Chapter 3:   A Conceptual Framework

3.1   INTRODUCTION

Within the preceding chapter, ADHD is defined, the diagnosis of ADHD is explained, the prevalence and the causes and ADHD in terms of the self-application of the learner and broad interventions for the learner with ADHD are discussed. In order to clarify the phenomenon of ADHD, the conceptual framework underpinning such a diagnosis is discussed in this chapter by reflecting on the role of the educator. The educator is a pivotal person in the life of the learner with ADHD as the learner spends a great length of time with the educator. The educator, thus, in the course of the teaching spends time observing and getting to know the learner with ADHD. Educators' experiences of learners with ADHD in their classroom could therefore, assist in further understanding ADHD. The following chapter deals with aspects of the role of the educator (section 3.2), classroom interventions (section 3.3), theories of ADHD (section 3.4) and the conceptual framework (section 3.5) within which this study is conceptualised.

3.2   EDUCATORS IN SOUTH AFRICA

South African educators have had to face several changes in a post-apartheid era (Le Roux, 2000; Fleisch, 2004; Vandeyar, 2005). As such, some of the challenges that educators face in South African schools have led to low morale amongst educators and managers (Mestry & Grobler, 2004). As educators have experienced low morale many have left South Africa looking for greener pastures in other countries. According to the Department of Education (2005) factors, including contextual factors, that influence the attrition of teachers in South Africa include:

❐   Disintegration of discipline (thus causing unfavourable working conditions).

❐   Lack of facilities for teaching.

❐   Learner-educator ratios and actual average class sizes. Severe overcrowding of schools and classrooms.

❐   School size and class sizes, and the effects of over-crowding, shortages, and staff involvement in administrative tasks.

❐   Lack of adequate incentives. Inadequate remuneration and other material incentives.

❐   Poor parental participation at all levels: school governance and the disciplining of learners.

- Role conflict. Teachers claim they have to adapt and adopt a multitude of roles depending on circumstances presented at school. These roles include attention to counselling, teaching, acting as *locus-in-parentis*, doubling as security personnel and sometimes even performing as midwives.
- Low teacher job satisfaction and morale.
- Lack of safety at schools. School security and levels of violence.
- Statutory working hours versus estimates of actual hours of teaching.
- Teacher workloads
  - Administrative tasks as a result of new curricula, associated with more complex assessment methods and procedures.
  - Location (rural, urban, semi-rural): the nature and scale of responsibilities vary considerably.
- Contextual relations between school and community, often resulting in expectations for the school to function as a broad-based community-service centre.
- Gender issues and imposed gender identities.
- Policy overload, leading to dissatisfaction with time allocation, and making working conditions unbearable through the increase in administrative work.
- Phase and learning area demands: different phases spend different amounts of time on particular activities, sometimes caused by the nature of the learning areas taught.
- The effects of OBE: varying reactions to the requirements of OBE and the presence or absence of teaching and learning resources.
- The effect of the requirements of the implementation of the Integrated Quality Management System (IQMS).
- Numerous departmental requirements add to workload, especially that of principals.

Due to a great variety of socio-cultural contexts of schools, histories and a combination of problems it is difficult to judge what an effective school is (Harber & Muthukrishna, 2000). Studies (Howie, 2005; Liddell, Lycett & Rae, 1997; Vambe, 2005) reiterate that classrooms in South African schools are over crowded and more often than not under resourced. The educators also need to accommodate for a multi-culturally diverse classroom (Le Roux, 2000). Researchers Onwu and Mogari (2004) are aware that educators in South Africa appear to lack confidence in their ability to cope with the demands of the Curriculum 2005.

One of the great criticisms of the education change process is the governance of schools, and according to Sayed (2002) changing policy does not immediately translate into changed practice. Karlsson (2002) believes that governance reforms in bringing democracy into South African schools have fallen short. One of the factors influencing governance in South African schools is that often policy implementation is not followed through to the micro-level that is in

the classrooms (Smith & Foster, 2002). This, according to Engelbrecht (2006) appears to be true with inclusive learning and being able to recognise the right of all learners at all levels of the education system. Changes in governance and curriculum, made at a macro-level, impact the educator and ultimately the learner at the micro-level.

One of the constructs that has been designed to decentralise governance and give schools more power to implement policies and change are the School Governing Bodies. School Governing Bodies (SGBs) in South Africa have been given power at a time of great change in South Africa and are expected to become a prime vehicle for democracy, equity and equality (Bush & Heystek, 2003). Hoadley (2003) is of the opinion that relations between educator, management and parents (and possibly SGBs) differ depending on the context resulting in varying educator ethos. Thus, the relationship between educators, school management and the School Governing Body is important to the educator and can influence his/her working context.

Within the South African context, the Department of Education (Education White Paper 6, 2001) philosophy of inclusive education acknowledges that all learners and youth can learn and that they need support in being able to learn. The Education White Paper 6 on special needs and inclusive education also lists the following issues as defining inclusive education:

❒　　Enabling education structures, systems and learning methodologies to meet the needs of all learners.

❒　　Acknowledging and respecting differences in learners, whether due to age, gender, ethnicity, language, class, disability, HIV or other infectious diseases.

❒　　Broadening the formal setting school in that learning also occurs in the home and community, and within formal and informal settings and structures.

❒　　Changing attitudes, behaviour, teaching methods, curricula and environment to meet the needs of all learners.

❒　　Maximising the participation of all learners in educational institutions and uncovering and minimising barriers to learning (Education White Paper 6, 2001, p.6).

The Department of Education's White Paper 6 (2001) states that potentially 280 000 learners with disabilities or impairments to learning could be unaccounted (that is not incorporated) in special needs schools. This figure is based on the statistics published by the World Health Organisation (WHO), reporting that approximately 2,6% of learners in any school system could be identified as learners with disabilities or barriers to learning (Education's White Paper 6, 2001:9).

According to Coleman and Webber (2002) educators are bound to encounter learners with ADHD in their classrooms due to the high prevalence of ADHD. The prevalence of ADHD, according to the DSM-IV-TR (APA, 2000), has been estimated at 3-7% in school age learners. Thus, out of every 100 learners that attend school, seven learners might have ADHD. The likelihood of educators having gained contact with learners with ADHD is thus highly based on the prevalence or number of learners with ADHD.

3.3 THE EDUCATOR'S ROLE

Educators play an important role in being able to identify the disorder in learners (Snider, Busch & Arrowood, 2003; Vereb & DiPerna, 2004). If the educator and school counsellor believe that ADHD is indeed present, the learner's parents need to be contacted and referred to the appropriate health professional who specialises in ADHD, to make a diagnosis. Furthermore, the educator plays an important role in collaborating with the health professional (psychiatrist, paediatrician, psychologist or occupational therapist) and parents to be able to provide support to the learner.

3.3.1 Misunderstanding and Misinformation

Learners with ADHD, that have had ADHD left undiagnosed and/or untreated often experience being corrected for misunderstanding what was expected of them, by doing or saying the wrong things at the wrong time (Brown, 2000). Misunderstandings could lead to the learner perceiving himself/herself as being lazy, stupid, and incompetent or inadequate (Brown, 2000). Educators (and parents) are left possibly feeling frustrated and at a loss to manage these learners to, for example, keep still, to stop disturbing others, stop daydreaming, completing a task or doing their homework.

Educators in South Africa are given support with the Guidelines for Inclusive Learning Programmes (DoE, 2005) document that states guidelines as to how to include all learners in the classroom. Certain guidelines include adapting the curriculum, lesson plans and grouping of learners (DoE, 2005). However, educators are not given specific information or guidelines on how to support learners with ADHD in the classroom. Guidelines and/or training may go a long way in offering support to educators and, thus, offering support to learners with ADHD.

O'Keeffe and McDowell (2004) state that misunderstanding and misinformation from either the educator or the doctor, could compromise the management of knowledgeable and applicable support structures of ADHD. The following two studies highlight this statement. Epstein, Willoughby, Valencia, Toney, Abikoff, Arnold and Hinshaw (2005) reported ethnic differences among teacher ratings of ADHD and classroom behaviour. In a study by Wood

and Benton (2005) they found that when a learner had no disability, teachers rated a male more likely to fail than a female when a learner had ADHD. The differences between learners (male and female) seemed to be related to diagnosis and medication status ascribed to the learners (Wood & Benton, 2005).

There could be many possible explanations for the misinformation and misunderstanding of ADHD. It could be that educators do not fully understand the complexity of ADHD. Another reason could be the diagnosis of ADHD, and receiving misinformation from either the parent or health professional. It seems that health professionals tend to assume that the educators' understanding of the diagnosis and management of ADHD are similar to their own understanding (Wood & Benton, 2005).

Learners with ADHD who do not understand that they have ADHD appear to perceive themselves negatively (Brown, 2000). Awareness and understanding can go a long way in assisting a learner that has been given the label of any mental or psychiatric disorder including ADHD. Learners with ADHD may be allowed to enter a special class that deals with learners behavioural and learning disabilities or gain extra time in examinations. The label of ADHD can also mean that the educator may treat the learner differently (either favoured or disliked) within the classroom. The disadvantage of labelling a learner with ADHD could reinforce the idea that he/she is unable to learn, thus leaving him/her unmotivated to work in class.

An educator's training and knowledge of ADHD contributes to the role that the educator may play in the diagnosis and management of ADHD. The following section discusses educator knowledge of ADHD.

3.3.2   Educator Knowledge of ADHD

According to McFarland, Kolstad and Briggs (1994) if educators develop an understanding of ADHD it could help with the diagnosis of ADHD. If educators do not have any knowledge of the disorder then the responsibility would fall on the principal to ensure that they are informed. There may be a need to improve knowledge among school staff about how cognitive and behavioural problems in learners are manifested and how they influence the learner's daily life. These developmental problems, mainly in the domain of executive functions, are not always visible, and are therefore often given other explanations. Learners with executive cognitive dysfunctions need appropriate educational treatment and support in order to prevent academic underachievement and poor self-esteem (Ek, Holmberg, De Geer, Swärd & Fernell, 2004). The ideal situation would be for an educator to be able to recognise

a learner with ADHD, as it is the educator that spends at least five hours of the day with the learner and is therefore exposed to the behaviour of the learner. Identification can, hopefully, mean that the educator can implement an intervention and inform the parents who sometimes had no prior knowledge thereof.

McFarland *et al.* (1994) is of the opinion that the educator is responsible for making the learning environment accommodating by, for example, assisting the learner in becoming more organised, giving him/her specific instructions, developing his/her self-esteem and proper classroom management that ensures learning for all. The educator is responsible for adjusting the lesson plan, curriculum and management of the classroom that allows the learner with ADHD to learn (Barkley, 1994; Green & Chee, 1994; Jones, Dohrn & Dunn, 2004; Mitchem, 2005; Roffey, 2004; Sonna, 2005).

All people have a continuum of needs (physical, social, intellectual, emotional and spiritual) that can vary over time, depending on circumstances and situations (Capper, Frattura & Keyes, 2000). Educators in current times are expected to meet the diverse needs of the learners in their classroom, including those learners who may have emotional or behavioural disorders, including Attention Deficit Hyperactivity Disorder (Baker, 2005). When anti-social or unruly behaviour is common in classrooms, educators are held responsible for mismanagement and learners are blamed for lacking social and self-management skills (Kaplan, Gheen & Midgley, 2002).

The Department of Education (2000) describes the competent educator in terms of the seven roles and their associated competences in the Norms and Standards for Educators. Therefore, according to the Department of Education's Norms and Standards (2000) the educator's roles are: (1) leading mediator; (2) interpreter and designer of learning programmes and materials; (3) leader, administrator and manager; (4) scholar, researcher and lifelong learner; (5) community, citizenship and pastoral role; (6) assessor and (7) learning area/subject/discipline/phase specialist. The educator will, thus, need to be able to fulfil these roles in his/her classroom to be considered competent. Thus a competent educator is able to "mediate learning that is sensitive to the diverse needs of learners". As an interpreter and designer of learning programmes and materials the educator will identify, select sequence and pace suitable learning material that is aware of the learners' different needs and learning areas. As a learning administrator and manager the educator will manage his/her classroom that supports learners and colleagues that is flexible to changing circumstances and needs. The educator as scholar, researcher and lifelong learner will strive for professional growth through study and research in their particular learning area. The educator community, citizenship and pastoral role should reflect respect and responsibility to

all in the community. As an assessor the educator will have an understanding of the purpose and methods of assessment, providing helpful feedback to the learners. Lastly, the educator should know about different approaches to teaching and learning which are appropriate to the learners and the context (DoE, 2000). The educator, therefore, will respond to the behaviour of a learner if it is considered atypical.

The learner's behaviour is what often attracts the attention of educators and parents, yet the learner in its totality still needs to be considered. Thus, there are many aspects that could be considered when teaching a learner who may have ADHD. All the aspects of the learner, that is the whole learner includes, amongst others, his/her cognitive ability to perform academically, as well as social functioning which includes interpersonal and intrapersonal ability[16] (APA, 2000). With all the factors in mind, the educator's ability to effectively manage his/her classroom then becomes an important aspect that either hinders or assists the teaching and learning that takes place.

Sufficient knowledge of the disorder, that is the behavioural, neuro-developmental and hereditary nature, is needed by educators to be able to confront the challenges found in the classroom (Barkley, 1994). Educators who receive training on ADHD and its co-morbidities can assist other educators in planning the teaching, learning and classroom environment.

Multi-modal forms of treatment of learners with ADHD, that includes medication in addition to parent training, school interventions and learner interventions, are found to be the most effective (Miranda, Jarque & Tarraga, 2006). The educator is, thus, responsible for providing the learner with ADHD with assistance in the form of different interventions such as: behaviour modification, adjusting lesson plans and adjusting discipline strategies within the classroom.

Brown (2000) points out that it is important to explore what expectations educators have of medication for learners with ADHD. If a learner has co-morbidity with ADHD, the treatment and intervention can become more complex. Where the learner could take more than one medication, they possibly need a focused intervention, for example, a remedial programme for a learning disorder or communication disorder. It is important that the educator is able to communicate with the parents as well as a health professional who can assist the learner.

If the educator does not understand ADHD and its co-morbidities, an educator may feel negative about a learner who acts out, as he/she behaves negatively in the classroom. A

---

[16] Reference is made to the whole learner this includes intrapersonal ability, which is a term meaning the thoughts, beliefs and feelings that may occur within the learners mind.

learner with Emotional and Behavioural Disorders[17] (EBD), who may act out anger, irritation, lack of sympathy and indifference is negatively associated (Poulou & Norwich, 2002) with the educator's motivation to help these learners. Educators could be made aware of their possible responses and learn to make sense of negative behaviour (associated with ADHD and EBD) and avoid negative consequences in order to assist these learners. Polou and Norwich (2002) suggest educators attend workshops that are aimed at addressing ADHD (or Emotional and Behavioural Disorders). These could highlight the importance of curbing such negative perceptions. A learner with ADHD can be described as having challenging behaviour that could test an educator's motivation to be an educator. The educator's ability to be assertive, friendly, approachable and the ability to change may assist the educator in his/her practice.

3.3.3   Educator Self-Perceptions

An educator's self-perceptions may impact how he/she is within the classroom and thus may impact on learners. According to Belvel and Jordan (2003) how an educator thinks about himself/herself as an educator and teacher affects how they teach in the classroom.

Baker (2005) examined educators' beliefs about their interpersonal self-efficacy regarding general classroom management skills and their readiness (i.e. ability and readiness) to implement behaviour management techniques to meet the needs of individual learners. In Baker's (2005) study it was established that educators reported low self-efficacy to get in touch with the most difficult learners, to keep problems from impacting negatively in class and to implement a behaviour intervention plan.

There are certain attributes that Roffey (2004) suggests that allow an educator to be a good educator that include the following:

❒   The reasons why a person has chosen to be an educator could reflect the kind of person he/she is, for example, wanting to be able to assist young people and the values associated with the profession of teaching.

❒   Emotional literacy (including emotional awareness, emotional regulation, emotional expression).

❒   The ability of changing roles - the educator needs to take on different roles within the classroom. For example, the roles for a competent educator as described by the Department of Education (2000) in the Norms and Standards, set out here above under section 3.1.

---

[17] ADHD is considered to be an EBD, as it is viewed as a behavioural disorder

❒   Being friendly - an educator needs to be a friendly, approachable person to the learners, parents and fellow educators.

❒   Personal qualities that convey confidence and security need to be implemented within the classroom such as for example, self-respect, confidence, body language, voice, facial expression, eye contact. These qualities can assist the educator to command and manage the classroom environment.

❒   Being aware of the obvious and avoiding distractions.

❒   Appropriate assertiveness.

These aspects, therefore, according to Roffey (2004) contribute to being a good educator. An educator could possess some of these aspects to some degree. These features could possibly play a role in how the educator behaves towards a learner with ADHD. For example, an educator's ability to be emotionally aware of how a learner with ADHD can be easily irritated by others in the classroom could enhance the relationship between the educator and a learner with ADHD. It could improve the climate within the classroom and thus allow for more learning and teaching to take place.

The educator's perceptions and ability in implementing strategies may influence how or if he/she supports the learner with ADHD. Special education strategies may seem too impractical or time consuming, and many educators are unsure of what to do and need support (Webb & Myrick, 2003). It was found that an educator's tolerance level of ADHD behaviour will affect how a learner, who is perceived to have ADHD, will be treated in the classroom (Calhoum, Greenwell-Iorillo & Chung, 1997). To improve the possibility of academic success for learners who may display ADHD-like behaviour, Glass (2000) suggests that positive teaching strategies and non-traditional teaching methods can be implemented. The following methods are considered to be non-traditional methods that can be applied: (1) modifying the amount of class or homework; (2) oral testing; (3) a reward system for personal achievement; (4) allowing the learner to work at his/her own pace and (5) hands on activities (Glass 2000).

3.4   CLASSROOM INTERVENTIONS

In order for a learner with ADHD to achieve academic success, the educator may need to implement an intervention. There are numerous interventions that are available to the educator in order for a learner with ADHD to be able to achieve in the classroom (Purdie *et al.*, 2002; Sonna 2005). Two modes of intervening available include behaviour modification and classroom management.

3.4.1   Behaviour Modification

According to Fabiano and Pelham (2003) educators in the USA use behavioural modification strategies, to some extent, to reduce misbehaviour in the classroom. However, these interventions may have varying degrees of success in terms of clinical improvement, due to the differing intensity of the behavioural interventions implemented (Fabiano & Pelham 2003). Fabiano and Pelham (2003) also noted in their study that although educators may be able to implement behavioural interventions in the classroom, they seem to lack the ability to effectively modify behavioural interventions to individualise them for learners with ADHD. Minor modifications to an existing behavioural intervention can result in meaningful behaviour changes that can assist the learner with ADHD.

Most classroom strategies designed for learners with ADHD are behaviouristic in nature (Purdie *et al.*, 2002). However, ADHD also has a neurological component, as the learner's attention, planning and working memory skills are affected. Educators could therefore include strategies in their lesson plans that can enhance behaviour while also supporting memory. Learners with ADHD appear to exhibit fewer behavioural problems in new or unfamiliar settings (Barkley 1994) suggesting that if educational material or educational content is colourful and stimulating and new to them it could hold their interest and attention. Thus, educators could avoid learning material that may be regarded as too boring (Barkley, 1994). Learners with ADHD need to be kept stimulated and have their attention held by colours and content that is deemed interesting or thought-provoking (Imhof, 2004). However, educators would not need to make activities colourful to the extent that it is visually distracting for learners with ADHD. On the same note, learners with ADHD tend to enjoy sensory exploration of their environment which can be distracting to others in the classroom (Sonna, 2005). It seems that these studies suggest that classroom activities can be planned, by the educator, to be colourful and fun in order to engage the learner (Imhof, 2004). However, caution is also needed as they should be colourful but not visually distracting to the learner with ADHD (Sonna, 2005). The complexity of designing such learning environments can however be intricate and difficult to implement.

To embrace inclusion, the school or educators could endeavour to learn how curriculum and instruction, leadership practices and school structure could change to meet the needs of students of all abilities (Capper *et al.*, 2000). Burcham, Carlson and Milich (1993) indicate that although schools have an obligation to serve learners with ADHD, different school systems have access to different resources, which may affect service delivery. One can

perhaps extend this to educators in the classroom; that different classroom resources may influence how the educator assists or accommodates the learner with ADHD.

Educators tend to be the first to recommend that a learner be evaluated for ADHD (Snider *et al.*, 2003). Health professionals (psychologists, speech and language clinicians and school nurses) agree that educators are often responsible for commencing the referral process of learners they suspect may have ADHD (Snider *et al.*, 2003). Although, Vereb and DiPerna (2004) found that educators experiences with learners with ADHD and their knowledge of ADHD were not related.

3.4.2   Classroom Management

Effective classroom management is required before an intervention aimed at learners with ADHD can be implemented by an educator. According to Emmer and Stough (2001), some features of classroom management could include: (1) an understanding of current research and theory in classroom management and its relationship to a learner's psychological and learning needs; (2) the ability to create a positive relationship between the learner and the educator and (3) instructional methods that respond to the academic needs of each learner and to the whole group as a class. Thus, effective classroom management could incorporate understanding a learner's psychological needs, which could include understanding the learner with ADHD holistically and the possible co-morbidities. Therefore, developing a meaningful relationship between the learner and the educator would take account of the psychological and/or emotional needs of the learner with ADHD.

The success of classroom management relates to the educator's ability to understand the learner's psychological and learning needs and being able to respond to this with creative instructional methods that appeal to all learners. According to Burcham *et al.* (1993) the importance of an educator could be to consider his/her own strengths and to focus on the strengths of the learner.

The central figure of this study is the educator. In this chapter, thus far, the educator's role, knowledge, self-perceptions, interventions and classroom management have been discussed in order to build on a conceptual framework. The next section in this chapter deals with the theories that currently attempt to explain ADHD.

3.5   THEORIES OF ADHD

As the knowledge on the etiology of ADHD has increased over the years, through advances in research, therefore models and theories have been developed in order to further

understand ADHD and intervention for ADHD. Below I present a number of models that have been found in current literature that attempt to explain or understand ADHD.

Zentall (2005) proposes the Optimal Stimulation Theory (OST) as a means to understand ADHD. Learners with ADHD appear to have a greater need for stimulation which alters the way they selectively attend, as well as their ability to sustain attention over time (Kuntsi & Stevenson, 2000; Zentall, 2005). According to Zentall (2005) learners with ADHD do not have an attentional deficit because all learners will attend to an object that is brighter, bigger, more intense, colourful, louder, or moving.

According to Butnik (2005) neurofeedback, also known as electroencephalogram (EEG) biofeedback, has been implemented as a treatment strategy for ADHD, as it is based on the model that describes ADHD as a disorder of neural regulation and underarousal, caused by inefficient communication among neurons in the brain. The aim of neurofeedback is to "train" the learner to normalise abnormal EEG frequencies and to increase awareness of how a normalised EEG pattern "feels" by producing patterns of brain waves that occur when one is motorically still, externally focused, and alert (Butnik, 2005). EEG biofeedback is considered as one of the non-traditional approaches of ADHD. EEG biofeedback is non-traditional as i does not involve the child taking stimulant drugs as a form of treatment.

Tsal, Shalev & Mevorach (2005) propose another model of ADHD; where executive functions refer to a broad and loosely defined set of self-regulatory capabilities, such as working memory, planning, and inhibitory control. Tsal *et al.* (2005) state that learners with ADHD exhibit the following problems: (1) Difficulty in effectively ignoring irrelevant distracting information when performing a perceptual act on relevant information (selective attention deficits); (2) difficulty in sustaining attention to relevant information over a relatively long period of time while withholding responses to irrelevant items (sustained attention deficits); and (3) difficulty in benefiting from a cue that automatically attracts attention to a specified location, or failure in disengaging and reorienting attention to a different location (orienting attention deficits).

According to Yeschin (2000) the psychoanalytic theory of object relations and affect attunement may explain psychological and social problems associated with a learner with ADHD, which is linked to under inhibition of responses via dynamic intra/interpersonal processes. Heriot, Evans and Foster (2001) suggest that that interactional model of synchrony between the caregiver and the learner with ADHD is vital to understanding ADHD. According to Heriot *et al.* (2001) when dyad interactions of a learner and parent translate into a "connection" or "bond" then the outcomes of treatment appear to be successful.

A number of psychological models emphasise impulsiveness that is poor behavioural inhibition, putting forward that learners with ADHD fail to inhibit or delay a behavioural response (Kuntsi & Stevenson, 2000; West *et al.*, 2002). Firstly, Quay and Hogan (1999) state that impulsiveness in ADHD arises from diminished activity in the brain's behavioural inhibition system. Secondly, Kuntsi and Stevenson (2000) suggest that, depending on the energetic state of the learner, there are certain aspects of inhibition which are deficient in learners with ADHD. Thirdly, Schachar, Mota, Logan, Tannock and Klim (2000), state that stimuli in the environment are seen as initiating signals of both activation of responding and inhibition of responding.

Lastly, according to the theory of delay aversion, the behaviour of learners with ADHD is mainly motivated by an attempt to minimise delay (Antrop, Buysse, Roeyers & Van Oost, 2005; Kuntsi & Stevenson, 2000; Sonuga-Barke, 1995). According to Sonuga-Barke (1995) the Delay Aversion Model proposes that learners with ADHD attend to non-temporal stimuli that decrease the awareness of time or increase the level of non-temporal stimulation by their hyperactive behaviour, in order to reduce the subjective experience of the delay. Delay Aversion Model is considered to be a non-traditional approach of ADHD. Delay Aversion Model is a form of remedial therapy where the goal is to reduce the subjective experience of delay.

Barkley (1997) has a proposed a unifying theory that complements and builds upon existing models of ADHD in an attempt to explain and understand learners with ADHD and their behaviour (West *et al.*, 2002).

3.5.1   Barkley's Theory of ADHD

Barkley's theory of ADHD is cited in literature as being the leading theory of ADHD (Bailey, 2000; Berlin *et al.*, 2004; Fischer, Barkley, Smallish & Fletcher, 2005; Meaux, 2000; Nicpon, Wodrich & Robinson Kurpius, 2004; Purdie *et al.*, 2002) and as such, much of how ADHD is understood is viewed from this theory. This theory is discussed briefly here below in order to highlight the fact that the theory is centred on the learner with ADHD, and the emphasis is on the neuro-cognitive processes of the learner with ADHD.

It is also important to note that Barkley's theory contributes to the conceptual framework that is used in this study, as Barkley included Bronowski's theory of language that arises from the pre-frontal cortex which provides for a theory on behavioural inhibition, executive functions and self-regulation (Barkley, 1994; Barkley 1997; Barkley, Edwards, Laneri & Fletcher, 2001). This hybrid theory proposed that the deficiency in behavioural inhibition that characterises

learners with ADHD reduces the effective operation of four executive functions: (1) working memory; (2) internalisation of speech; (3) self-regulation of affect, motivation and arousal; and (4) reconstitution, that sub-serve self-control and goal-directed motor behaviour (Quay & Hogan, 1999; Berlin *et al.*, 2004).
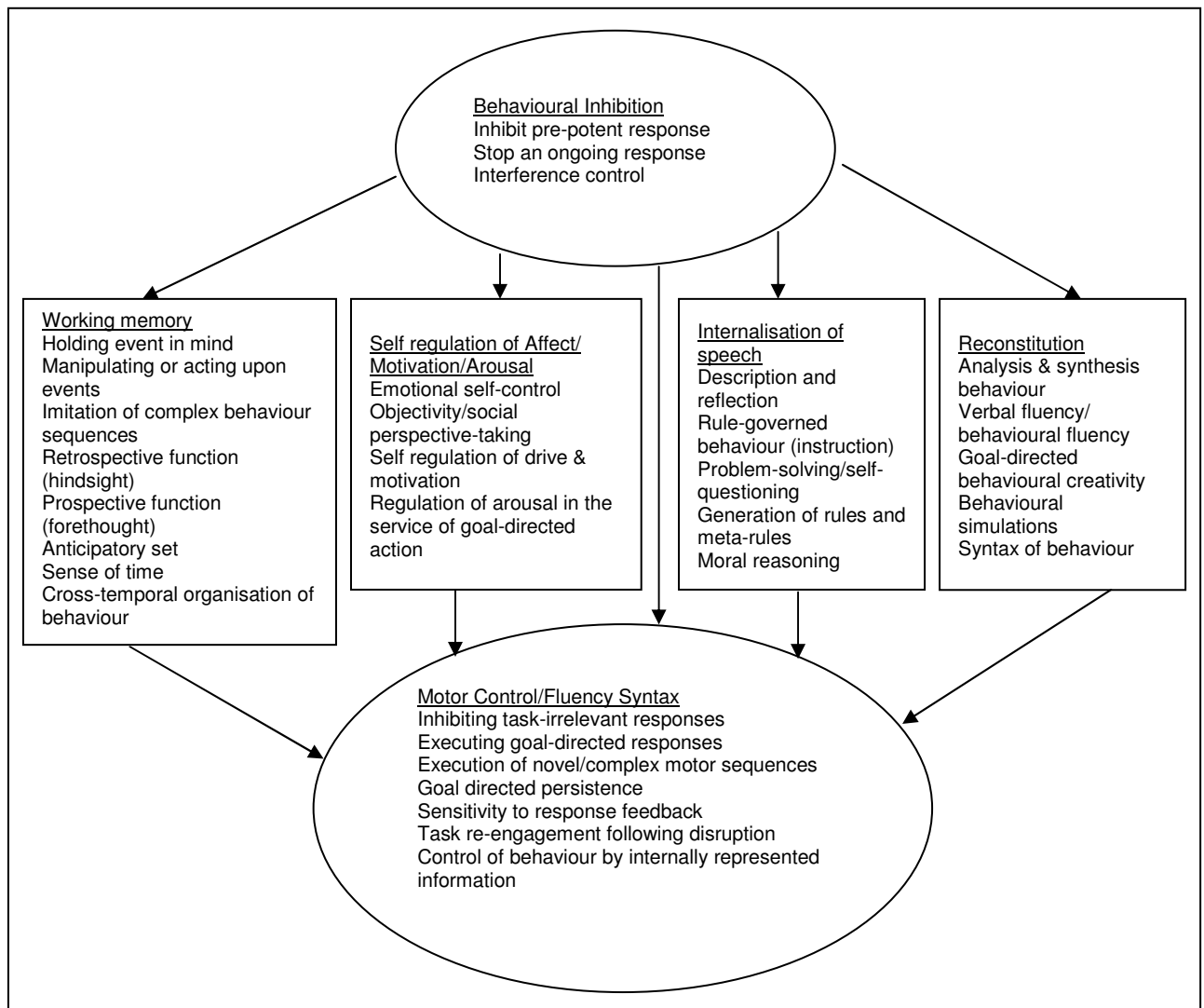

Figure 4: **Barkley's (1997) Model of the Impairments in Executive Function Predicted to be associated with the Deficits in Behavioural Inhibition that Characterises ADD**

The following is a brief description of the four executive functions that form part of Barkley's theory of ADHD. Refer to figure 4, which illustrates Barkley's theory of ADHD (Barkley, 1997) and the four executive functions. The four executive functions are:

3.5.1.1 (Non-) Working Memory

The definition of working memory has been defined as the ability to hold an event in mind so as to use it to control a response. It includes both a verbal and non-verbal response (Berlin, Bohlin, Nyberg & Janols, 2004). According to Barkley (1994; 1997) learners with ADHD have

a diminished sense of hindsight, forethought and self-awareness which arises from working memory. One of the functions of working memory is the ability to represent events in their proper temporal order, which is found to be problematic in learners with ADHD. Therefore, learners with ADHD have difficulty in processing new information and retaining it in the proper sequence. Thus, learners with ADHD have difficulty in anticipating future behaviour and how they respond may also be challenging.

Learners with ADHD have difficulty in the psychological sense of time as they often perceive time to last much longer than perceived by "normal" learners:

> "The problem then for those with ADHD is not of knowing what to do, but one of DOING what they know WHEN it would be most adaptive to do so" (Barkley, 1997: 308).

In Barkley's model non-verbal working memory is the first aspect to be developed (Berlin *et al.*, 2004). A non-working memory could impact how an educator experiences the learner with ADHD in the classroom as the learner may have difficulty processing new information, anticipating their own future behaviour and understanding the passing of time. An educator may experience a learner with ADHD with a diminished sense of working memory, yet how do educators respond to this? The role of the educator is to respond to this challenge. Understanding the experiences of educators could assist learners, educators and parents to understand how to respond to it within the classroom and at home.

3.5.1.2   Internalisation of Speech

According to Barkley (1997) there is a delay in internalisation of speech or verbal working memory in those with ADHD. Learners with ADHD, therefore, have difficulty in using self-speech in self-regulation and are less likely to formulate problem-solving strategies. Even if they formulate strategies, the learners find it challenging to apply themselves effectively in their own task performance.

Reading comprehension in learners with ADHD is problematic due to the fact that learners with ADHD find it difficult to read silently to themselves, via internalised speech, which is held in mind so as to extract its semantic and inferential content. If learners with ADHD do experience difficulty in reading silently and with comprehension, it may impact their learning.

3.5.1.3 Self-regulation of Affect, Motivation and Arousal

Mentally represented forms of information will have affective, motivational, appetitive and even arousal states. Learners with ADHD are often unable to manipulate emotional states to positive alternatives when they are angered, frustrated, disappointed, saddened, anxious or bored. Therefore, learners with ADHD sometimes appear to be impulsive for far longer in their development than other learners. If learners with ADHD have difficulty in self-regulating emotions and motivation, this could impact their motivation to want to apply themselves in class.

3.5.1.4 Reconstitution

Reconstitution involves the analysis and synthesis of internally represented information and the behavioural structures associated with that information. Learners with ADHD thus often have difficulty with behaviour that is based on a set of rules

The following sections deal with the conceptual framework that is implemented in this study. The conceptual framework is based on the literature on the educator and other models of ADHD as discussed above in sections 3.1 to 3.4.

3.6 CONCEPTUAL FRAMEWORK

According to Bronfenbrenner (1979; 1989) development (that is psychological human development) is shaped by various interacting systems, which include the micro-system, the meso-system, the exo-system, and the macro-system. The core conceptual underpinning of the ecological model is that human development is a function of the influences from all of the various systems, and the relationships that exist between the systems (Bronfenbrenner & Evans, 2000; Bronfenbrenner, 1979; Friedman & Wachs, 1999; Stolzer, 2005). The conceptual framework of this study will be discussed with reference to Figure 5, which outlines the framework.
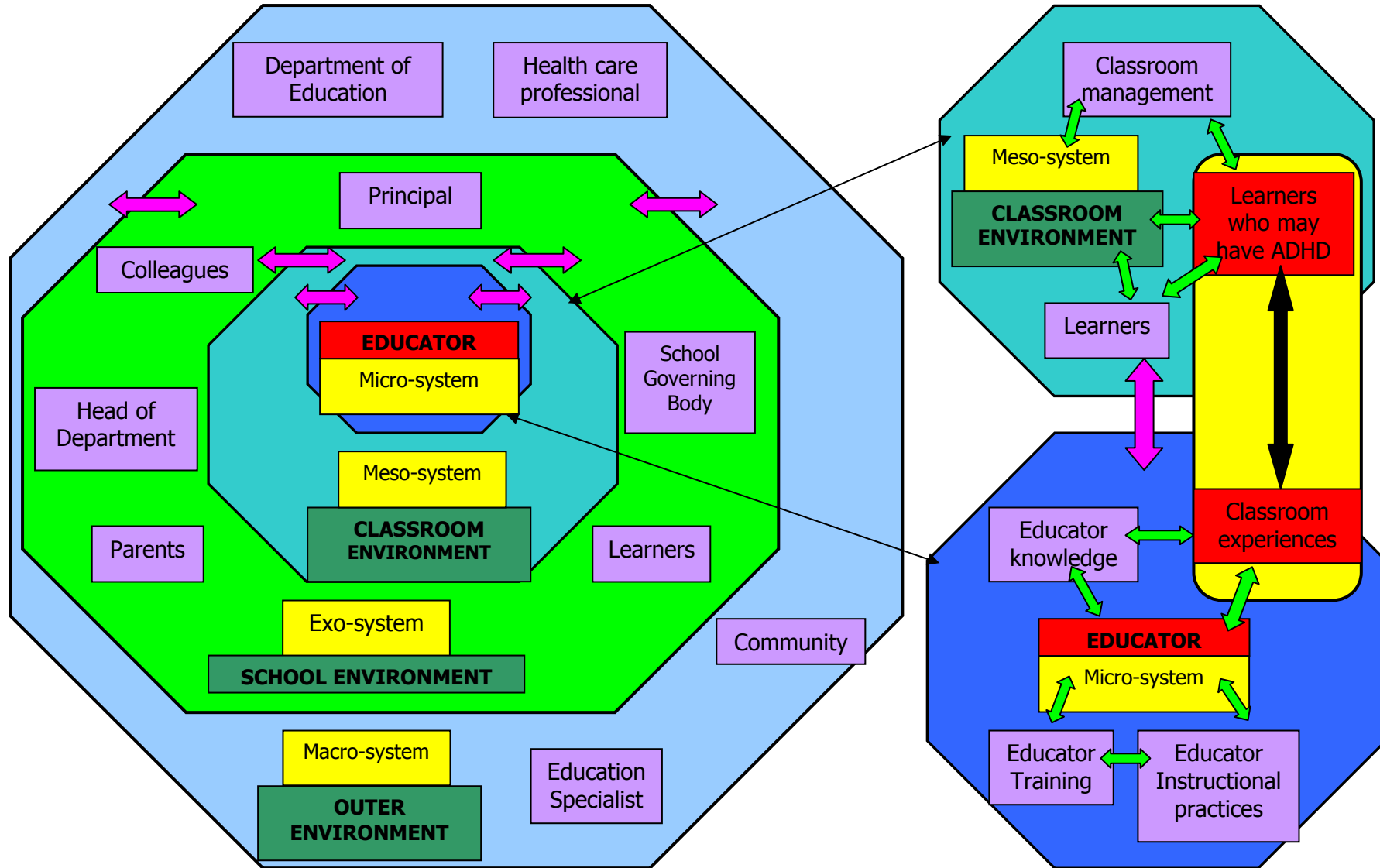
Figure 5: **Conceptual Framework**

3.6.1　The Ecological Model

In the conceptual framework proposed for this study, there are different environments[18] that have been put forward. The educator is the focus of this study and therefore the environments of the educators have been illustrated. The learners who may have ADHD are indirectly involved in this study. According to Bronfenbrenner (1979) the ecological model is a theory that notes that the environment as it is perceived influences behaviour and development of a person. Therefore, how a person perceives an environment, whether it is a school or a home, as opposed to how it may exist in reality, will influence the person's behaviour and development. Thus, how an educator experiences learners within a classroom may influence his/her own development as a person. How the educator perceives the learner who may have ADHD, may also influence the learner's development as a person

It is important to note that growth and development referred to within the ecological model does not refer to the conventional psychological processes of perception, motivation, thinking and learning but rather on the content, that is the perceived, desired, feared, thought about, acquired as knowledge and how the nature of this changes as a function of a person's experience to interact with the environment (Bronfenbrenner, 1979). Bronfenbrenner (1979) defines development as "the person's evolving conception of the ecological environment and his relation to it, as well as the person's growing capacity to discover, sustain or alter its properties". Thus, the educator, as the target or focus of the study, relies on his/her perceptions of his/her environment and the systems that exist within it for human growth and development to occur.

How the educator experiences the school (and some components that make up a school, for example: learners, learners with ADHD, school environment, principal, the Head of Department, colleagues, parents, School Governing Body) can influence the development of the educator. The ecological model focuses on the relationships between individuals (such as in a dyad) and their physical context, viewing different levels of systems of the social environment as systems where the functioning of the whole is dependent on the interaction between all the systems. Bronfenbrenner (1989) has proposed that the various systems are bi-directional in nature as they are continually influencing us, and we in turn are continually influencing them. As the school environment impacts and influences the educator, so does the educator impact and influence the school (in the figure the bi-directional nature between systems or contexts is indicated by a bi-directional arrow). As the educator impacts and influences the school so it impacts and influences the learner.

---

[18] Setting, context and environment are used interchangeably to mean (noun) a scene (Roget's New Millennium™ Thesaurus, 2007).

The environments and the persons found in those settings are not the focus of the study. However, the importance of the settings and the direct and/or indirect influence the settings may have on the educator and the learners within his/her classroom is significant. Thus, the micro- and meso-systems have been exported from the other contexts to emphasise the fact that the study focuses on how the educators experience learners who may have ADHD. The influence that the person (and the learners in a classroom in particular) and/or the context have on the educator may be reflected in the narratives of the educators. As such, the context (expressed as the micro-, meso-, exo- and macro-systems) and persons (educator, learners, learners with ADHD, school environment, Principal, the Head of Department, colleagues, parents, School Governing Body) who influence could be thought to exert power; as they shape the narrative of the educator in the experiences that he/she may have within the classroom. This will be explained further, using figure 5, p.55.

Before explaining each of the contexts there are certain concepts that Bronfenbrenner (1979, 1989) proposes that are central to his model. These concepts have been applied to this conceptual framework. The concepts include the dyadic and triadic relationship, molar activity (which is included under the section Building Blocks), role, setting, social network, institution, subculture and culture.

3.6.1.1 Dyadic and Triadic Relationships

Bronfenbrenner (1979) explains that environments are viewed in terms of systems. The dyad is an example of a system, where the relationship is one-on-one and a two person system. Bronfenbrenner (1979) states that within a dyad, such as for example a mother and learner relationship, or a learner and educator relationship, if the one person "undergoes a process of development" then so does the other person. The one person will influence the other person, so that the system changes or grows. Human development is dependent on the existence and contribution of a third party (triad), such as a spouse and friends. If this third party of the triad is disruptive, instead of being supportive, the developmental process can break down (Bronfenbrenner, 1979). An example of this could be that the dyadic relationship between the educator and the learner is extended to the triadic relationship when a parent is added as a third party.

The triadic relationship can be experienced as supportive or disruptive, depending on how much or how little support is given to all three persons in the triadic relationship. Thus, the parent can be viewed as not being supportive to the educator if he/she does not inform the educator that the learner has been diagnosed as having ADHD. The information could be

supportive in that the educator may understand the learner with ADHD and his/her behaviour within the classroom within the context of ADHD.

The educator may also provide support to the parent in the triadic relationship. This relationship can be supported by the educator's ability to be able to identify key behavioural indications of ADHD and make recommendations for a diagnosis to a health care professional. The educator could be a support in contributing in assisting the learner in class. Thus, the triadic relationship between parent, educator and learner can be supportive, but also disruptive in terms of Bronfenbrenner's (1979) model.

3.6.1.2   Building Blocks of Psychological Growth

According to Bronfenbrenner (1979) there are certain "building blocks" in the environment that relate to one another in the course of a person's development and psychological growth; the "building blocks" that affect one's psychological development are molar activity, dyad, role, setting, social network, institution, subculture and culture.

Molar activities are activities that comprise both internal mechanisms and external mechanisms of psychological growth (Bronfenbrenner, 1979). A setting is a place where people can engage in face to face interaction (Bronfenbrenner, 1979). Within particular settings or contexts there is expected behaviour that is associated "with particular positions in society" which is considered by Bronfenbrenner (1979) as being "roles". Roles are an important aspect of the ecological model as roles have the ability to alter how a person is treated, how the person acts, what the person says and does, and what the person thinks and feels (Bronfenbrenner, 1979). Within this study there are behavioural expectations from both the educators and the learners. Educators are expected to manage their classroom, to teach the learners and also consider those learners that may have obstacles to learning. The learners are expected to behave within the rules and regulations of the school and the classroom. Therefore, both the educator and the learner have certain roles to play at school and within the classroom.

The focus of this study is the perception of the educator regarding his/her classroom experiences, therefore the educator and classroom experiences have been highlighted in red in the illustration.

3.6.2   The Micro-System

The micro-system is a blueprint of activities, roles, and interpersonal relations experienced by a developing person in a given context or setting with particular physical and material

characteristics (Bronfenbrenner, 1979; 1989). The educator has been positioned at the centre of the conceptual framework and is the micro-system in the study. Figure 5 illustrates that the educator is the target of the system (namely of this study). The conceptual framework is guided by Figure 5 which is based on an ecological model. The micro-system in this study is the educator. The educator within the context or setting of a school and within the role of the educator may be influenced by the educator's knowledge, instructional practices, training and classroom experiences.

3.6.2.1 Educator

The educator is at the centre of the study and at the centre of the conceptual framework. As such, there are factors that may influence his/her experience of teaching and learning of learners with ADHD within the classroom. These may include the educator's instructional practices (Barkley, 1994; Green & Chee, 1994; Jones *et al.*, 2004; Mitchem, 2005; Roffey, 2004; Sonna, 2005), educator's training, educator's knowledge (McFarland *et al.*, 1994; O'Keeffe & McDowell, 2004) and past classroom experiences (which are general classroom experiences) (Kaplan *et al.*, 2002; Poulou & Norwich, 2002; Roffey, 2004). The training and therefore the knowledge that the educator may have, could influence the educator's instructional practices and the classroom experiences. These four factors, while it is not exhaustive in influential factors may influence the educator and how he/she experiences learners and learners with ADHD in the classroom.

3.6.2.2 Educator's Training and Knowledge

The training in teaching and learning that an educator may have received can influence his/her experience of learners with ADHD (Barkley, 1994; Green & Chee, 1994; Jones *et al.*, 2004; Mitchem, 2005; Roffey, 2004; Sonna, 2005). One can assume that if an educator has received instruction on ADHD; that it may lead to better understanding of learners who have ADHD (McFarland *et al.*, 1994). A better understanding of what ADHD is, and how to manage learners with ADHD within the classroom, could improve the experience of the educator within the classroom.

There are inherent factors that may influence the educator, namely intra-personal factors, for instance biological factors. For example, the educator who suffers from headaches may be different in the way he/she teaches or manages his/her classroom. The ecological model that Bronfenbrenner (1979) designed takes into consideration that biological factors could influence the growth and development of a person. In this study I acknowledge that there may be a number of intra-personal factors, including biological factors that may influence what the educator does within the classroom. An example of this could be if the educator is

experiencing a headache and may not have the patience or tolerance to be able to deal with a classroom full of learners. However, this study does not aim to focus on the psychological and development growth (as discussed above in section The Ecological Model) of the educator. Instead, this study realises the importance of the environment and how it can impact experiences and how behaviour can differ in different settings (Bronfenbrenner, 1979). The primary concern of this study is the experience of the educator and not an in-depth analysis of the factors that may influence the experience. The next system that is illustrated in the figure is the classroom environment; which constitutes the meso-system within this study.

3.6.3   The Meso-System

The interconnectedness within contexts, those that the person participates in and those that he/she may not participate in, but are affected are called the meso-systems and exo-systems (Bronfenbrenner, 1979). The meso-system includes the interrelations among two or more contexts in which the person participates (Bronfenbrenner, 1979). In the meso-system the educator comes into contact with the learners within the classroom, including learners that may have ADHD. The educator that comes into contact with the learner establishes a dyadic relationship. The following is a description of the meso-system as the classroom environment, as depicted by figure 5.

3.6.3.1   The Classroom Environment

The classroom environment is made up of all learners, including learners who may have ADHD. One of the contributing factors that may influence the environment as well as the classroom experience of the educator is classroom management. The educator's ability to manage his/her classroom may influence the learning and teaching that is taking place in the classroom. In the same way, the educator's *inability* to manage his/her classroom may impact negatively on the educator and learners, possibly leading to the educator experiencing teaching and learning as negative. If an educator is, however, able to effectively manage his/her classroom, he/she may feel a sense of mastery and achievement with regards to learning and teaching (Kirkpatrick, Lincoln & Morrow, 2006; Romia & Leyserb, 2006). This may be positively associated with the learners in the classroom.

The role of the educator in the classroom is important as learners are reliant on the educator for teaching so that they may learn. As mentioned earlier, the role of the educator in the classroom is significant as he/she spends approximately six hours a day with the learners thus he/she gets to develop a relationship with the learners. This relationship can assist the learner with ADHD in and through the process of being identified, diagnosed and treated.

The classroom, therefore, becomes an environment whereby important behaviour can be observed and monitored within the confines of the dyadic relationship of educator-learner.

3.6.4   The Exo-System

In the exo-system, two or more settings interact but do not necessarily involve the person directly, but the person is affected by the events or what happens within the settings (Bronfenbrenner, 1979). In the exo-system the educator will come into contact with learners, parents of learners in his/her class, colleagues, the school governing body, the Head of Department and the principal. The following context is the school, which is referred to as the exo-system.

3.6.4.1   School Environment

In this study the school environment or school system is made up of the Principal, Head of Department, colleagues, learners, parents and School Governing Body. These persons make up the school system and, in some way, exert influence on the meso- and micro-system. The Principal can exert influence over the educator, for example by insisting that he/she manage or teach the learners in a certain way (Farmer & Farmer, 1999). In the same approach, a Head of Department position of influence can be supportive to the educator's for example by encouraging continual professional development by communicating information regarding learners as well as teaching and learning.

3.6.4.2   Principal, Head of Department and Colleagues

The Principal, Head of Department and colleagues (fellow educators) make up the school environment and the exo-system that the educator encounters. The Principal and Head of Department have the influence to assist and support the educator (Mestry & Grobler, 2004). According to Mestry and Grobler (2004) a principal should be able to motivate the educators at a school, including being able to manage conflict, stress and cultural diversity effectively. Thus, it would seem that the ideal school has the teaching staff work uniformly as a team. This could include the Head of Department contributing towards the management of the school and educators in the management of learners and the curriculum.

3.6.4.3   Parents

Within the ecological model parent involvement extends to the school and the classroom level (Bronfenbrenner, 1979; Comer & Hayes, 1991; Keyes, 2002). Parent involvement can ensure that the learner with ADHD obtains the correct fit in terms of a medical treatment plan,

where educators assist parents in making sure that learners receive their medication at school and at the correct hour. Parent involvement can ensure that the educator can implement an academic and/or a behavioural intervention where necessary. Lastly, if a parent is involved and a supportive relationship exists between educator and parent, the educator can provide valuable monitoring and feedback on the learner to the parent. The monitoring and feedback provides the parent with information that will assist in diagnosing and treating ADHD.

3.6.4.4 School Governing Body (SGB)

According to the Department of Education the School Governing Body is required to support the principal and educators in the performance of their professional performance (General Notice, Regulation 1457 of 1997, Regulations and Rules Governing Bodies of Public schools) and to be the official "mouthpiece" of parents of learners, educators and learners of the school (Department of Education, Gauteng, 1995). The School Governing Body is required to exercise influence over the educator by being the decision-making power and role that it fulfils within the school (Department of Education, Gauteng, 1995). Therefore the School Governing Body plays an influential role in the educator's world, since it has the same decision-making power regarding the educator's classroom and teaching practices. An example of this could be if the SGB makes the decision to send educators on a workshop that could empower them with knowledge on ADHD or empower educators with classroom management skills.

Thus, the SGB's could have direct influence on the educators and their world. However, the SGB's could also have indirect power to influence the educator in that they have the power to, for example, recruit more educators. The SGB's have the ability to assist the principal with school related events and situations that could have an indirect influence on the educators and learners at the school.

3.6.5 The Macro-System

The macro-system is viewed by Bronfenbrenner (1979) as the overarching ideology and organisation of social institutions that are found in a culture or subculture. Public policy, according to Bronfenbrenner (1979), is an example of how the macro-system can determine the properties of the exo-, meso- and micro-systems that occur in everyday life that guides behaviour and development. The macro-system could include the community, where the school is situated, education specialists, health care professionals and the department of education.

According to Bronfenbrenner's (1989) theory, the systems are intrinsically intertwined. Alterations occurring on one level have the potential to affect the entire system (Bronfenbrenner, 1989). Therefore, if a change occurs, for instance, at the macro-system level it has the potential to change the whole system. That could impact on the educator and possibly the learner who may have ADHD. Psychological, biological and social systems are open systems. They depend on interaction with each other and, therefore, are open to change due to interaction (Lefrançois, 1993). Thus, in order for any change to occur in any of the systems, the systems will need to be in interaction with each other.

Bronfenbrenner (1979) states that "children's institutions" development depend on the extent that the physical and social environment facilitate and encourage the developing person to engage in progressively more complex molar activities, patterns of shared interaction, and primary dyadic relationships with others in the setting. Therefore, the school and educator's development and growth are dependent on the interaction between systems and the relationships that develop between the systems.

3.6.5.1   The Outer Environment

The outer environment in this study as illustrated, in Figure 5 includes the Department of Education (including the education specialists), health care professionals (the educational psychologist and psychiatrist) and social services (includes the social worker) and community. The outer community, as the macro-system, assists in the development and implementation of policies. Educational policies that are developed by the Department of Education impact on the educator and his/her learners directly. The Learner Care Act 1983, Section 28, is a policy that has been promulgated in parliament for the South African public that is the macro-system, to care and protect learners. Therefore the Learner Care Act is an example of how a policy that has been designed within the macro-system has a direct impact on the learner.

3.6.5.2   Health Care Professionals

The health care professional contains the power of assessing a learner, of making a diagnosis and providing treatment and therapy to the learner. However, the health care professional can communicate with the educator as to what diagnosis and treatment has been decided on for the learner in consultation with the learner's parents. Therefore, the health care professional has the power to include the educator in the treatment process. This process can assist the learner who may have ADHD, but it can also assist the educator in allowing him/her to understand what the treatment is and to be a part of the treatment plan of the learner.

3.6.5.3 Department of Education

The Department of Education has a hierarchical structure that provides support to the learner and educator. At a national level, the Department of Education develops policies, acts, and papers that provide guidelines and procedures for schools, principals and educators to follow (Department of Education, 2000). At a district level the Department of Education has Education Specialists that provide support to schools and educators directly.

3.6.5.4 Education Specialist

The Education Specialist, as part of the macro-system, gives assistance to educators. Thus, the Education Specialist's role of support can be perceived as being constructive by the educator depending on the nature of the support. The role of an Education Specialist is to provide individual support by visiting schools and educators or by collective support by conducting workshops that assist the educators.

3.6.6 The Interconnectedness of the System

As discussed above, the ecological model views the whole system, highlighting the fact that the whole system is dependent on the interaction between systems. Therefore, where there is change on one system there will be a change at another level. Thus, change in one section of the school could influence the school as a whole so the whole school could be changed (Van der Linde, 2002). Changes within personnel staff may affect the whole school. Creating positive perceptions of negative classroom experiences can influence how the educator views himself/herself and possibly the learners within the classroom.

Another consideration when viewing the whole system and its inter-connectedness is the referral system or the system for seeking help for learners. As pointed out in chapter 2 and previously in this chapter educators play a pivotal role in identifying learners who may have ADHD (Snider *et al.*, 2003; Vereb & DiPerna, 2004). In South Africa, depending on the situation, educators would then need to inform the parents of the learner (exo-system) of the possibility that the learner may have ADHD. The parents of the learner can then approach a health care professional (macro-system) to have the learner evaluated. Several authors (Bussing *et al.*, 2003; Eiraldi, Mazzuca, Clarke & Power, 2006; Efron, 2004) stress the importance of the "referral" system and that it needs improvement. The importance of seeking out the help from a health care professional or an education specialist could determine if the learner who may have ADHD receives the adequate support which could

impact on his/her academic performance, social and emotional wellbeing. The referral system has been discussed in chapter 2.

3.6.7   The Educator and Learner who may have ADHD

The focus of the study is the experience of the educator of the learner who may have ADHD, as stated under section 3.5.1. The interconnectedness of the systems has been stated in the section here above, and as such I am aware that any change at any level of the system could influence either the educator or the learner who may have ADHD. The relationship between the educator and the learner who may have ADHD could therefore be easily influenced by other environmental or contextual factors. The educator could be influenced by the factors such as educator's instructional practices, educator's training, educator's knowledge and possible past classroom experiences. The learner who may have ADHD could be influenced by different factors including the ADHD itself, as discussed in chapter 2.

Environmental factors could influence the real life of experience of the educators. However, the educator's experiences of learners who may have ADHD in their classroom is a story that may reflect only a part of the system, as reflected in Figure 5. However, the experiences of the educator may be of importance as it could influence the whole system directly and indirectly as highlighted under the section the *Interconnectedness of the system*. The educator's experience thus could impact the educator, the learner who may have ADHD and the parent directly. The educator's classroom experience of a learner who may have ADHD could influence the other learners in the class, the school, as well as other educators, the health care professional and the community.

3.7   CONCLUSION

A learner with ADHD may be considered to have a "barrier towards learning" as ADHD may contribute to his/her challenges in learning. As such, the South African Department of Education (2001) highlights the importance of classroom educators in the Special Needs White Paper 6, and how they can contribute to the inclusion of learners. According to the Department of Education (2002), schools should create the conditions for learners to succeed, addressing their barriers to learning, as experienced by individual learners (Holz & Lessing, 2002). Within South Africa there are certain schools that may have procedures or strategies in place, for example having a resident educational psychologist or remedial teacher present, but less privileged schools may not have the same benefits (Barber, 2001). This study aimed to investigate how educators experience learners with ADHD in their classrooms and how they make sense of ADHD in their classrooms through the use of narrative inquiry.

Educators are faced with the challenge of having learners who may have ADHD in their classrooms. With that responsibility, educators are then faced with the daunting task of identifying the learners. Secondly, educators are expected to support these learners academically, by considering behavioural and academic intervention strategies. The following chapter, chapter 4, discusses the research design and methodology implemented in this doctoral study.   ---oOo---