic terminology well, actually demonstrated some limited understanding of constructivist principles and practice, as they clearly considered that the child's delayed development was due to interactions between the child and people in his environment. This limited understanding did not extend to perceptions regarding interventions however, as it was evident that they did not have a conception of intervening systemically.

These findings have implications for the training of professionals on many levels. Firstly, in spite of much research that casts doubt on the usefulness of the psycho-medical model, it is still largely entrenched in psychological and educational training programmes and in practice in South Africa. The findings from this study suggest therefore, that at least 2 years of training and practice is necessary to ensure that trainees are able to understand and apply ecosystemic principles effectively. In addition, the study found that even though some participants were not trained adequately in constructivist principles, they seemed able to understand and apply some aspects of the principles, just by being part of an ecosystemic intervention

process. This suggests that practical, applied practice in using constructivism is required in order for trainees to construct abstract and applied constructs regarding ecosystemic principles. This should not surprise us since this is the basic tenet of constructivism; namely that we need to do things in order to build concepts. It is possible that this notion of the necessity of practice explains the findings of Tyler and Jones (2000); namely that systemic theoretical ideas are difficult to understand, possibly due to complex terminology, but often easy to put into practice.

This finding is especially important when thinking about university psychology and learning support training programmes. For example, expecting participants to move from a fairly simplistic psycho-medical model of understanding development to a complex, multi-factorial systemic understanding of learning diversity, i.e. changing their conceptual understanding, is perhaps too much to expect of most people, especially within the short time frames of the Master's year, and especially if no practical exposure is given. It seems apparent that the current B.Ed Honours programme at this university provides practical exposure to the approach, whereas other programmes including Honours programmes from other universities, as well as the Master's programme at this university reviewed in the context of this study, perhaps provide only theoretical explanations of the ecosystemic approach.

In summary, the findings from participants in this research tentatively suggest that using an ecosystemic approach to understanding development is an effective way of understanding a child's emotional and scholastic development. In addition, evidence suggests that using the IAC is an effective way of helping parents, the child and other relevant stakeholders to analyse the differing ecosystemic interactions that affect development, so that appropriate interventions can be decided upon.

3. Using collaboration for helping stakeholders understand and to support a child's emotional and scholastic development

Another tenet of the ecosystemic framework is that the ecosystemic assessment and intervention process should be conducted so that it enables stakeholders to manage many of the systemic interactions themselves. Such a supportive approach needs to

use collaboration to effect optimal change. Collaboration has been researched fairly extensively over the last few years in various contexts (Denton, Hasbrouck and Sekaquaptewa, 2003), particularly regarding inclusive education (Meck and Barrow, 2005).

The research reviewed indicates that this approach is highly effective when used to understand a child's development as well as when used to implement support intervention programmes (Hasbrouck & Sekaquaptwea, 2003; Meck & Barrow, 2005; Levac, 2004; Kennedy, et al., 2002). The findings of this study also confirm this trend as the majority of the participants seemed to have a good understanding of collaboration and perceive it to be helpful in supporting the development and learning of the child, parent, educator and trainees.

In addition, this study suggests that the usage of collaboration is linked to the ability to understand and apply ecosystemic principles. For example, trainees not conversant in ecosystemic terminology who leant towards a medical approach were seen to misunderstand or only partly use the notion of collaboration in terms of supporting the child. This is also confirmed by the fact that those who exhibited a wide understanding of ecosystemic principles were more likely to understand and use collaboration well in order to both understand and support the child and relevant stakeholders.

These findings suggest that using a collaborative approach together with an ecosystemic framework for understanding the child's development is highly effective, as children need to be considered holistically. This cannot be done unless those in the child's environment collaborate with each other. Thus, collaboration can be seen as an effective method for implementing support interventions following improved understanding of the child's development.

In addition, the findings of this study suggest that collaboration involves time and commitment. Limitations to collaboration within this case study were evident. A few participants expressed the notion that more collaboration would have been better, particularly between the school and relevant interveners, but expressed that insufficient time hindered the process. This proved to be a limitation of the academic setting where examinations, holidays and academic pressures can impede full

collaboration. It can also be suggested that collaboration, along with constructivist assessment and intervention processes, are also highly time-consuming, and that clinical private practice and educational settings may have insufficient funds or motivation to pursue these ideals.

In the next section, the efficacy of the ecosystemic interventions used in this case-study is examined.

4. Using a constructivist ecosystemic approach in supporting a child's development

a. Using a constructivist ecosystemic approach to learning

Remedial approaches have traditionally been used for many generations as one of the psycho-medical model's battery of treatments. Such programmes tended to focus on remediating a child's intrapersonal/genetic disabilities. However, considerable research has shown that focusing exclusively on the child in order to remediate learning difficulties is flawed (Quirk & Schwanenflugel, 2004; Torgesen, Alexander, Wagner, Rasholte, Voeller & Conway, 2001; Chia-hua, 2006).

A considerable amount of research in various areas has offered alternate, more constructivist approaches to supporting learning and developmental delays. This research as been reviewed in detail in Chapter 2, while only highlights are referred to here. For example, one study based on constructivist mediation showed significant increases in scientific thinking and knowledge by the experimental group over the control group (Schur, Skuy, Zietsman & Fridjhon, 2002). Another study showed that more effective learning took place in constructivist, mediated forms of learning support over traditional, remediation approaches (Chia-hua, 2006). A need to view the child within an interacting environment as part of the process was therefore considered to be far more important to both studies (Chia-hua, 2006; Schur, et al., 2002).

The findings in the aforementioned studies along with this study's findings suggest that a constructivist ecosystemic approach to supporting a child's learning (i.e. in this

instance, Harcombe's CATLI) is highly effective. For example, all relevant stakeholders in this study commented very favourably on the CATLI's high efficacy in providing an emotionally and scholastically conducive environment for the child, though it must be understood that this success was also made possible by the systemic collaboration of the other stakeholders. It was also perceived that the CATLI, as used by the learning support trainee, accommodated Matthew by adjusting the levels of the lessons (i.e. to suit Matthew's Zone of Proximal Development, interests and strengths, amongst other aspects understood from the IAC process), thereby providing an environment conducive to academic, motivational and emotional improvement.

More detailed findings of this study (based on perceptions and testing) indicate that, due to the excellent use of the CATLI by the learning support trainee and supervisor, Matthew showed marked improvement in self esteem, in interpersonal relationships, in anxiety, in motivation, in the use of cognitive strategies to learn and think more effectively, as well as in reading and writing. Emotional improvements were evident in the CATLI as by accommodating Matthew in such an excellent manner, for example, by accommodating his temperament, this provided his mom with a model on how to do the same in the same manner. This in turn affected the quality of social support that Matthew received, promoting both his academic and emotional development.

It needs to be emphasised that many of Matthew's improvements are likely to remain, especially as many of them are due to learning and acquiring meta-cognitive strategies. Secondly, Matthew has already started to generalise these thinking skills in other domains such as mathematics, which is also an excellent sign that he has thoroughly internalised these strategies. In addition, his motivation to read has improved considerably, and he is already reading more books, which is also an excellent sign that the results produced by using the CATLI are likely to remain permanently on many levels.

It is also interesting to note that this excellent improvement occurred after only twelve 75-minute sessions. This is very unusual, as traditional remedial sessions tend to produce minimal changes after such a short space of time. This improvement can therefore be seen as being due to the entire ecosystemic process of assessment and intervention. In addition, it could also be perceived to be due to the constructivist,

ecosystemic underpinnings of Harcombe's CATLI, as well as the enthusiasm and care of both the learning support trainee and her supervisor.

Once again, it can be inferred from the learning support findings of this study that practical, applied work with competent, able supervisors in the context of a collaborative systemic intervention process is necessary to train trainees that produce the excellent results such as those obtained here. However, it must be pointed out once more that the extent to which trainees have been exposed to constructivist principles and the extent to which they are willing to change their thinking and practice, will also affect the way Harcombe's CATLI is implemented, and will thereby affect the results obtained.

b. Using a constructivist ecosystemic approach to counselling

Tramontana (1981) described and critically evaluated studies published mostly between 1967 through to 1977 that involved individual, group and family therapy. The greater weight of available evidence about adolescents does point toward the superiority of psychotherapy over no-therapy condition. This is only minimal evidence for this in the findings of this study. Even though the child initially battled with counselling, there are only minimal findings that suggest that the child benefitted from the counselling process. In addition, the minimal findings of this study are insufficient to prove that the child's self-esteem and anxiety improved solely due to the counselling process. It is possible that the entire ecosystemic process was more responsible for the improvements than anything else.

Additional reviews of literature were conducted by the American Psychological Association (APA) and Grunebaum (1975). These reviews concerned themselves with the effectiveness of psychotherapy with regards to group dynamics, the characteristics of client and therapist which promote or hinder a successful outcome, the therapist's behavioural characteristics and the patient's sociological characteristics. It was found that all these factors are implicated in therapeutic success (Grunebaum, 1975), thus suggesting that many factors other than individual psychodynamic therapy contribute to psychological wellness.

Findings regarding the characteristics of client and therapist in promoting or hindering a successful outcome are in accordance with the findings of this study, as well as those regarding the therapist's behavioural characteristics. The findings of this study suggest firstly, that due to the initial poorness of fit between the child's slow-to-approach-and-adapt temperament and the psychodynamic orientation of the trainee counsellors and the play therapy in general, anxiety was heightened. However, the trainee counsellors' behavioural characteristics prompted the counselling supervisor to respond to the child's needs and temperament, i.e. by becoming more directive, and because of this, the study suggested that the child may have been able to benefit from the process.

Findings from the reviews conducted by the APA and Grunebaum (1975), regarding the environmental effects of the counselling were also evident in this study. Outcomes of the parent counselling on the child's emotional development were seen to be highly effective. The study proposes that the parent counselling in fact benefited the child in that it improved his anxiety, self-esteem, interpersonal relationships and scholastic development. These findings suggest that the constructivist, ecosystemic aspects of the counselling interventions considerably contributed to the psychological well-being of the child and mother, as well as the family to some extent. However, there is insufficient evidence to show whether any of these improvements were in any way related to the actual psychotherapeutic intervention, or whether they were due to the combined ecosystemic intervention process. This could mean that the learning support process and the mother's support process were all that was necessary to improve Matthew's psychological well-being. On the other hand, it could also mean that had a more ecosystemic form of psychotherapy been used, additional positive outcomes could have been achieved.

In summary, the findings of this study appear to confirm, as other studies have shown, that the use of a constructivist, ecosystemic assessment and intervention process can be highly effective in improving a child's learning and development. On the other hand, this study only reviews the process used with one child from one family in a particular context. Such a study has, obviously, many limitations, which will be discussed in the next section.

CHAPTER SIX: CONCLUSIONS AND LIMITATIONS

This study has demonstrated positive findings. It is exciting and rewarding to note that this child and his family responded so favourably to a constructivist ecosystemic approach to assessment and intervention. These findings auger well for the South African context due to the SA policy of inclusive education, which emphasises the use of systemic approaches.

However, though the findings of this cutting edge study are positive in terms of assessing and supporting a child ecosystemically, and though it is suggested that such an approach could be effective and equitable for many reasons in a South African context, there is a need for far more research to add validity to these findings.

This need for additional studies is emphasised because only one child, in a particular context, was focused on in this study. And even though this child and his family responded so positively, a study focusing on a wider population would be needed to further support the findings of this study. However, ecosystemic research is very time-consuming and therefore expensive. In addition, asking for ecosystemic research also presupposes that there is considerable ecosystemic practice 'out there' that is available for research, which is not really the case in South Africa.

Though participants were largely seen to understand ecosystemic principles, internalisation of these principles was not fully evident among all participants. One of the reasons for this could be that this model takes time and practice to internalise, often because trainees have already been taught to understand development via a medical model approach. The findings of this study therefore suggest that changing one's way of thinking from a psycho-medical viewpoint to an ecosystemic approach is a difficult process, which takes time and support for change to occur. Since the participants in this study who were highly knowledgeable and at ease with ecosystemic principles, were those trainees and supervisors who had had at least two years experience in constructivist, ecosystemic theory and practice, it seems logical to suggest that a time frame of two years (at least) is necessary for most people to effect such shifts in their thinking.

In addition, other implications of these findings for the training of professionals is that practical, applied practice is also very necessary to ensure that trainees are able to understand and apply ecosystemic principles effectively. Since many universities in South Africa are not as amply funded as they used to be, the logistics and the payment for such practice may be more than is financially viable.

The results of this study also demonstrated that a collaborative approach is highly effective in ecosystemic support situations. This finding is especially relevant in the South African context as the political and socio-economic structures of the country, generated by the previous government for a few generations, have not enabled and empowered educationalists, parents or learners in the school context to be part of problem-solving processes. However, limitations to collaboration within this case study were evident, due to insufficient time being available during academic course work years, since examinations, holidays and academic pressures can impede the time available for full collaboration. This means that collaboration, along with constructivist assessment and intervention processes are all highly time consuming and that clinical, private practice and educational settings may also not have sufficient time, funds or motivation to pursue such practice.

The high efficacy that was evident in this study regarding using the CATLI in terms of promoting both scholastic and emotional well-being as well as the high efficacy of the parent counselling, suggest that these interventions considerably contributed to the child's development. Using the CATLI in a collaborative manner also has implications for school settings, particularly, and if institutional level support teams could work in collaboration with teachers, parents and district/provincial level support teams while using the CATLI, it is highly likely that literacy and learning levels would improve considerably in South Africa, though obviously, more research in need to corroborate this claim.

As there is not enough evidence to prove whether any of Matthew's improvements were related to the individual psychotherapeutic intervention, or whether they were due to the combined ecosystemic intervention process, further research is also required to elucidate whether or not individual psychotherapy is a necessary part of the ecosystemic intervention process. In fact, the findings of this study suggest that

learning support for children, as well as teacher and parent support, may be all that is necessary to improve most children's learning and emotional development.

This suggestion has considerable implications for future research and practice. In other words, if it can be determined that the majority of children with emotional, social and educational needs can be well supported by the combination of learning, parent and teacher support, much time, effort and money could be saved. This possibility is very important in the South African context particularly, as there are still very few professional psychologists in the country, especially those who work with children and youth. In any case, even if there were more trained psychologists, individual therapy could never address the needs of the large number of learners who experience barriers to learning and development in this country. In other words, empowering the learners themselves, as well as empowering teachers and parents/caregivers to effect improvements on systemic interactions will have much more far-reaching effects than individual interventions.

In summary, it is clear from this discussion that more research is needed to add validity to using an ecosystemic approach instead of a psycho-medical model for understanding, assessing and supporting scholastic and emotional development. It is also clear that constraints apply, as the process takes time, patience, expertise and money to implement. In addition, it is also suggested that there is some evidence to support the notion that this, or a similar systemic approach should work well, in any academic, scholastic or clinical setting provided that collaborative support is part of the process, costly though it may be. After all, who can put a price on the well-being of our children?

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APPENDICES

Appendix A: Participation Information Sheets

APPENDIX A1: TEACHER PARTICIPATION INFORMATION SHEET

School of Human and Community Development

Dear Madam

My name is Maria-Viviana Mugnaioni, and I am conducting research for the purpose of obtaining a Masters degree at the University. You may recall that I gave learning support to this learner in your class, and we chatted together when visiting the school. My area of research focus is the evaluation of holistic approach towards psychological and educational assessment and intervention with regard to the progress of one specific child at the Centre at the university. The holistic approach emphasizes the role that the child's environment may have on his development, and as such recommends that parent s, teachers, and children need support and need to collaborate together in removing any barriers to development and learning a child may have. As the child who is the focus of this study was a pupil of yours we would like to invite you to participate in this study.

Participation in this research will entail you filling in a survey around what you think of this learner's development last year.

Your participation is voluntary and you will not be advantaged or disadvantaged in any way for choosing to participate or not in the study. You may choose to refrain from answering certain questions. All of the information received will be kept confidential, including your name, the school's name, the child's name and any other information that could identify any of the participants. In addition, names and any other identifying information will be omitted from any written or oral work that stems from this research. Please also note that all notes and other data gathered will be kept in a locked cupboard and then destroyed when the study is over. If you wish to you may withdraw at any point of the study, without penalty. The data collected, will only be viewed by myself and my supervisor. There will be no direct risks and benefits to you and a summary of the research report can be drawn up upon request and submitted to you

If you choose to participate in the study please contact me within two weeks, so that I can come through to the school to discuss with you the objectives and rationale of the study as well as to collect signed documentation with regard to consent to be interviewed, to be audio recorded as well as to use direct quotes from the interview. I can be contacted telephonically at 082 8073989 or via email at vivdo@hixnet.co.za.

Kind regards

Maria-Viviana Mugnaioni

APPENDIX A2: PARENT PARTICIPATION INFORMATION SHEET

School of Human and Community Development

Dear Madam and Sir

My name is Maria-Viviana Mugnaioni, and I am conducting research for the purpose of obtaining a Masters degree at the University. My area of focus is that of the evaluation of the holistic approach towards psychological and educational assessment and intervention with regard to your child's progress at the Centre at the university. The holistic approach emphasizes the role that the child's environment may have on his development. The approach used in our clinic is unusual and as such has not been researched before, so we really would like to use your son as an anonymous case study. I know that you were very happy with his progress last year, which is one of the reasons why we chose him as a possibility.

Participation in this research will entail you filling in a survey around what you think of your child's development last year.

Your participation is voluntary and you will not be advantaged or disadvantaged in any way for choosing to participate or not in the study. You may choose to refrain from answering certain questions. All of the information received will be kept confidential, including your name, the school's name, the child's name and any other information that could identify any of the participants. In addition, names and any other identifying information will be omitted from any written or oral work that stems from this research. Please also note that all notes and other data gathered will be kept in a locked cupboard and then destroyed when the study is over. If you wish to you may withdraw at any point of the study, without penalty. The data collected, will only be viewed by myself and my supervisor. There will be no direct risks and benefits to you and a summary of the research report can be drawn up upon request.

If you choose to participate in the study please contact me within two weeks, so that I can come through to meet you so as to discuss with you the objectives and rationale of the study as well as to collect signed documentation with regard to consent to be interviewed, to be audio recorded as well as to use direct quotes from the interview. I can be contacted telephonically at 082 8073989 or via email at vivdo@hixnet.co.za.

Kind regards

Maria-Viviana Mugnaioni

APPENDIX A3: THERAPISTS' PARTICIPATION INFORMATION SHEET

School of Human and Community Development

Dear Madam

My name is Maria-Viviana Mugnaioni, and I am conducting research for the purpose of obtaining a Masters degree at the University. My area of focus is that of the evaluation of an holistic approach towards psychological and educational assessment and intervention with regard to the progress of one specific child at the Centre at the university. The holistic approach emphasizes the role that the child's environment may have on his development. The approach used in our clinic is unusual and as such has not been researched before. As the child and family in focus were clients of yours we would like to invite you to participate in this study.

Participation in this research will entail you filling in a survey around what you think of this child's development last year.

Your participation is voluntary and you will not be advantaged or disadvantaged in any way for choosing to participate or not in the study. You may choose to refrain from answering certain questions. All of the information received will be kept confidential, including your name, the school's name, the child's name and any other information that could identify any of the participants. In addition, names and any other identifying information will be omitted from any written or oral work that stems from this research. Please also note that all notes and other data gathered will be kept in a locked cupboard and then destroyed when the study is over. If you wish to you may withdraw at any point of the study, without penalty. The data collected, will only be viewed by myself and my supervisor. There will be no direct risks and benefits to you and a summary of the research report can be drawn up upon request.

If you choose to participate in the study please contact me within two weeks, so that I can come through to meet you so as to discuss with you the objectives and rationale of the study as well as to collect signed documentation with regard to consent to be interviewed, to be audio recorded as well as to use direct quotes from the interview. I can be contacted telephonically at 082 8073989 or via email at vivdo@hixnet.co.za.

Kind regards

Maria-Viviana Mugnaioni

APPENDIX A4: ASSESSORS' PARTICIPATION INFORMATION SHEET

School of Human and Community Development

Dear Madam

My name is Maria-Viviana Mugnaioni, and I am conducting research for the purpose of obtaining a Masters degree at the University. My area of focus is that of the evaluation of a holistic approach towards psychological and educational assessment and intervention with regard to the progress of one specific child at the Centre at the university. The holistic approach emphasizes the role that the child's environment may have on his development. The approach used in our clinic is unusual and as such has not been researched before. As the child in focus was a client of yours we would like to invite you to participate in this study.

Participation in this research will entail you filling in a survey around what you think of this child's development last year.

Your participation is voluntary and you will not be advantaged or disadvantaged in any way for choosing to participate or not in the study. You may choose to refrain from answering certain questions. All of the information received will be kept confidential, including your name, the school's name, the child's name and any other information that could identify any of the participants. In addition, names and any other identifying information will be omitted from any written or oral work that stems from this research. Please also note that all notes and other data gathered will be kept in a locked cupboard and then destroyed when the study is over. If you wish to you may withdraw at any point of the study, without penalty. The data collected, will only be viewed by myself and my supervisor. There will be no direct risks and benefits to you and a summary of the research report can be drawn up upon request.

If you choose to participate in the study please contact me within two weeks, so that I can come through to meet you so as to discuss with you the objectives and rationale of the study as well as to collect signed documentation with regard to consent to be interviewed, to be audio recorded as well as to use direct quotes from the interview. I can be contacted telephonically at 082 8073989 or via email at vivdo@hixnet.co.za.

Kind regards

Maria-Viviana Mugnaioni

APPENDIX A5: SUPERVISORS' PARTICIPATION INFORMATION SHEET

School of Human and Community Development

Dear Madam

My name is Maria-Viviana Mugnaioni, and I am conducting research for the purpose of obtaining a Masters degree at the University. My area of focus is that of the evaluation of a holistic approach towards psychological and educational assessment and intervention with regard to the progress of one specific child at the Centre at the university. The holistic approach emphasizes the role that the child's environment may have on his development. The approach used in our clinic is unusual and as such has not been researched before. As the child in focus was a client of your students we would like to invite your school to participate in this study.

Participation in this research will entail you filling in a survey around what you think of this child's development last year.

Your participation is voluntary and you will not be advantaged or disadvantaged in any way for choosing to participate or not in the study. You may choose to refrain from answering certain questions. All of the information received will be kept confidential, including your name, the school's name, the child's name and any other information that could identify any of the participants. In addition, names and any other identifying information will be omitted from any written or oral work that stems from this research. Please also note that all notes and other data gathered will be kept in a locked cupboard and then destroyed when the study is over. If you wish to you may withdraw at any point of the study, without penalty. The data collected, will only be viewed by myself and my supervisor. There will be no direct risks and benefits to you and a summary of the research report can be drawn up upon request.

If you choose to participate in the study please contact me within two weeks, so that I can come through to meet you so as to discuss with you the objectives and rationale of the study as well as to collect signed documentation with regard to consent to be interviewed, to be audio recorded as well as to use direct quotes from the interview. I can be contacted telephonically at 082 8073989 or via email at vivdo@hixnet.co.za.

Kind regards

Maria-Viviana Mugnaioni

Appendix B: Consent Forms

APPENDIX B1: CONSENT FORM (INTERVIEW)

I, _____, consent to participating in Ms Maria-Viviana Mugnaioni for her study on the ecosystemic approach to assessment and intervention. .I further give permission to Ms Maria-Viviana Mugnaioni to use direct quotes from my comments in her study.

I understand that:
Participation is voluntary.
I may refuse to answer any questions I would prefer not to.
I may withdraw from the study at any time without penalty
No information identifying me or my school or my learner will be included in the research report, and my responses will remain confidential.
Direct quotes may be used from transcript
Anonymity may not be guaranteed
That there are no direct risks and benefits

Signed: _____ .

Name: _____ .

Date _____ Place _____ .

APPENDIX B2: CONSENT FORM (PARENT)

I _____, consent to participating in Ms Maria-Viviana Mugnaioni for her study on the ecosystemic approach to assessment and intervention. I further give permission to Ms Maria-Viviana Mugnaioni to use direct quotes from my comments in her study.

I understand that:
Participation is voluntary.
I may refuse to answer any questions I would prefer not to.
I may withdraw from the study at any time without penalty
No information identifying me or my son or will be included in the research report, and my responses will remain confidential.
Direct quotes may be used from transcript
Anonymity may not be guaranteed
That there are no direct risks and benefits

. Signed: _____ .

Name: _____ .

Date _____ Place

APPENDIX B3: PARENT CONSENT FORM (DOCUMENTATION)

I _____, consent to Ms Maria-Viviana Mugnaioni accessing reports, and notes on my son, for her study on the ecosystemic approach to assessment and intervention. I further give permission to Ms Maria-Viviana Mugnaioni to use direct quotes from these documents in her study.

I understand that:
Participation is voluntary.
I may withdraw from the study at any time without penalty
No information identifying me or my son will be included in the research report, and my responses will remain confidential.
Direct quotes may be used.
Anonymity may not be guaranteed
That there are no direct risks and benefits

Signed: _____ .

Name: _____ .

Date _____ Place

APPENDIX B4: CONSENT FORM (TRAINEE THERAPISTS)

I _____, consent to participating in Maria-Viviana Mugnaioni study on the ecosystemic approach to assessment and intervention. I further give permission to Ms Maria-Viviana Mugnaioni to use direct quotes from my comments in her study.

I understand that:
Participation is voluntary.
I may refuse to answer any questions I would prefer not to.
I may withdraw from the study at any time without penalty
No information identifying me, my client will be included in the research report, and my responses will remain confidential.
Direct quotes may be used from transcript
Anonymity may not be guaranteed
That there are no direct risks and benefits

Signed: _____ .

Name: _____ .

Date _____ Place _____.

APPENDIX B5: CONSENT FORM (TRAINEEE ASSESSORS)

I _____, consent to participating in Ms Maria-Viviana Mugnaioni study on the ecosystemic approach to assessment and intervention. I further give permission to Ms Maria-Viviana Mugnaioni to use direct quotes from my comments in her study.

I understand that:
Participation is voluntary.
I may refuse to answer any questions I would prefer not to.
I may withdraw from the study at any time without penalty
No information identifying me or my client will be included in the research report, and my responses will remain confidential.
Direct quotes may be used from transcript
Anonymity may not be guaranteed
That there are no direct risks and benefits

Signed: _____ .

Name: _____ .

Date _____ Place _____.

APPENDIX B6: CONSENT FORM (SUPERVISORS)

I _____, consent to participating in Ms Maria-Viviana Mugnaioni study on the ecosystemic approach to assessment and intervention. I further give permission to Ms Maria-Viviana Mugnaioni to use direct quotes from my comments in her study.

I understand that:
Participation is voluntary.
I may refuse to answer any questions I would prefer not to.
I may withdraw from the study at any time without penalty
No information identifying me, my student or the child will be included in the research report, and my responses will remain confidential.
Direct quotes may be used from transcript
Anonymity may not be guaranteed
That there are no direct risks and benefits

Signed: _____ .

Name: _____ .

Date _____ Place _____.

Appendix C: Surveys

APPENDIX C1: PILOT QUESTIONNAIRE

What did you think of the assessment process that is called the IAC?

Do you think this process helped you to understand your client's strengths and needs?

How do you feel this ecosystemic approach to assessment helped or did not help with regard to addressing the concerns discussed initially in the IAC process?

Taking the whole approach in consideration again, what role do you feel the IAC played on deciding the interventions that followed?

.

What impact do you feel this collaboration had on assessing the child's concerns and needs? Why?

What roles did an ecosystemic framework / IAC process play in doing this assessment? Do you consider an ecosystemic stance was necessary to assess this child? Why / why not?

What other forms of assessment do you think this child would have benefitted from?

APPENDIX C2: PARENT QUESTIONNAIRE

When assessing your son, a process whereby you the parent s as well as the family and the assessment consultants, engaged in drawing on your sons goals, strengths, interests, concerns, with the overall aim of problem solving. These were then collated with the battery of assessments that were administered. What did you think of the assessment process (the IAC) as a whole?

Do you think this process helped you to understand your child's strengths and need's? In what ways?

After the assessment, your child came for learning support, and counselling while you came for counselling too. In what ways do you think this process helped and/or was to the detriment of your family and your child, especially in terms of the strengths and needs identified by the IAC process?

How helpful or not helpful was the emphasis placed by the students on your consulting with all the different consultants: the child counsellor, your counsellor, the assessors and the learning support specialist?

Would you recommend this process to other families? Why or why not?

What did you think of the Learning Support (LS)?

What effect do you think Learning Support had on your child?

What did you think of the counselling your child received?

What effect do you think the counselling had on your child?

What did you think of your personal counselling?

What effects do you think the counselling had on you, your family and your child?

APPENDIX C3: TEACHER QUESTIONNAIRE

When assessing your student, a process whereby the parent s as well as the family and the assessment consultants, engaged in drawing on your students goals, strengths, interests, concerns, with the overall aim of problem solving. These were then collated with the battery of assessments that were administered. Furthermore observations of the child within your classroom as well as your observations through answering a teacher questionnaire were also considered in the assessment process. What did you think of the assessment process (the IAC) as a whole?

Do you think this process helped you to understand your learner's strengths and needs?

After the assessment, your learner came for learning support, and counselling while you were offered teacher support. In other words, we tried to give as much support as we could and we tried to consult with you and the teachers and with the therapists and their supervisors. In what ways do you think this process helped and/or was to the detriment of your learner, especially in terms of the strengths and needs identified by the IAC process?

How helpful or not was the emphasis placed by the students on your consulting with all the different consultants: the child counsellor, your counsellor, the assessors and the learning support specialist?

Would you recommend this process to other learners in your classroom? Why or why not?

What did you think of the Learning Support (LS)?

What effect do you think LS had on your learner?

What did you think of the counselling your child received?

APPENDIX C4: TRAINEE ASSESSORS QUESTIONNAIRE

What did you think of the assessment process that is called the IAC?

Do you think this process helped you to understand your client's strengths and needs?

How do you feel this ecosystemic approach to assessment helped or did not help with regard to addressing the concerns discussed initially in the IAC process?

Taking the whole approach in consideration again, what role do you feel the IAC played on deciding the interventions that followed?

.

What impact do you feel this collaboration had on assessing the child's concerns and needs? Why?

What roles did an ecosystemic framework / IAC process play in doing this assessment? Do you consider an ecosystemic stance was necessary to assess this child? Why / why not?

What other forms of assessment do you think this child would have benefitted from?

APPENDIX C5: ASSESSMENT SUPERVISOR QUESTIONNAIRE

What did you think of the assessment process that is called the IAC?

Do you think this process helped your students to understand their client's strengths and needs?

How do you feel this ecosystemic approach to assessment helped or did not help with regard to addressing the concerns discussed initially in the IAC process?

Taking the whole approach in consideration again, what role do you feel the IAC played on deciding the interventions that followed?

What impact do you feel your collaboration with your students had on assessing the child's concerns and needs? Why?

What roles did an ecosystemic framework / IAC process play in doing this assessment? Do you consider an ecosystemic stance was necessary to assess this child? Why / why not?

What other forms of assessment do you think this child would have benefitted from?

What was the extent of the collaboration between all participants and what effect do you think this had on the whole process, and on the child?

Comment on the collaboration between the students, yourself and any participants in relation to quality of the assessment?

How did you experience the relationship between yourself and your students?

What about the whole process could have been improved for the child's benefit and for your benefit?

APPENDIX C6: LEARNNG SUPPORT SUPERVISOR QUESTIONNAIRE

What were the effects of the CATLI process on the child?

Why do you think that the CATLI worked or didn't work for this child and in this ecosystemic intervention context?

How did the IAC process inform your student's ability to plan the CATLI effectively?

How do you think the CATLI works as an intervention in a clinic setting?

Did any aspects of the CATLI address the child's anxiety and difficulty with reading and writing?

How do you think these aspects of the CATLI addressed the child's anxiety and difficulty with reading and writing?

Taking the whole ecosystemic approach in consideration again, did the child improve and how?

Comment on the collaboration between the student, yourself and any participants in relation to quality of the learning support?

How did you experience the relationship between yourself and your student?

What further multidisciplinary collaboration between your student and other students worked well and which didn't and what effect did this have on the process?

APPENDIX C7: TRAINEE PLAY THERAPIST QUESTIONNAIRE

How do you think the child was affected by his counselling experience?

What part did the IAC process play for you in your counselling?

How do you feel the intervention worked in the context of an ecosystemic intervention process?

What effects do you think the whole approach had on the child?

What was the extent of the collaboration between all participants and what effect do you think this had on the whole process, and on the child?

What effects do you think the parent counselling had on the parent s?

What do you think the effects were on the child that the parent was also in counselling?

Comment on the collaboration between the supervisor, yourself and any participants in relation to quality of your psychotherapy?

How did you experience the relationship between yourself and your supervisor?

What about the whole process. What could have been improved for the child's benefit and for your benefit?

Comment on the suitability of the orientation of the counselling (psychodynamic) offered in the context of an ecosystemic intervention approach.

APPENDIX C8: TRAINEE PARENT COUNSELLOR QUESTIONNAIRE

How do you think the parent was affected by his or her counselling experience?

How do you feel the intervention worked in the context of an ecosystemic intervention process?

What effects do you think the whole approach had on the child?

What was the extent of the collaboration between all participants and what effect do you think this had on the whole process, and on the child?

What do you think the effects were on the child that the parent was also in counselling?

Comment on the collaboration between the supervisor, yourself and any participants in relation to quality of your psychotherapy.

How did you experience the relationship between yourself and your supervisor?

What about the whole process could have been improved for the child's benefit and for your benefit?

Comment on the suitability of the orientation of the counselling offered in the context of an ecosystemic intervention approach.

APPENDIX C9: COUNSELLING SUPERVISOR QUESTIONNAIRE

How do you think the child was affected by his counselling experience?

What part did the IAC process play for you as you supervised your counselling student?

How do you feel the intervention worked in the context of an ecosystemic intervention process?

What was the extent of the collaboration between all participants and what effect do you think this had on the whole process, and on the child?

What did you think of the parent counselling? Did the parent changed due to this?

What do you think the effects were on the child that the parent was also in counselling?

In what ways was the above mentioned evident?

What do you think the effects were on the child that parent was also in counselling?

Comment on the collaboration between the students, yourself and any participants in relation to quality of the psychotherapy?

How did you experience the relationship between yourself and your child therapy student?

What about the whole process could have been improved for the child's benefit and for your benefit?

Comment on the suitability of the orientation of the counselling (psychodynamic) offered in the context of an ecosystemic intervention approach.

Appendix D: IAC Structure

First session

(i) Assessment through problem solving chart pinned up – containing the subheadings short and long term goals, interests, strengths, concerns, understanding, alternatives and decisions

(ii) Approach explained as a joint problem solving approach between teachers, parent s and learners, to work together to understand concerns and reach solutions.

(iii) Chart explained

(iv) Chart explored starting with goals.

(v) Interests and strengths discussed

(vi) Concerns relating to scholastic, home, relationships with others, behaviour, health and so forth are brought into light.

(vii) Understanding of the concerns is explored, drawing on each concern. Why the family feels this happening, the causes, how the problem arose, and what is still contributing to it and so on are some questions that need exploring

(viii) Alternatives are then addressed looking at what are some of the options that one could take in tackling the concerns.

(ix) Decisions are then agreed upon of which the family will try before the follow up session.

Formal testing occurs

Assessment of school situation occurs.

Second session – feedback

(i) The chart is put again, briefly reminding family of what was said in the first session. Any further concerns can be added at this point

(ii) Agreement on, and understanding of the concerns; generating, evaluating and deciding upon alternatives jointly; plan implementation of alternatives

Appendix E: Steps in Harcombe's CATLI

Step one: Theme and lesson planning

Theme planning

- Learning should occur within a theme that captures the strengths and interests of the child and each lesson planned according to the child's chosen meta-theme. The child's interests are accommodated into the meta-theme, which includes required aspects from the curriculum. This allows the child to do an authentic task.
- The meta-theme is always well-planned and negotiated with the child.
- The CATLI is planned according to a graphic organiser, including planning strategies for individual learners needs to be met.

Step two: Theme initiation

Themes are introduced with videos, stories, visits, etc to stimulate the child's interests in the meta-theme. Do anything that is as real as possible, so that the child's current knowledge (concepts) are activated and linked to new concepts in the material. For instance, it would be beneficial for the child to take him to a farm if he has never been to one if you are planning a meta-theme with sub-themes involving farming or farm animals.

Step three: Literacy Experience

- Reading can be used as an escape from all that's around the child
- Reading benefits the child's general knowledge and vocabulary development, especially when mediation of meaning takes place.
- The book is carefully selected, and
- Explained in terms of the cover, the front page and the pictures. Interaction with the learner occurs orally, asking open-ended questions about content and feelings about the content, etc.
- The story is read to the child, with appropriate expression as well as with constant interaction with vocabulary development, as well as meditating strategies such prediction and problem solving.
- Literacy conventions, such as phonics, rhymes in words, punctuation, terms such as 'author', 'artist', etc. are taught in the process, while reading.
- When the story is finished, evaluation of the story takes place.

Step four: Construction / Activity Based Tasks

- These tasks are used to stimulate the child's thinking
- The introduction of the construction draws back on the theme and their interests and how the task is linked to the theme.
- The tasks are always connected to real-life, providing an authentic purpose for writing and reading afterwards.
- The activity is done by the child, whereby the products is admired, discussed, displayed and linked appropriately to the theme, etc.
- Next, discuss a plan for writing the story of how the activity was done. The child dictates a negotiated text, sentence by sentence, which the trainee learning support specialist writes down on a large piece of paper or a pre-made book. While the writing is being negotiated and written, the meaning is linked intensely to the language and the literacy process.
- Some attention to details can occur, such as drawing attention to a full stop, a rhyme, etc, while writing.
- Then the story is read together, in unison.

Step five: Publishing

- The story is typed up into a book for the child, which is illustrated or decorated with magazine pictures. The story is then read from the book at least two or three times as a reader.
- Publishing the book gives meaning to reading and writing. It also provides opportunity for the learners to practise reading (repeated reading). Furthermore, it also helps them to build their vocabulary and concepts, as well as

allowing them to just enjoy something they have made. This gives them a sense of accomplishment, mastery and motivation.

Step six: Multilevel Teaching / Literacy-based practice

a) Repeated reading - This strategy has been explained above. It involves learners' reading the texts they have dictated over and over again at this level. Learners should not do repeated reading with published texts until their reading is very confident.
b) Sentence matching - Duplicated sentences are cut up, mixed and then need to be matched into intact sentences. This task helps the child to practice sentence construction and linking meaning to vocabulary and punctuation.
c) Word matching - Children play word matching games, e.g. Bingo. This is a fun way of practicing instant word recognition.
d) Shared writing - Starting a journal that can be exchanged possibly on a weekly basis.
e) Handwriting practice - Children who are able, can copy the sentences they have generated. Children who cannot do this, can trace over 'dotted' words in sentences.
f) Rhyming - Do poems, songs, nursery rhymes, etc. for fun every day. Teaching children to hear rhymes in words is necessary before they are able to sound out words for spelling
g) Simple phonics through sound families helps develop children's strategies for spelling.

In addition to these six steps, establishing and maintaining rapport with the child and applying behaviour modification strategies are important aspects of the CATLI process.

Appendix F: Analysts Work

Participant 1: Parent
Participant 2: Teacher
Participant 3: Assessor 1
Participant 4: Assessor 2
Participant 5: Assessment supervisor
Participant 7: Learning support supervisor
Participant 8: Play Therapist
Participant 9: Counselling supervisor
Participant 10: Parent counsellor
Assessment process

This section will analyse five participant's responses to Matthew's assessment process. Participants included Matthew's teacher, his mother, two assessors, and the assessor's supervisor. Transcripts were analysed using thematic content analysis. Common emergent themes were identified, collated and analysed for similarities and differences in responses. Themes mainly emerged from questions in structured interviews.

Perceptions of IAC assessment

It was reported by all participants that the assessment process had a positive influence on Matthew.

"Matthew is a shy boy and was made to feel comfortable at all times…Drawing on my sons strengths, interests, etc, gave some/a lot of positive reinforcement" (1)

"Drawing on my sons strengths, interests, etc, gave some/a lot of positive reinforcement" (2)

"I find the assessment process extremely useful for gathering information." (3)

"The IAC is a phenomenal process to use in assessing a child." (4)

The assessment provided understanding and insight into Matthew's problem. This allowed the family and school to open up to the process, creating a more conducive environment for change.

"The IAC allows the family insight into assessment which demystifies it and makes it more user friendly and more collaborative." (3)

Two participants identified that the process allows for family integration and supportive because of its holistic approach.

"As the name of the model suggests it is integrative approach as one gets the entire family involved." (4)

"It facilitates a holistic understanding of the child within his/her unique context…The approach allows for the active inclusion of all concerned parities in the assessment and decision making process." (5)

By using a holistic approach, one begins to view a problem as embedded within in a system and thus the problem is no longer identified as a person/individual.

"It defocuses from the child as the identified individual with a 'problem' – but looks at the entire system to understand the concerns." (5)

Participant 3 also identified a negative aspect of the assessment process which involves observations made of family dynamics during the interview process. According to the participant, interviewees are anxious when arriving for the interview and thus one should not fully rely on observations made during this process.

“It is nice to see the family dynamics, although I feel that the interview setting does make the members a bit nervous, especially if they are anxious about the outcome, therefore I don’t rely on the observations of family dynamics during the interview.” (3)

Insight into Matthew and the problem gained through IAC assessment

All participants reported that they gained insight into Matthew’s behaviour, the problem, and/or contributing factors to the problem. A main strength identified by the IAC assessment is that the approach focuses on a client’s strengths.

“I think it certainly helps identify needs more than strengths and it helps the client identify strengths.” (3)

“Yes indeed it helped me get a better picture of the clients.” (4)

“The identification of strengths is a central element of the process.” (5)

It was also reported by participant 1 that she had seen improvements in Matthew’s confidence and anxiety.

“This definitely helped my son’s strengths and needs as he gained a lot of confidence and is more relaxed than what he was.”(1)

The gained insight created understanding in Matthew’s mother and his teacher, which then allowed them to be more supportive towards Matthew’s needs. The assessment helped participants to identify strategies which would aid them in aiding Matthew.

“By understanding my sons strengths and needs it allowed me as a parent to help my son more as I now understand what he has needed and requires. We have learnt to give plenty positive reinforcement as we now fully understand to concentrate on the positives and work on the problem areas.”(1)

Although the assessment allowed participant to identify strategies to help aid Matthew one participant felt that a limitation, such as a big classroom, prevented the use of strategies.

“Difficult to use recommendations as there were so many other children in the classroom.” (2)

IAC process in aiding assessor/supporter in therapy

All participants reported the assessment process helped them to gain a better holistic understanding of Matthew and helped supporters to be more involved in Matthews’s therapy. Stakeholders were given an opportunity to express concerns and be involved in the decision making process.

“It allowed for the expression of different perceptions in relation to the expressed concerns (i.e. from the parent s, child, teacher, student consultants, peer consultants etc.) This enriched understanding facilitated the assessment and decision making process as well as further interaction.” (5)

“I would say that students using this approach do actively try to get a holistic understanding of the child within his/her context.”(5)

“The entire family or system is involved in making decisions for the client involved.” (4)

“It helped me understand his temperament. It was good to be able to know how to help him.” (2)

Participant 3 identified the process as one that is cost-effective because it does not involve a lot of psycho assessment.

"It helps eliminate unnecessary testing which is costly and time consuming…It is cost effective and most of our learners cannot afford private remedial lessons and psychologist fees" (3)

Participant 2 reported that support was not ongoing from other parties and therefore it became difficult to aid Matthew in the classroom. This was confirmed by participant 5 who thought there could have been more remedial support given at the school level. However, she did report good collaboration between other parties such as the assessors, parent and supervisor.

"The process was not ongoing, and so was difficult to always support and accommodate him" (2)

"The collaborative relationship between the student consultants and parent s appeared to be good – which has to be positive for the child. I am not able to comment on the extent of collaboration with the school – this perhaps needed greater attention. E.g. Change of school placement was agreed upon – there was no immediate space at the remedial school. A program needed to be developed in the interim for the school to implement." (5)

Benefits of IAC process on stakeholders

The process allowed Matthew's school and parent s to benefit from it. One participant reported the process allowed them to better understand Michaels' temperament and was able to learn how to help Matthew in the classroom. Another participant reported that the process allowed the family to understand and better accept interventions. Family felt included in the process and their inputs felt valued.

"The IAC identifies the possible areas of intervention, the following assessment confirms or eliminates areas identified and the IAC helps family understand cause which helps them to accept interventions…the families come for assessment to find intervention and don't feel confident to suggest their own intervention. The consultant can influence this during the IAC to make family suggestions for intervention feel validated and valued." (3)

"It was good to be able to know how to help him." (2)

This point is validated by the participant reporting she felt valued and comfortable with the assessors.

"The different consultants are amazing people and genuinely care." (1)

The process also encouraged Matthew's parent s to seek counselling which benefit their relationship and individual selves.

"I found the counseling I did as well as the family counseling extremely beneficial to our family. My husband and I started understanding each other a lot better…I learnt to let go of a lot of issues I had internalized." (1)

The ecosystemic approach

The ecosystemic approach allows both client and consultant to identify areas that are contributing towards the problem. I.e. the ecosystemic approach helped identify contributing factors to Matthew's problem concerning the family.

"The IAC approach is based on a systemic framework and model which is crucial in conducting a psych-educational assessment. A shift from a medical model approach with the emphasis on the child 'with a problem' and its narrow view assessment is essential to conduct psych-educational assessments in a meaningful and ethical manner." (5)

"This approach is very helpful because it involves all stakeholders and dynamics between each member and involvement of their interests in the client concerned is gathered. A holistic picture is formed around the problems and one can address issues on a holistic manner and also involve the stakeholders."(3)

The approach involves all parties like the client's mother, school and assessors. This was found to be beneficial to all parties involved because the collaborations enriched the process.

"It was very helpful consulting with various consultants…I appreciate how everybody worked together, the input, feedback and session." (1)

"Team collaboration and consultation allowed for a broad and enriched understanding of all aspects of the case study." (5)

Participant 2 reported that the approach allowed discussion between herself and the learner support and thus she gained understanding Michael's learning styles and how to go about helping Matthew learn in the classroom.

"She was able to advise me on the way the child learns." (2)

An ecosytemic approach towards assessment

Only three participants were asked to respond on their perceptions of an ecosystemic approach towards assessing Matthew. All participants felt that an ecosystemic approach was needed in Matthew's case. They expressed that it was important because a case such as Matthew's could not be attributed to one factor, but rather involved many factors. In addition, Matthew is a shy and quiet boy and benefited from an approach that encouraged other to support him.

"IAC was crucial in this assessment and the ecosystemic stance was necessary as the child was extremely shy and anxious." (3)

"This stance is important to assess any child as one cannot attribute the child's difficulties to only a single factor. All factors influencing the child need to be considered." (4)

An ecosystemic approach aided assessors in being able to make decisions around assessments from an approach that would both suit the Matthew and his family. The IAC process thus guides a relevant intervention.

"It gives the assessor something to work from and also make the necessary decisions around what tools to use to assess and also what approach one can use towards the family and it structure."(4)

"The interventions that followed were guided by the IAC and its broad principles and philosophy." (5)

Benefits of IAC process for Matthew, his family and school

It was reported that the IAC process allowed Matthew the space to express his thoughts and feelings and ensured that these expression were valued and he was given unconditional positive regard.

It had a great impact because the child has a voice that is taken seriously. (3)
The IAC provides a space in which the parent s and consultant allow the child their say, without judgement or ridicule. (3)

Both participants reported that they would recommend the process to other children and their families. The process aided not only the client, Matthew, but also his family.

"It really helped not only my son, but our family as a whole…we learnt exact problems my son has from a learning disability as well as recommendation as to what to do." (1)

One participant highlighted the difficulty of children voicing their concerns about their parent s. Parent s may also feel they will be judged if they spoke about concerns. As such, the IAC process provides a space where a child may speak openly and honestly.

"It can be difficult when the child has concerns about their parent s or vice versa but consultant should encourage parent s to listen to their child's perspective as it may provide insight into where some of the concerns originate etc." (3)

Another participant felt similarly, however recognised that family dynamics may play a role in how families and children responded to the IAC process.

"Depending on family dynamics the child may feel empowered or sometimes undermined and misunderstood. With a very involved and cooperative family there may be less anxiety provoked in the child and in another instance where parent s or caregivers are not that concerned or highly strung may have an impact on the child concerned." (4)

Other forms of assessment that may have benefited Matthew

Only three participants were asked if they felt Matthew would benefit form additional or other forms of assessment. One participant felt that the informal assessments that were conducted were sufficient, and that any additionally testing that was formal would not be beneficial towards Matthew.

"This particular child was so anxious he needed informal assessment rather than formal assessment as he did not respond well to formal testing situation, school and home observations probably would have been beneficial." (3)

Other participants felt Matthew could have benefited from a neurological assessment and speech and hearing therapy (Participant 4&5).

Participant 5 also reported that Matthew may have benefited from shorter period of assessment. She also felt that taking a multi-disciplinary and a more collaborative approach, especially within the school setting may have benefited Matthew.

"Perhaps a more condensed period of assessment – rather than one spread across about 5 weeks. Resources to provide multi-disciplinary team intervention. More intensive collaborative support in relation to the classroom learning situation." (5)

Learner Support

This section will include an analysis of pre and post assessments on Matthew, in addition to qualitative responses of the learning support supervisor, Matthew's mother, and teacher.

Pre and post assessment results are derived from the follow tests that were administered:

Wechsler Intelligence Scale for Children (3rd edition), (WISC III)
Bender Visual-Motor Gestalt Test (Bender)
Draw-a-Person Test (DAP)
Kinetic Family Drawing (KFD)
Children's Apperception Test (CAT)
Purcell Sentence Completion Test
Three Wishes and Desert Island Projective Tests
Stanford Diagnostic Reading Test (SDRT: Red Level, Form G)
Subtests: Auditory Vocabulary; Reading Comprehension tests A and B
Durrell Analysis of Reading Difficulty (3rd edition)
Subtest: Visual Memory of word subtest
Schonell Graded Dictation (Test A)
Visual Discrimination of Words Test
Informal reading and writing tests
Informal maths test

Results in post assessment indicate Matthew's performance in Key Maths improved in all areas, with significant improvements seen in numeration, numerical reasoning and word problems. These activities represent meaning based activities.

Key Maths

	Pre test	Post test
Numeration	2	3.2
Addition	1.3	1.4
Subtraction	2.1	2.3
Mental Computation	2	2.1
Numerical Reasoning	0.8	2
Word Problems	1.3	2.5

Reading and writing

In areas of reading Matthew also improved in all areas with significant improvements seen in visual discrimination, visual memory, and percentage word instantly recognized. Improvements in writing processes could not be assessed due to Matthew's inability to complete tasks in the pre-assessment. Participant 7 also reported that the CATLI addressed Matthew's anxiety and difficulty with reading and writing.

Reading and writing

Reading	Pre test	Post test
Visual Discrimination	4 errors	2 errors
Visual memory	Grade 1 – score 12	Between grade 2 and 3 – score 16
% word instantly recognized	51%	65%
Writing		
Schonell Dictation	20 errors	18 errors
Errors in writing sample	N/A	6 errors
Meaning conveyed	N/A	Not much
Literacy convention	N/A	No punctuation, but sturdy handwriting
Planning	N/A	No obvious planning

The CATLI addressed the anxiety and difficulty with reading by allowing Matthew to be slowly introduced to content through the use of picture cues, paired, shared and repeated reading activities.

"Different kinds and interesting reading material child can relate to at child's level, introducing meaning in a book before reading (i.e. cover page and predictability)."(7)

The CATLI addressed anxiety and difficulty in writing through the follow:
Authentic activities
Theme based
Sound family approach
Listening/talking about activity and introducing new vocabulary
Leaner describes activity
Student using graphic organisers a
Writing process scribes the information
Some associative writing
Creating small books and big books for publication
Repeated reading activities (7)

Reduced anxiety was attributed to literacy skills being modeled with Matthew's interest and joys and being fun. By using an exciting approach it reinforces cognitive, linguistic and literacy knowledge and the learner does not fully realize how much reading and writing they are accomplishing. This in turn improves self-esteem, motivation and confidence levels and anxiety is contained.

"The theme provides background knowledge and vocabulary necessary for activity, activity is concrete with positive experience, the whole language approach introduces meta-cognitive strategies enabling learner to develop schema and higher cognitive functions as well as language development." (7)

Effects of CATLI process on Matthew

All three participants felt there were improvements in Matthew's behaviour and performance in tasks such as reading and writing.

"The learning support was excellent. He improved in leaps and bounds…helped him tremendously… He enjoyed it immensely, still misses it."(1)

"It helped him with his reading and writing. He needed the one on one support."(2)

Participant 7 reported improvements in the follow areas:

Reduced levels of performance anxiety
Improved self-esteem, confidence and motivation. Emotionally more secure
"…Matthew's needs lay mainly in his anxiety and withdrawal, it was most rewarding seeing the change in confidence levels."
Assessment report
Improved ability to think, problem-solve and retrieve information

Assessment results also indicated significant improvements could be seen after four/five sessions. It was reported that Matthew enjoyed the structure of the session and was Matthew responded positively to an environment where unconditional positive regard was offered. Marked improvements were seen in his self confidence. Through reconditioning Matthew learnt to become of his achievements and work through rewards. Thus, his conditioned response of poor motivation from poor performance was changed to confidence. This allowed improvements to be made in reading and writingobserved "chatting enthusiastically with his mother during an informal meeting between himself and his mom." Assessment report

An assessment report also reported improvements in the following areas:

Social support and emotion – Matthew experienced less anxiety and significant improvement was seen in his identify of emotions in learner support, using emotion cards. The Stanford Test also highlighted improvements in reading comprehension in addition to experiencing less anxiety.
Behaviour and condition responses –
Cognitive processing and strategies – self monitoring, self correcting, planning, prediction, sequencing and successive processing.
Concepts development or general knowledge – schema's and concepts have significantly improved
Oral language – increased confidence to express emotions

Reasons for CATLI working/not working in an ecosystemic intervention context

According to participant 7, the CATLI worked because of:

Lessons developed out of child's interest accommodated within a meta-theme
Unconditional positive regard and relationship building
Monitoring performance, understanding the child and allowing for flexibility in meeting the child's needs
Good planning and organizational skills using the graphic organizer
Interactive, concrete-based and authentic activities
Intensive and extensive mediation at child's level
Cognitive development level and cognitive processing styles could be accommodated into the teaching and learning process
Enabled the usage of the whole language/concentrated language encounter approach that makes reading and writing easy
Finding a fit in temperament between child and student
Liaising with other professionals involved and good case management
Student was always open to suggestions. (7)

It did not work:

When child started play therapy – emotionally overwhelmed
When, on some occasions, lessons were not sufficiently simplistic and concrete. (7)

CATLI is also reliant on the physical environment, i.e. the clinic setting, to be "consistent, organised and child-friendly" in order to be successful.
CATLI
Two participants reported Matthew's self-esteem, confidence, and motivation levels improved through an ecosystemic approach as it allowed for ongoing, additional and consistent input and support.

"Yes…considerably. Improved self-esteem, confidence, and motivation levels. Ongoing, additional, consistent input using the ecosystemic approach is required." (7)

"Help him to cope, built his confidence and he learnt new ways to learn."(1)

The third participant felt there was improvement, however noted that Matthew would need continuous and more support and during the process Matthew moved to a remedial school.

"His learning is better but still needed more support and is now at a remedial school' (2)

IAC process in informing the learner support specialist's ability to plan the CATLI effectively

Participant 7 reported that the IAC process enabled the learner support specialist to view Matthew from an inclusive/ecosystemic framework and therefore:

"Gained further understanding and insight of child's temperament." (7)

The process also allowed the learner support specialist to assess levels of knowledge and areas for development and thus plan activities according to Matthew's interests. In addition it also encouraged his family and school to support him.

"Assess level of knowledge and what areas or concepts not developed in order to fill gaps effectively."(7)
The quality of learner support can also be attributed to cooperative and open collaborations with supervisors, students and other participants.

"Student was very cooperative and open to suggestions. She was flexible and creative in her ideas. She understood the child's temperament and tried to meet his needs as required. Collaboration was an integral part of learning support success." (7)

"Peer interaction…communication and sharing of ideas had a supportive impact on the process." (7)

Counselling Process

This section of analysis will analyse three participant responses to the counselling process. Counselling process notes that were made for sessions with Matthew and his parent s will also be used to illustrate points. The five participants included the play therapist, counsellor for parent s, and counselling supervisor, including responses from Matthew's mother and teacher.

Overall perceptions of therapy sessions

Participants involved in therapy sessions with Matthew found him to be quite, non responsive and sometimes fearful in early therapy sessions.

"…the child barely spoke during the therapy sessions. Initially it seemed that the play therapy was terrifying for him and that he was virtually paralysed by fear." (8)

"Initially he appeared too frozen in the therapy…" (9)

Therapy process notes confirm that Matthew was non-responsive to therapy, silent and would keep still for long periods of time. This continued for five sessions. The play therapist also reflected on her anxiousness and frustration during many of the sessions and questioned the benefit/harm that therapy may have on Matthew.

"I felt anxious here. I was feeling the tension trying to alleviate come of his (and my) anxiety but also aware not be directive." Session 1.

"He seemed to hold himself very still as though he were a statue. One of my thoughts during this reverie was that he might feel if he does not move much or say anything, he might not be noticed, and that would please him. I felt life he wanted to be invisible." Session 4

"Matthew seemed paralysed with anxiety and I wondered a few times whether this experience was detrimental rather than therapeutically useful." Session 1

Although Matthew's initial response to counselling was negative, it was later reported by the participants that he enjoyed play therapy and it was a valuable experience.

"…when he began painting, his anxiety lessened and it appeared he began to enjoy having time and space to mess."(8)

Therapy process notes reveal that Matthew responded verbally to the play therapist in session.

"Matthew, for the first time, provided some one-word answers, such as 'fine'." Session 5

In session 6, the play therapist decided to take a more directive approach by showing Matthew some paints and paper on a table to which Matthew responded positively. In this session, and subsequent sessions, Matthew painted and revealed a lot about his inner emotions.

"My understanding of the play was that the colours are his feelings that are smothered beneath the dark feelings of depression. He would like to scoop away the black feelings, but it is difficult, because the blackness seems all pervasive." Session 6

Two participant attributed this success to a trusting, non judgmental and empathic relationship between Matthew and felt Matthew's artwork reflected his containment.

"The trust arose from the reliability and consistency of both the frame and the therapist coupled with a non-judgmental and empathic attitude displayed by the therapist. His artwork suggested that he felt held through the experience" (9)

"My son battled at first with the counselling as he has to first build trust with a person before he will open up. He internalizes things. But once he relaxed he opened up to the counseling and enjoyed the play therapy." (1)

Although Matthews's initial reaction to counselling sessions was negative, his parent 's counsellor reported that they positively responded to counselling by engaging with the process. However, it was also reported that counselling sessions were disrupted by the University setting of session.

"…the disruption of a University setting impacted on continuity. Just as the intervention was reaching a meaningful time – vac and exams."(10)

It was also reported by the participant that counselling helped Matthew's mom by helping her reflect on her past and how it impacted on her family.

The process helped the mother in particular to start understanding how her past was impacting on her relationships with her children and husband. (10)

Role of IAC in counselling

All three participants described how the IAC process allowed for one to have an accurate understanding of the family structure and dynamics, from Matthew's perspective.

"It provided me with an accurate glimpse into the family life and dynamics of the child's context."(8)

"I suppose what stood out most for both the therapist and myself was the family system that the child was experiencing."(9)

"Seeing the family interact provided insight into how the family is structures and the roles family members assumes." (10)

Understanding the family dynamics structures allowed all participants to understand much of Matthew's social, emotional and behavioural difficulties.

"…his learning difficulties were also understood/ thought about in the context of the family context." (10)

"The child's behaviour and social difficulties were directly linked to his relationship with his parent s" (9)

"…with difficult circumstances where his mother and father may not have had sufficient energy to provide him with the attention and containment he needed."

Matthew's family dynamics were described as "intrusive", "over involved" with a lack of boundaries. This was specifically focused on Matthew's mother.

"We were both struck by the over involvement/ intrusiveness and lack of boundaries displayed by the mother and how the child needed to defend against this."(10)

Therapy process notes from the play therapist also reveal this.

"I found this interlude with Ms S at the end very interesting. It indicated once again that she is over involved in Matthew's life and her problems with boundaries." Session 10

One participant felt that the IAC process provided them with information such as Matthew's IQ, cognitive and emotional functioning, which in term allowed them to structure play therapy sessions accordingly. By taking all factors into consideration this helped the therapist to carefully consider the pathology of Matthew's behaviour.

"…allowed me to factor this information into his therapy and assisted me in neither over or under 'pathologising' his behaviour and when forming a tentative hypothesis around his diagnosis." (8)

Counselling as an ecosystemic intervention

All participants felt that by viewing Matthew and his difficulties from an ecosystemic approach allowed them to address these difficulties by understanding Matthew's family, school and community context. Insight into contextual dynamics allowed insight into Matthew and his family dynamics and thus aided the therapeutic process.

"I feel that it is imperative that one doesn't work with the child in isolation. The child needs to be "seen" in the context of the family, the school and the community. In this particular case understanding the family dynamics certainly impacted on our understanding of the child's dynamics."(9)

"The process was a link in the chain. The child's behaviour and social difficulties were directly linked to his relationship with his parent s. He could only change in relation to change in the system."

Impact of process on Matthew

Four participants were asked about what effects they perceived there to be in Matthew. Both participants felt it was hard to measure the impact of the process on Matthew as the support had only been present a year and one participant did not indirectly work with Matthew. Positive aspects that were identified included:

Allowing the family to identify and understand support that is available.
"Perhaps he (Matthew) felt important and attended to"(8)
"He is not as anxious and much more relaxed.' (1), (participant 2 response was the same)
"Perhaps the child stopped setting himself up as the problem…"(10)

Although the participants identified some positive aspects of the process for Matthew, reservation were still felt.

"It seemed to help with his anxiety but he was still a very shy boy." (2)

"I often got the feeling he would rather be left alone." (8)

One participant attributed the inability to measure impact by explaining that change needs to be internalised before it can be measured behaviourally. She also identified how change in the unconscious was difficult to measure.

"Often change takes time to be internalised before it can be measured in behavioural change. It is also difficult to measure what was happening on an unconscious level." (10)

Participant 9 identified how difficult therapy sessions were between the play therapist and Matthew. However the success of the therapy could be measured by understanding the process that took which, which involved the persistent of the play therapist and her ability to be more directive. By giving Matthew paint and paper it allowed him to open up more. His painting allowed him to express his emotions and internal struggles.
"Initially the child was frozen and I think the process felt excruciating for both the therapist and the child. But after a while once the child experienced the therapist as being able to survive him, together with the fact that the therapist became a bit more directive and placed paint and paper within his reach he started to "thaw". His painting expressed his messy and muddled internal world but ultimately also indicated that his "baby feelings" were contained," (9)

Collaboration of therapeutic team and other participants

Participant 9 and 10 felt there was team collaboration, however participant 8 felt there was little collaboration.

Positive and negative aspects were identified by participants:

Positive aspects included:
Supervisor supervising both play therapy and parent 's therapy allowed for greater understanding and insight into Matthew's issues and systems.

"The child's therapist and I were in supervision together so this helped to gain insight into the systems functioning."(10)

Counsellors, learning support specialist and assessors all worked in the same institute which allowed for easier case and strategic discussion.
Participants 9 and 10 also identified good collaboration between participants such as parent s, the school and therapist.

"There appeared to be collaboration between all the participants, the parent s, the school, the learning support therapist and the play therapist as well as between the child's therapists and the mother's therapist." (9)

Negative aspects included:
Participant 8 felt that there was little collaboration between therapists, specialists and counsellors.

"…despite a few phone calls to the learning support specialist, there was not much team collaboration."(8)

Time limitations – "For change to occur on a meaningful level consistency is essential – students only there for a short period and therefore change is limited accordingly."(10)

It should also be noted that two participants described the parent counselling and process as only involving Matthew's mother.

Impact of parent counselling

Although the counselling process involved both parent s, participants only reflected on the impact on Matthew's mother. In parent counselling process notes it was reveal that Matthew's father did not want to attend therapy as he felt it was "pointless" (Parent Case presentation notes). Although he initially thought counselling to be pointless, he later attended a session which he felt was very helpful.

"He responded by saying that he had found the session very helpful. It was not what he expected and he feels that it was good to talk through issues with an arbitrator present…" Parent Session 5

A parent interview, conducted by the play therapist reveals information about Matthew's father. The interview revealed that he struggled for many years at school, and attended eighteen schools in total. He attended a school "malletjies" and was quite ashamed by this. He is also described as "a quiet and reserved temperament". Parent Interview

This was confirmed by an earlier response made by participant 3. Matthew was described by both participants as very similar to his father in the parent interview.

"The parent s gave the background information and during the exploration of their child the father didn't respond until the feedback., but he responded to say that he had similar difficulties as his son, and went form school to school feeling like a failure as no one had taken the time to understand him as we had done for his son." (3)

One participant described the mother as being initial resistant to counselling which lead to the short duration of therapy. The same participant initially described the parent counselling process as worked well, and how the mother responded, especially to an older therapist. This in term aided the mother to be more supportive of Matthew's therapy.

"I think that the parent counselling worked well. I believe that the mother responded well to an older therapist and seemed more supportive of the child's therapy because of this." (9)

Although this participant initially thought the counselling worked well and allowed a supportive and integrated process, she felt reservations about behavioural change.

"I am not sure that there was any change other than being supportive and perhaps experiencing the whole process as a good enough experience." (9)

In contrast, Matthew's mother reported that she found counselling to be beneficial to her and her relationship with her husband. She felt she was given an opportunity to deal with past issues in a contained environment. She also reported that the counselling aided her in finding and utilising ways of coping.

"I needed the personal counseling and it helped me a lot as well as the joint counseling with my husband. We had gone through a lot of emotional trauma in our lives and I was battling to cope and I suffer with anxiety. It helped my husband and I to understand each other as well as dealing with our traumas and emotional issues. It taught me to relax a lot more and coping mechanisms which I still use today. It taught me how to control my anxiety." (1)

Another participant described that the parent counselling allowed Matthew's mother to explore and deal with her issues, and allowed her a space to be heard.

"It enabled them to get in touch and begin to explore some of her own issues. It allowed her hopefully to feel heard and understood." (8)

It was also reported by Matthew's mother that she felt their family had grown closer and more supportive of each other and Matthew. Counselling not only benefited Matthew, but his whole family.

"We are more relaxed as a family. We all understand each other a lot more. The counseling helped for our whole family's well-being. My son is now a lot more relaxed and we talk about our problems and find solutions to the problems. We are definitely more closer as a family. The counseling brought us together." (1)

Participant 3 also reported that Matthew's dad felt validated by the counselling process.

"He felt the process had validated his son as well as a part of himself."(3)

Impact of parent counselling on Matthew

The impact of parent counselling on Matthew was described as positive by all participants. Parent counselling allowed Matthew to be heard and understood by his parent s.

"I believe that the child felt heard and understood which appeared to have a holding effect." (9)

Participant 9 identified a "holding effect" of the counselling, which was also identified by another participant. Participant 8 felt that Matthew's therapy attendance was attributed to his mother's attendance in counselling.

"A practical effect was that the child's attendance was more regular because the mother was also incentivised to come." (8)

Two participants also identified how having a parent in counselling also helped Matthew to feel more 'normal' and therefore Matthew became more willing and less angry to attend therapy. The counselling process also helped Matthew come to terms with understanding his problem as something that includes his parent s and other external factors.

"I think it made him feel less strange and more normal that his mother was also in counselling." (8)

"In addition it appeared as if the child was more willing to come to therapy knowing that his parent s were also there – less anger about participating in the process." (10).

"However, generally I would say that the child would experience the parent being in counselling as a relief – it stops him from feeling as though he is the problem and also allows the parent to be more thoughtful and receptive to the child."(9)

It was also noted by participant 9 that Matthew's mother was more supportive of the counselling process, more than his father.

"I'm not entirely sure in this particular case other than that the mother was more supportive of the process." (9)

Supervision process of play therapist and parent counsellor

All participants felt very positive towards the supervision process and described it the relationship as one that is supportive and understanding.

"Very good – understanding and supportive."(10)

Positive aspects of supervision were identified as:
A space to allow for sound advice and guidance
A psychodynamic approach
Valued and trusted input from supervisor
Professionalism of supervisor
Ability to learn from supervisor

The play therapist was also described as a warm, empathic and gentle person who able to use the supervision process to contain and explore her many feelings towards and about the case. This therefore aided her therapeutic process with Matthew by allowing her to be outwardly calm and thoughtful.

"She was/is a warm empathic and gentle person and therapist. She wax able to use the supervision space and appeared thoughtful about her cases. With this particular case she was able to sit through and remain outwardly calm although it evoked enormous feelings, which she was able to think about." (9)

Improvement of the counselling/therapeutic process

One participant identified weakness in the academic setting of the process, which was limited by student counsellors having to negotiate academic and therapeutic commitments. In addition the process was identified as short because of the academic setting. These limitations are hard to change because of the very nature of academics, e.g. terms, holidays, examinations.

"The intervention was too short – limited by the reality that we were students having to accommodate academic needs as well. Within an academic setting this is likely to remain a difficulty due to the inflexible constraints such as examinations and holidays." (10)
Participant 9 suggested that therapy and learner support could have occurred on different days. However this was again limited to student commitments and Matthew's mother.

Matthew's play therapist expressed early concerns about the benefits or harm that therapy might do to Matthew.

"I was wondering how fair it was doing this to Matthew as to me it seemed that the session was unbearable for him. I was wondering what good this had done for him and whether I should have ended the session earlier." Session 1.

The use of a psychodynamic approach within an ecosystemic intervention

One participant felt very positive towards the use of a psychodynamic approach within an ecosystemic intervention. Participant 9 felt Matthew should be seen in relation to family and holistically, however play therapy should be taken from a psychodynamic approach as it reflects on unconscious communication and therefore Matthew's needs can be understood and interpreted. In addition, the participant felt that an analytic framework allows Matthew to be contained by:

Introducing boundaries of time, e.g. starting and ending times,
Interpretation of personal questions,
No personal disclosure on part of therapist and
Not gratifying Matthew.

This framework created a sense of consistency, reliability and dependability for both Matthew and the play therapist.

In contrast to participant 9, participant 8 felt there were both positive and negative aspects to using a psychodynamic approach within an ecosystemic intervention. She felt a psychodynamic approach was inappropriate for Matthew's therapy (see above). This participant felt that a psychodynamic approach focuses primarily on the individual and the intrapsychic functioning of a person, thus not focusing on the systems of the individual.

"Given the child's temperament and cognitive functioning, psychodynamic play therapy might not have been the easiest for him." (8)

"Obviously since psychodynamic counselling focuses primarily on intrapsychic functioning and on the child's inner world this orientation lends itself less to the ecosystemic way of working." (8)

Although participant 8 felt the psychodynamic approach did not benefit Matthew's therapy, she felt it benefit her counselling and further her understanding of Matthew.

From a student learning perspective, the use of a psychodynamic approach allowed the student gain experience and supervision in this approach.

"Since it was the approach we were taught first and since I was most interested in it I was very pleased to get a chance to use and be supervised in it." (8)

"… operating in the real world, information form assessment and the parent 's counselling certainly assisted in my understanding of the child." (8)

Participant 10 felt that the use of a psychodynamic approach was limited in an academic setting. She justified this by describing how children and their caretakers are in a system and therefore one needs to consider the different parts of a system in order to change or sustain behaviour.

"How the child behaves is in relation to others and therefore the 'others' also need to change entrenched patterns of behaviour." (10)

Appendix G: Result Tables

PARTICIPANTS INVOLVED IN SURVEYS

Participant P: parent
Participant E: Educator
Participant T1: assessment trainee
Participant T2: assessment trainee
Participant T3: play therapy trainee
Participant T4: parent counselling trainee
Participant S1: assessment supervisor
Participant S2: learning support supervisor
Participant S3: counselling supervisor

EXTANT DATA SOURCES – EXD

Report on school observation conducted by the author in 2007 - RSO
Learning support lesson plans and evaluations compiled by the author in 2007 – LSP
Pre intervention test data administered in 2007 by trainee assessors – TD 1
Post intervention test data administered in 2007 by the author – TD 2
Evaluation (exam equivalent) of learning support (CATLI) process compiled by the author for exam purposes in 2007 -ELS
Journal Notes compiled by author during the process of the learning support, during 2007 - J
Process notes from child counselor – PN C
Process notes from parent counselor – PN P

The data from the surveys and the extant data were anlysed and triangulated using thematic content analysis. An external analyst firstly engaged with the data, and familiarized herself with the data. The analyst was able to produce initial codes from the data. When reflecting on the research questions, key-words in each question were described forming categories. Criteria for each category of analysis were then developed. Raw data was analyzed transversely (interview transcriptions, session process notes and session evaluations) and statements assigned to the relevant categories. In this way the data was coded. The coded data was then brought together to form themes. Here the analyst sorted the different codes into potential themes and collated all the relevant coded data extracts within the identified themes. This work put together by the external analyst can be found in Appendix R. The analyst together now with the researcher began to refine the above themes by reviewing them. It became evident to them that some themes were not really themes as there was not enough data to support them, while other themes collapsed into each other as apparent ly two different themes could in fact form one theme.
Once the analyst had completed her work, the researcher ultimately defined the themes by identifying the essence of what each theme was about and determining what aspect of the data each theme captured. This is represented in the tables below (Appendix S). Results from the quantitative pre and post intervention testing can be found in Appendix T.

The above mentioned process was collated into the following tables. The analysis provided data in an attempt to address the aims of this research report. In so doing, the analysis presented is divided into two sections, namely: 1) Ecosystemic principles (Research Question 1 and 2) The effects of the holistic process on the child's development (Research Question 3 and 4).

ECOSYSTEMIC PRINCIPLES

The following are themes that emerged from the data indicating the perceptions held by the participants with regard to ecosystemic / medical model principles (Research question 1)

TABLE GI: THEME 1: TERMINOLOGY USED WHEN REFERRING TO THE CHILD'S DEVELOPMENT/ PROCESS

P	E	T1	T2	S1	S2
"It really helped not only my son, but our family as a whole…we learnt exact problems my son has from a learning disability as well as recommendation as to what to do."		"The ecosystemic approach allows both client and consultant to identify areas that are contributing towards the concerns. More than one area may be contributing to a problem" "The ecosystemic approach helped identify contributors to problems. The parent s gave the background information." "The IAC allows the family insight into assessment which demystifies it and makes it more user friendly and more collaborative." "This approach is very helpful because it involves all stakeholders and dynamics between each member and involvement of their interests in the client concerned is gathered. A holistic picture is formed around the problems and one can address issues in a holistic manner and also involve the stakeholders."	"This stance is important to assess any child as one cannot attribute the child's difficulties to only a single factor. All factors influencing the child need to be considered." "The IAC process assists in gathering information from all areas that forms part of the clients system (family, school, social and other environments)." "As the name of the model suggests it is an integrative approach as one gets the entire family involved."	"It [the IAC]facilitates a holistic understanding of the child within his/her unique context" "It defocuses from the child as the identified individual with a 'problem' - but looks at the child's entire system to understand concerns " "The IAC approach is based on a systemic framework and model which is crucial in conducting a psych-educational assessment. A shift from a medical model approach with the emphasis on the child 'with a problem' and its narrow view assessment is essential to conduct psych-educational assessments in a meaningful and ethical manner." "The child's development is based on the interactions occurring between him and his environment" "The identification and accommodation of strengths is a central element of the process [IAC]." "I would say that students using this approach actively try to get a holistic understanding of the child	"Matthew's life events, the financial struggles incurred by his family, his interpersonal support were all seen to have contributed to difficulties with learning; it appeared as though Matthew had very limited exposure and appropriate mediation" "the child was seen ecosystemically, by allowing an analysis of the interactions between his temperament and cognitive style and his environment, the learning support trainee encouraged a goodness of fit"

				within his/her context."	
T3	S3	T4	EXTANT DATA ELS		
"I feel in went some way in addressing the intra-psychic difficulties he experiences in light of being born into a family with difficult circumstances where his mother and father may not have had sufficient energy to provide him with the attention and containment he needed." "The assessment allowed me to factor this information into his therapy and assisted me neither over or under pathologising his behaviour and when forming a tentative hypothesis around his diagnosis"	"The child needs to be "seen" in the context of the family, the school and the community. In this particular case understanding the family dynamics certainly impacted on our understanding of the child's dynamics." "an analytic framework allows Matthew to be contained by: Introducing boundaries of time, e.g. starting and ending times, interpretation of personal questions, no personal disclosure on part of therapist and not gratifying Matthew."	"The process was a link in the chain. The child's behaviour and social difficulties were directly linked to his relationship with his parent s. He could only change in relation to change in the system. Teacher's attitudes also needed to change."	"An ecosystemic framework was used, focusing on the impact of interpersonal support evident in the relationships between him, his parent s, his school and peers; as well as the environmental influences of the political environment " "The child was seen as interacting with many systems. Some of these interactions promoted development and some of them hindered development"		

- The content analysis indicates that the parent participant had not acquired proficiency in using ecosystemic terminology, and in fact seems to be leaning towards medical model terminology.
- The two assessment trainees (T1 and T2) and their supervisor (S1) all seemed very conversant with ecosystemic terminology.
- The learning support supervisor (T2) and extracts from LS extant data (ELS) indicate that they were also very conversant with ecosystemic terminology
- The counselling supervisor (S3) and the counselling trainees (T3 and T4) tended to mostly use psychodynamic terminology (medical model)

TABLE G2: THEME 2: APPLICATION OF ECOSYSTEMIC PRINCIPLES TO UNDERSTANDING THE CHILD'S DEVELOPMENT

P	E	T1	T2	S1	S2
"It was important for us to see that there was nothing actually wrong with him. Only that there were things standing in his way." "It [IAC] really helped not only my son but our family as a whole. We learnt exact problems my son has from a learning disability as well as recommendations as to what to do" "Matthew is a shy boy and was made to feel comfortable at all times…Drawing on my sons strengths, interests, etc, gave some/a lot of positive reinforcement" "By understanding my sons strengths and needs it allowed me as a parent to help my son more as I now understand what he has needed and requires. We have learnt to give plenty positive reinforcement as we now fully understand to concentrate on the positives and work on the problem areas."	"I was able to see what was wrong with him, and that the way he processes information is different to other children. I realised that I have to be more patient and understanding"	"It helped to understand those barriers to learning he was experiencing at home and within the classroom." "Parent s are encouraged to listen to their child's perspective as it may provide insight into where some of the concerns originate" "This approach is very helpful because it involves all stakeholders and dynamics between each member and involvement of their interests in the client concerned is gathered. A holistic picture is formed around the problems and one can address issues in a holistic manner and also involve the stakeholders."	"The child is not the problem- one cannot attribute the child's difficulties to only a single factor all factors influencing the child need to be considered" "It [the IAC] helped me get a better picture of the client"	"The IAC approach is based on a systemic framework and model which is crucial in conducting a psych-educational assessment. A shift from a medical model approach with the emphasis on the child 'with a problem' and its narrow view assessment is essential to conduct psych-educational assessments in a meaningful and ethical manner." "It [the IAC]facilitates a holistic understanding of the child within his/her unique context" "It defocuses from the child as the identified individual with a 'problem' - but looks at the child's entire system to understand concerns "	"The IAC process enabled the learner support specialist to view Matthew from an inclusive/ecosystemic framework and therefore gained further understanding and insight of child's temperament." "Matthew's life events, the financial struggles incurred by his family, his interpersonal support were all seen to have contributed to difficulties with learning; it appeared as though Matthew had very limited exposure and appropriate mediation" "The child was seen ecosystemically, by allowing an analysis of the interactions between his temperament and cognitive style and his environment, the learning support trainee encouraged a goodness of fit" "Through the use of graphic organisers, we were able to understand Matthew ecosystemically in supervision". "Cognitive development level and cognitive processing styles could be accommodated into the teaching and learning process. The CATLI …[enabled] a fit in temperament between child and student …[as well as] the liaising with other professionals involved and good case management."

T3	S3	T4	Extant Data J	Extant Data ELS	Extant Data RSO
"The assessment allowed me to factor this information into his therapy and assisted me neither over or under pathologising his behaviour and when forming a tentative hypothesis around his diagnosis"	The process of the parent being in counselling…stops him from feeling as though he is the problem "The child needs to be "seen" in	"…the child stopped setting himself up as the problem " "The process was a link in the chain. The child's behaviour and social difficulties were directly linked to his relationship	"More and more do I realise that the barriers to learning Matthew is experiencing – his teacher doesn't seem to be aware of how his poor successive processing impacts on his learning, and the classroom doesn't seem to	"Matthew's processing style, temperament, and low motivation needed to be accommodated and these were addressed during learning support.". "Matthew needs to be	"It was evident why Matthew was struggling so much within the classroom. When interacting with the teacher, Matthew appeared very anxious, never looking her in the

"However, operating in the real world, information from assessment and the parent 's counselling certainly assisted in my understanding how the environment impacts on the child.	the context of the family, the school and the community. In this particular case understanding the family dynamics certainly impacted on our understanding of the child's dynamics."	with his parent s. He could only change in relation to change in the system. Teacher's attitudes also needed to change."	match his temperamental style" "It is apparent that there is a poorness of fit between Matthew and his teacher. It certainly seems that the teacher not being accommodating and understanding of Matthew is hindering his development." "The CATLI encouraged a goodness of fit between myself and Matthew. This match seems to have been achieved as he is becoming less anxious around reading and writing tasks,."	understood in terms of the environment around him. It is apparent that those around have provided a poorness of fit and dysfunctional interactions seem to be the reason of his emotional and scholastic difficulties."	eyes and often staring into thin air. It soon became evident that the teacher was overwhelmed by Matthew's difficulty in grasping the concepts, as she showed signs of frustrations. At this stage the teacher reprimanded Mathew for his "ugly" work and for getting all the answers wrong. This presents to be a concern as Matthew is already a very anxious boy, without having to be shouted out."

- The parent participant (P) shows considerable understanding regarding ecosystemic principles especially that the problems are systemic and not only due to the child. In addition, since she has had her own counselling it is evident that she is more aware of how to provide good social support.
- The assessment supervisor (S1) showed good understanding, whereas the Counselling Supervisor (S3) showed only some understanding. What it noticeable, however, is that S3 did not seem to apply ecosystemic principles in supervision (See theme 3 – T3)
- The assessment trainees,T1 and T2, show fair to good understanding of ecosystemic principles for example referring to the holistic understanding they gained form various stakeholders.
- The counselling trainee, T3, showed a not very good to fair application of ecosystemic principles. She appears to use medical model applications such as "diagnosis" and "pathology".
- The parent counsellor, T4, seems to view the concerns and child's behaviour in relation to his parent s and ecosystemically, however, she did seem to apply ecosystemic principles (see theme)
- The learning support trainee, evidenced in the extant data J, ELS and RSO, and LS supervisor showed good understanding of ecosystemic principles and in addition appeared to apply ecosystemic principles within the CATLI and within the supervision process.

TABLE G3: THEME 3: COLLABORATION BETWEEN STAKEHOLDERS FOR UNDERSTANDING AND SUPPORTING THE CHILD'S DEVELOPMENT/PROCESS

P	E	T1	T2	S1	S2
"By understanding my sons strengths and needs it allowed me as a parent to help my son more as I now understand what he has needed and requires. We have learnt to give plenty positive reinforcement as we now fully understand to concentrate on the positives and work on the problem areas." "It was very helpful consulting with various consultants… I appreciate how everyone worked together" "As a parent , problem solving was important in knowing what our next step was." "I needed the personal counseling and it helped me a lot as well as the joint counseling with my husband. We had gone through a lot of emotional trauma in our lives and I was battling to cope and I suffer with anxiety in so doing this we were supported and better able to be there for Matthew"	"She was able to advise me on the way the child learns [through collaboration with LS trainee]." "The report that was given to the school after such assessment was done provided an accurate understanding of the child because everyone's ideas and thoughts were put together." "It helped me understand his temperament. It was good to be able to know how to help him" "They gave me suggestions and recommendations" "Difficult to use recommendations [to address needs] as there were so many other children in the classroom." "The process was not ongoing, and so was difficult to always support and accommodate him"	"The IAC allows the family insight into assessment which demystifies it and makes it more user-friendly and more collaborative." "This approach is very helpful because it involves all stakeholders and dynamics between each member and involvement of their interests in the client concerned is gathered." "A holistic picture is formed around the problems and one can address issues in a holistic manner and also involve the stakeholders[IAC]." "I find the assessment process extremely useful for gathering information." "The IAC is a phenomenal process to use in assessing a child." "It can be difficult when the child has concerns about their parent s or vice versa but consultant should encourage parent s to listen to their child's perspective as it may provide insight into where some of the concerns originate etc." "It had a great impact because the child has a voice that is taken seriously [IAC]" "The IAC provides a space in which the parent s and consultant allow the child their say, without judgement or ridicule" "The IAC identifies the possible areas of intervention." "The following assessment confirms or eliminates areas identified [areas of concern highlighted during the initial contact] and the IAC helps family understand causes [of these areas of concern] which helps them to accept	"As the name of the model suggests it is integrative approach as one gets the entire family involved." "The entire family is involved in making decisions for the client involved." "Need to make the necessary decisions around … what approach one can use towards the family and it structure."	"The approach allows for the active inclusion of all concerned parities in the assessment and decision making process.[IAC]" "It defocuses from the child as the identified individual with a 'problem' - but looks at the child's entire system to understand concerns " "It allowed for the expression of different perceptions in relation to the expressed concerns (i.e. from the parent s, child, teacher, student consultants, peer consultants etc.)This enriched understanding facilitated the assessment and decision making process as well as further interaction." "Team collaboration and consultation allowed for a broad and enriched understanding of all aspects of the case study." The interventions that followed were guided by the IAC and its broad principles and philosophy "The collaborative relationship between the student consultants and parent s appeared to be good – which has to be positive for the child. I am not able to comment on the extent of collaboration with the school – this perhaps needed greater attention." "A program needed to be developed in the interim for the school to implement."	"The learner support student gained further understanding and insight of child's temperament, however more parent al and teacher support was required, as this where Matthew's challenging behaviours originated." "The IAC process enabled the learner support specialist to view Matthew from an inclusive/ecosystemic framework and therefore gained further understanding and insight of child's temperament." "Liaising with other professional was involved and as well as good case management [learning support]" "Collaboration was an integral part of learning support success." "Peer interaction…communication and sharing of ideas had a supportive impact on the process."

		interventions." "The families come for assessment to find interventions and don't feel confident to suggest their own intervention. The consultant can influence [facilitate] this [problem solving] during the IAC. Suggestions that the family makes in terms of intervention are valued."			
T3	S3	T4	Extant Data ELS	Extant Data J	
"However, operating in the real world, information from assessment and the parent 's counselling certainly assisted in my understanding how the environment impacts on the child." "Despite a few phone calls to the learning support specialist, there was not much team collaboration." "I think it gave the family an effective- although perhaps one year is too short to see long term tangible changes – "taste" of what support is out there." "Supervision provided a space to allow for sound advice and guidance, for valued and trusted input from supervisor and an ability to learn from supervisor. The supervision was psychodynamic in nature"	"There appeared to be collaboration between all the participants, the parent s, the school, the learning support therapist and the play therapist as well as between the child's therapists and the mother's therapist. Both last year and the year before it appeared useful to have both therapists in the same supervision group, i.e. the mother and the child could be thought about in our supervision group setting – it certainly seemed to facilitate our thinking around the case." "I feel that it is imperative that one doesn't work with the child in isolation." "I think that the parent counselling worked well. I believe that the mother responded well to an older therapist and seemed more supportive of the child's therapy because of this. Given the short duration of the therapy due the mother's initial resistance I am not sure that there was any change other than being supportive and perhaps experiencing the whole process as a good enough experience. "I would say that the child would experience the parent being in counselling as a relief – it stops him from feeling as though he is the problem and also allows the parent to be more thoughtful and receptive to the child"	"The child's therapist and I were in supervision together so this helped to gain insight into the systems functioning." "There was a high level of collaboration in that the learning support specialist; counsellors and assessors were all in the same institution. So strategies could be discussed and ideas shared. However limited time was a disadvantage and limitation to the collaboration." "The process helped the mother in particular to start understanding how her past was impacting on her relationships with her children and husband." "How the child behaves is in relation to others and therefore the 'others' also need to change entrenched patterns of behaviour." "In reality children are totally dependant on their caregivers at home/school and therefore change in the system is essential if the child is going to firstly start changing negative behaviour patterns and secondly sustain them." "[The supervision process was] very good – understanding and supportive."	"Collaboration was essential to the process, beginning with the assessors and parent s in helping me identify his needs and strengths as well as in supervision and with the play therapist. " "Even though collaboration is evident, parent s and teacher needed more support."	"Matthew seems to have lost focus in learning support since commencing play therapy. The play therapist today suggested to me that I use emotion cards to help him to identify his feelings in a non intrusive way."	

- The greater majority of the participants seemed to have a good understanding of collaboration and how it was helpful in supporting the development of the client and the learning and development of parent , teacher and trainees

- The parent , P, perceived that her collaboration with her counsellor very helpful for son's support
- T1 perceived that the collaboration with the child very helpful to his development
- A few expressed(T3, T4, S3) the notion that more collaboration would have been better, particularly with the school and between the interveners but expressed that insufficient time and not lack of interest got in the way.
- T2 and T3 showed slight understanding of collaboration as they did not use terminology
- T2 and T3 seemed to lack in comment on this theme which may suggest that the notion of collaboration was not internalised
- S1 showed understanding and used terminology.
- S2 and S3 possibly some understanding but gave minimal comment.
- Learning support trainee showed considerable understanding through the extant data ELS and J.

TABLE G4: THEME 4: PERCEPTIONS OF HOLISTIC (ASESSEMENT AND SUPPORT) PROCESS

P	E	T1	T2	S1	S2
"Matthew is a shy boy and was made to feel comfortable at all times…Drawing on my sons strengths, interests, etc, gave some/a lot of positive reinforcement" "The different consultants are amazing people and genuinely care." "It [the IAC] really helped not only my son but our family as a whole. We learnt exact problems my son has from a learning disability as well as recommendations as to what to do" "The learning support was excellent. He improved in leaps and bounds…helped him tremendously… He enjoyed it immensely, still misses it." "My son battled at first with the counselling as he has to first build trust with a person before he will open up. He internalizes things. But once he relaxed he opened up to the counseling and enjoyed the play therapy." "I needed the personal counseling and it helped me a lot as well as the joint counseling with my husband. We had gone through a lot of emotional trauma in our lives and I was battling to	"It helped him with his reading and writing. He needed the one on one support."	"I find the assessment process extremely useful for gathering information." "The IAC allows the family insight into assessment which demystifies it and makes it more user friendly and more collaborative." "It is nice to see the family dynamics, although I feel that the interview setting does make the members a bit nervous, especially if they are anxious about the outcome, therefore I don't rely on the observations of family dynamics during the interview." "This approach is very helpful because it involves all stakeholders and dynamics between each member and involvement of their interests in the client concerned is gathered. A holistic picture is formed around the problems and one can address issues on a holistic manner and also involve the stakeholders." "It had a great impact because the child has a voice that is taken seriously. The IAC provides a space in which the parent s and consultant allow the child their say, without judgement or ridicule."	"The IAC is a phenomenal process to use in assessing a child." "As the name of the model suggests it is integrative approach as one gets the entire family involved." "Yes indeed it helped me get a better picture of the client."	"It [the holistic process] facilitates a holistic understanding of the child within his/her unique context."	"IAC process enabled the learner support specialist to view Matthew from an inclusive/ecosystemic framework and therefore: Gained further understanding and insight of child's temperament." "The process also allowed the learner support specialist to assess levels of knowledge and areas for development and thus plan activities according to Matthew's interests. In addition it also encouraged his family and school to support him." "The CATLI worked because of: Lessons developed out of child's interest accommodated within a meta-theme Unconditional positive regard and relationship building Monitoring performance, understanding the child and allowing for flexibility in meeting the child's needs Good planning and organizational skills using the graphic organizer Interactive, concrete-based and authentic activities Intensive and extensive mediation at child's level Cognitive development level and cognitive processing styles could be accommodated into the teaching and learning process Enabled the usage of the whole

cope and I suffer with anxiety. It helped my husband and I to understand each other as well as dealing with our traumas and emotional issues. It taught me to relax a lot more and coping mechanisms which I still use today. It taught me how to control my anxiety." "We are more relaxed as a family. We all understand each other a lot more. The counseling helped for our whole family's well-being. My son is now a lot more relaxed and we talk about our problems and find solutions to the problems. We are definitely more closer as a family. The counseling brought us together."					language/concentrated language encounter approach that makes reading and writing easy Finding a fit in temperament between child and student Liaising with other professionals involved and good case management Student was always open to suggestions. It did not work when child started play therapy – emotionally overwhelmed and when, on some occasions, lessons were not sufficiently simplistic and concrete" "CATLI is also reliant on the physical environment, i.e. the clinic setting, to be "consistent, organised and child-friendly" in order to be successful."
T3	S3	T4	Extant Data PN – C	Extant Data – ELS	
"Initially he appeared too frozen in the therapy." "The child barely spoke during the therapy sessions. Initially it seemed that the play therapy was terrifying for him and that he was virtually paralysed by fear." "It provided me with an accurate glimpse into the family life and dynamics of the child's context." "Given the child's temperament and cognitive functioning, psychodynamic play therapy might not have been the easiest for him."	"Matthew was quite, non responsive and sometimes fearful in early therapy sessions" "The trust arose from the reliability and consistency of both the frame and the therapist coupled with a non-judgmental and empathic attitude displayed by the therapist. His artwork suggested that he felt held through the experience" "Initially the child was frozen and I think the process felt excruciating for both the therapist and the child. But after a while once the child experienced the therapist as being able to survive him,	"The intervention was too short – limited by the reality that we were students having to accommodate academic needs as well. Within an academic setting this is likely to remain a difficulty due to the inflexible constraints such as examinations and holidays." "It enabled them to get in touch and begin to explore some of her own issues. It allowed her hopefully to feel heard and understood." "The use of a psychodynamic approach was limited in an academic setting. Children and	"I felt anxious here. I was feeling the tension trying to alleviate come of his (and my) anxiety but also aware not be directive." Session 1. "He seemed to hold himself very still as though he were a statue. One of my thoughts during this reverie was that he might feel if he does not move much or say anything, he might not be noticed, and that would please him. I felt life he wanted to be invisible." Session 4 "Matthew seemed paralysed with anxiety and I wondered a few times whether this experience was detrimental rather than	"Matthew responded positively to an environment where unconditional positive regard was offered" "Matthew has poor social skills; and therefore needs for his unique temperament to be understood. In so doing he needs to be part of a group that would accommodate his low PSF. Furthermore, as anxiety also seems to be a factor contributing to Matthew's poor peer relations, he needs a lot of unconditional positive regard, providing him the right emotional environment, to help develop emotionally. Once	

"… operating in the real world, information from assessment and the parent 's counselling certainly assisted in my understanding of the child."	together with the fact that the therapist became a bit more directive and placed paint and paper within his reach he started to "thaw". His painting expressed his messy and muddled internal world but ultimately also indicated that his "baby feelings" were contained," "an analytic framework allows Matthew to be contained by: Introducing boundaries of time, e.g. starting and ending times, interpretation of personal questions, no personal disclosure on part of therapist and not gratifying Matthew." "I believe that the child felt heard and understood [by his mother] which appeared to have a holding effect."	their caretakers are in a system and therefore one needs to consider the different parts of a system in order to change or sustain behaviour." "How the child behaves is in relation to others and therefore the 'others' also need to change entrenched patterns of behaviour."	therapeutically useful." Session 1 "I was wondering how fair it was doing this to Matthew as to me it seemed that the session was unbearable for him. I was wondering what good this had done for him and whether I should have ended the session earlier." Session 1.	anxiety has lifted he, may feel more confident to form such relationships." "The CATLI provided Matthew with an environment that is interesting, fun and wherein he can gain a sense of mastery. This increased his motivation to scholastic tasks, thereby lowering his anxiety and promoting much needed literacy skills"

- Three participants, namely T3, T4, S2 commented on the overall process (i.e. IAC, collaboration and to some extent, interventions provided etc) as being helpful, firstly for understanding child really well (T3), for enabling appropriate, good-fit designing of LS plan.
- In addition, T4 commented that the interventions were too short, due to academic constraints
- IAC process: respondents commented on the high efficacy of the IAC process in providing a holistic understanding of the child and the systems he interacts with (P and T1) and for providing an detailed understanding to base LS plans on (S2)
- LS process: Parent found the LS to be excellent…"The learning support was excellent. He improved in leaps and bounds…helped him tremendously… He enjoyed it immensely, still misses it."
- The educator considered it helped with reading and writing and S2 found it very effective for the child and well planned

EFFECTS OF SUPPORT ON CHILD

The following are themes that emerged from the data regarding the perceptions of the participants around the progress Matthew made highlighting the efficacy of this ecosystemic process (Research Question 2)

The tables that follow illustrate specific progress Matthew made. The themes that emerged from the evidence are divided into his emotional development (research question 3) and his scholastic development (research question 4).

Emotional Development

TABLE G5: THEME 5: EMOTIONS: SELF ESTEEM

P	E	T1	T2	S1	S2
"He gained a lot of confidence and is more relaxed than what he was." "Matthew is a shy boy and was made to feel comfortable at all times…Drawing on my sons strengths, interests, etc, gave some/a lot of positive reinforcement" "This [the assessment and support process] definitely helped my sons strengths and needs as he gained a lot of confidence and he is more relaxed than what he was." "My son needed learner support and play therapy as his confidence was very low."					"It was clearly evident through observing Matthew , that there was a marked improvement in self-esteem, confidence, and motivation. He appeared relatively more emotionally secure." "The learning support worked because lessons were developed out of child's interest accommodated within a meta-theme. Monitoring performance, understanding the child and allowing for flexibility in meeting the child's needs, all benefitted Matthew. He felt capable of doing the reading and writing tasks as they were targeted at his level." "Finding a fit in temperament between child and student was

"The learning support helped him cope, built his confidence and he learnt new ways to learn"					essential." "The process also allowed the learner support specialist to assess levels of knowledge and areas for development and thus plan activities according to Matthew's needs and interests."
T3	S3	T4	Extant Data ELS		
	"I believe that the child felt heard and understood which appeared to have a holding effect."	*"Often change takes time to be internalised before it can be measured in behavioural change. It is also difficult to measure what was happening on an unconscious level."*	"Matthew responded positively to an environment where unconditional positive regard was offered. Marked improvements were seen in his self confidence." "The CATLI provided Matthew with an environment that is interesting, fun and wherein he can gain a sense of mastery. This increased his motivation to scholastic tasks, thereby lowering his anxiety and promoting much needed literacy skills" "Marked improvements were seen in his self confidence. Through reconditioning Matthew learnt to become of his achievements and work through rewards. Thus, his conditioned response of poor motivation from poor performance was changed to confidence. This allowed improvements to be made in reading and writing" "Matthew's needs lay mainly in his anxiety and withdrawal, it was most rewarding seeing the change in confidence levels."		

			"Matthew is very shy and does seem to like talking. He needs a lot of motivation to overcome anxiety and so one of his needs is to focus on his individual interests by targeting his love for animals and the outdoors." "Matthew has poor social skills; and therefore needs for his unique temperament to be understood. In so doing he needs to be part of a group that would accommodate his low PSF. Furthermore, as anxiety also seems to be a factor contributing to Matthew's poor peer relations, he needs a lot of unconditional positive regard, providing him the right emotional environment, to help develop emotionally. Once anxiety has lifted he, may feel more confident to form such relationships." "Reduced anxiety was attributed to literacy skills being modeled with Matthew's interest and joys and being fun. By using an exciting approach it reinforces cognitive, linguistic and literacy knowledge and the learner does not fully realize how much reading and writing they are accomplishing. This in turn improves self-esteem, motivation and confidence levels and anxiety is contained."

- Overall, 4 participants commented on how his self-esteem and confidence had markedly improved (P, S2,S3 and ELS)
- They attributed this to being made to feel comfortable in the IAC, by all trainees focusing on his strengths and in general to the counselling and learning support processes

- 2 participants commented why his self esteem had markedly improved.
- S3 felt it was due to the trainee counsellor hearing and understanding the client which provided a holding effect .
- The learning support trainee felt it was due to:
- an environment where unconditional positive regard was offered,
- reconditioning and allowing Matthew to work towards rewards,
- targeting his love for animals and the outdoors.
- literacy skills being modeled as fun as Matthew did not fully realize how much reading and writing he was accomplishing. This in turn improved his self-esteem, motivation and confidence levels and anxiety was contained

TABLE G6: THEME 6: EMOTIONS: CHANGES IN INTERPERSONAL RELATIONSHIPS

P	E	T1	T2	S1	S2
"We are more relaxed as a family. We all understand each other a lot more. The counselling helped for our whole families' wellbeing. My son is now a lot more relaxed and we talk about our problems and find solutions to the problems." "We are definitely more close as a family. The counselling brought us together." "By understanding my sons strengths[through the IAC] and needs it allowed me as a parent to help my son more as I now understand what he has needed and requires. We have learnt to give plenty positive reinforcement as we now fully understand to concentrate on the positives and work on the problem areas." "It has helped me as a mother to help; Matthew speaks about his concerns, and gets things off his chest"	"Difficult to use recommendations [to address needs] as there were so many other children in the classroom." "The process was not ongoing, and so was difficult to always support and accommodate him."				
T3	S3	T4	Extant Data ELS	Extant Data J	
"I think it gave the family an effective- although perhaps one year is too short to see long term tangible changes – "taste" of what support is out there.	"I am not sure that there was any change other than [the mother] being supportive and perhaps experiencing the whole process as a good enough experience."	"The process [the parent counselling] helped the mother in particular to start understanding how her past was impacting on her relationships with her	"After 12 sessions he was noticed chatting enthusiastically with his mother during an informal meeting between himself and his mom."	"Matthew was silent hardly engaging with his parent s and his parent s hardly engaging with him."	

"I think it made him feel less strange and more normal that his mother was also in counselling."	"I'm not entirely sure in this particular case other than that the mother was more supportive of the process." "However, generally I would say that the child would experience the parent being in counselling as a relief – it stops him from feeling as though he is the problem and also allowed the parent to be more thoughtful and receptive to the child." "I believe that the child felt heard and understood [by his mother] which appeared to have a holding effect."	children and husband." "In addition it appeared as if the child was more willing to come to therapy knowing that his parent s were also there – less angry about participating in the process."	"Matthew's increased self esteem and the mother's increasing support prove to have a positive effect on Matthew "	

- 3 Participants considered that the mother's ability to support, understand and help her son had improved considerably (p, S3, T4, ELS, J).
- The mother also commented positively on the whole family being closer together
- The learning support trainee particularly noticed considerable improvements in the mother son relationship

TABLE G8: THEME 7: EMOTIONS: ANXIETY

P	E	T1	T2	S1	S2
"We are more relaxed as a family. We all understand each other a lot more. The counselling helped for our whole families' wellbeing. My son is now a lot more relaxed and we talk about our problems and find solutions to the problems." "My son battled at first with the counselling as he has to first build trust with a person before he will open up. He internalizes things. But once he relaxed he opened up to the counseling and enjoyed the play therapy." "He is much more relaxed, not as anxious as has learnt not to internalise his problems but to speak about them."	"It seemed to help his anxiety but he was still a vey shy boy [of the counselling]."				
T3	S3	T4	EXTANT DATA ELS	Extant Data PN-C	
"Initially it seemed that the play therapy was terrifying for him and that he was virtually paralysed by fear. At session 6, when he began painting [with guidance and direction], his anxiety lessened and it appeared he began to enjoy having a time and space to mess."	"I think that the child found it [the counselling] a valuable experience. Initially he appeared frozen in the therapy, but as he came to trust the therapist and process he began to participate by painting. The trust arose from the reliability and consistency of both the frame and the therapist coupled with a non-judgmental and empathic attitude displayed by the therapist. His artwork suggested that he felt held through the experience.""		"Social support and emotion were to be improved – Matthew experienced less anxiety and significant improvement was seen in his identifying of emotions in learner support, using emotion cards. The Stanford Test also highlighted improvements in reading comprehension due experiencing less anxiety." "Reduced anxiety was attributed	"I felt anxious here. I was feeling the tension trying to alleviate some of his (and my) anxiety but also aware not be directive." Session 1. "…when he began painting, his anxiety lessened and it appeared he began to enjoy having time and space to mess."	

			to literacy skills being modeled with Matthew's interest and joys and being fun. By using an exciting approach it reinforces cognitive, linguistic and literacy knowledge and the learner does not fully realize how much reading and writing they are accomplishing. This in turn improves self-esteem, motivation and confidence levels and anxiety is contained." "The CATLI provided Matthew with an environment that is interesting, fun and wherein he can gain a sense of mastery. This increased his motivation to scholastic tasks, thereby lowering his anxiety and promoting much needed literacy skills" "Matthew's needs lay mainly in his anxiety and withdrawal; it was most rewarding seeing the change in confidence levels." "Post testing observations from the Standford Reading Test revealed that Matthew is experiencing far less anxiety. Anxiety caused difficulties in Matthew completing two subtests. Post testing observations made by the author revealed that Matthew was experiencing far less anxiety. During post testing Matthew was able to complete the Standford Test highlighting his improvement not only in reading comprehension but also	

			emotionally, anxiety may have lifted to some extent from pre-assessment."	

- 3 participants in particular noticed that the client showed a lessening of anxiety and a more relaxed state (P and E)
- The LS trainee commented on lessened anxiety in general and lessened performance anxiety around reading and writing tasks (ELS)

Scholastic development

THEME 8: SCHOLASTIC: COGNITIVE STRATEGIES AND GENERAL KNOWLEDGE

P	E	S2	Extant Data ELS	Extant Data TD1 AND TD2
"He learnt new ways to learn and think."	"His learning is better but still needed more support and is now at a remedial school."	"Improved ability to think, problem-solve and retrieve information." "Matthew's improved reading, writing, mathematics, reduced performance anxiety, increased motivation and increased usage of cognitive strategies, was attributed to the application of the following components of the CATLI - Authentic and theme based activities for improving motivation and accommodating simultaneous processing style - Sound family approach for addressing weak successive processing and subsequent weak spelling and writing - Listening/talking about activity and introducing new vocabulary so as to bridge and develop existing and new concepts - Leaner describing activity - Student using graphic organizers to fully address Matthews needs - Writing process involving scribing of information so as to reduce performance anxiety and to promote development of planning and sequencing strategies as well as develop concepts and general knowledge	"Improvement and usage of the following cognitive processing strategies were evident– self monitoring, self correcting, planning, prediction, sequencing and successive processing. Concepts development or general knowledge – schema's and concepts have significantly improved." "It was evident that Matthew was using the pictures whilst reading as well as using strategies such as prediction. These two strategies were useful to him as it help with instant word recognition and fluency of his reading."	Sequencing and successive processing improvements were evident in his informal reading, where he read with a lot more ease and flow. Further indications of this improvement were evident in decreased errors in reading and writing activities requiring sequencing and successive processing. Visual discrimination tasks in reading and writing improved. Matthew seemed to notice more detail (punctuation and other literacy conventions) in his reading These strategies were also seen in his writing sample. Previous assessment yielded no writing sample due to extreme performance anxiety. Post assessment yielded a writing sample just below his grade level. Improvements of problem solving strategies were evident in Matthews's mathematics. Marked improvement was seen between pre and post testing. His numerical reasoning improved from below grade 1 level to a grade 2 level. His ability to solve

		- Creating small books and big books for publication so as to improve writing skills and usage of literacy conventions - Repeated reading activities so as to improve fluency of reading.”		word problems improved from a grade 1 level to grade 2 levels. Improvements in concepts and general knowledge were evident in the Standford Reading Test. Improvements in reading comprehension and auditory vocabulary were indicative of this. Post testing improved to grade 1.5 for reading comprehension and from a grade 1 to a grade 2 level for auditory vocabulary.

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- 4 participants and post-testing suggested that Matthew had learnt to think and learn better (P , T, S2, ELS, TD1, TD2)
- Matthew’s improved usage of cognitive strategies were also commented on which included thinking, problem-solving, retrieving information better, self correcting, self-monitoring, planning and prediction (S2, ELS, TD1 and TD2
- Matthews concepts/ general knowledge was also considered to have improved considerably (ELS)
- Improved knowledge and improved cognitive strategies were also considered to have helped improve Matthews reading, writing and maths skills (ELS,TD1,TD2)

TABLE G9: THEME 9: SCHOLASTIC: MOTIVATION

P	S2	Extant Data ELS
"The learning support was excellent. He improved in leaps and bounds…helped him tremendously… He enjoyed it immensely, still misses it."	"Reduced levels of performance anxiety were evident. Improved self-esteem, confidence and motivation. Reduced anxiety was attributed to literacy skills being modeled with Matthew's interest and joys and being fun. By using an exciting approach it reinforces cognitive, linguistic and literacy knowledge and the learner does not fully realize how much reading and writing they are accomplishing. This in turn improves self-esteem, motivation and confidence levels and anxiety is contained." "The learning support worked because lessons were developed out of child's interest accommodated within a meta-theme. Monitoring performance, understanding the child and allowing for flexibility in meeting the child's needs, all benefitted Matthew Finding a fit in temperament between child and student The process also allowed the learner support specialist to assess levels of knowledge and areas for development and thus plan activities according to Matthew's needs and interests." "Lessons were developed out of child's interest accommodated	"The CATLI addressed the anxiety and difficulty with reading by allowing Matthew to be slowly introduced to content through the use of picture cues, paired, shared and repeated reading activities." "Matthew experienced less anxiety and significant improvement was seen in his identifying of emotions in learner support, using emotion cards." "Improvement in reading [The Stanford Test] was attributed to experiencing less anxiety. Through reconditioning Matthew learnt to become aware of his achievements and work towards rewards. Thus, his conditioned response of poor motivation from poor performance was changed to confidence. This allowed improvements to be made in reading and writing." "Matthew's interests were targeted and thus increasing his motivation to most reading and writing tasks." "Matthew is very shy and does seem to like talking. He needs a lot of motivation to overcome anxiety and so one of his needs is to focus on his individual interests by targeting

	within a meta-theme, this provided meaning and motivation." "Yes [there were] considerable [improvements]. Improved self-esteem, confidence, and motivation levels. Ongoing, additional, consistent input using the ecosystemic approach is required" "Matthew's improved reading, writing, mathematics, reduced performance anxiety, increased motivation and increased usage of cognitive strategies, was attributed to the application of the following components of the CATLI - Authentic and theme based activities for improving motivation and accommodating simultaneous processing style - Sound family approach for addressing weak successive processing and subsequent weak spelling and writing - Listening/talking about activity and introducing new vocabulary so as to bridge and develop existing and new concepts - Leaner describing activity - Student using graphic organizers to fully address Matthews needs - Writing process involving scribing of information so as to reduce performance anxiety and to promote development of planning and sequencing strategies as well as develop concepts and general knowledge	his love for animals and the outdoors. Matthew has poor social skills; and therefore needs for his unique temperament to be understood. In so doing he needs to be part of a group that would accommodate his low PSF. Furthermore, as anxiety also seems to be a factor contributing to Matthew's poor peer relations, he needs a lot of unconditional positive regard, providing him the right emotional environment, to help develop emotionally. Once anxiety has lifted he, may feel more confident to form such relationships." "Post testing observations from the Standford Reading Test revealed that Matthew is experiencing far less anxiety. Anxiety caused difficulties in Matthew completing two subtests. Post testing observations made by the author revealed that Matthew was experiencing far less anxiety. During post testing Matthew was able to complete the Standford Test highlighting his improvement not only in reading comprehension but also emotionally, anxiety may have lifted to some extent from pre-assessment."

	- Creating small books and big books for publication so as to improve writing skills and usage of literacy conventions - Repeated reading activities so as to improve fluency of reading."	

- 3 participants and post-testing revealed that Matthews motivation to learn especially reading, writing and maths improved considerably (P, S2, ELS, TD1 and TD2)
- Participants attributed this directly to using the CATLI (S2, ELS)
- S2 attributed increased motivation to the use of the CATLI as the lessons were developed out of child's interest accommodated within a meta-theme. Allowing for the monitoring of performance, understanding the child and allowing for flexibility in meeting the child's needs. She felt that by finding a fit in temperament and cognitive style between child and student the child was made to feel capable as the process also allowed the learner support specialist to assess levels of knowledge and areas for development and thus plan activities according to Matthew's needs and interests."
- The learning support trainee noted in the ELS, that the improvement in motivation to read and wrote was attributed to the CATLI as it firstly allowed Matthew to become aware of his achievements and work towards rewards, secondly as it provided a form of instruction that suited Matthew's cognitive style and thirdly because the activities and books chosen were all authentic, meaning based and of high interest to him.

TABLE G10: THEME 10: SCHOLASTIC: READING

P	E	S2	EXTANT DATA TD1 AND TD2
	"It helped him with his reading and writing."	"Reduced levels of performance anxiety were evident. Improved self-esteem, confidence and motivation. Reduced anxiety was attributed to literacy skills being modeled with Matthew's interest and joys and being fun. By using an exciting approach it reinforces cognitive, linguistic and literacy knowledge and the learner does not fully realize how much reading and writing they are accomplishing. This in turn improves self-esteem, motivation and confidence levels and anxiety is contained." "The learning support worked because lessons were developed out of child's interest accommodated within a meta-theme. Monitoring performance, understanding the child and allowing for flexibility in meeting the child's needs, all benefitted Matthew Finding a fit in temperament between child and student The process also allowed the learner support specialist to assess levels of knowledge and areas for development and thus plan activities according to Matthew's needs and interests." "Lessons were developed out of child's interest accommodated	Decreased errors were noticed in reading activities requiring visual discrimination, and improvement from a grade 1 level to an above grade 2 for visual memory. Reading fluency increased from 51% instant word recognition to 65% instant word recognition at a grade 2 level, highlighting an improvement in word recognition as well as improved motivation to read aloud. Matthew's improved word recognition is also attributed to better phonics use as seen in his Standford post test results where his phonetic analysis is at a grade 3 level. This is attributed to the CATLI's sound family phonics approach "Improvement and usage of the following cognitive processing strategies were evident in Matthews reading and writing– self monitoring, self correcting, planning, prediction, sequencing and successive processing. Concepts development or general knowledge – schema's and concepts have significantly improved." "It was evident that Matthew was using the pictures whilst reading as well as using strategies such as

		within a meta-theme, this provided meaning and motivation." "Matthew's improved reading, writing, mathematics, reduced performance anxiety, increased motivation and increased usage of cognitive strategies, was attributed to the application of the following components of the CATLI - Authentic and theme based activities for improving motivation and accommodating simultaneous processing style - Sound family approach for addressing weak successive processing and subsequent weak spelling and writing - Listening/talking about activity and introducing new vocabulary so as to bridge and develop existing and new concepts - Leaner describing activity - Student using graphic organizers to fully address Matthews needs - Writing process involving scribing of information so as to reduce performance anxiety and to promote development of planning and sequencing strategies as well as develop concepts and general knowledge - Creating small books and big books for publication so as to improve writing skills and usage of literacy conventions - Repeated reading activities so as to improve fluency of reading."	prediction. These two strategies were useful to him as it help with instant word recognition and fluency of his reading." Pre and post testing improvements were seen on the Standford Reading Test. Auditory vocabulary improved from a grade 1 level to grade 2 levels highlighting his improved concepts. He improved to grade 1.5 for reading comprehension

- 3 participants and testing data revealed that, in general, Matthews reading skills had improved considerably (E, S2, ELS, TD1, TD2)
- In particular, the following skills were noted to have improved: motivation to read in general and aloud, improved word recognition, improved comprehension, and improved phonics.
- Matthew's improved reading, reduced performance anxiety, increased motivation and increased usage of cognitive strategies, according to the learning support supervisor was attributed to the application of the following components of the CATLI:

"- Authentic and theme based activities for improving motivation and accommodating simultaneous processing style
- Sound family approach for addressing weak successive processing and subsequent weak spelling and writing
- Listening/talking about activity and introducing new vocabulary so as to bridge and develop existing and new concepts
- Leaner describing activity
- Creating small books and big books for publication so as to improve writing skills and usage of literacy conventions
- Repeated reading activities so as to improve fluency of reading."

TABLE G11: THEME 11: SCHOLASTIC: WRITING

P	E	S2	Extant Data TD1 AND TD2	Extant Data ELS
	"It helped him with his reading and writing."	"Reduced levels of performance anxiety were evident. Improved self-esteem, confidence and motivation. Reduced anxiety was attributed to literacy skills being modeled with Matthew's interest and joys and being fun. By using an exciting approach it reinforces cognitive, linguistic and literacy knowledge and the learner does not fully realize how much reading and writing they are accomplishing. This in turn improves self-esteem, motivation and confidence levels and anxiety is contained." "The learning support worked because lessons were developed out of child's interest accommodated within a meta-theme. Monitoring performance, understanding the child and allowing for flexibility in meeting the child's needs, all benefitted Matthew Finding a fit in temperament between child and student The process also allowed the learner support specialist to assess levels of knowledge and areas for development and thus plan activities according to Matthew's needs and interests." "Lessons were developed out of child's interest accommodated	Improvement and usage of the following cognitive processing strategies were evident in Matthews reading and writing– self monitoring, self correcting, planning, prediction, sequencing and successive processing. Concepts development or general knowledge – schema's and concepts have significantly improved Matthews spelling errors in the Schonell Spelling Test decreased between pre and post testing, even though he was still below a grade 1 level. Literacy conventions that were used were attributed to his increased usage of self monitoring and self correcting strategies. Matthew was unable to complete any written piece in the pre-intervention assessments.	"Even though, improvement is seen within his reading, not much difference was seen in the writing process, including planning and therefore further support is much needed. However, it should be noted Matthew was unable to complete any written piece in the pre-assessments." "Matthew increasingly enjoyed copying the sentences from the Sound Family activity [of the CATLI]. Such an activity provided Matthew with a sense of mastery thus increasing his motivation to write" "Matthew thoroughly engaged with the writing process including the planning and sequencing of his story on the graphic organisers provided to him. He enjoyed this as I scribed the words he so wanted to say. It was a non threatening process" "It appears that Matthew and his writing are emotionally attached. He finds it one of the most challenging of tasks. It was very rewarding to see the first layer of success and that is his increased motivation and decreased anxiety towards writing. This should lay a foundation for

		within a meta-theme, this provided meaning and motivation." "Matthew's improved [reading] writing, [mathematics], reduced performance anxiety, increased motivation and increased usage of cognitive strategies, was attributed to the application of the following components of the CATLI - Authentic and theme based activities for improving motivation and accommodating simultaneous processing style - Sound family approach for addressing weak successive processing and subsequent weak spelling and writing - Writing process involving scribing of information so as to reduce performance anxiety and to promote development of planning and sequencing strategies as well as develop concepts and general knowledge - Creating small books and big books for publication so as to improve writing skills and use of literacy conventions…"	After the learning support intervention he was able to write at a grade one level. Post testing highlighted very little use of punctuation and little meaning conveyed.	further development"

- Some improvement in writing skills was noted (T, S2, ELS, TD1 and TD2) as well as motivation to write.
- Matthew was unable to complete any written piece in the pre-assessments. After the learning support intervention he was able to write at a grade one level.
- According to both the learning support trainee and her supervisor, this motivation, to write was attributed to the CATLI writing process involving scribing of information so as to reduce performance anxiety. Writing activities were based on meaningful authentic tasks. All writing activities including the publication of the small books and the copying of Sound Family sentences, provided Matthew with a sense of mastery thus increasing his motivation to write"
- The learning support trainee noted that even though only some improvement was seen, it was evident that the CATLI promoted development of planning and sequencing strategies as well as developed concepts and general knowledge

- Literacy conventions that were used were attributed to his increased usage of self monitoring and self correcting strategies.
- Post testing highlighted very little use of punctuation and little meaning conveyed.
- The learning support trainee felt that limitations to achieving full writing success were attributed to his hesitance and anxiety towards writing. She further felt that addressing his motivation and anxiety towards writing was of primary importance, in any further development of skills in writing.

Appendix H: Quantitative Results

READING

Standford

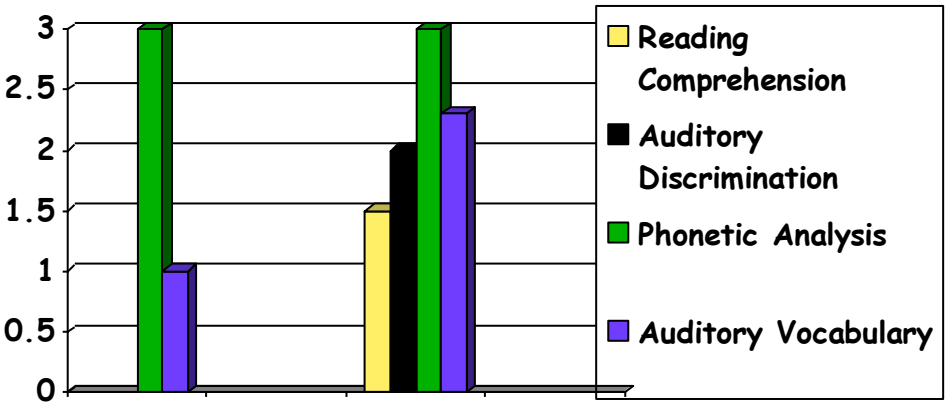


Figure H1

The two sets of graphs are differentiated between pre and post test and reflect grade levels. It was noted in the previous assessment ie the pre-test phase, that Matthew's anxiety and lack of confidence caused difficulties in completing two subtests. Post testing observations revealed that Matthew experienced far less anxiety and had better confidence. During post testing Matthew was able to complete all four subtests of the Stanford Diagnostic Reading Test highlighting his improvement not only in reading comprehension but also emotionally, as his anxiety appeared to have lifted to some extent since the pre-assessment stage.

INFORMAL READING TESTS RESULTS

Reading	Pre test	Post test
Visual Discrimination	4 errors	2 errors
Visual memory	Grade 1	Between grade 2 and 3
% word instantly recognized	51% at grade 1 level	65% at grade 2 level

Table H1

In reading tasks, improvements were seen in visual discrimination, visual memory, and the percentage of words instantly recognized.

Decreased errors were noticed in reading activities requiring visual discrimination, and improvement from a grade 1 level to an above grade 2 for visual memory**.**

Reading fluency increased from 51% instant word recognition to 65% instant word recognition at a grade 2 level, highlighting an improvement in word recognition as well as improved motivation to read aloud.

Matthew's improved word recognition is also attributed to better phonics use as seen in his Standford post test results where his phonetic analysis is at a grade 3 level. This is attributed to the CATLI's sound family phonics approach

Sequencing and successive processing improvements were evident in his informal reading, where he read with a lot more ease and flow. Further indications of this improvement were evident in decreased errors in reading activities requiring sequencing and successive processing. Visual discrimination tasks in reading improved. Matthew seemed to notice more detail (punctuation and other literacy conventions) in his reading.

Improvements in concepts and general knowledge were evident in the Standford Reading Test. Improvements in reading comprehension and auditory vocabulary were indicative of this. Post testing improved to grade 1.5 for reading comprehension and from a grade 1 to grade 2 levels for auditory vocabulary.

Reduced levels of performance anxiety, improved self-esteem, confidence and motivation were attributed to literacy skills being modeled with Matthew's interest and joys and being fun. By using an exciting approach it reinforces cognitive, linguistic and literacy knowledge and the learner does not fully realize how much reading and writing they are accomplishing. This in turn improves self-esteem, motivation and confidence levels and anxiety is contained.

It was evident that the learning support worked because lessons were developed out of child's interests accommodated within a meta-theme. Monitoring performance, understanding the child and allowing for flexibility in meeting the child's needs, all benefitted Matthew. Finding a fit in temperament between child and student was also essential in the success of the learning support

The supervisor highlighted that "Matthew's improved reading reduced performance anxiety, increased motivation and increased usage of cognitive strategies, which was attributed to the application of the following components of the CATLI
- Authentic and theme based activities for improving motivation and accommodating simultaneous processing style
- Sound family approach for addressing and improving Matthew's weak successive processing style
- Listening/talking about activity and introducing new vocabulary so as to bridge and develop existing and new concepts
- Repeated reading activities so as to improve fluency of reading."

FORMAL AND INFORMAL WRITING RESULTS

Writing	Pre-testing	Post-testing
Schonell Dictation	20 errors	18 errors
Errors in writing sample	N/A	6 errors
Meaning conveyed	N/A	Not much
Literacy convention	N/A	No punctuation, but sturdy handwriting
Planning	N/A	No obvious planning

Table H2

Improvement and usage of the following cognitive processing strategies were evident in Matthews writing– self monitoring, self correcting, planning, prediction, sequencing and successive processing.

Matthews spelling errors in the Schonell Spelling Test decreased between pre and post testing, even though he was still below a grade 1 level.
Slight differences were seen in his writing, with particular reference to planning and therefore further reinforcement was much needed. However, it should be noted Matthew was unable to complete any written piece in the pre-assessments due to extreme performance anxiety.
Extant data (ELS, PT1 and PT2) reveals that Matthew in fact was unable to complete any written piece in the pre-assessments. After the learning support intervention he was able to write at a grade one level.

The learning support trainee (ELS) noted that even though only some improvement was seen, it was evident that the CATLI promoted development of planning and sequencing strategies, evidenced during the learning support process and not in the post testing phase. This is perhaps due to some performance anxiety.

Post testing highlighted very little use of punctuation and little meaning conveyed in his informal writing sample (TD1 and TD2). However, it was noted in the ELS that Matthew increasingly enjoyed copying the sentences from the Sound Family activity [of the CATLI]. Such an activity provided Matthew with a sense of mastery thus increasing his motivation to write.

According to both the learning support trainee (ELS) and her supervisor (S2), this motivation, to write was attributed to the CATLI writing process involving scribing of information so as to reduce performance anxiety. Writing activities were based on meaningful authentic tasks. All writing activities including the publication of the small books and the copying of Sound Family sentences, provided Matthew with a sense of mastery thus increasing his motivation to write"

The learning support trainee felt that limitations to achieving full writing success were attributed to his hesitance and anxiety towards writing. She further felt that addressing his motivation and anxiety towards writing was of primary importance, before any further development of skills in writing could occur.

"It appears that Matthew and his writing are emotionally attached. He finds it one of the most challenging of tasks. It was very rewarding to see the first layer of success and that is his increased motivation and decreased anxiety towards writing. This should lay a foundation for further development" (ELS)

Literacy conventions that were used were attributed to his increased usage of self monitoring and self correcting strategies.

The supervisor highlighted that "Matthew's improved writing, reduced performance anxiety, increased motivation and increased usage of cognitive strategies, was attributed to the application of the following components of the CATLI
- Authentic and theme based activities for improving motivation and accommodating simultaneous processing style
- Sound family approach for addressing and improving Matthew's weak successive processing style and the subsequent weak spelling and writing
- Writing process involving scribing of information so as to reduce performance anxiety and to promote development of planning and sequencing strategies as well as develop concepts and general knowledge
- Creating small books and big books for publication so as to improve writing skills and usage of literacy conventions

MATHEMATICS

Key Maths

	Pre test	Post test
Numeration	2	3.2
Addition	1.3	1.4
Subtraction	2.1	2.3
Mental Computation	2	2.1
Numerical Reasoning	0.8	2
Word Problems	1.3	2.5

Table H3

Improvements of problem solving strategies were evident in Matthews's mathematics. Marked improvement was seen between pre and post testing. His numerical reasoning improved from below grade 1 level to a grade 2 level. His ability to solve word problems improved from a grade 1 level to grade 2 levels.

This improvement in mathematics is attributed to the promotion of cognitive strategies, lowered anxiety, increased motivation as well as to the learner support trainee establishing a goodness of fit between his cognitive processing style and the way she mediated to him.