A CASE STUDY EXPLORING HOW GRADE THREE LEARNERS WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER EXPERIENCE THE SUPPORT PROVIDED BY THEIR EDUCATORS IN AN INCLUSIVE EDUCATION CONTEXT

by

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The learners and educators for their co-operation and willingness to participate in the study.

DECLARATION

I declare that:

A CASE STUDY EXPLORING HOW GRADE THREE LEARNERS WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER EXPERIENCE THE SUPPORT PROVIDED BY THEIR EDUCATORS IN AN INCLUSIVE EDUCATION CONTEXT

is my own work, that all the sources used or quoted have been indicated and acknowledged by means of a complete reference, and that this dissertation was not previously submitted by me for a degree at another university.

Signed:_____

Date:_____

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Abstract

South Africa is a country with tremendous diversity. Previously, many learners who experienced barriers to learning and development were excluded from the education system, preventing them from meeting their educational needs. With the implementation of inclusive education, barriers to learning and development are no longer seen to reside primarily within the individual learner, but instead emphasis is placed on transforming the education system to accommodate a variety of learning needs. Many learners in South Africa display symptoms of Attention Deficit Hyperactivity Disorder (ADHD) which frequently affects their learning and development. In some instances very little is being done to accommodate such learners to ensure that they are given the opportunity to develop to their full potential, as many educators continue to view these learners negatively, and fail to question the effect that they themselves may have upon the learners' development. The implementation of inclusive education, however, ought to create a space in schools where educators can support learners with ADHD in a unique manner and assist them to develop to their full potential.

It is on the basis of this acknowledgement and commitment of support by Education White Paper 6 that this research project was conceived, to explore how grade three learners with Attention Deficit Hyperactivity Disorder experience the support provided by their educators. A qualitative approach was employed in the study and participants were selected through purposive sampling. As the primary participants were young learners, the data was obtained through the use of arts-based (collage) focus group interviews. Individual interviews were also used to gather additional data

from the learners' educators. The data from both the learners with ADHD and their educators was then transcribed. After a thorough analysis, using an open-coding technique, the findings clearly indicated that attempts are being made to implement the policy of inclusive education within schools. Educators and staff are beginning to value the diversity of learners, and evidently are attempting to make adjustments to cater for the individual needs of learners and promote their successful learning and development.

KEYWORDS

- Attention Deficit Hyperactivity Disorder
- Educators
- Inclusive Education
- Learners
- Learners' experiences
- Support

LIST OF ACRONYMS

ADHD	:	Attention Deficit Hyperactivity Disorder
AEU	:	Accelerated Education Unit
CD	:	Conduct Disorder
DoE	:	Department of Education
DSM	:	Diagnostic and Statistical Manual of Mental Disorders
EWP 6	:	Education White Paper 6
NCESS	:	National Committee of Educational Support Services
NCSNET	:	National Commission on Special Educational Needs
OCD	:	Obsessive Compulsive Disorder
ODD	:	Oppositional Defiant Disorder
TS	:	Tourettes Syndrome
UNESCO	:	United Nations Educational Scientific and Cultural Organisation And Training
UNICEF	:	United Nations Children's Fund

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CHAPTER ONE
GENERAL ORIENTATION TO THE RESEARCH

"Ricky is an eight-year-old second grader whose parents, Richard and Danielle, have tried "everything" to get Ricky to do better at school. He was retained in first grade, and they fear he may be retained again. Ricky is a noisy, restless gadfly who flits about his home or classroom, doing many things at once but not staying long enough to finish any of them. Most days, notes home from his teacher tell his parents he has been 'off task', aggressive, and disruptive of other children's work and play activities. For little apparent reason, this year he has taken to shoving other children, taking things from them, bullying peers during recess, and sabotaging others' work when he is not being supervised directly. For the first time, his parents are having difficulty getting him to school. He complains of vague bodily aches and pains that are clearly intended to keep him home. Recently he mentioned hating himself and wishing he were dead, and has begun referring to himself as "stupid". Ricky's parents have always taken his difference from his older brother and sister in stride as just part of Ricky's unique personality. He frequently responds well to their praise of him and is seen as a loving, affectionate child toward his family members. Yet this year his self-esteem has plummeted, he is easily irritated, and at all times he is on the verge of tears when frustrated by the simplest of things. His parents see him as really hurting inside, yet cannot seem to provide more than temporary relief for him. They have developed an adversarial relationship with his teacher, seeing her harsh discipline and lack of forgiveness as a major contributor to Ricky's downhill slide in self image" (Barkley, 2000, pp. 28-29).

1.1 INTRODUCTION AND RATIONALE

It is generally accepted that children tend to have far more energy than adults, but, like Ricky in the excerpt above, some children may have difficulty with the abundance of energy in a classroom. Although we live in a world of television and

computers and where the activity level of young learners is indeed declining, most still enjoy spending time running and jumping and letting off steam through busy activities. It is my perception that they appear to be happiest during these times, as they forget about the demands of life and are given the opportunity to simply be children in a complicated world. As adults we acknowledge the importance of allowing children the freedom to play and explore their world, yet children are also expected to suspend this restlessness and business and conform to rules and regulations accepted by society. Through education children are taught rules so as to ensure that they can develop to their full potential and eventually contribute to the betterment of our society. It is at this point that the difference between a learner with ADHD and other learners becomes evident. Although all learners may need time to adjust to such a change, it does not take long before they develop an understanding of what society expects from them and begin to conform to its rules. A learner with ADHD, however, could have greater difficulty in adjusting to such a change and therefore may need to be provided with extra support and assistance, especially in the classroom context.

According to the National Institute of Mental Health (1996, p. 2) “the principle characteristics of ADHD are inattention, hyperactivity, and impulsivity”. These symptoms may make it difficult for the learner to conform, and one may assume that learners such as these are simply naughty and unwilling to follow the rules expected of them. Over time, as more and more research has been done in this area, educators have developed a greater understanding of ADHD, and are now able to ascertain that ADHD is, in fact, a disorder and could become a barrier to learning and development in school. This means that learners who display these symptoms are not intentionally misbehaving and disobeying rules, but instead have less control over their behaviour and actions. The National Institute of Mental Health (1996, p. 1) confirms this view by claiming that “Attention Deficit Hyperactivity Disorder is a condition that becomes apparent in some children in the preschool and early school years. It is hard for these children to control their behaviour and/or pay attention”. As there is no cure for ADHD, learners can only learn to minimise the effects of the ADHD that they experience and try to cope with and solve the challenges that they face. To assist learners with ADHD, emphasis is placed upon treatment, as many learners who are diagnosed with ADHD are provided with medication to reduce the

symptoms that they experience. This is supported by Smith, Segal, Jaffe and Segal, (2007, p. 1) who state that “although the causes of ADD/ADHD are not fully understood, most specialists believe that chemical imbalances in the brain play a major role. Medications work by correcting this imbalance”. Although one cannot overemphasise the benefits that such medications produce in the lives of learners with ADHD, there is still widespread controversy about the ethics involved in placing young children on schedule six drugs.

The above controversy has compelled many who work with learners with ADHD to focus on behaviour modification as a method of assisting such learners. According to Brown (2005, p. 272) “many of these children need systematic help to develop more adaptive patterns of behaviour”. There are a variety of ways in which behaviour modification can be set in place, but in most instances the learner is taught the necessary skills to cope with their disability while being provided with assistance and support from parents and educators. Although this method has proved to be highly successful, the key to its success lies in the attitude and knowledge of the learner’s parents, caregivers and educators. A positive attitude that promotes tolerance and love, combined with an abundance of knowledge about ADHD, will equip parents and educators with the most vital skills needed to assist a learner with ADHD.

The above findings are promising in that the potential exists to assist learners with ADHD in their development and learning. However, although some schools have adopted positive attitudes and are attempting to assist learners with ADHD, there are still many educators who do not/cannot meet the needs of their learners. These learners are not provided with the assistance and support that they require and, as a result, will find life far more challenging than it ought to be. Educators such as these need to develop an understanding of how they can successfully support learners with ADHD to ensure that all learners with ADHD can be supported in their learning and development, as educators can be made more aware of how they can positively have an impact on the lives of such learners.

1.2 STATEMENT OF THE PROBLEM

By focusing on the extract provided at the beginning of the chapter, it can be argued that the complexity of ADHD and how it affects the lives of not only the individual, but also those around them, cannot be overemphasised. In many instances learners with ADHD may find it very challenging to make friends. Parents are often blamed for their child's behaviour and considered to lack the ability to control their children. Educators may find that their patience runs thin, which affects the way in which they view and therefore treat the learner. Ultimately in cases such as this, learners will be affected to a large extent by the negative views that others have of them. This may result in the learners viewing themselves in the same negative light. A learner who truly believes that he is unable to achieve will find it even more challenging to control behaviour and perform to the best of his ability. Therefore, urgent attention should be given to learners with ADHD so that they too can realise that they are able to perform and achieve. A learner with ADHD can also live a successful and fulfilling life as long as society accepts him and his individual needs. Returning to the learner in the extract and focusing on the school context, it becomes clear that the relationships between the learner, his parents and the learner's educators are deteriorating, which ultimately makes school and classroom life even more challenging and upsetting for the learner. It is within the school context that the focus of this research lies.

According to O'Regan (2005, p. 5) "Attention Deficit Hyperactivity Disorder, more commonly known as ADHD, is a complex and often controversial term. It is an internationally validated medical condition, involving brain dysfunction, in which individuals have difficulty in controlling impulses, inhibiting their behaviour and sustaining their attention span". Recent research such as this, shows that ADHD is, in fact, a disorder which ultimately implies that those affected by it should not be blamed, but should be given support to live successfully with their disorder. With an increased understanding of ADHD and the impact of the disability, educators within mainstream schools are starting to acknowledge the importance of supporting learners with ADHD and the positive effects that they can have on the learning and development of these learners.

Although there are many educators and parents who are beginning to understand this importance, my personal experiences during teaching practice at a variety of schools, indicates that many educators still do not understand ADHD in all its complexity and are therefore failing to assist learners such as these to develop to their full potential. I have come into contact with many educators who have very little patience with learners with ADHD and do not realise that they could have a positive impact on the learner if they were to find methods that assist and support these learners within their classrooms. In schools where educators have come to this realisation, learners with ADHD are no longer seen as a burden. Instead they are simply viewed as unique individuals who may not learn and develop in the same manner as other learners and therefore require support in their learning and development, specific to their situation. It is such teaching where the positive impact this attitude has on learners with ADHD becomes visible, as these learners are happier and more comfortable in such a learning environment. The opposite of this has obviously been seen in schools where educators do not understand ADHD, and where learners with ADHD remain a problem for educators and other learners in the class. To assist such educators, attention should be given to finding out what it is that some educators are doing to support learners with ADHD, which is proving successful. An understanding of how they include and support learners with ADHD in their learning and development, will allow us to gain a better understanding of how other learners with ADHD, can be further supported in their learning and development.

Furthermore, there is a wide variety of available literature that focuses on ADHD and medical treatment, and in most cases the benefits of medication such as Ritalin, are acknowledged. Researchers such as Green and Chee (1997, p. 124) argue in favour of the benefits of medication as they state that “we make no apology for our enthusiasm for stimulant medication. The body of evidence is now so great that no reputable research centre questions the benefits and safety of this treatment in ADHD”. Although in the above quotation Green and Chee start off by stating that the benefits of Ritalin are well known, they also include a section focusing upon the possible side effects of Ritalin. Here they address many issues that children may experience when taking Ritalin, such as, becoming withdrawn, teary and upset, appetite reduction, Tics and Tourettes syndrome, sleep problems, rebound

behaviour, growth retardation, headache-stomach ache, edgy, and over focused (Green and Chee, 1997). This in itself raises the question whether educators are relying far too much on drugs or medication to intervene in the lives of learners with ADHD. Therefore exploring educator support will be useful. With the implementation of the policy of inclusive education, it is now our responsibility as educators to focus on other methods of intervention in an attempt to optimise the development and learning of learners with ADHD.

It is on the basis of the above discussion that this research aims to explore how educators, who are key in the development and learning of the learner, support learners with Attention Deficit Hyperactivity Disorder but, more importantly, explore how learners in grade three experience the educator and her support. In order to formulate guidelines for optimal support in the classroom, the aim of my study is therefore to explore how grade three learners with ADHD experience the support provided by their educators in an inclusive education context.

1.3 CONCEPT CLARIFICATION

According to the Encarta dictionary...

ADHD is a condition, occurring mainly in children, characterized by hyperactivity, inability to concentrate, and impulsive or inappropriate behaviour. For the purpose of this research, ADHD will refer to a condition with the above characteristics in a group of boys in grade three, who have been clinically diagnosed as having ADHD.

SUPPORT usually implies to give assistance or comfort to somebody in difficulty or distress. For the purpose of this research, support will refer to assistance or comfort that an educator provides to learners with ADHD in grade three to assist them in their development and learning.

EXPERIENCE refers to feeling a particular sensation or emotion. In the case of this research, experience will refer to the experiences that learners with ADHD have of the support in the classroom, how it makes them feel and the degree to which it inspires them to persevere in their own development and learning.

LEARNER is used when referring to a person who studies or learns to do something. For the purpose of this research, a learner will refer to children in grade three who have been diagnosed with ADHD.

AN EDUCATOR is a term used to describe a professional teacher. For the purpose of this research, an educator will refer to a professional teacher in grade three.

1.4 RESEARCH AIMS

As has been indicated above, there are many educators who are beginning to understand ADHD and what it entails, and who are attempting to provide support to learners with ADHD. I have personally seen the positive impact that an educator can have on learners such as these when they provide them with appropriate support. Taking this into account, the following aims were identified:

1.4.1 Primary aim

To explore how grade three learners with ADHD experience the support provided by their educators, in an inclusive education context.

1.4.2 Secondary aim

To develop guidelines in the form of recommendations on how learners with ADHD can be further supported in their learning and development, in an inclusive education context.

1.5 RESEARCH QUESTIONS

The research questions can be formulated as follows:

1.5.1 Primary research question

How do grade three learners with ADHD experience the support provided by their educators, in an inclusive education context?

1.5.2 Secondary research question

What guidelines in the form of recommendations can be developed on how learners with ADHD can be further supported in their learning and development, in an inclusive education context?

1.6 RESEARCH DESIGN AND METHODOLOGY

1.6.1 Research design

A qualitative, descriptive and contextual research design (Mouton, 1994) was used within the study. According to Creswell, as cited by Ivankova, Creswell and Clark, (2007, p. 257) qualitative research is “an inquiry process of understanding where the researcher develops a complex, holistic picture, analyses words, reports detailed views of informants, and conducts the study in the natural setting”. I will use a qualitative approach in order to explore the experiences of the participants involved so as to develop an accurate understanding of their personal experiences of support in the classroom.

To ensure that the data produced is trustworthy, the four criteria: credibility, transferability, dependability and confirmability, as suggested by Krefting (1991) will be adhered to and will be fully discussed within chapter three.

1.6.2 Research methodology

1.6.2.1 Literature research study

A literature survey will be conducted so as to explore the literature around ADHD and support from an inclusive education perspective, focusing on support provided by the educator in the mainstream classroom.

1.6.2.2 Case study

A case study will be used as it will allow me to focus on a small number of participants to gain highly descriptive data. “Case studies strive to portray ‘what it is like’ to be in a particular situation, to catch the close up reality and thick description

of participants' lived experiences, of thoughts about and feelings for a situation" (Cohen, et al., 2007, p. 254). The case study will focus on portraying the lived experiences of a group of grade three learners who all have ADHD, and who need support from the educator in the school system.

1.6.2.3 Sample

As I am aiming to explore how grade three learners with ADHD experience the support provided by their educators, it would be appropriate to select a school that appears to be teaching according to the values held within the policy of inclusive education, as this would mean that the learners with ADHD are likely to be receiving support from their educators in their learning and development. In order to develop guidelines in the form of recommendations on how learners with ADHD can be further supported in their learning and development, I need to identify what educators are currently doing to support learners with ADHD that is proving to be successful. In order to gain an understanding of this would therefore require researching the experience of learners with ADHD who belong to a school that uphold the values within the policy of inclusive education. Therefore, I selected a private school that strives to ensure the optimal development and well-being of their learners. I have knowledge of the school due to the fact that I too attended the school for the last two years in high school. I also identified, during my fourth year of practice teaching, that the junior school was similarly concerned about the well-being and development of all their learners, regardless of their individual needs. It therefore appears that this school truly believes that all learners can succeed in their learning and development, and that every learner therefore benefits from assistance provided by their educators that takes into account the individuality of each learner. I am also familiar with the staff at the school, which should assist in gaining access to the school.

Once permission is received from the principal for the study to commence within the selected school, I will select the participants for the study using a technique known as purposive sampling. Purposive sampling means that "the people most suitable to 'wander with' on the research journey are selected at the time they are needed" (Henning, et al., 2004, p. 71). Therefore I will make specific choices about which

learners to include in the sample. The American Psychiatric Association (1994, p. 82) highlight within the Diagnostic and Statistical Manual of Mental Health disorders (DSM-IV) that "the disorder is much more frequent in males than in females, with male-to-female ratios ranging from 4:1 to 9:1 depending on the setting". As there are more boys with ADHD than girls, the class from which I hope to select participants has far more boys with ADHD than girls. Therefore, I will select four grade three boys who have been clinically diagnosed with ADHD to participate in the study. Once the learners have been identified, purposive sampling will again be used to select the educators that will participate in the study. The participation of all the educators who are directly involved with the learners previously selected is required within the study.

An empirical investigation will be conducted to determine how learners with ADHD in a grade three class experience the support provided by their educators, in an inclusive education context. An empirical study will also allow me to explore the support educators provide to these learners. Gathering data from both the learners and their educators will allow me to develop valuable recommendations or guidelines to assist educators who teach learners with ADHD.

1.6.2.4 Methods of data collection

1.6.2.4.1 Arts-based (Collage) focus group interviews

An arts-based (collage) focus group interview will be used within the study. According to Cohen, et al. (2007, p. 376) "focus groups are contrived settings, bringing together a specifically chosen sector of the population to discuss a particular given theme or topic, where the interaction with the group leads to data and outcomes". Within this particular study, I am interested in obtaining information regarding the experiences of support of learners with ADHD in an inclusive classroom, so as to develop an understanding of how learners with ADHD can be further supported in their learning and development. I will therefore bring the learners together to discuss aspects relating to this topic. However, due to the fact that the participants are children, I need to ensure that an appropriate method for gathering data during the focus group interview is used. Therefore an arts-based (collage) method will be combined with the focus group interview to enable the learners to feel

comfortable and willing to discuss the topic. According to Eisner and Barone (1988/1997) as cited by Vaughan (2005, p. 3) “arts based research can be defined as the presence of certain aesthetic qualities or design elements that infuse the inquiry and its writing”. As I am specifically including collage as part of the arts-based activity, it would be useful to examine the meaning of collage. Vaughan (2005, p. 5) further explains that “according to the strictest fine arts definitions, collage comes from the French meaning a glued work”. Hawker and Waite (2007, p. 164) elaborate further and claim that collage is “a form of art in which various materials are arranged and stuck to a backing”.

Taking the above definitions into account, the learners with ADHD will be asked to find pictures in magazines and newspapers to show me what it is like for them in the classroom with their educator and other class mates. The learners will then paste these pictures onto cardboard and add writing to tell their story. The completed collages will then be used as a prompt during the focus group interviews, which should make it easier to discuss the topic, drawing on the concreteness of the collage. This view is further backed up by Norris, et al. (2007, p. 483) who claim that “art based activities can be very effective for a variety of reasons, ranging from the high interest rate of many young people in engaging in creative activities, to the importance of a focus on the learners themselves and their thoughts and feelings, to the need for relatively low-risk and non-intimidating activities”.

1.6.2.4.2 Individual interviews

Individual interviews will be used to gather descriptive and meaningful data from the learners’ educators about how they support the learners with ADHD in their classes. I will specifically be using an open-ended interview schedule (see appendix F). According to Nieuwenhuis (2007, p. 87) “an open-ended interview often takes the form of a conversation with the intention that the researcher explores with the participant her or his views, ideas, beliefs and attitudes about certain events or phenomena”. The data that is gathered from the educators will be used to validate the findings from the focus group interviews with the learners.

1.6.2.4.3 Observation

In order to ensure that the data collected from the participants is reliable and meaningful, I will observe the participants in their natural environment. “Observation is the systematic process of recording the behavioural patterns of participants, objects and occurrences, without necessarily questioning or communicating with them” (Nieuwenhuis, 2007, p. 83). By incorporating observation, I can increase the validity of the findings through crystallization. According to Maree and van der Westhuizen (2007, p. 40) “crystallization refers to the practice of validating results by using multiple methods of data collection and analyses”. I will then be able to observe how the learners experience the support provided by their educators.

1.7 DELIMITATION OF THE STUDY

The research is undertaken from an educational psychology perspective, focusing on support provided within an inclusive education system. The focus is therefore on the school environment, in terms of teaching and learning, so as to establish how learners with ADHD are supported to optimise learning. The connection between teaching and learning is acknowledged by the DoE (2001, p. 17) who claim that “inclusion is about supporting all learners, educators and the system as a whole so that a full range of learning needs can be met. The focus is on teaching and learning actors, with the emphasis on development of good teaching strategies that will be of benefit to all learners”.

1.8 PLAN OF RESEARCH

Chapter one provides the rationale for research. The purpose and aim of the study, as well as the research design and methodology, are also indicated within chapter one.

Chapter two will firstly discuss the theoretical framework that will be used within the study, i.e. Bronfenbrenner’s ecological systems theory linked to inclusive education. A literature study, which focuses on ADHD and the support that such learners require, will be incorporated. A variety of information will be provided, including the

history of ADHD, the types of ADHD that are present, as well as the causes thereof. The symptoms of ADHD, as well as diagnostic issues, will be highlighted. The treatments and strategies that parents and educators can draw on to assist learners with ADHD will be also be discussed.

Chapter three will provide insight regarding the research design and methodology that will be used to answer the key research questions. This includes the sampling criteria to select the participants for the study, the instruments that will be used to collect data from the participants, as well as the analysis. The ethical considerations that will be taken into account will also be indicated in chapter three.

Chapter four will provide a discussion of the results and findings.

Chapter five will provide a summary of the findings, conclusions and recommendations, in terms of guidelines on how educators can further support learners with ADHD in the grade three setting.

1.9 CONCLUSION

In this chapter the importance of this research has been discussed. Furthermore, I have emphasised the need for supporting learners with ADHD and how educators are key to assisting such learners. After highlighting the problems that learners with ADHD and their educators face, I was able to explain the aim of the study and the reasons why the topic needed to be given further attention. Once the problems were indicated, the critical questions were listed. Finally a summary of the research plan was provided to indicate what will be dealt with in each chapter of the dissertation.

CHAPTER TWO
LITERATURE REVIEW OF ATTENTION DEFICIT HYPERACTIVITY DISORDER

"Children with Attention Deficit Disorder are like diamonds in the rough: It takes special care and time for them to dazzle" (Stordy and Nicholl, 2002, p. 21).

2.1 INTRODUCTION

For many years, most learners who experienced difficulties in their learning and development were not provided with the necessary support and assistance within the mainstream classroom. Learners with unique needs were considered different, and, if possible, were provided for in special education schools and classes. As stated earlier, this view began to change and society began to realise that all learners can learn, even though some might have specific needs which could be catered for within an inclusive education system, as is emphasised within Education White Paper 6 (EWP6). "The inclusive education and training system will include a range of different institutions, including special schools/resource centres and designated full service and other schools, public adult and learning centres and further and higher education and training institutions" (DoE, 2001, p. 39).

Furthermore, the Salamanca statement, which was adopted by the World Conference on Special Needs Education in 1994, asserts that "every child has a fundamental right to education, and must be given the opportunity to achieve and maintain an acceptable level of learning. Every child has unique characteristics, interests, abilities and learning needs. Education systems should be designed and educational programmes implemented to take into account the wide diversity of these characteristics and needs" (UNESCO, 1994, p. Viii).

Inclusive education moves away from past practices whereby people with disabilities were separated and educated within special schools. "The National Disability Strategy condemns the segregation of persons with disabilities from the mainstream society. It emphasises the need for including persons with disabilities in the work place, social environment, political sphere and sports arenas" (DoE, 2001, p. 10).

Previously, if a learner had difficulties in their learning, it was thought that the barrier was simply within the learner, and the fact that there could be other issues promoting learning breakdown were not considered. Although ADHD is so common, people, including educators, tend to have very little patience with learners who have ADHD, resulting mainly from ignorance about the learning disability. All too often, the learner is blamed and accused of being naughty. However, recent research shows that ADHD is in fact a disorder, which ultimately means that those affected by it should not be blamed but should be given support to control or possibly even overcome it. Although some educators are still ignorant about ADHD, with an increased understanding of the disability, more and more educators are beginning to acknowledge the importance of supporting learners with ADHD in the classroom and the positive effects that they can have on the learning and development of learners with ADHD.

With the implementation of the policy of inclusive education we have therefore begun to move away from viewing barriers to learning as residing simply within the learner. This view is clearly stipulated by the DoE (2001, p. 24) who claim that "the approach advocated in this White Paper is fundamentally different from traditional ones that assume that barriers to learning reside primarily within the learner. Establishing an inclusive education and training system will require changes to mainstream education so that learners experiencing barriers to learning can be identified early and appropriate support provided" (DoE, 2001, p. 24). A transformation such as this is not easy to attain and therefore the Department of Education assures that schools and educators will be supported throughout this process.

> *"Education support personnel within district support services will be orientated to and trained in their new roles of providing support to all teachers and other educators. Training will focus on supporting all learners, educators and the system as a whole so that the full range of learning needs can be met. The focus will be on teaching and learning factors, and emphasis will be placed on the development of good teaching strategies that will be of benefit to all learners; on overcoming barriers in the system that prevent it from meeting the full range of*

learning needs; and on adaptation of support systems available in the classroom" (DoE, 2001, p. 19).

The implementation of inclusive education therefore ought to create space in schools where educators can support learners with ADHD in a unique manner and assist them to develop to their full potential.

It is on the basis of this acknowledgement and commitment of support by Education White Paper 6 (DoE, 2001) that this research project was conceived to explore how, seven years after adopting EWP6, learners who experience attention difficulties are supported in their learning within a mainstream class. Specifically, this research project focuses on how grade three learners with Attention Deficit Hyperactivity Disorder (ADHD) experience the educator and her support, within an inclusive education context, with the intention of improving the learners' learning.

2.2 THEORETICAL FRAMEWORK

A theoretical framework that helps me understand how learners with barriers to learning are included within schools is required in this study. For this purpose Bronfenbrenner's ecological systems theory, which underpins the move towards inclusive education, will be used to explain my findings.

In 1997 the Department of Education (1997, p. 13) acknowledged the existence of different needs "among learners and within the education system which must all be met if effective learning and development is to be provided and sustained". In the same document, the Department of Education acknowledges that sometimes there are factors which prevent the system from accommodating learner diversity, causing learning breakdown or exclusion.

"*These factors are termed barriers to learning and development and they can be located within the learner, the classroom or school, the general system of education, or even in contexts outside of education"* (ibid). "*Some of the barriers to learning and development that were identified include an inflexible*

> *curriculum, inappropriate and inadequate provision of support services, lack of parental recognition and involvement, disability, and negative attitudes"* (DoE, 1997, pp. 12-19).

This document, the NCESS and NCSNET Report (DoE, 1997) after much discussion and consultation, led to the adoption of a policy of inclusive education (DoE, 2001). Inclusive education is a single system of education that is committed to correcting the imbalances of the past and improving the quality of education for all learners. It acknowledges "the ability of all children and youth to learn, and that all of them need support in their learning" (DoE, 2001, p. 6). Inclusive education therefore acknowledges that all learners are unique individuals who have their own specific needs which must all be met. In this way every learner is given the opportunity to develop to their full potential. All learners are now considered to be capable of learning and developing and, as educators, it is our responsibility to support all learners, regardless of their individual needs. This therefore means that learners with learning disabilities, such as ADHD, should be learning and developing within a mainstream environment and, in order to do so, they must be provided with the necessary support from the system, and therefore also their educators.

> *"The ministry believes that the key to reducing barriers to learning within all education and training lies in a strengthened education support service. Through supporting teaching, learning and management, they will build the capacity of schools, early childhood and adult basic education and training centres, colleges and higher education institutions to recognise and address severe learning difficulties and to accommodate a range of learning needs"* (DoE, 2001, pp. 28-29).

This indicates that attempts are being made (and will still be made) to equip educators with the necessary skills to be able to support all learners and cater for every individual learner by adapting the system. If this is successful, it would be valuable to identify how learners with ADHD are being supported and assisted to develop to their full potential by their educators. Therefore by taking into account the theory underlying inclusive education, i.e. **Bronfenbrenner's ecological systems**

theory, which posits that a developing learner is embedded in several environmental systems, all of which influence the learner in one way or another, assists in developing an understanding of how educators include learners with barriers to learning and development (Donald, Lazarus & Lolwana, 2002).

Landsberg, et al. (2005, p. 10) explain that "Bronfenbrenner's model suggests that there are layers or levels of interacting systems resulting in change, growth and development, such as physical, biological, psychological, social and cultural. What happens in one system affects and is affected by other systems". Paquette and Ryan (2001, p. 1) elaborate further as they state that "this theory looks at child development within the context of the system of relationships that form his or her environment. Bronfenbrenner's theory defines complex 'layers' of environment, each having an effect on a child's development. This theory has recently been renamed 'bioecological systems theory' to emphasise that a child's own biology is a primary environment fuelling his development. The interaction between factors in the child's maturing biology, his immediate family/community environment and the societal landscape fuels and steers his development. Changes or conflict in any one layer will ripple throughout other layers. To study a child's development then, we must look not only at the child and her immediate environment, but also at the interaction of the larger environment as well".

Therefore identifying how learners with ADHD in grade three experience the educator and her support will require a focus on the different levels or systems, such as the classroom and the school, but also on the broader social context. This is due to the fact that "understanding the origins, maintenance, and solutions to barriers to learning, cannot be separated from the broader social context and the systems within it, including the individual" (Landsberg, et al., 2005, p. 10). Therefore a focus on Bronfenbrenner's different levels or systems, known as the microsystem, the mesosystem, the exosystem and the macrosystem, is required as it is these systems which are believed to interact with one another and influence the educators' support and the learner's response in the class.

Donald, et al. (2002, p. 51) refer to the microsystems as "systems such as the family, the school, and the peer group, in which children are closely involved in continuous

face-to-face interactions with other familiar people". The microsystem therefore focuses on the learner's immediate environment and can be made up of many different systems which all interact and influence one another. The focus is on how learners are influenced by other microsystems or people they come into contact with on a regular basis.

The mesosystem is explained by Donald, et al. (2002, p. 51) as the level where "peer group, school and family systems interact with one another. The mesosystem is a set of microsystems associated with one another. Thus what happens at home or in the peer group can influence how children respond at school, and vice versa". The mesosystem therefore refers to a group of microsystems which all impact and affect each other. Therefore a learner, the learner's family and the learner's school all interact with one another and influence each other in many ways. This system is of great importance as, "implementing inclusion is not possible without paying attention to the developing relationships between the different microsystems" (Landsberg, et al., 2005, p. 11). Therefore, in order to develop greater clarity as to how educators are including learners with ADHD within their classrooms requires focusing on the complexities of the different systems and the impact they have on one another.

The third system, known as the exosystem, "refers to one or more environments in which the developing learner is not involved directly as an active participant, but which may influence or be influenced by what happens in settings and relationships that directly influence the learner" (Landsberg, et al., 2005, p. 11). For example, if a learner's father is retrenched from work, although the learner is not directly involved with his or her father's occupation, the learner will be directly influenced by this system. A sudden change in living conditions will occur whereby the learner is unable to receive the same benefit in his life. This will ultimately affect the learner's development within all other systems. This aspect will therefore influence the relationship between the learner and his educator and will impact upon the support with which the educator provides him and the way in which he responds to the educator and her support.

The bigger system is known as the macrosystem. Landsberg, et al. (2005, p. 12) assert that this level "refers to the attitudes, beliefs, values and ideologies inherent in

the systems of a particular society and culture which may have an impact or be influenced by any of the systems". During South Africa's years of Apartheid, the beliefs of the government and dominant social structures had a tremendous effect upon all systems within society. The way in which educators taught and interacted with students was largely affected by dominant beliefs. This illustrates the influence that the macrosystem can have upon other systems in Bronfenbrenner's model, and highlights the importance of acknowledging the influence that each system has on the development of the learner in terms of the support provided from the educators.

Throughout the study, the chronosystem will also be taken into account. "The chronosystem refers to developmental time frames, which cross through the interactions between these systems and their influences on individual development" (Landsberg, et al., 2005, p. 12). In other words the interactions that take place in a learner's life will thus be affected by time. The learner will experience different interactions in his teenage years compared with his infant years, and will ultimately respond differently to interactions in different stages of his life. The way in which educators respond to learners with ADHD will therefore change over time, as will the way in which the learners respond to the educators' support.

Drawing on Bronfenbrenner's ecological systems theory, in terms of inclusive education, can therefore help to gain an understanding of how educators may support and include learners with ADHD.

2.3 HISTORY OF ADHD

There is a great deal of evidence that suggests that ADHD has been recognised for many years. According to Green and Chee (1997, p. 9) "ADHD was first described almost 100 years ago. Some of the earliest work was done by a famous English paediatrician, George Still". It therefore stands to reason that 100 years ago our understanding of the disability was fairly simplistic in nature, but that, slowly over the years, we have come to gain a more thorough and complex understanding of ADHD. This view is further substantiated by Sandberg and Barton (2002, p. 1) who claim that "the current conceptualization of the disorder represents a stage in a complex and varying developmental history". Furthermore, symptoms of ADHD had not yet

been documented, and therefore, there were no available stimulants to treat it. According to Bailey (2003, p. 1) it was only in “1960 that stimulant medication became more widely used”.

Although ADHD has been present within our societies for many years, it was only in the late 1980’s that the hyperactive symptom was given greater attention. According to Green and Chee (1997, p. 13) “in the early 1970’s a Canadian, Virginia Douglas, promoted the view that attention deficit was a more important symptom than hyperactivity. By the end of the 1970’s her publications were so impressive that the American Psychiatric Association in 1980 used the term ‘Attention Deficit Disorder’ in their diagnostic and statistical manual (DSM-III). In 1987 the American Psychiatric Association put out the DSM-III-Revised, which referred to it as Attention Deficit Hyperactivity Disorder”. This therefore implies that ADHD has in fact been evident within our societies for many years, but that it is only in recent years that we have come to understand ADHD more fully in all its complexity. As we have developed a clearer understanding of ADHD we have become better equipped to assist learners. No longer are learners with ADHD expected to struggle alone, because the knowledge, skills and resources available can assist learners with ADHD and prevent them from experiencing learning breakdown and exclusion.

2.4 ATTENTION DEFICIT HYPERACTIVITY DISORDER

2.4.1 Defining ADHD

The American Psychiatric Association (1994, p. 78) stipulates in the DSM-IV that “the essential feature of Attention-Deficit/Hyperactivity Disorder is a persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequent and severe than is typically observed in individuals at a comparable level of development”. The DSM-IV refers to ADHD as a disorder, and this term therefore corresponds with the medical model of deficits. As this research is underpinned by the policy of inclusive education, and I want to address ADHD as a barrier to learning, I will need to refer to ADHD, which I view as a disability as opposed to a disorder, which is the more appropriate in terms of an inclusive education

perspective. Cleary realising the tension between the medical model and the human rights model, I will for the purpose of this research, still use the term ADHD.

There are many definitions of ADHD, but in its broadest sense it can be defined as "a developmental disorder of self control. It consists of problems with attention span, impulse control and activity level" (Barkley, 2000, p. 19). If it is developmental, it means that its onset is during childhood and that those who are generally affected are children. This does not mean that adults are not affected by ADHD but rather that it emerges in the early years. Children are therefore more affected as they are still adapting and learning to live in society.

Another definition of ADHD, given by Wikipedia (2006, p. 1) is, "Attention-deficit/hyperactivity disorder (ADHD) is thought to be a neurological disorder, always present from childhood, which manifests itself with symptoms such as hyperactivity, forgetfulness, poor impulse control, and distractibility". Taking this into account, one could say that ADHD is a condition which causes people to have difficulties in learning, behaving and socialising with other people. As learning, behaving and socialising are skills which we develop in our childhood years, having ADHD will affect the developing learner.

Araujo - Muggli (2006, p. 22) asserts that "it is a behaviour disorder most commonly diagnosed in children and young people". The author estimates that between "three and nine percent of school aged children are affected in the UK, ten percent in the USA and between one and five percent world wide". South Africa is no exception and there are many learners in South Africa who are also affected by ADHD. According to Meyer, as cited by Kleynhans (2005, p. 1) "this serious disorder affects approximately 5% of South African children and is, according to preliminary research, the most prevalent psychiatric disorder among children in South Africa as well". The above emphasises the reality of ADHD and how it is becoming more and more common amongst young children in South Africa and all over the world. Although it is so common, people tend not to have very much patience for children who suffer with ADHD as can be seen in the following extract.

> "*Amy easily becomes envious of other children and has on occasion taken home someone's new toy that she doesn't have. She brags about her accomplishments, manufacturing many details. Her peers and their parents find her blunt comments rude and her play behaviour selfish. Amy is loosing friends and now is not often invited to other children's homes. Neighbourhood children have begun to call her "weird" and "hyper". Her parents are worried that she may end up friendless and that she may develop a poor self-image" (Barkley, 2000, p. 27).*

As stated earlier, ADHD has been recognised in society for many years, but recent developments have opened up a clearer understanding of ADHD in all its complexity. Researchers now understand that there are still many people, including educators, who do not fully understand ADHD and all too often, the child is blamed for his symptoms and accused of being naughty. "At first many adults attempt to overlook the child's interruptions, blurted remarks, and violation of rules. With repeated encounters, however, they try to exert more control over the child. When the child still fails to respond, the vast majority decide that the child is wilfully and intentionally disruptive" (Barkley, 2000, p. 20). Research suggests that ADHD is a disability and ultimately implies that those affected by it should not be blamed, but should be given the necessary support to develop the skills needed to live successfully with their disability. Taking this into account, ADHD should be considered a disability in the same way as blindness, deafness and cerebral palsy.

The severity of ADHD cannot be overemphasised and the effect that it can have upon an individual's life is profound. Every aspect of the person's life is affected as they find completing simple, daily activities extremely challenging. According to Brown (2005, p. 22) "ADHD is a complex disorder that involves impairments in focus, organisation, motivation, emotional modulation, memory, and other functions of the brain's management system". Although some learners with ADHD lead complicated and difficult lives, they are still able to perform and achieve. Most learners with ADHD want to be successful but cannot understand why they find simple tasks so challenging, as is indicated in the following quotation:

“I know what I have to do and I really want to do it because I know how important it is for all the rest of my life. I try to get into it like hockey. Sometimes I can get into it for a while, for this assignment or that class. But mostly I just can’t make it happen” (Brown, 2005, p. 2).

The above emphasises the struggles that learners with ADHD are faced with on a daily basis. Educators and parents have to familiarise themselves with the nature of ADHD so that they can provide meaningful support to all learners with ADHD and ensure that they too can lead healthy and fulfilling lives.

2.4.2 Types of ADHD

In order to understand ADHD in all its complexity, it must be acknowledged that ADHD can be sub-divided into three sub types or categories, namely; “1.) ADHD primarily of the inattentive type (ADHD/I), 2.) ADHD primarily of the hyperactive - impulsive type (ADHD/HI); and 3.) ADHD, combined type (ADHD/C.)” (Karande, 2005, p. 2). People who fall within the first group, known as ADHD/I referred to as the inattentive type, are generally withdrawn as opposed to hyperactive. The second group, known as ADHD/HI, is the most well known group, and is characterised by hyperactivity. Often it is only this group that people acknowledge, as many do not realise that if a learner is diagnosed with ADHD, it does not necessarily mean they are hyperactive. Some learners can show signs of having a combination of both the hyperactive and inattentive type, and such learners are said to be ADHD/C (Combination). (Karande, 2005)

2.4.3 Causes of ADHD

The causes of ADHD are fairly complex, and there is not one single theory that can explain the causes of this disability. However, over time our understanding of what causes ADHD has increased dramatically as more and more research has been done in this area, concluding that environmental and hereditary factors are both at work. According to Barkley (2000, p. 65) “environmental factors include exposure to agents within the environment which have an effect on children’s lives, such as fetal

exposure to alcohol and tobacco, and early exposure to high levels of lead, whereas hereditary factors include what is passed on genetically from parents to children".

A slightly different reason is provided by Beal (1999, p. 11) who believes that "ADHD occurs because certain chemicals in the brain are missing. Because of this chemical problem, the brain is unable to properly use chemicals called neurotransmitters, which carry nerve impulses to the brain". This theory propagates the idea that within the human brain there are billions of tiny nerve cells which rely on these chemicals or neurotransmitters. Having too many or too few neurotransmitters is said to affect the individual's ability to control their behaviour. Through modern scientific research it has been ascertained that "people who have ADHD have too much or too little of a chemical in these parts, which affects how these parts of the brain control their behaviour" (Spilsbury, 2001, p. 7).

No one explanation is more important than the others, but they do highlight the complexity of the topic under study. As a result, it is important for all those working with affected learners and young people to acknowledge that ADHD has multiple causes, and to keep in mind that the causes for each learner may vary considerably.

2.4.4 Symptoms and diagnosis of ADHD

As the causes for ADHD can vary considerably for each learner, so too can the symptoms. There are many symptoms that could manifest themselves and the learner may not necessarily show signs of all the symptoms. As there are three sub-types of ADHD, the symptoms for each group will be discussed individually. However, one must take into account that there are a variety of symptoms that a learner with ADHD can show. What one learner experiences may not be what another experiences. Some of the common symptoms are described below.

The first sub-type of ADHD is known as ADHD/I (inattentive type). According to Karande (2005) and the American Psychiatric Association (1994) a child meets the diagnostic criteria for ADHD by documentation of at least six of the nine behaviours described in the inattentive domain (ADHD/I):

- “Often does not give close attention to details or makes careless mistakes in schoolwork, work, or other activities
- Often has trouble keeping attention on tasks or play activities
- Often does not seem to listen when spoken to directly
- Often does not follow instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behaviour or failure to understand instructions)
- Often has trouble organizing activities
- Often avoids, dislikes, or doesn't want to do things that take a lot of mental effort for a long period of time (such as schoolwork or homework)
- Often loses things needed for tasks and activities (e.g. toys, school assignments, pencils, books, or tools)
- Is often easily distracted
- Is often forgetful in daily activities” (Department of Health and Human Services, 2006, p. 1).

The second sub-type of ADHD is known as ADHD/HI (hyperactive-impulsive type). Karande (2005) and the American Psychiatric Association (1994) explain that a child meets the diagnostic criteria for ADHD by documentation of at least six of the nine behaviours described in the hyperactive/impulsive domain (ADHD/HI). The symptoms for ADHD/HI are listed in two subgroups because the learner can show evidence of hyperactivity as well as impulsivity.

- **Hyperactivity**

- “Often fidgets with hands or feet or squirms in seat
- Often gets up from seat when remaining in seat is expected
- Often runs about or climbs when and where it is not appropriate (adolescents or adults may feel very restless)
- Often has trouble playing or enjoying leisure activities quietly
- Is often ‘on the go’ or often acts as if ‘driven by a motor’.
- Often talks excessively”
  (Department of Health and Human Services, 2006, p. 2).

- **Impulsivity**

- “Often blurts out answers before questions have been finished
- Often has trouble waiting one's turn
- Often interrupts or intrudes on others (e.g., butts into conversations or games)”
  (Department of Health and Human Services, 2006, p. 2).

Finally, Karande (2005) and the American Psychiatric Association (1994) assert that a learner can be diagnosed with ADHD/C once they show evidence of at least six of the nine behaviours described in both domains.

In terms of inclusive education, the whole purpose and significance of identifying barriers to learning and development lies in the identification of strategies to address them. The identification of ADHD is no different. For this reason, I will be discussing what an educator can do to remove or reduce the impact of this condition on the learner’s ability to access and participate in the curriculum. However, some learners may also have other disorders which often accompany ADHD. Co-morbid disorders similarly require the development of strategies to address them. However, strategies can only be developed if one has an understanding of such disorders and, therefore, the co-morbid disorders which are often associated with ADHD will now be discussed.

2.4.5 Co-morbid disorder associated with ADHD

According to Marshall (2004, p. 1) co-morbidity refers to “the presence of one or more disorders (or diseases) in addition to a primary disease or disorder”. Many learners who are diagnosed with ADHD are more likely to have other medical conditions which exist at the same time. Barkley (2000, p. 97) comments that “it is rare in clinical practice to see children who have only one disorder; probably fewer than 20% of children who come to my ADHD clinic, for example, have only ADHD”. It therefore stands to reason that most learners who are diagnosed with ADHD are likely to lead far more challenging lives as they deal with the effects of more than one disability on a daily basis. Some of these are highlighted in the following section.

- **Oppositional Defiant Disorder (ODD)**

Oppositional Defiant Disorder (ODD) is a "psychiatric behaviour disorder that is characterised by aggressiveness and a tendency to purposefully bother or irritate others" (Kane, 2007, p. 1). A disability such as this negatively affects a learner, as many other people may find it challenging to socialise with a person with such traits. Learners with ODD do not intend to be difficult but, instead, truly believe that their actions are acceptable. This aspect is what separates learners with ODD from others who are simply diagnosed with ADHD. According to Green and Chee (1997, p. 47) ADHD children may be impulsive and unthinking, but following an event they are genuinely remorseful. This is not the case with Oppositional Defiant learners, who may "feel indignant and totally justified in the stand they took". Although parents and caregivers may find it extremely tiring assisting a learner with such a disability, it must be remembered that the child is not to blame. ODD learners do not simply plan to spend their day annoying others and being defiant. Most of the time they simply cannot control their emotions. This view is further supported by Green and Chee (1997, p. 47) who claim that "the origin of ODD seems to be largely biological (in the child's temperamental make up) but the incidence and severity of the problem are greatly affected by parenting". This therefore leads me to believe that to assist a learner with ADHD and ODD requires a behavioural intervention programme which can be implemented at home and at school to support the learner to do what is required of him throughout the course of the day. Parents who suspect that their child has ODD should seek expert advice and support from either a psychiatrist or other qualified professional.

According to Taylor, as cited by Stewart (2006, p. 22) "the indicators must occur for at least six months, they are: negativism, hostility, defiant behaviour, arguing with adults, refusal to comply with rules and requests, deliberate attempts to annoy others, blaming others rather than accepting responsibility for one's own actions, frequent display of resentment and anger, being 'thin-skinned', easily offended or annoyed and display spiteful or openly vindictive actions". Many learners with ODD may appear to improve as they mature. If learners with ODD have been provided with assistance and support during their childhood years, it is likely that they will learn to manage their disorder. Green and Chee (1997, p. 47) further claim that "if

ODD children survive to adulthood their future is generally favourable. At home they seem to resent their parents, but in later life they mellow and most will regret their ways".

- **Conduct Disorder (CD)**

Many learners who have been diagnosed with ADHD have also been diagnosed with Conduct Disorder. According to Shaywitz and Shaywitz (1992, p. 204) the "nature and relationship (co-morbidity) between attention disorder and those behavioural disturbances characterized as Oppositional/Conduct Disorders (O/C) represents a significant problem that continues". Learners who have both ADHD and CD are likely to find everyday life far more challenging than learners who are simply diagnosed ADHD. Parents of children who also have CD may find it extremely tiring and demanding raising a child of this nature. The reality of this fact is made explicit when focusing on the features and behaviours that CD produces within learners. According to Green and Chee (1997, p. 48) "the presence of Conduct Disorder with ADHD has a dramatic influence on outcome. Its features can be mild, moderate or severe. Those with the most severe CD are destined for imprisonment, addiction, serious accidents, abuse, early death or major social dysfunction. The behaviours of CD include lying, cheating, stealing, threatening, cruelty, violating the rights of others, destruction of property, fire-setting and inflicting pain".

From the previous quotation it can be identified that a person who is living with CD may become a serious threat to society. As it is not the fault of the learner that they have such a disability, all attempts should be made to identify CD in the initial stages so as to ensure that such learners can be assisted to manage and live with their disability to the best of their ability.

- **Depression**

Depression affects many people on a daily basis, but when depression is combined with ADHD the problem is more severe in nature. According to Ingersoll (1998, p. 32) depression is "not just a state of mind. It is an illness that affects every aspect of the person's life". Lange (1994, p. 339) adds that "depression is a mood disorder in

which the individual is unhappy, demoralised, self-derogatory, and bored. The individual does not feel well, loses stamina easily, often has poor appetite, is listless, and unmotivated". A learner who is experiencing these emotions is unlikely to succeed in many areas of his life. Therefore, once a learner has been diagnosed with ADHD as well as depression, it is of paramount importance that these are treated to minimise the negative effects that the learner has to deal with. Childhood should be a time of happiness and excitement and therefore every learner should be given the opportunity to live their childhood in this manner. Furthermore, learners who are suffering from depression might develop other problems in their lives which stem from the depression. Ingersoll (1998, p. 32) explains how depressed children complain of "aches and pains for which no medical cause can be found. They are also vulnerable to every bug that comes along, so they are often laid up with colds, strep infections, or the flu. Depressed youngsters often have sleep problems such as difficulty falling asleep or repeated awakenings throughout the night. They may withdraw from friends and social activities and go into self-imposed social hibernation".

From the above quotation the effect that depression may have on a young learner is made explicit. Every aspect of the learner's life is affected in a negative manner, resulting in a build up of problems faced by the learner on a daily basis. As with any disorder there are a variety of ways in which depression can be treated, including both therapy and anti-depressant medication (National Resource Centre on ADHD, 2005).

- **Tics and Tourette's syndrome**

Many learners in our society live with ADHD and Tourette's syndrome (TS), which is characterised by nervous tics. According to Packer (2005, p. 1) "a tic is usually defined as a brief, repetitive, purposeless, non-rhythmic, involuntary movement or sound. Tics that produce movement are called 'motor tics,' while tics that produce sound are called 'vocal tics' or 'phonic tics'".

Life becomes difficult for these learners due to the fact that society is ignorant about this syndrome and is not tolerant of the characteristics of the disability. In every

society there are rules to live by to ensure acceptance by others. A learner with Tourette's syndrome is likely to violate many of these rules unintentionally and, as a result, many people may find it difficult to be around someone with Tourettes syndrome. If learners with Tourette's syndrome are to be supported, society needs to be educated about the disability as this will assist learners with Tourettes syndrome to be accepted in society, giving them the opportunity to develop to the best of their ability.

It is slightly more complex to diagnose a learner with Tourette's syndrome than is the case with many other disorders as there is "no brain test or laboratory test to determine if someone has Tourette's. The diagnosis is a clinical one, which means that it is based on the professional taking a careful history, observing the patient, and arranging for any tests that might be necessary to rule out other conditions that could look like Tourettes or that could cause tics" (Packer, 2005, p. 3).

Once a learner has been diagnosed with Tourette's syndrome, intervention must take place to assist the individual. As there is no known cure for Tourette's syndrome, the key to assisting a learner with Tourette's syndrome (TS) lies in therapy, medication and education. The diagnosis of TS does not mean that the learner necessarily needs medication, as educating the learner and those around him/her can make a significant difference, as "can accommodations or modifications in school" (Packer, 2005, p. 22).

- **Bipolar Disorder**

Bipolar Disorder often accompanies ADHD but can also be evident in learners who do not have ADHD. According to Spearing (2007, p. 1) bipolar disorder is also known as manic depressive illness, and is a "brain disorder that causes unusual shifts in a person's mood, energy, and ability to function". A learner who is experiencing symptoms such as these on a regular basis will be less likely to achieve due to lack of motivation. In many cases society misinterprets Bipolar Disorder and assumes that the symptoms are similar to that of depression or someone who is simply sad and upset. However, according to Spearing (2007, p.1) this is not the case as it is "different from the normal ups and downs that everyone goes through, the symptoms

of bipolar are severe. They can result in damaged relationships, poor job or school performance, and even suicide".

In order to assist a learner with Bipolar Disorder, the first and most important stage is that of diagnosis. According to Spearing (2007, p. 5) Bipolar Disorder "cannot yet be identified physiologically – for example, through a blood test or brain scan. Therefore the diagnosis of Bipolar Disorder is made on the basis of symptoms, course of illness and, when available, family history". The diagnostic criteria for Bipolar Disorder are described by the Diagnostic and Statistical Manual for Mental Health Disorders, fourth edition. (The American Psychiatric Association, 1994).

A learner living with ADHD and Bipolar Disorder may find life extremely challenging, but fortunately it can be managed. A strategy that combines medication and psychosocial treatment is recommended for managing the disorder over time (Spearing, 2007).

- **Obsessive Compulsive Disorder (OCD)**

Obsessive Compulsive Disorder is another disorder that often accompanies ADHD. According to Ballas (2006, p. 1) Obsessive Compulsive Disorder is "an anxiety disorder characterized by recurrent thoughts, feelings, ideas or sensations (obsessions) or behaviours that make a person feel driven to perform (compulsions). A person may have both obsessions and compulsions". An individual with OCD will experience difficulties in completing activities in his daily life due to the fact that most of his time is spent focusing on his obsessions and compulsions. Eddy and Walbroehl (1998, p. 2) state that "symptoms include intrusive thoughts that lead the patient to perform repetitive rituals that interfere with daily living".

Although people with OCD are often aware that their compulsive behaviour is "excessive or irrational but, nonetheless, they feel driven to perform it. Typical compulsions include excessive hand washing, repetitive checking of rituals (e.g., of door locks) and repetitive prayers for protection" (Eddy & Walbroehl, 1998, p. 2).

Despite its earlier reputation as a disorder resistant to treatment, a number of effective treatment approaches now exist for Obsessive Compulsive Disorder (Eddy and Walbroehl, 1998). Typically, when treating patients with OCD, physicians usually advise either incorporating psychopharmacologic (medication) methods or psychologic (therapy) methods. Successful psychological approaches for the treatment of Obsessive Compulsive Disorder have almost exclusively involved some variation of behaviour therapy based on “exposure of the patient to the feared object or obsession” (Eddy and Walbroehl, 1998, p. 7).

As can be seen from the above, although there is no known cure for OCD, there are a variety of options available to a learner diagnosed with OCD to assist him to lead a fulfilling life.

- **Motor problems**

According to Green and Chee (1997, p. 51) ADHD children often have difficulties with “co-ordination, motor planning, written work and late neurological maturity. When ADHD and co-morbid clumsiness coexist, some therapists see only the motor problems, calling this ‘the clumsy child syndrome’”. Learners who are clumsy will not be able to perform to the best of their ability and will possibly develop negative feelings about themselves. Although they can’t be good at everything, learners with motor problems will find most tasks challenging throughout the school years, including activities on the sports field as well as tasks in the classroom.

The connection between ADHD and motor problems is still not clearly understood. Although there appears to be a connection, there is evidence that suggests that some learners with ADHD do not have motor problems. Nevertheless, “as many as 52% of children with ADHD, compared to up to 35% of children without ADHD are likely to have poor motor coordination - especially fine motor coordination, such as buttoning, tying shoelaces, drawing, and writing” (Barkley, 2000, p. 102). However, this does not mean that they are unable to improve their skills in this area. Simply practising activities that the learner finds challenging will be beneficial, although they may be embarrassed to participate in certain activities in front of others. According to Green and Chee (1997) it is advisable for them to avoid the pressure of competitive

sports, unless they enjoy them. Allowing them to enjoy what they do is important, even if they are not very good at it, and, more importantly, assisting them with activities or tasks that they find particularly challenging.

2.5 TREATMENT AND STRATEGIES

There are three treatment approaches that are reportedly successful in eliminating the effects of ADHD in learners, namely, medication management, behaviour modification and a multimodal approach (Karande, 2005).

2.5.1 Medication management - The stimulants

The most common treatment for ADHD involves the use of medication commonly known as Ritalin (Methylphenidate hydrochloride). “Scientists think that ADD and ADHD occur because certain chemicals in the brain are missing. Because of this chemical problem the brain is unable to properly use chemicals known as neurotransmitters, which carry nerve impulses through the brain. Ritalin does not cure ADHD, but it does improve the person’s ability to be calm and concentrate” (Beal, 1999, p. 10).

Ritalin is a prescription drug that is made through a chemical process. There are a variety of different strengths of Ritalin available, namely, 10, 20, 30 and 40 mg tablets which are prescribed to suit each learners individual’s needs. Ritalin 10 and 20 mg capsules are available in sustained release (SR) form, which last up to four hours, and Ritalin 20, 30 and 40mg are available in modified release capsules (LA - long acting) which last up to eight hours. The medication is taken orally at certain times throughout the day (Novartis, 2002).

Although Ritalin is the most common treatment for ADHD, there are also a variety of other medications which are highly effective. According to Greeff (2005, p. 1) “stimulant therapy includes, methylphenidate (Ritalin), dextroamphetamine and premoline. Recent advances in the formulation of stimulant medications have now resulted in the development of agents with a rapid onset of action and a long duration of effect. Four rapid-acting, long duration stimulant compounds have been

registered. Three of these contain methylphenidate (Ritalin-LA, Concerta AD, Metadate CD) and one is composed of mixed salts of a single-entity amphetamine (Adderall XR)".

After discussing the medications used to treat ADHD with my family doctor I was able to ascertain that the most common generics to Ritalin prescribed in South Africa are Concerta, Strattera and Methylphenidate. According to Beal (1999, p. 9) "Ritalin is the brand name for the prescription drug methylphenidate. Methylphenidate is a generic drug produced by several companies. Generic drugs and brand-name drugs are similar in their chemical makeup and effectiveness. However generic drugs usually cost less". Bester (2006, p. 128) asserts that "Concerta has been available in South Africa since 2005. The active constituent is methylphenidate. It works in much the same way as Ritalin". Both Ritalin and Concerta contain methylphenidate, resulting in a very similar outcome being produced by both stimulants. Methylphenidate Hydrochloride is another common stimulant which is used to treat ADHD. According to Monson (2007, p. 2) "generic Ritalin, which is sold under the name Methylphenidate Hydrochloride tablets, is available in three different strengths: 5 mg, 10 mg, and 20 mg. Methylphenidate Hydrochloride is a prescription medicine that has been licensed to treat Attention Deficit Hyperactivity Disorder (ADHD) and narcolepsy". Strattera is slightly different from the previous stimulants, as has been indicated by Eli Lilly (2004, p. 10) who claim that "Strattera differs from other treatments in that it is the only non-stimulant medication for ADHD. Strattera reduces the removal of noradrenaline from parts of the brain. Because symptoms of ADHD are in part thought to be due to too little noradrenaline activity in the brain, by increasing this activity, Strattera can improve the symptoms of ADHD".

It can therefore be seen that methylphenidate is frequently found in stimulants which are prescribed to treat ADHD. According to Kenny and Kenny (2007, p.1) methylphenidate is a mild stimulant of the central nervous system which enhances the activity of certain under-active parts of the brain". Although there are a variety of stimulants which have been produced to treat ADHD, Ritalin is the most frequently prescribed medication. This view is supported by Barkley (2000, p. 277) who claims that "the two most commonly recommended stimulants for ADHD are the drugs d-amphetamine (Dexedrine) and Methylphenidate (Ritalin).

Learners with ADHD find tasks and activities challenging because they are unable to block out the irrelevant thoughts in their minds and therefore they are literally bombarded with thoughts. Therefore, focusing on one task at a time becomes difficult for the ADHD learner. According to Bester (2006, p. 126) “stimulants like Ritalin improve one’s ability to block irrelevant thoughts and impulses”. The use of Ritalin clearly has many advantages for learners with ADHD, yet does not cure ADHD. Brown (2005, p. 247) explains that “just as eyeglasses do not repair the patients’ eyes and cure impaired vision, so medications that alleviate ADD syndrome do not cure problems of brain chemistry that cause these impairments: the improvements last only as long as the medication is active in the body”. Although ADD and ADHD are slightly different in nature, they are both treated with the use of stimulants such as the one previously discussed. Therefore neither ADD nor ADHD can be cured by the use of stimulants (Rief, 2005).

Many learners with ADHD who have been prescribed Ritalin, have encountered positive effects from the medication. However, the effect of the medication can be greatly increased by combining medication with other therapies. In this way learners can be supported to behave appropriately. Zimmerman (1999) highlights the importance of Ritalin but suggests that it is effective only when used in combination with other dietary and behavioural treatments.

2.5.2 Benefits of stimulants

Many people debate whether the use of stimulants for young learners with ADHD is advisable. A number of concerns have risen about the medications due to the fact that they may produce side effects in the learner. However, the side effects of stimulants normally disappear after a few weeks and can be controlled by monitoring and altering the daily dosage. To emphasise the importance of stimulants, the benefits that the medication can produce should be highlighted.

According to Green and Chee (1997, p. 12) “the beneficial effects of stimulant medication have been well known for over half a century. The main breakthrough came with the introduction in 1957 of a new stimulant methylphenidate (Ritalin), and in the next decade many controlled studies showed that stimulants were both safe

and effective". Stimulants are not designed as a cure and it is only while the effects of the medication are still working that improvements will be noticed. Once the medication has worn off, the learner will be as he was before he took the medication. However, while the medication is still functioning, a learner with ADHD as well as those around him may notice a significant improvement in not only behaviour but also in productiveness.

Green and Chee (1997, p. 129) further claim that "stimulants reduce restlessness, keep the child focused on task, improve classroom productivity, increase self-monitoring and accuracy. Children are less impulsive and disruptive; they learn when to back off. Written work is neater and speech that once wandered may come back on track. Interactions improve between children, parents, teachers and peers. Parents tell us they have a child who listens, takes instructions on board and can now accept reason".

As stated earlier, there are certain chemicals which allow the brain to function and carry nerve impulses to the brain. A learner with ADHD is said to have either too many or too few chemicals and thus the brain has difficulty in receiving impulses. Therefore, having too many or too few neurotransmitters is said to affect the learner's ability to control his behaviour. Therefore, if any medication is going to assist a learner with ADHD, the medication will ultimately need to target this problem. According to Green and Chee (1997, p. 125) "the stimulants, or more correctly the psychostimulants, are believed to work by increasing the neurotransmitter chemicals dopamine and noradrenaline in certain parts of the brain". This means that stimulants allow the brain to filter through all the information that the brain is receiving so that the learner can focus on one thought or impulse at a time. A learner with ADHD has difficulties due to the fact that the brain responds to too many stimuli and does not sift or filter the information, resulting in the learner being overwhelmed by all the information that is received by the brain, regardless of its appropriateness. "In the ADHD child's brain it seems that the information rushes in without much filtering, which leaves the television screen of the mind in a bit of a buzz" (Green & Chee, 1997, p. 17).

As stimulants can assist the brain throughout this process, a learner with ADHD should respond well to Ritalin and should find that everyday life and tasks are far less challenging.

2.5.3 Side Effects of stimulants

Although there are many advantages of stimulants, one must not overlook the possible side effects that medication can produce. As with any medication, some learners may be more susceptible to the side effects than others. Therefore it is of great importance that educators be aware of the possible side effects caused by stimulants to ensure that they can be identified in the initial stages when a learner is reacting to the medication in a negative manner.

- **Anxiety and sleep deprivation**

There are many different side effects that one can encounter with Ritalin but, according to Bester (2006) the most common side effects are anxiety and sleep deprivation. If a learner is extremely tired and anxious all the time they will be unable to perform to their fullest potential and could therefore encounter further difficulties in many aspects of their lives. Therefore, parents or caregivers must ensure that efforts are made to minimise and eliminate the side effects that the learner is experiencing. If educators are aware of the possible side effects that stimulants can have on learners, then they will be better equipped to identify when a learner is experiencing their negative effects. If a learner is indeed experiencing such side effects, Bester (2006) suggests that reducing the dosage and/or skipping the afternoon and/or evening dose should be considered. This view is supported by Green and Chee (1997) who suggest that if the stimulants disturb a good sleep pattern, the afternoon dose should be reduced or suspended and occasionally the midday dose given earlier.

Barkley (2000, p. 279) claims that “it has been estimated that from 1% to 3% of children with ADHD cannot tolerate any dose of any stimulant medication”. Parents and educators therefore need to ensure that learners who are prescribed stimulants are closely monitored to ensure that they acquire the benefits of the medication.

- **Appetite reduction**

Another well known side effect caused by the use of stimulants is appetite reduction. According to Watkins and Brynes (2006, p. 2) “this effect may be worse in the very young. It may improve after several weeks or months”. It therefore appears that most learners will need time for their bodies to adjust to the medication but, at the same time, it is of great importance that learners with ADHD are meeting their nutritional requirements. Green and Chee (1997) suggest that medication should be given with meals to allow the food to arrive in the stomach before the drug deadens appetite, and that the afternoon dose can be lowered or suspended, which allows for catch up nutrition in the evening. Parents can also provide their children with a variety of tasty and nutritional foods throughout the course of the day, especially during times of low appetite. Green and Chee (1997, p. 133) also suggest that “appetising food, for example flavoured milk, yoghurt, can be offered at times of low appetite, and high energy supplements can be bought from local chemists”. Parents must therefore attempt to find foods and snacks that their children enjoy as, without adequate nutrition, they will be unable to perform to the best of their ability.

As stated above, many learners who are prescribed stimulants commonly experience anxiety, sleep deprivation and appetite reduction. Although these are among the most common side effects produced by stimulants, there are other side effects that are less frequently discussed. I would therefore like to highlight some of the other side effects that learners with ADHD can experience.

- **Increased blood pressure**

Stimulants may cause an increase in blood pressure or pulse but this is usually not significant at normal doses in most people (Watkins & Brynes, 2006). Although this is not very common, parents and caregivers should closely monitor their child on stimulants and ensure that regular appointments with the family physician are made.

- **Headaches**

Headache is a rare side effect and must not be mistaken for the tension headache experienced by many ADHD learners due to the stresses of school. Where stimulants cause significant headaches the dose is lowered and other medication tried (Green & Chee, 1997). As stated earlier, some learners with ADHD experience appetite reduction in the initial stages of being prescribed stimulants. For this reason parents are also advised to check that the headaches are not caused from appetite reduction and decreased intake of food. This in itself could cause a learner to develop headaches. Ensuring that the learner eats enough nutritional food and consumes sufficient amounts of water could circumvent this side effect.

- **Stomach ache**

Some learners with ADHD feel slight nausea due to the appetite suppression of stimulants. This is very rarely a problem and can be addressed by giving the medication with food, lowering the dose or changing to other medication (Green & Chee, 1997). Again it can be seen that a single side effect can produce other problems and for this reason it must be ensured that the side effect that is causing the problem be addressed. Simply making sure that the learner has eaten sufficiently before consuming the medication should eliminate the feelings of nausea.

- **Depression**

“When starting the medication a few children can become withdrawn, teary, upset, irritable and unhappy. These side effects only occur when introducing the medicine or increasing the dose, and once the levels are fine tuned they will not reappear” (Green & Chee, 1997, p. 133). These side effects are slightly more difficult to address as no parent wants to see their child upset. However it must be taken into account that many learners with ADHD feel depressed even before medication has been introduced due to the fact that they experience so many challenges. If parents can assist their child through the initial stages of medication, they should ultimately find that their children are happier than they were before they began taking the medication.

- **Seizures**

"A small study suggested that asymptomatic individuals with an abnormal EEG might be at increased risk of seizures when taking the stimulants" (Watkins & Brynes, 2006, p. 5). Parents must ensure that before placing their child on stimulants, an appointment with the family physician is made. By focusing on not only the child's history but also the family history, he or she will be able to advise the parents as to whether or not their child is likely to develop seizures after taking stimulants. A learner whose family has a history of seizures will be advised to avoid taking stimulants.

- **Tics and Tourette's syndrome**

A small number of learners may experience tics and, in severe cases, this may develop into Tourette's syndrome. Before treatment starts it should be ascertained whether there is a history of tics or anxiety in the family, as in such a case it would be unwise to administer stimulant medication (Train, 1996). It can again be seen that parents must not take any chances and should at all times consult their doctor for advice. His or her expertise will assist in selecting the best intervention for the child, and will ensure that no harm is done to the wellbeing of the child.

It can be seen from the above that stimulants can produce a variety of side effects in young learners with ADHD. Although the side effects listed above could be extremely dangerous, it is very unlikely that they would remain unnoticed for very long. For this reason, with careful monitoring, parents can ensure that every effort is made in the initial stages to minimise and eradicate the side effects before they become a major problem. Solanto, Schachar and Ickowicz (2007, p. 278) cite Barkley, et al. (1990) and Greenhill (1999) who give the assurance that "in most patients, all of these adverse effects can be managed by decreasing the dose of medication or reducing the amount given late in the day. Therefore, fewer than 10% of patients discontinue treatment because of adverse effects during the acute phase of treatment".

2.5.4 Alternative medication

There are many different kinds of milder, natural medications which have recently been introduced and are intended to assist learners with ADHD. Although most contain similar ingredients, some may be better suited to certain learners.

- **Eye q**

Eye q is one of the most popular alternatives to Ritalin on the market and is commonly given to learners with ADHD. Netmums (2008, p. 4) claim that "because of the naturalness of Eye q it is suited for children of all ages. The formulation is made from high grade marine and botanical oils that are naturally sourced". "The eye q range is a unique formulation that provides the specific fatty acids required for eye and brain function" (Equazen, 2006, p. 1). As it is a natural product it will likely have fewer side affects than Ritalin but can still assist learners with ADHD. This view is confirmed by Equazen (2008) who assert that the incidence of side effects associated with the use of eye q is low.

- **Thinkwell**

Thinkwell Absorbamax with highly concentrated omega 3 and 6 essential fatty acids will help support mental alertness and concentration. Thinkwell can improve behaviour and concentration levels (Thinkwell, 2006). This product is useful for learners with ADHD as it is believed that they do "not get enough glucose and oxygen to the brain which effects concentration and the ability to remember things" (Thinkwell, 2006, p. 1).

- **Smartfish**

Smartfish is authorised by the Attention Deficit Hyperactivity support group of South Africa and is one of the newest products on the market. Smartfish is a marine oil supplement manufactured from the highest quality fish oils rich in Essential Fatty Acids (Absolute Organix, 2006).

- **Comega Vite**

Comega Vite also contains omega 3 and 6, also known as essential fatty acids, “which are micronutrients which cannot be produced by the body on its own and are necessary for good health and energy production” (Comega Vite, 2006, p. 1). Comega Vite also contains a substance known as Eicosapentaenoic Acid (EPA) which is found in omega 3’s. “EPA has been found effective in reducing the problems of attention, perception and memory that are associated with ADHD” (Comega Vite, 2006, p. 1).

It can be seen that most of the available products that are being referred to as alternatives to Ritalin are far milder and will naturally not have the same effect as Ritalin and other psychostimulants. Stimulants could be a last resort after alternative treatments have proved to be unsuccessful.

2.5.5 Behavioural therapy

Behavioural therapy is complex, because every learner is unique and what works for one learner may not work for another. According to Sidley (2008, p. 17) “the point of therapy and counselling is for the child to learn coping skills and adaptive behaviour. Options may include parent training, family therapy, organisational skills, training, individual tutoring, social skills training and individual psychotherapy. Success is often dependent on how well the adults around the child are able to establish routines and rules for behaviour, and help the child achieve them. As a parent of an ADHD child, your role is crucial. Your child is unlikely to be able to change his own behaviour without your help and guidance”.

The complexity of this method therefore demands that both parents and educators collaborate in the intervention. Therefore, parents are required to take part in training programmes so that they can understand how to support the child’s learning at home, thereby reinforcing their school learning. Parents are taught how to reinforce positive behaviours by using praise or by using daily contingency charts, how to extinguish negative behaviours by active ignoring, and how to effectively punish unacceptable behaviour (Karande, 2005). However, behavioural therapy will only be

effective if the school and parents form collaborative relationships whereby they continuously assess and monitor the learner's progress. A learner with ADHD cannot be assisted if changes do not occur in every aspect of his or her life; therefore the need for home and school to work together cannot be overemphasised. According to Donald, et al. (2002) these two systems (home and school) interact and influence each other in many ways. This draws on Bronfenbrenner's ecosystemic theory which "sees different levels and groupings of the social context as 'systems' where the functioning of the whole is dependent on the interaction between all parts" (Donald, et al., 2002, p. 47). Within this theory the individual, family, school, community and society are seen as different systems which all interact and affect each other. Each system is further divided into subsystems which all affect each other in the same way. "A school for instance, is a system with different parts, consisting of staff, its students, its curriculum and its administration. The dynamic interdependence between its parts forms the system as a whole, so whatever happens in one part will affect all other parts" (Donald, et al., 2002, p. 47).

From the above it can be seen that while the individual systems interact and influence subsystems within themselves, the systems as a whole also interact and influence the systems outside of their own. Taking this into account, it seems logical to say that to assist a learner with ADHD, the school and parents need to ensure that they form collaborative relationships and work together.

2.5.6 Diet and ADHD

Diet plays a major role in a learner's daily living and can affect many aspects of his wellbeing. It is acknowledged that without a healthy balanced diet health and wellbeing will deteriorate. Even with this knowledge it appears that many parents do not pay enough attention to their children's diets, and provide them with many foods that could potentially be causing them harm. According to Zimmerman (1999, p. 71) "medical experts have traced the origin of many chronic diseases to unhealthy changes in our eating habits as a population over the past fifty years".

With an improved understanding of ADHD it is realised that eating the right foods "maximises concentration, learning capacity and self control, and poor nutrition choices can exacerbate symptoms of ADD or cause medical problems" (Dr Phil, 2006, p. 1). As ADHD and ADD are closely related, it stands to reason that diet will also have a profound effect upon ADHD. This view is further supported by Zimmerman (1999, p. 73) who claims that, "although there is widespread disagreement within the scientific community on the effects of diet on learning and behaviour, there is a large body of evidence showing that diet plays a big role in ADHD".

There are a variety of different diets available, for example the Feingold diet, which have been developed specifically for children with ADHD. Feingold claimed that "50 percent of children with behavioural problems would be helped by this diet" (Green and Chee, 1999, p. 121). However, a criticism is that many of these diets are difficult to adhere to, especially for children, and therefore simply eliminating certain foods can prove to be successful. An example is that of milk. The ADHD Information Library (2006, p 2) estimates are that "30 % of all children are allergic to milk". This could be substituted by almond milk, rice milk, or water. To avoid the possibility of such problems, dairy products should be used sparingly and if possible eliminated from the diet all together.

Preservatives and colorants have a more negative effect on the ADHD learner's behaviour than sugar, according to the clinicians in the field (Bester, 2006, p. 134). For this reason brightly coloured foods, especially yellow foods should be totally omitted from the diet, and all foods which are high in sugar should be avoided and not replaced with artificial sweeteners.

The Nutrition Health Centre (2006, p. 1) also claims that large amounts of carbohydrates and processed foods have a negative impact on "energy level, attention and cognition". According to The George Mateljan Foundation (2008) this is because processed foods have been found to have many additives which have the ability to compromise the body's structure and function, and are related to the development of skin, pulmonary and psycho-behavioural conditions.

Furthermore, the ADHD information Library (2006, p. 2) clearly stipulates, “no junk foods. If it comes in a wrapper, don’t eat it”. This therefore implies that all junk food should be totally avoided.

The ADHD Information Library (2006, p. 2) further advises that fish oils, olive oil, primrose oil and flaxseed oil are amongst the best fats to use as they are “high sources of Omega oils”.

Bester (2006) claims that individuals with ADHD should eat plenty of vegetables and fruit (but avoid fruit with high salicylate content). Encouraging the eating of fruits and vegetables throughout the day will sustain the energy levels.

The Nutrition Health Centre (2006) suggests that there are foods that learners with ADHD can eat in abundance, such as, beans, whole grains, nuts and seeds and fruits and vegetables. It can therefore be seen that natural foods are amongst the best option for learners with ADHD. This may seem overwhelming but there are many foods available that can assist a learner with ADHD. There are a number of excellent studies that have “demonstrated 50 to 70 percent resolution of hyperactive behaviour and increased concentration spans with alternative menus” (Nutrition Health Centre, 2006, p. 2).

2.5.7 Multi-modal approach

A multi-modal approach is believed to be highly successful, as behaviour therapy can often allow the learner with ADHD to reduce the daily dosage of medication, as he masters appropriate ways in which to act and behave, rather than simply relying upon medication to correct or alter his behaviour. This view is further confirmed by Karande (2005, p. 5) who claims that “a combined treatment may help prevent the development of future psychiatric disorders”.

Although the use of stimulants has proved to be extremely successful in eliminating the effects of ADHD, in many instances parents are simply advised to place their children on medication. According to Block (1996, p.30) “studies indicate that paediatricians are more likely to prescribe mainly drugs without the other two

treatments". Although medication can be extremely helpful, behavioural intervention can be incorporated simultaneously with medication to develop the skills of learners with ADHD and help them cope.

According to Rief (2005, p. 29) "once a child is identified and diagnosed with ADHD, there are many ways to help the child and family. The best way of doing so in most cases is through a multifaceted approach – a "multimodal" plan of interventions, tailored to the needs of the individual child and family". This typically includes a combination of medical, behavioural/psychosocial, and educational interventions, implemented as *needed* at different times in the learner's life. Learners with ADHD often do best with a combination of a structuring of their environment (home, school, and other settings); medication; behaviour modification and specific behaviour management strategies implemented at home and school; educational supports/accommodations; and counselling of some kind. Rief (2005) asserts that it is important to realise that ADHD can be treated and managed effectively.

Barkley (2000, p. 143) also encourages the use of the multi-modal approach for learners with ADHD. He claims that "a recent study called the Multi-modal Treatment Study of ADHD (sponsored by the National Institute of Mental Health) indicated that medication may be the most effective treatment option for learners with ADHD. Combining medication with a comprehensive psychological treatment package may produce some additional benefits and may result in less need for medication or the need for a lower dose of medication. Psychological treatments alone can be effective, but may not produce equivalent results to those achieved by medication". Therefore using a multi-modal approach is of great benefit to learners with ADHD as they will not have to rely only on medication.

Now that I have provided an overview of the main ideas within each strategy and treatment of ADHD, I will now discuss, in greater detail, how learners with ADHD can be supported at home and at school.

2.6 STRATEGIES THAT PARENTS AND EDUCATORS CAN DRAW ON TO SUPPORT THE LEARNING AND DEVELOPMENT OF LEARNERS WITH ADHD

2.6.1 Viewing ADHD as a disability

Dealing with a learner who has ADHD can often be extremely tiring. Barkley (2000, p. 152) claims that "to avoid frustration, distance yourself from your status as a parent and try to behave and view the situation as a stranger would. Keeping in mind at all times that ADHD is a disability, can assist you to stay calm". This is a very important aspect because if parents, who are adults, are unable to stay calm, then it is very unlikely that the child will remain calm. Parents can assist by simply "accepting their child's limitations and trying to see the virtues within their child and helping him to make the most out of them" (India Parenting Pvt, 1999, p. 2).

2.6.2 Using immediate rewards and consequences

In order to influence a learner with ADHD it is advised that parents and educators, "become part of the moment" (Barkley, 2000, p. 146). Learners with ADHD need to be immediately rewarded for good behaviour but at the same time must learn that negative behaviour has negative consequences. The U.S. Department of Education (2004, p. 2) claims that when working with learners with ADHD, "the sooner that approval is given regarding appropriate behaviour, the more likely the student will repeat it". Dealing with the situation immediately will have a greater effect upon a learner and will also avoid confusion as he will know whether his behaviour was acceptable or not. Parents and educators can find their own methods of positive reinforcement which work best.

2.6.3 Providing regular feedback

Learners with ADHD respond well when feedback is provided on a regular basis. "Consistency among teachers and parents with respect to desired behaviour is important in order to avoid confusion on the part of students with ADHD" (U.S. Department of Education, 2004, p. 14). If a learner who finds many tasks challenging

is constantly provided with feedback on what has been achieved, he or she would possibly be more determined to complete the task. Through this, learners with ADHD learn that they are capable of completing the task and so can develop a greater sense of self confidence in their own abilities.

2.6.4 Incorporating larger and more powerful consequences

Although parents and educators have been encouraged to make use of intrinsic rewards for young children, specifically with learners with ADHD, it is advisable to use larger, more powerful consequences because “ADHD learners have reduced sensitivity towards rewards and other consequences, hence larger more important rewards are needed to motivate them to perform, follow rules and behave well” (India Parenting Pvt, 1999, p. 2). Providing these types of rewards has proven to be far more successful when working with learners with ADHD, as they are physically able to see the consequences of their actions and behaviour. Therefore, the nature of the disability “dictates that you use larger, more significant, and sometimes more material consequences to develop and maintain positive behaviour” (Barkley, 2000, p. 147). Material rewards should be given in conjunction with intrinsic rewards, such as praise and affection, to ensure that the pleasure the learner with ADHD can feel from simply achieving and completing a task is not diminished.

2.6.5 Incorporating incentives before punishment

Learners who have ADHD tend to misbehave more frequently than learners who do not have ADHD. It is therefore very important that punishment should not be the first step in suppressing undesirable behaviour (India Parenting Pvt, 1999). Using positive reinforcement before punishing the learner for misbehaving means that the learner is not being punished all the time. Constant punishment usually leads to resentment and hostility and eventually to avoidance (Barkley, 2000). A decision about what behaviour is acceptable and what behaviour will be ignored must be made. Once the learner with ADHD begins to improve his or her behaviour, one can start to include mild punishments for negative behaviour, but at all times the learner with ADHD must be provided with more rewards than punishments, so as to build self-confidence in his own ability.

2.6.6 Externalising time and bridging time where necessary

According to Barkley (2000, p. 149) learners with ADHD are delayed in their "development of an internal sense of time and of the future". Because they do not have the same sense of time as other learners, they cannot respond as well as others to demands that involve timelines and preparation for the future. For this reason learners with ADHD experience many challenges when completing assignments and tasks and therefore may need assistance in this area. The U.S. Department of Education (2004, p. 12) acknowledges this fact and states that learners with ADHD often have difficulties finishing their assignments on time and can "benefit from special materials and practices that help them to improve their time management skills". Barkley (2000) highlights many ways in which this problem can be overcome. He recommends the use of an alarm clock to assist learners with ADHD to identify how much time they have left to complete the task, which should keep them motivated to stay on task. For larger assignments that require far more time to complete, Barkley (2000, p. 149) further suggests that "parents bridge the time", by dividing the assignment into manageable sections, which will help the learner avoid procrastinating and leaving the assignment till the last minute.

2.6.7 Externalising the important information at the point of performance

Point of performance refers to the actual moment when a learner is undertaking an activity or task. "Working memory, or the ability to keep in mind the important information necessary to complete a task", is impaired significantly in learners with ADHD (Barkley, 2000, p. 149). "Providing the learner with a checklist of mistakes that he or she frequently makes in written assignments" will be helpful (U.S. Department of Education, 2004, p. 13). Paper with guidelines and rules can be provided to assist a learner with ADHD stay on task and remember important things to do, thereby providing the learner with a greater sense of independence. Barkley (2000, p. 149) suggests that such reminders should be tailored to address the problems that each learner with ADHD has at the "point of performance", and can include guidelines such as, "stay on task", "don't space out", "ask for help if you need it", "read directions carefully", "do all the work", and "when finished go back and double check all your answers for completeness and accuracy".

2.6.8 Externalising the source of motivation at the point of performance

Most people manage to maintain the discipline needed to complete an activity through determination and acknowledging that once the task is completed, they will feel a sense of pride and achievement. According to Barkley (2000, p. 150) learners with ADHD have “trouble internalising not only time and rules but also motivation”. Therefore a learner with ADHD requires a greater amount of motivation when completing an activity. This deficit in intrinsic motivation can be overcome to a large extent by giving the learner an “external motivation boost such as incentives, rewards, or reinforcer to behave himself, restrict his activity, and follow rules” (Barkley, 2000, p. 150). Parents and educators can create a situation whereby a reward or privilege is given to the learner with ADHD once the intended task or assignment has been completed. By providing tangible rewards to learners with ADHD they are taught that they can be “responsible for their actions and be recognized for their good efforts” (Massachusetts General Hospital, 2006, p. 11).

2.6.9 Developing thinking and problem solving on a more physical level

Learners with ADHD find mental problem solving and thinking far more challenging than learners who do not have ADHD. Taking this into account, parents are advised to think of ways to make “the problem and the parts of possible solutions physical, so that your child can touch them, manipulate the pieces, move around them, and come up with new arrangements of the pieces of information that might help him solve the problem” (Barkley, 2000, p. 151). This can be done by simply providing the learner with ADHD with cards or paper on to which he records any ideas that he has to assist him with the project. At any stage when the learner thinks of new information he is to record it on the same piece of paper or card. Through this procedure, the learner will eventually be ready to begin and complete his assignment. All the valuable information will be documented and therefore the learner will not forget anything he has thought of. Learners with ADHD must also be given the opportunity to expand their ideas that they have already developed.

2.6.10 Aiming for consistency

Most learners with ADHD respond best to routine and consistency. Parents and educators should aim to be consistent in their methods of discipline, even if the method does not succeed at first. Change will not occur immediately, but through consistent reinforcement, learners with ADHD will begin to understand what is acceptable and what is not. This involves being consistent over time; not giving up too soon when a behaviour change program has been started; responding in the same way even when the situation changes; and making sure that all persons involved are using the same methods (Barkley, 2000). Parents and educators must also ensure that they are consistent in their methods in different environments. It is also of utmost importance that no one should contradict or undermine another's authority (India Parenting Pvt, 1999).

2.6.11 Actions speak louder than words

Learners with ADHD are far more likely to respond appropriately to their parents and educators, if learners see that they act upon what they say at all times. It is therefore advised "that parents stop talking and use consequences" (Barkley, 2000, p. 151). Simply talking and trying to reason with a learner with ADHD will not assist him or her to behave better, and could result in the learner becoming immune to what is said and the point that is being made. An immediate response to bad behaviour is important, so that the learner with ADHD can begin to understand what he will be praised for and what he will be reprimanded for. As soon as there are exceptions made a learner with ADHD becomes unsure of what is expected from him.

2.6.12 Planning ahead for problematic situations

In many instances parents are caught off guard because they tend to wait for a problem to occur before they find a solution. According to India Parenting Pvt (1999) parent's can generate a strategy to deal with anticipated problematic situations. Barkley (2000) provides valuable guidelines in this regard and suggests that if learners are being taken on an outing, they should be told before they leave how they are to behave. On arrival at the intended destination the rules should be

reviewed and learners asked to repeat what has just been said, to ensure that they understand. If learners with ADHD comply with the rules that have been set up, they should be rewarded so that incentives are provided for continued good behaviour in the future. The consequences also need to be explained regarding what would have happened had they disobeyed. Behaviour should always be responded to, whether it be good or bad. Educators can also use this technique when moving between lessons or taking learners on a field trip.

2.6.13 The need for forgiveness

Barkley (2000, p. 153) explains that a learner with ADHD cannot "always control what he does and deserves to be forgiven". For this reason parents and educators need to make a concerted effort to review the events of each day and let go of all the anger and frustration caused from the learner's behaviour. If one is angry with the learner, he is unlikely to feel a sense of self-worth, whereas forgiving him provides him with a second chance to correct his behaviour in future (Barkley, 2000).

There are clearly a variety of different methods and techniques that can be incorporated when supporting a learner with ADHD. Some techniques may prove to be more successful than others as what works for one learner may not work for another. Therefore a process of trial and error will help in finding the most effective techniques.

2.7 METHODS FOR SUCCESS AT SCHOOL

Once methods like the ones previously described have been developed to improve behaviour at home, educators must ensure that support is provided at school. In order to improve behaviour, parents, learners and educators must collaborate to work together to assist and support the learner with ADHD. Barkley (2000) claims that there are a variety of methods that both educators and parents can draw on in an attempt to minimise inappropriate behaviour and assist a learner with ADHD in achieving his full potential at school. The following are guidelines that can assist the development of a learner with ADHD at home and at school.

2.7.1 Incorporating positive consequences

Focusing more attention on good behaviour and providing a learner with positive attention has been proved to be successful for most learners with ADHD. Negative consequences may temporarily change behaviour, but they rarely change attitudes and may actually "increase the frequency and intensity of inappropriate behaviour by rewarding misbehaving students with attention" (U.S. Department of Education, 2004, p. 14). The educator needs to develop skills in this area and can acquire techniques to remind herself to provide regular and positive feedback. Although most learners respond well to intrinsic rewards, some learners with ADHD may require more concrete incentives as indicated previously. There are endless rewards that can be given, and educators must find rewards which suit the learners in her class.

2.7.2 Incorporating negative consequences

There are five negative consequences to behaviour which have proved to be successful when dealing with learners with ADHD. However, according to Barkley (2000, p. 250) negative consequences should be used sparingly as "frequent harsh punishment may even increase a child's defiance".

- **Ignoring**

Sometimes learners with ADHD may be misbehaving with the intention of receiving attention from the educator. According to Taylor (1994, p. 70) some learners will "go to great lengths to get this attention, almost irrespective of whether it is superficially pleasant or unpleasant". Ignoring does not mean that the educator will not acknowledge that the learner is misbehaving but, instead means she will tactfully correct the behaviour by not focusing on the learner who is misbehaving. For example, the educator could praise a group of learners who are not talking in assembly in order to encourage a learner who is distracting others to stop talking. The learner who is talking will notice that if he does not talk he too will receive attention from the educator.

- **Reprimanding**

If reprimanding is incorporated in the correct manner, it can be successful in altering behaviour. Brief, specific reprimands given swiftly, without much emotion (businesslike), and consistently supported by other punishment can be effective for learners with ADHD (Barkley, 2000). Educators must ensure that they incorporate powerful and consistent reprimands, and that learners with ADHD understand from the beginning what is expected from them and what will happen if they do not adhere to the rules.

- **Behaviour penalties and fines**

This method has been successful among learners with ADHD. Each educator can develop their own techniques, but the use of a point system has proved to be effective. When a learner misbehaves he will lose a point. For each point lost, the learner will lose a reward. The learners must at all times be aware of how many points they have lost. However, evidence shows that giving a greater number of rewards is more successful than giving more penalties and fines (Barkley, 2000).

- **Time – out**

Time-out means time out from rewarding experiences and is used to decrease undesirable behaviour. The main principle of this procedure is to ensure that the learner in time-out is not able to receive any reinforcement for a particular period of time (Child Development Institute, 2006). There are many different ways in which time out can be administered, but when dealing with learners with ADHD, Barkley (2000) advises that learners are simply removed from an area that offers exciting activities, to the corner of the classroom facing a blank wall. To assist the success of this method, rules must be set in place. Learners can earn points for good behaviour and their time in the corner can be reduced. On the other hand, bad behaviour will increase the amount of time spent in the area. More drastic action can be taken if the learner still does not comply, and time out can be spent in the principal's office, or a reward or privilege can be taken away.

2.7.3 Home-based reward systems

In a home-based reward system, the educator sends home an evaluation of how the learner with ADHD behaved in school that day, and the parents use it to give or take away rewards at home (Barkley, 2000). Home-based rewards programmes therefore require the educator to communicate daily with the learner's parents in an attempt to monitor and improve behaviour. The educator will evaluate the learner's behaviour and find a means of recording the findings, which will then be sent home to the learner's parents. The learner's parents can then use this information to either give or take away rewards at home. The educator can develop report cards which focus on specific behaviour in different lessons, which can be filled in throughout the course of the day. In many instances learners with ADHD may behave differently in the company of others. It is therefore also very important for parents to find out how their children are behaving when they are not present.

2.7.4 Developing skills of self control in the learner

According to Goldstein (2006, p. 1) "at its simplest level, ADHD represents a delay in the development of self-control". Learners with ADHD therefore need to learn to control their own behaviour, as they are not always going to have someone who will do it for them. Once improvements can be seen, learners with ADHD should be given the opportunity to complete tasks with less input from an adult. To support this process, the learner, with assistance, should be instructed to make a list of guidelines which he or she can use while completing a task. The learner must be taught to constantly question and analyse his work and reward himself for quality work. Barkley (2000, p. 256) claims that many programmes for learners with ADHD have used methods that "teach the children to talk to themselves out loud, give themselves instructions on what they should be doing, and reward themselves verbally for how they did". It is important that a learner with ADHD is not simply thrown into the deep end. Therefore support should be provided in the beginning, and reduced as the learner becomes more confident.

2.8 TEACHING THE LEARNER WITH ADHD

There are a variety of techniques and methods that educators can incorporate when teaching learners with ADHD. There is a great deal of literature which provides guidelines for teaching learners with ADHD but as no two learners are the same, a variety of options may need to be explored and tried.

Educators play a key role in the development of all their learners, as learners spend most of their time throughout the year in the classroom with their educator and peers. Therefore, educators need to be aware of the effect that they have on their learners and therefore ought to ensure that they find methods and techniques which positively impact on the development of all their learners, regardless of their individual needs. This view is supported by the U.S. Department of Education (2004, p. 4) who claim that "because no two children with ADHD are alike, it is important to keep in mind that no single educational program, practice, or setting will be best for all children". For optimal benefit, educators need to form meaningful relationships with their learners in an attempt to get to know them and be better equipped to identify each learner's individual needs.

2.8.1 A strategy for the successful instruction of learners with ADHD

According to the U.S. Department of Education (2004, p. 3) educators who are successful in educating learners with ADHD use a "three-pronged approach". Firstly, the unique needs of the learner are identified. For example, the educator determines how, when, and why the learner is inattentive, impulsive and hyperactive. Secondly, the different educational practices associated with academic instruction, behavioural interventions, and classroom accommodations appropriate to meet that learner's needs, are selected. Finally, the educator combines these practices into an individualised plan and integrates this with educational activities provided to other learners in the class.

The above confirms four important aspects that educators need to consider when educating learners with ADHD. Firstly, the fact that every learner is unique and therefore has specific needs. The identification of the learner's needs is required

before any support can be provided. If something is preventing a learner with ADHD from developing to his full potential then it stands to reason that the most appropriate intervention would require removing the barrier/s that are challenging the learner, and it is only once the barrier/s have been identified that this can take place. Once the barrier/s are removed, to accommodate the learner's needs the educator can make rearrangements within the physical environment, the way in which she interacts with the learner, and the way in which she teaches the learner. The educator can then take her ideas and put them into practice so that the learner with ADHD can be included within the classroom. This provides educators with a basic strategy and highlights the first steps that need to be taken when teaching learners with ADHD. The three main components of a successful strategy for educating these learners are "academic instruction, behavioural intervention, and classroom accommodations" improving both academic performance and behaviour of learners with ADHD. (The U.S. Department of Education, 2004, p. 23) In this way an enhanced learning environment for all learners is created

There are, however, a variety of other researchers who provide alternative techniques that educators can incorporate when teaching learners with ADHD. According to Peterson and Hittie (2003, p. 296) teaching students with ADHD "challenges us to emphasize three important areas: balancing creativity and engagement with individual options, help with organizational skills and structure, and providing emotional support".

2.8.2 Balancing creativity and engagement with individual options

Most people find interesting and enjoyable activities easier to complete than ones that are not. In the same way acknowledging the sense of pride that one will feel after completing the activity usually inspires individuals to complete tasks regardless of whether they are pleasurable or not. As learners with ADHD have problems with attention and concentration, it stands to reason that they will find completing tasks that are uninteresting far more challenging than individuals without ADHD. According to Nelson (1998) as cited by Peterson and Hittie (2003, p. 196) students with ADHD "need stimulating activities to engage their attention". Educators can be creative and modify their activities to make them more appealing and interesting to all the learners

in the class. For example, if an educator is teaching the learners about other countries in the world, the learners could be allowed to dress up in traditional costumes and accessories, making the lesson more enjoyable and therefore more stimulating for the learners. There are endless ways in which educators can be creative and can develop fun and stimulating activities for their learners. After interviewing early childhood educators, Rief (2005, p. 71) asserts that one teacher's summary of her philosophy was consistent with all of the teachers interviewed; "If my kids are happy and feel good about themselves, they will learn!"

Furthermore, learners with ADHD may respond better if they are provided with the opportunity to be responsible and involved in their own learning. By simply communicating with the learners, educators can identify the needs of each learner in her class. Every learner will have his own methods of learning and it must not be assumed that all learners can learn in the same way. Peterson and Hittie (2003, p. 197) ask what it takes for learners with ADHD to "engage and focus"? They claim that "for some, class noise makes concentration difficult. Others need background noise". The above emphasises the uniqueness of every learner and highlights the importance of flexible learning environments which can be adapted to suit the needs of every learner in the class.

Peterson and Hittie (2003, p. 297) also suggest that one could help these learners to "monitor fatigue, create transitions from mental to physical activity, take breaks to release energy and tension". Furthermore one could provide environmental options such as:

- Social interactions while working – tables, gathering places with pillows, a small sofa.
- Places where students can be alone and where it is quieter - desks or pillows in the hall, study carrels (with headphones and tape players with soft music)
- Spaces for individual work – desks, floor areas with pillows
- Varied lighting – different types of lamps and study areas next to the windows".

There are many ways in which educators can create a variety of learning environments within a classroom setting which allow learners with ADHD to select an environment best suited to their own learning needs. By communicating with learners, educators can identify adaptations that need to be made to continually ensure that the classroom environment caters for all the learners' needs.

2.8.3 Help with organizational skills and structure

According to Barkley (2000, p. 100) learners with ADHD also tend to be "less skilled in the use of complex problem solving strategies and organisational skills needed for solving intellectual or social problems". The severity of this problem is highlighted by Green and Chee (1997, p. 33) who claim that many ADHD learners are disorganised, which is made visible in their dress: "clothes are back to front, inside out and messy, while shoelaces are only half tied. Messages sent home from school never get home. The school bag is left on the bus. Swimming costumes are found later at the pool. Books are not brought home for homework".

It is therefore essential that educators support learners with ADHD in these areas. There are a variety of ways in which learners with ADHD can be supported with organisation skills. Peterson and Hittie (2003, p. 297) recommend the following strategies:

- "Help students set goals, plan, break goals into short term steps, and monitor their progress
- Provide tools for planning, scheduling, and tracking assignments – a calendar, project task analysis, daily and weekly schedules, journaling
- Help students organise their work with student notebooks (ring binders and note books for each subject); filing systems (alphabetic, topical); and computer organisation, including the use of computer folders"

Supporting learners with ADHD to develop organisational skills could prove highly beneficial for both the learners and their educator. Although it may seem frustrating at first, educators must keep in mind that, with support, learners with ADHD can develop their organisation skills and hopefully as they mature, so too will their organisational skills. Green and Chee (2005) assert that an ADHD child, who is

disorganised from birth, will decrease their messiness with age. In this regard educators must be patient and must not expect changes to take place immediately.

2.8.4 Providing emotional support

Most learners with ADHD show certain forms of emotional problems, such as mood swings and cycles, which makes their behaviour unpredictable (Wender, 2000). Educators spend a great amount of time with the learners in their class, and should provide emotional support, especially to the younger learners (Rief, 2005). People are emotional beings living in a competitive world. Learners with ADHD do not intend to misbehave and are often in trouble for things that they have little control over, which ultimately provides them with little inspiration to improve behaviour. Peterson and Hittie (2003, p. 298) claim that educators often become frustrated when learners don't "complete assignments, are active in class, or can't concentrate". A negative cycle can be initiated by educators trying to control and punish learners with ADHD, and the learners' behaviour gets worse. When learners are inattentive, impulsive or hyperactive, these occurrences could be used as opportunities for learning. Learners need to feel comfortable in their learning environment and need to trust their educator to the point that they feel comfortable to confide in her when they are experiencing difficulties. All learners need to be supported in all aspects of their learning and development. If learners have an educator who is patient, kind and approachable, they are more likely to feel comfortable to confide in her when they require support.

There are evidently many techniques that can be incorporated within the classroom by the educator. To discuss all these techniques would require far more time than can be given in this research project. Therefore educators should become agents in their own development and review the wide variety of literature available on this topic. However, Peterson and Hittie (2003, p. 298) do provide us with some valuable guidelines to take into account when providing emotional support to learners with ADHD. These are:

- "Pay attention to students' emotions and build on strengths
- Develop community structures for emotional support – listening to students' voices through circles of support, peer partnerships, class meetings

- Help students understand their own actions and consequences. Get them to think about what they need. Have them journal about their actions and feelings
- Provide positive outlets for student energy – opportunities for movement, creative expression
- Form a personal relationship with the student"

The most valuable aspects to consider when teaching learners with ADHD highlight the fact that educators can have a profound effect on the wellbeing and development of their learners.

On a final note the view of Jaffe-Gill, Dumke, Segal, de Benedictis, Smith and Segal (2007, pp. 1-2) provides valuable insight into the teaching of learners with ADHD, arguing that the school setting requires learners to "Sit still. Listen quietly. Pay attention. Follow instructions. Concentrate". These are the very things that learners with ADD/ADHD have difficulty with. So how do you teach learners that won't settle down and listen? "The answer: with a lot of patience, creativity and consistency". The most effective tool, however, in helping a learner with ADD/ADHD is a positive attitude.

Educators are not expected to have all the answers, but developing a positive attitude along with patience and kindness is the first and most important step in assisting learners with ADHD. An attitude such as this develops trust between an educator and learners. It is relationships such as these which develop happy and healthy classroom environments and encourage learning and development.

2.9 CONCLUSION

ADHD is one of the most common developmental disorders. For many years learners with this condition have been neglected and thought of in a negative light. This may have to do with the fact that society is only beginning to understand and acknowledge ADHD, and grapple with the justice of inclusion. To support and include learners with ADHD, we therefore need to change the perceptions of learners with ADHD.

As each learner is unique, an in depth analysis of each learner's specific situation is required, to find the best approach to include learners with ADHD. In order for a learner with ADHD to succeed in school, they clearly require systemic change in the family and school, together with the learner's input.

The literature reviewed in this assignment suggests that the effects of ADHD can be minimised through intervention and systemic change. Therefore, there is no excuse for not supporting learners with Attention Deficit Hyperactivity Disorder reach their full potential.

CHAPTER THREE
RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This research is underpinned by the policy of inclusive education, in relation to the support of the learning and development of learners with ADHD in a grade three classroom. According to the DoE (2001, p. 11) “this policy framework outlines the ministry’s commitment to the provision of educational opportunities, in particular for those learners who experience or have experienced barriers to learning and development or who have dropped out of learning because of the inability of the education and training system to accommodate the diversity of learning needs, and those learners who continue to be excluded from it”. Inclusive education therefore refers to a process of building a single system of education which is committed to correcting the imbalances of the past by providing quality education to all learners, regardless of their individual differences and needs.

With the introduction and implementation of inclusive education, learners with ADHD are required to be supported in their learning and development within a mainstream classroom environment. As no two learners are the same, and as they require support specific to their learning needs, exploring how grade three learners with ADHD experience the support provided by the educators could assist in developing guidelines on how learners with ADHD can be further supported in their learning and development within an inclusive education system.

This chapter unpacks the design and methodology of the study focusing specifically on the aim, statement of the problem, data collection methods and analysis and other aspects which indicate how the study was conducted.

3.2 STATEMENT OF THE PROBLEM

ADHD has been evident in learners in classrooms for many years. Previously, learners with ADHD may not have been provided with sufficient support within the classroom because of the fact that the barriers the learners were experiencing were

believed to reside primarily within the learner. According to the DoE (2001, p. 24) “many learners experience barriers to learning or drop out primarily because of the inability of the system to accommodate the diverse range of learning needs typically through inaccessible plants (school buildings), curricula, assessment, learning materials and instructional methodologies. The approach advocated in this white paper is fundamentally different from traditional ones that assume that barriers to learning reside primarily within the learner and accordingly, learner support should take the form of specialist, typically medical interventions”. With the implementation of inclusive education more and more educators are evidently beginning to realise the importance of providing support specific to the individual needs of all learners within the school system.

3.3 AIMS OF THE STUDY

Taking into account the above and the policy and practice of inclusive education, with particular reference to learners with ADHD, the following aims were formulated.

3.3.1 Primary aim

To explore how grade three learners with ADHD experience the support provided by their educators, in an inclusive education context.

3.3.2 Secondary aim

To develop guidelines in the form of recommendations on how learners with ADHD can be further supported in their learning and development, in an inclusive education context.

3.4 RESEARCH QUESTIONS

The research questions can therefore be formulated as follows:

3.4.1 Primary research question

How do grade three learners with ADHD experience the support provided by their educators, in an inclusive education context?

3.4.2 Secondary research question

What guidelines or recommendations can be developed on how learners with ADHD can be further supported in their learning and development, in an inclusive education context?

3.5 RESEARCH DESIGN

3.5.1 Qualitative research

In this study a qualitative, explorative, contextual and interpretive research design (Mouton, 1994) was used. According to Dawson (2006, pp. 14-15) qualitative research explores “attitudes, behaviour and experiences through such methods as interviews or focus groups. It attempts to get an in-depth opinion from participants. As it is attitudes, behaviour and experiences which are important, fewer people take part in the research, but the contact with these people tends to last a lot longer”.

A qualitative study was therefore most suited to the topic as I was aiming to gather descriptive data which would provide an understanding of the particular experiences of support of the participants with ADHD in the classroom. Henning, et al. (2004, p. 3) claim that in a qualitative study the “‘variables’ are usually not controlled because it is exactly this freedom and natural development of action and representation” that we wish to access. Wanting to understand, and also explain, by using evidence from the data and from the literature, what the phenomenon being studied is about, is key to qualitative research. Wanting to place this understanding within the boundaries of an ‘instrument’ that was designed beforehand, will limit the data to those very boundaries. As the learners with ADHD have specific information which only they

were able to provide, a qualitative study provided me with the freedom to explore in as much detail their unique experiences within the classroom and how they interpret them.

3.5.2 Trustworthiness of qualitative research

Krefting (1991, p. 214) argues that qualitative research is often evaluated against "criteria appropriate to quantitative research and is found to be lacking". Taking this into account, Krefting further argues that in order to determine the trustworthiness of qualitative research, different criteria need to be used. The author specifically highlights four criteria which can be used within qualitative studies to assist researchers to ensure that their data is trustworthy, these being; credibility, transferability, dependability and confirmability. In the sections below the criteria will be explained, followed by how I applied them to ensure trustworthiness.

- **Credibility**

According to Terre Blanche and Durrheim (2006, p. 62) "credible research produces findings that are convincing and believable". There are a number of things that a researcher can do to increase the credibility of a study. Specifically within this study I ensured that a prolonged period of time was spent within the field, until the data reached a point of saturation. This ensured that the quality of data produced was not affected by time constraints.

Secondly, through triangulating both the data collection methods and data sources, I increased the credibility of the study further. I interviewed both learners and their educators and then compared the data that was gathered from both groups of participants. Through this process I was able to ascertain the degree to which the data could be considered an accurate and true reflection of the experiences of the learners with ADHD with regard to the support they receive in the classroom. Furthermore, I also observed the learners with ADHD in their classroom to provide a means for validating the data that was gathered during the interviews.

- **Transferability**

Krefting (1991, p. 216) claims that “research meets the criterion of transferability when the findings fit into contexts outside the study situation that are determined by the degree of similarity or goodness of fit between the two contexts”. To ensure that the findings could be transferred to other contexts of a similar nature, I ensured that the data was written up in a detailed and descriptive nature to ensure that no one would be able to insert their own meaning into the findings. I also ensured that descriptive data concerning the participants’ background, as well as the context of the research, was provided. Providing rich and detailed descriptions of this nature will allow others to understand the context of the research, which in turn will assist them to identify what applies to their specific situation. This view is further supported by Krefting (1991, p. 220) who claims that “it is critical that researchers provide dense background information about the informants and the research context and setting to allow others to assess how transferable the findings are.

- **Dependability**

According to Terre Blanche and Durrheim (2006, p. 64) dependability refers to the “degree to which the reader can be convinced that the findings did indeed occur as the researcher says they did. Dependability can be achieved through rich and detailed descriptions”. The direct quotations of the participants further provide a chain of evidence that the findings are a true and accurate reflection of the learners’ experiences in the classroom. As well as ensuring that the study was written up using detailed descriptions, I also ensured that the methods of data collection and analysis used were clearly explained. Krefting (1991, p. 221) argues that “such dense description of methods provides information as to how repeatable the study might be or how unique the situation is”.

- **Confirmability**

Confirmability refers to the “degree to which the findings are a function solely of the informants and conditions of the research and not of other biases, motivations and perspectives” (Krefting, 1991, p. 216). To address confirmability I firstly incorporated

an audit strategy. “This strategy involves an external auditor attempting to follow through the natural history or progression of events in a project to try and understand how and why decisions were made. In addition, confirmability suggests that another researcher could arrive at comparable conclusions given the same data and research context” (Krefting, 1991, p. 221). During the data analysis process I incorporated an open-coding technique. The categories and themes were discussed with a fellow researcher during a consensus discussion allowing us to agree on the themes and categories that were developed.

Secondly, in order to address the issue of confirmability further I also used triangulation. According to Cohen, et al. (2007, p. 141) “triangulation may be defined as the use of two or more methods of data collection in the study of some aspect of human behaviour”. Within this study I triangulated the data collection methods by incorporating individual interviews, focus group interviews and observation, and also the sources of data, i.e. the learners as well as the learners’ educators. I was then able to ascertain the degree of accuracy of the data that was collected from both the learners and their educators, as the data could be compared for similarities and/or differences. Krefting (1991, p. 221) asserts that “triangulation of multiple methods, data sources, and theoretical perspectives test the strength of the researcher’s ideas”.

3.6 RESEARCH METHODOLOGY

3.6.1 Introduction

According to Leedy and Ormrod (2005, p. 12) research methodology is the “general approach the researcher takes in carrying out the research project; to some extent, this approach dictates the particular tools the researcher selects”. Henning, et al. (2004, p. 36) concurs that methodology refers to the “coherent group of methods that complements one another and that have the ‘goodness of fit’ to deliver data and findings that will reflect the research question and suit the research purpose”. In this study there were a variety of aspects which contributed to the methodology of the study, as will be described in the following section.

3.6.2 Literature review

A literature review focusing on ADHD, inclusive education and support, provided the background for the study. This served as a frame of reference to highlight existing theories and prior research studies and to define the research question (Leedy & Ormrod, 2005). A variety of relevant literature, research and theories were reviewed to unfold the theoretical framework that is used to explain the findings of the study (Bak, 2005).

3.6.3 Case study

As I was aiming to gather descriptive data, the focus was narrowed to a small number of learners with ADHD who could provide me with data of this nature. Therefore a case study was most suited to this particular research enquiry. According to Bromley, as cited by Nieuwenhuis (2007, p. 75) case study research is "a systematic inquiry into an event or set of related events which aim to describe and explain the phenomenon of interest".

Due to the fact that learners with ADHD are influenced by a variety of aspects within the classroom, everything that takes place during the course of the day, including the behaviour and attitude of the educator, will have an effect on the learners. As there are many aspects that could affect a learner with ADHD, a methodology that would allow one to capture the experiences of the grade three learners with ADHD in all its complexity was clearly required. This view is further supported by Cohen, et al. (2007, p. 253) who claim that "a distinguishing feature of case studies is that human systems have a wholeness or integrity to them, rather than being a loose connection of traits necessitating in depth investigation".

3.6.4 Paradigm

As I was trying to understand how grade three learners with ADHD experience the support provided by their educators, the study was conducted, drawing on the interpretivist paradigm. The reason for this is the fact that the central aspects within the interpretivist paradigm are "to capture the lives of the participants in order to

understand and to interpret meaning" (Henning, et al., 2004, p. 19).In order to gather sufficient data to answer the research questions required gathering information in the form of accounts. This means that I was trying to access the participants' individual thoughts and feelings about the topic. I was therefore interested in understanding the behaviour, attitudes, beliefs and experiences of both the learners with ADHD and their educators in order to gain an understanding of how learners with ADHD are being supported within the context of inclusive education. Therefore the interpretive paradigm was best suited to the study as the interpretivist paradigm "assumes that reality is not objectively determined, but is socially constructed" (Nieuwenhuis, 2007, p. 58). The underlying assumption is that by studying the participants in their social contexts, there is greater opportunity to access and understand their own experiences of support.

3.6.5 Sampling

Purposive sampling was best suited to the study as it ensured that participants who would be of value to the study could be selected. Within this study the participation of learners with specific characteristics was required. The primary participants were learners in grade three, between the ages of 8 and 9 years old. I decided to include only boys within the sample as there are more boys with ADHD than girls. The learners needed to have been clinically diagnosed with ADHD, which in turn meant that they had been prescribed Ritalin or an alternative form of stimulant medication. I therefore made specific choices about which learners to include within the sample. It would have been of no value to the study to select the participants through random sampling as this would have resulted in a sample group who did not display the characteristics that were required for the study.

Table 1: Biographical information of the grade three learner participants

Learner participants	Age	Gender	Diagnosed with ADHD since	Medication
David	9	Male	Grade 2	Ritalin
Michael	9	Male	Grade 2	Ritalin
Andrew	9	Male	Grade 0	Strattera
Matthew	9	Male	Grade 2	Ritalin (LA)

Once I had identified the grade three learners with ADHD who would participate in the study, purposive sampling was again used to identify the secondary participants. The participation of all the educators who teach the four learners in the sample was required. It therefore made sense that I selected the participants through purposive sampling.

The learners who participated in the study had been selected from two grade three classes. In each class there was a total of 20 learners who all displayed a degree of individuality. I would therefore like to provide a brief description about the four learners who participated in the study.

David was enrolled at the school in 2005, when he started grade nought. He is a very positive and diligent young learner. He is fairly shy in front of others and only spoke when spoken to and at times appeared withdrawn from the events around him. David has been diagnosed as having ADHD since October 2007. He was initially prescribed Strattera to assist him with his disability but, as it was having little effect, in June 2008, it was requested that he try an alternative treatment, and has since been placed on Ritalin. According to David's file, he is not currently attending extra therapies outside of school. However, in grade two he attended Occupational Therapy. There were no indications, within his file, of the existence of co-morbid disorders.

Michael was also enrolled at the school in 2005, at the beginning of grade nought. He is a vibrant and boisterous person who strives to be popular. He is a very open and vocal individual who appeared to enjoy being the centre of attention. He is very confident and enjoyed taking charge of the situation. Michael was diagnosed in 2007 as having ADHD, and was therefore diagnosed in grade two. His file indicated the presence of a co-morbid disorder as it stated that he also suffers from depression. In grade two he started going to occupational therapy, which has been maintained to date. He is currently prescribed Ritalin.

Andrew started at the school in 2006, in grade one. He is a very pleasant young boy who aims to please. He tries hard in all that he does, but at the same time is an extremely anxious individual who does not cope well in stressful situations. There was no evidence of co-morbid disorders within his file, but it was indicated that he has a low self-esteem. He is particularly competitive and also places a lot of pressure on himself to succeed. He has been diagnosed as having ADHD since August 2005, which means he was diagnosed in grade nought. His file indicated that he had Occupational therapy for one year, during grade two. He is currently prescribed Strattera.

Matthew started at the school in 2007, in grade two. He is a likeable individual who appeared content and happy. He also appeared to be rather absent minded and as a result was far more dependent on adults. He is a very emotional individual whose main goal in life appeared to be ensuring the happiness and love of others. Although he was confident, he still looked for reassurance from others before making a decision, indicating his need to be accepted and popular. Matthew has been diagnosed as having ADHD since January 2007, and was therefore diagnosed in grade two. He is currently prescribed Ritalin (LA) and attends remedial lessons twice a week.

After extensive discussion between the learners' parents and their educators at school, the learners were sent for assessment. All the learners involved in the study were diagnosed by a professional person (either a medical doctor or psychologist) in the community,

Table 2: Biographical information of the educator participants

Educator participants	Gender	Learning area	Teaching experience (years)	Qualifications
A	Female	Class teacher	20	M + 4 Majored in Remedial Education
B	Female	Class teacher	23	HDE Diploma in Special Education – Edgewood Certificate in Gifted Education - UNISA
C	Female	Afrikaans	35	B.A Degree Diploma in Primary Education Diploma in Remedial Education. Diploma in Special Education.
D	Female	Zulu	10	ECD Diploma
E	Female	AEU	21	Remedial Education. Diploma in Senior Primary Education Special Needs Education: 2 years College 2 years UNISA

As can be seen from the table above, five female educators were interviewed. Their qualifications varied as some had studied further in order to gain qualifications in remedial and special education. All the educators had a large amount of experience in the education environment, their teaching experience ranging from 10 to 35 years. Some of the educators were the learners' class teachers and others were responsible for teaching languages such as Afrikaans and Zulu to the learners. One particular educator was a specialist from the Accelerated Education Unit and did not actually teach the learners with ADHD, but had valuable information regarding these learners.

3.6.6 Data collection

3.6.6.1 Arts-based (collage) focus group interview

As young learners were participating in the study, I needed to ensure that a method of gathering data that would be sensitive yet at the same time motivating to the participants was developed. I therefore decided to incorporate an arts-based (collage) focus group interview within the study. According to Rodriguez (2007, p. 1) "arts-based methods use the arts as conceptual tools and modes of inquiry to understand the self, the other, and social realties. Researchers who apply these methods posit that approaching the other through less common methods allows us to transcend our closed ways of looking and thinking, thus breaking us out of stale methodological/epistemological paradigms". Therefore I felt that an arts-based method of data collection would allow data to be captured that was a true reflection of the learners' experiences, as the learners with ADHD were given the freedom to discuss the topic from their viewpoint without interference on my behalf. As was described in chapter one, within this specific research project I specifically decided to incorporate collage during the arts-based focus group interview. UNICEF (2001, p. 1) explain collage as a method which "involves the cutting out, arranging and sticking down of images that can be taken from a variety of sources. With the collage method, children feel less limited by their technical abilities than when they draw. This method seems to increase their visualising capabilities. Also the possibility of contrast of scale, such as a sheep as large as a public housing tower, can have symbolic and metaphorical potential which children often do not feel free to express in drawing". Robertson (2004), as cited by Norris, et al. (2007, p. 483) expand on this view and assert that "collage reflects the very way we see the world with objects being given meaning not from something within themselves, but rather through the way we perceive they stand in relation to one another". Furthermore the concreteness of the collage would possibly enable the young learners with ADHD to talk about their experiences more easily.

The collages that were developed reflected the learner's choice of which individual experiences they wanted to present, and I was then able to use the learners' collages as prompts during the focus group interview. Through discussing and interpreting the learners' collages, I was able to identify their experiences within the

classroom and gain greater clarity on how the learners with ADHD respond to the support they receive, yet, at the same time, draw on an age-appropriate method for gathering data from the young learners. It would have been unethical for me to simply overwhelm the learners with questions that they may not understand. In this respect I needed to be sensitive to their situations and ensure that no emotional or physical harm was caused to the participants.

When I arrived at the school, I was instructed to go to the art room where the four learners with ADHD would meet me. Unfortunately, two of the learners that had agreed to participate in the study were absent from school. I therefore was unable to conduct the focus group interview with all four learners and had to return to meet with the other two learners on a separate occasion. The same process was followed during both interviews whereby the learners with ADHD were provided with an A2 sheet of cardboard, magazines, pens, scissors and glue. The aim of the collage was for the learners to represent their experiences at school, showing how they are affected by ADHD and how they are supported by and respond to their educators. I developed a prompt which I wrote on a piece of cardboard. (See appendix E) The learners were given 45 minutes to complete their collages. I facilitated the activity and the learners were asked to work individually; they were encouraged to be creative. Once the collages were complete, a focus group interview of about one hour took place, where the learners with ADHD were provided with an opportunity to explain and discuss their collages. With their permission, I recorded the discussions, which I later transcribed. This provided me with a description of the learners' collages and experiences. As I was unable to conduct the focus group interview with all four learners with ADHD at the same time, as had been planned, at a later stage arrangements were made for me to meet with the learners in the principal's office to discuss their collages as a group. The same process was used whereby I recorded the discussions, which were later transcribed to corroborate the data gathered from the initial focus group interviews. The completed collages are displayed in chapter four.

3.6.6.2 Individual interviews

As the data that I was aiming to collect is largely descriptive in nature and based on the experiences of the participating educators, the methods of data collection needed to ensure that they were provided with the freedom to discuss the topic from their own point of view in as much detail as they chose. Individual interviews were therefore the most appropriate method for data collection within this study, as they are successful in capturing the holistic experiences of the participating educators. According to Nieuwenhuis (2007, p. 87) an interview is "a two way conversation in which the interviewer asks the participant questions to collect data and to learn about the ideas, beliefs, views, opinions and behaviours of the participant".

As I wanted to understand the participating educators' unique experiences in order to develop my understanding of the topic, it therefore required a gathering of a large amount of detailed and descriptive data from the participants. According to Cohen, et al. (2007, p. 349) interviews "enable participants to discuss their interpretations of the world in which they live and to express how they regard situations from their own point of view". In this study I used an unstructured interview (see appendix F) to interview the five educators who teach the learners with ADHD. This specifically included the educators who taught the learners Zulu and Afrikaans, the learners' class educators, as well as a specialist from the Accelerated Education Unit based at the school. Dawson (2006, pp. 28-29) explains that unstructured interviews are a type of interview where "the researcher attempts to achieve a holistic understanding of the interviewees' point of view or situation. Because you are unsure of what has happened in his life, you want to enable him to talk freely and ask as few questions as possible." The individual interviews were conducted at the school during the educator's free periods and took approximately 30 - 40 minutes each. During the interview the educators were asked one open-ended question to tell me about the ADHD learners in their class and how they support them. A variety of sub-questions were also developed to ensure that any aspects that the educators did not discuss could be addressed. With permission from the educators, the interviews were recorded and then later transcribed.

3.6.6.3 Observation

I incorporated observation within the study so as to increase the trustworthiness of the findings through crystallization. Crystallization refers to the “practice of validating results by using multiple methods of data collection and analyses” (Maree & van der Westhuizen, 2007, p. 40). Once the data from the individual interviews and the arts-based focus group interviews had been collected, an observation schedule (See appendix G) was used to explore the situation in the class and to confirm the data that had been gathered through the interviews. Observation means that “the situation of interest is checked and a person or some mechanical device records the relevant facts, actions, or behaviours” (Allen, 1999, p. 1). Although I had aimed to include four learners with ADHD from the same class, some parents did not provide consent for their child to participate in the study and therefore only three of the learners with ADHD were from the same class. I therefore had to ensure that I visited two classes to observe all four learners with ADHD in the classroom environment. During my first visit to the school I attended a maths lesson and observed one of the learners with ADHD in the classroom. I then returned to the school and attended a literacy lesson and observed the other three learners in their classroom. I observed the learners in both classrooms for an hour and a half each. My visits to the school allowed me to observe how the educators interacted and supported the learners with ADHD, as well as how the learners responded.

3.6.7 Data analysis

Due to the fact that qualitative studies can generate large amounts of textual data which can therefore be difficult to analyse, I used a coding technique which made the data more manageable to analyse and interpret. According to De Vos, et al. (2000, p. 346) “coding represents the operations by which data are broken down, conceptualised and put back together in new ways”. Although there are a variety of coding procedures, specifically within this study I decided to incorporate an open-coding technique. De Vos, et al. (2000, p. 346) explain that when using an open-coding technique “data are broken down into discrete parts, closely examined, compared for similarities and differences, and questions are asked about the phenomena as reflected in the data”. I therefore analysed the raw data and identified

units of meaning, and grouped them into categories and themes which were then used to explain how learners with ADHD experience the support provided by their educators. A literature control was done to support the findings, i.e. recontextualisation of data.

3.6.8 Ethical considerations

According to Mouton (2001, p. 238) the "ethics of science concerns what is wrong and what is right in the conduct of research. Because scientific research is a form of human conduct, it follows that such conduct has to conform to generally accepted norms and values. As in any sphere of human life, certain kinds of conduct are morally acceptable, whereas others are not". In this particular study, due to the fact that a qualitative methodology within the interpretivist paradigm was employed to research young learners with ADHD, I needed to ensure that ethical guidelines were adhered to at all times, both during and after the research process. In any form of research study, ethics are very important, but when a researcher includes humans as participants, especially children, the ethics are even more crucial. In this study the following guidelines were adhered to:

- **Informed consent**

According to Leedy and Ormrod (2005, p. 101) "research participants should be told of the nature of the study to be conducted and given the choice of either participating or not participating. Furthermore, they should be told that, if they agree to participate, they have the right to withdraw from the study at any time. Any participation in a study should be strictly voluntary".

All of the participants were informed of what the research expects from them and the process that is involved. A letter explaining all the details of the study was provided to the potential participants. (See appendix C and D) Within the letter a section was included whereby the participants could choose whether or not to participate in the study. In this way written consent was obtained from all participants (learners and educators) involved in the study, indicating their willingness to participate. Due to the fact that young learners were participating in the study, consent was also received

from the learners' parents. Furthermore, in the letters to the participants, it was also clearly stipulated that participants were free to withdraw from the study at any point, if they chose to do so.

- **Confidentiality and Anonymity**

According to Mouton (2001, p. 244) anonymity refers to "the principle that the identity of an individual is kept secret" and the "principle of confidentiality refers to the information gathered from the subjects". Cohen, et al. (2007, p. 64) assert that "the essence of anonymity is that information provided by participants should in no way reveal their identity". In the final dissertation, I used pseudonyms to ensure that the information provided did not expose the identity of the participants. Furthermore, Cohen, et al. (2007, p. 65) claim that another way of protecting a participant's right to privacy is through the promise of confidentiality. This means that, although researchers know who has provided the information or are able to identify participants from the information given, they will in "no way make the connection known publically; the boundaries surrounding the shared secret will be protected". Although the information that the participants provide was included within the final dissertation, I ensured that the information was written up in such a manner that guaranteed that outsiders would not be able to identify the participants from the information provided.

- **Protection from harm**

According to Leedy and Ormrod (2005, p. 101) researchers should not expose research participants to "undue physical or psychological harm...nor should they be subjected to unusual stress, embarrassment, or loss of self esteem". I made all attempts to ensure that the participants understood the nature of the topic before they agreed to take part within the study. Therefore the participants were made aware of any possible risks before the study commenced. The nature of this particular study was unlikely to place unusual stress on the participants and I aimed to ensure that all the participants, especially the learners, felt that they had been specially selected to participate in the study. The learners were informed that I required specific information that only they could provide and that, without them, the

research questions could not have been answered. This helped to create a sense of pride for taking part in the study. I did everything in my power to ensure that no form of harm was caused to the participants and that their best interests were always put first, even if this was at the expense of the study and prohibited me from gathering the required information.

- **Honesty with professional colleagues**

According to Leedy and Ormrod (2005, p. 102) researchers must report their findings in a "complete and honest fashion, without misrepresenting what they have done or intentionally misleading others about the nature of their findings". I made sure that the participants were provided with the freedom to answer the questions as they saw fit. The data that was gathered was included with honesty on my behalf and no attempts were made to alter the data to suit the desired outcomes. I remained in the field until the data reached the point of saturation which ensured that enough data was gathered to answer the research question with honesty and integrity.

3.6.9 Design Limitations

An adult researching children always faces the issue of power dynamics as "interviewing is not simply a data collection exercise, but is a social, interpersonal encounter" and therefore power relations can influence the process of the interview (School of Education, Training and Development, 2004, p. 88). Therefore, the participants may have been inclined to provide me with information that they assumed I wanted to hear. Therefore, observing the learners with ADHD once the interviews were complete allowed me to ascertain the accuracy of the responses that were provided. Working from a qualitative approach, large amounts of descriptive data were generated. This process can be extremely time consuming and, for this reason, a larger sample size was not used in this study.

Working with young learners can be difficult as they do not understand the complexity of the study. I could not simply interview the learners with ADHD and expect to gather sufficient data. I therefore needed to ensure that methods of data collection which were sensitive and age appropriate were developed. I therefore

incorporated an arts-based (collage) focus group interview with the learners, which tried to ensure that they were comfortable to provide me with the relevant information for the study. The learners felt as though they were simply discussing their collages, as opposed to being questioned about their disability and the challenges they experience.

3.7 CONCLUSION

In this chapter a description of the research problem, the research design and the methodology were provided. The aims of the study and the research questions were also highlighted before the methods of data collection and analysis that I used to answer the research questions were discussed. Finally, the ethical considerations that were taken into account throughout the study were discussed.

CHAPTER FOUR
RESULTS AND DISCUSSIONS

4.1 INTRODUCTION

In this chapter the major themes and categories of the learners' experiences of support within the inclusive class will be presented. In order to validate the findings, I will incorporate the verbal accounts provided by the learners and their educators during the interviews. This will be complemented by my observations during my visits to the class.

Bronfenbrenner's ecosystemic model of child development stresses the importance of acknowledging learners' individual differences and diversity. According to Donald, et al. (2002, p. 56) "specific factors at any one level can be seen as interacting with specific factors at other levels. For example the values held by any one student could be seen as interacting with – shaping and being shaped by – the values of his family, peer group, teacher/classroom, school, community, and the broadest level, the dominant ideology and value of the social system". As each learner develops within a unique environment, it can be concluded that every learner will have specific needs requiring specific support which caters for their individual needs.
This view is expanded further by Engelbrecht and Green (2006, p. 160) who assert that

> *"...since barriers to learning are understood differently, the range of support options is expanded. From an ecosystemic perspective (Bronfenbrenner, 1979) each individual learner is located within a complex network of intersecting contexts, all of which can influence the extent to which he or she can benefit from instruction and make academic progress. Barriers to learning may exist at any level of the system. They may arise from the subsystems that make up the self (physical, emotional, intellectual or spiritual) or from a mismatch between the self and the surrounding contextual systems. This understanding of individuals-in-context implies that interventions to remove or minimise barriers need not necessarily focus directly upon*

the learners, but may take the form of changes to one or more of the systems of which he or she is part of".

Therefore the environment in which a learner develops, and the interactions which take place within those environments, will have a tremendous influence on his or her development. Thus, each learner will not only have specific needs, but will also have specific feelings towards the educator and her support. Therefore, considering the main concepts of Bronfenbrenner's model, the learners voiced similar views on some issues but differed in the degree of importance they placed upon these issues.

4.2 RESULTS

Table A: Learners' experiences of support in an inclusive classroom

MAIN THEMES	RELATED CATEGORIES
Theme 1: **VARIATIONS OF SUPPORT EXPERIENCED**	• Whole school support • Providing for individual requirements • Enjoying a variety of lessons and resources
Theme 2: **VARIED FEELINGS TOWARDS EDUCATOR SUPPORT**	• Being acknowledged by the educator • Being helped to develop a sense of responsibility and autonomy • Being favourably compared • Being treated like all other learners
Theme 3: **LEARNING IN A HAPPY ATMOSPHERE**	• Personal relationships with the educator • The need for friends • Classroom environment arrangements to suit learners' individual needs • Not always perfect

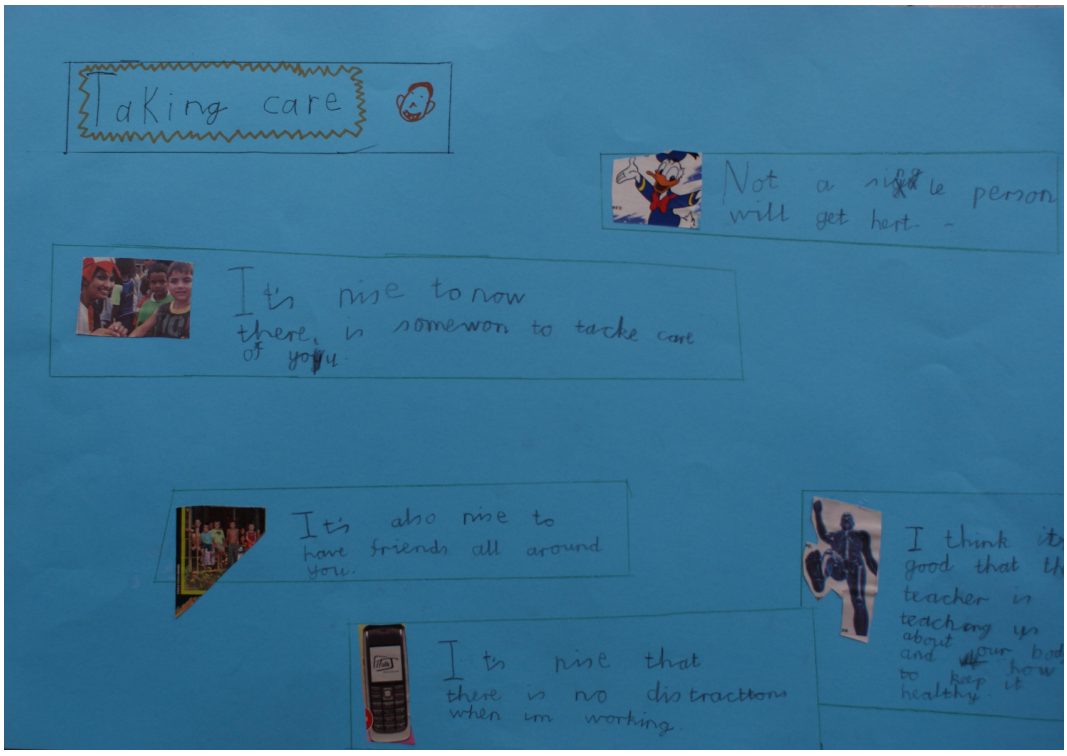
Each learner with ADHD created a collage using pictures from newspapers and magazines, and added writing to display their experiences in the classroom with their

educators and other learners. The collages were then used as a prompt during the focus group interview to ensure that learners felt at ease to discuss the topic from their own point of view. Taking this into account, it was more appropriate that I placed greater emphasis on an analysis of the discussions that were generated from the collages, not necessarily on the collages themselves. The collages themselves were beneficial, and did provide some valuable aspects that were included in the findings, but the most valuable data was that which emerged after a thorough discussion during the focus group interview. Thus the collages were used more specifically as a prompt to assist the learners with ADHD to feel comfortable to discuss their experiences from their own view. Data was also gathered from the learners' educators using individual interviews. Once both the focus group interviews and the educator interviews were completed, I transcribed the discussions, which were then analysed using an open-coding technique. As the primary participants were the learners with ADHD, it was their experiences that I was mostly concerned with when analysing the data. Therefore the educators' experiences as well as the data gathered during my visits to the school were used to support what had been identified among the learners. After a through analysis I was able to identify some of the major themes and categories evident in the data which then formed the basis of the findings, which will be discussed in detail in this chapter. However, before I undertake a discussion of the findings, it would be appropriate to highlight some of the aspects that were not included in the themes and categories but which were included in the learners' collages.

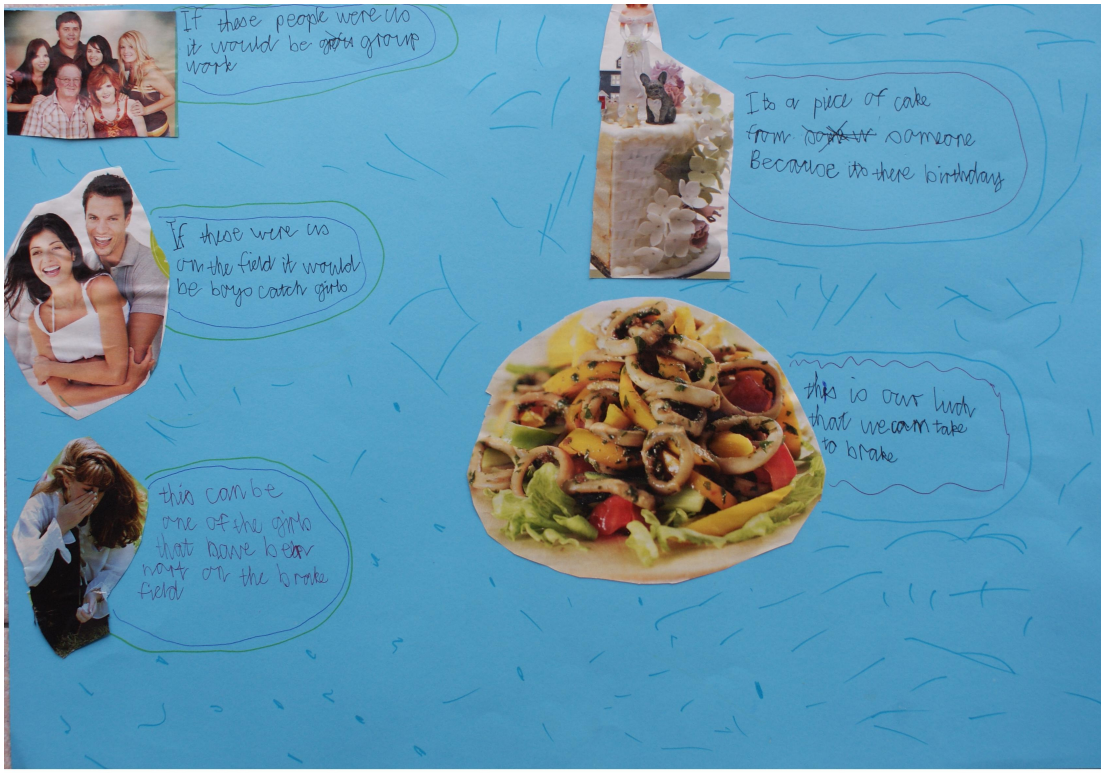
Some of the learners with ADHD placed a greater emphasis on food and eating than was displayed in the findings. Although some aspects were included in the findings, I felt that this information was not relevant in terms of support within the classroom, and therefore only included what was relevant to the topic. Furthermore, the learners also discussed other topics which appeared to interest them such as sport and animals, and again, I only included the relevant aspects of these topics to ensure that the data was specifically addressing the research question. Finally, the last topic that was included in the collages but not discussed in the findings focused on the importance of not judging others by their physical appearance. They stressed that everyone at school accepted and cared for others, no matter what they look like. The collages that were developed by the learners are provided on the next page.

Andrew's collage

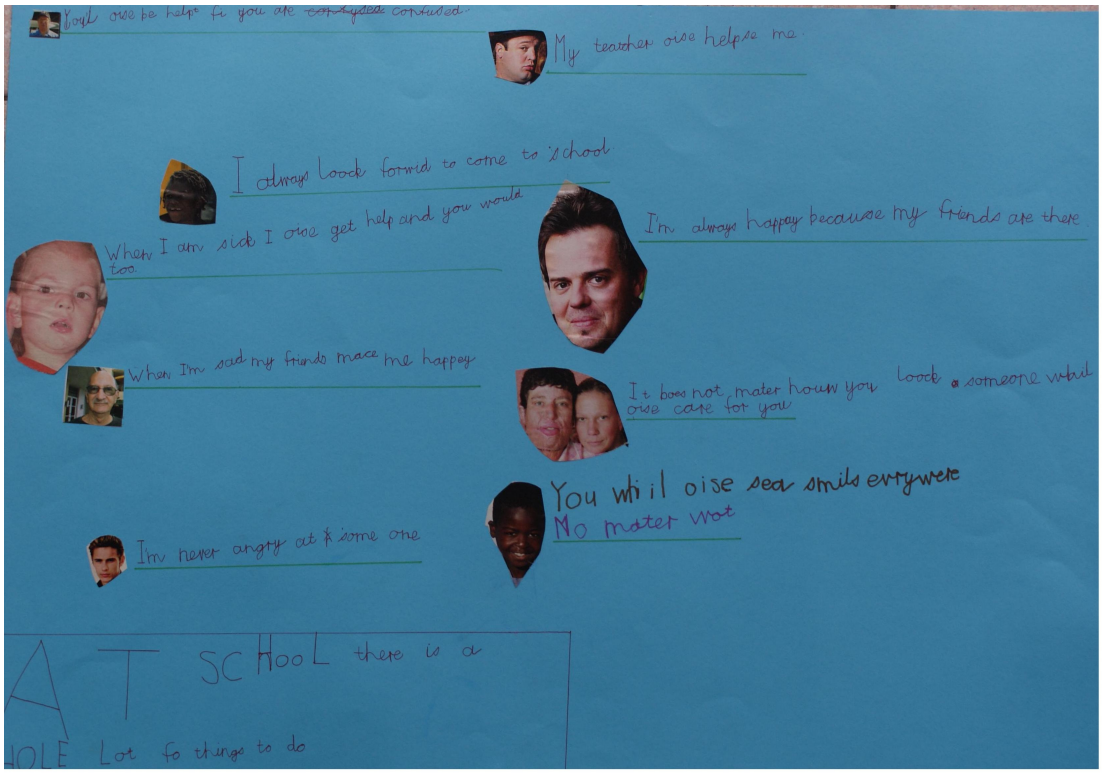
David's collage



Michael's collage



Matthew's collage



4.2.1 Theme 1: Variations of support experienced

According to the DoE (2001, p. 17) inclusion focuses on "overcoming barriers in the system that prevent it from meeting the full range of learning needs. The focus is on the adaptation of and support systems available in the classroom". Taking into account the diversity amongst learners in South Africa, the above statement implies that educators should be implementing a variety of support structures, which promote the development of all learners. Teaching within an inclusive education setting therefore requires that educators make alterations in order to cater for the individual needs of their learners, in order to minimize the barriers to learning experienced by such learners. Theme one therefore focuses on the variations of support experienced by the learners with ADHD who participated in the project.

- **Whole school support**

It emerged that the learners with ADHD at this particular school are supported though various support structures which were set in place in the learners' initial stages of schooling and have been maintained throughout their education.

The learners with ADHD themselves acknowledged a variety of support structures that had assisted them in their learning. Andrew indicated that "sometimes I get help from my friends and sometimes I get help from my teacher". David responded by saying "I named my chart taking care because there is always a teacher or a child to help you". When discussing the topic of whole school support Matthew stated "*I went to the AEU (Accelerated Education Unit) when I came to the school for the first time. They test you with your reading and maths to see what grade you need to go up to. My mum sometimes goes there to see how I am doing and they will tell her if it's improving or it's going down. If it is going down then you have to do more work to teach you more and if you improving then they help me to stay on that level. Now I go to another lady outside of school who helps me with my reading and maths".*
At this point Michael added to the conversation and said, "*I used to go to the one lady up in the senior primary and she does all your skills with you. We would do writing, and then she would give us a math's sheet and then if we still had time left we would play some games".*

It appeared that most learners had experienced support not only within the school but also from a community of professionals. The educators at the school believe in forming close ties with support personnel both within the school and the broader community. In some instances parents chose to make use of support services from within the broader community as was indicated by David as he explained "*I used to go to a place in Gilletts. And she helped me with my pencil grip. That was in grade two and some of grade three. Now I have a lot of meetings with doctors and medication people and also lots of OT specialists".*

This view was confirmed by an educator who worked in the Accelerated Education Unit. "*Ok first of all the teacher sees if there is a problem. Then she goes to the parents and explains the problems she has observed. Our advice is to have a full psychological assessment to find out if the child is performing at the optimum level and to identify any other problems he is having with ADHD. The mom also gets a questionnaire to fill in, which is given to the psychologist, who does an analysis over and above the full assessment. The full assessment comes back to me and the class teacher and then we look at the recommendations. The other options are that the child might need occupational or speech assistance or maybe even a remedial school, or another placement. It is then the class teacher's duty to follow up those recommendations. What I do is I just provide the service because I have occupational and speech psychologists on the property".*

Another educator highlighted the benefit of whole school collaboration by stating *"we (educators) have got a very strong tie. What I love about having the AEU is it is so hands on. Often learners who are struggling will go there for extra lessons. I can go even before their lesson and say I don't know what you have planned to do today with such and such a child, but I have just introduced fractions and these children need a lot more practical work and I have run out of time and need to move on. Even though they have got such beautiful resources down there, I will take my fraction game, because this is what he is familiar with, and then they will consolidate with the learner".*

Another educator explained that *"the grade three educators meet every Thursday. I do the maths for the week, another educator does the spelling, homework and life*

skills and then the literacy is done by someone else. So we pool ideas and team up. Obviously you teach with your own flair and you use your own initiative but that's how we work and it works amazingly".

In terms of community support a particular educator said, *"I have always been able to phone somebody or I have even gone with the principal to see the doctor and say this is the child, this is what I am dealing with, can you give me advice, and they do, he was very supportive, so I have never had a problem".*

During my observation of the classroom interaction, I noticed that educators did collaborate with each other to assist the development of the learners with ADHD and parents were encouraged to take part in their children's learning. While the learners were completing their maths activities, one of the learner's parents arrived and took groups of learners to a separate room where she listened to their reading. This ensured that the educator was available in the classroom to assist learners who were still completing the activities while other learners were provided with an opportunity to practice their reading. This same process was observed during a literacy lesson, when another parent arrived to take some of the learners for reading outside the classroom. A specialist from the Accelerated Education Unit also entered the classroom during the lesson to take one of the learners for extra lessons.

According to Kruger and Adams (2002, p. 259) "the extent to which the inclusion of learners with barriers to learning and development succeeds in South African schools will depend largely on the teachers who have to implement it. If the teachers are well trained, well motivated and creative, learners will reap the benefits that the system has the potential of providing. However, it must be emphasised that the education of learners with barriers to learning and development is not the responsibility of the teachers alone. Teachers have to be supported by parents, the rest of the school, the education department and the wider community. It is a task that calls for team work and joint responsibility".

Landsberg, et al. (2005, p. 67) concur that "school based support teams should feature strongly in each school and should be flexible. The learning support teacher should take responsibility for the organisation of this team. Experts from the

community, special schools as resource centres, full service schools and medical services could be co-opted to this team where necessary. Support to learners who experience barriers to learning is therefore a team approach but the class teacher should be in the centre of that team". Peterson and Hittie (2003, p. 130) further emphasise that "effective inclusive schools build a culture of mutual help and support among all staff – teachers, secretaries, support staff, custodians. Helping children is the overriding aim, but all concerned understand that helping one another is a prerequisite for this to occur".

Taking the above into account, the need for whole school support and collaboration cannot be overemphasised if we wish to ensure the success of all learners with ADHD in the classroom. No educator is expected to work alone and should be provided with support from various personnel within the school and the broader community. This resonates with the view that a disability is not a private issue, but a public concern.

- **Providing for individual requirements**

Throughout the focus group interviews, although diagnosed with ADHD, all the learners displayed their own individuality. They were comfortable to be themselves which possibly indicated that they had been accepted at school as being individuals. Matthew stated that *"my teacher always helps me. When it's a very hard sum and I don't understand it then my teacher helps me if she sees I am stuck on something. Sometimes I have to ask her but then sometimes she comes to me".* David also indicated that educators made alterations to suit the learners' individual needs as he explained his situation. *"I'm quite a slow worker so when I don't finish something she lets me take it home, either the worksheet or the card and I can finish it at home".* Michael added to the conversation as he explained "*I am not so good with my literacy and language so she helps me a lot with that. Sometimes I am very slow but my teacher supports me with that. I am quite good at maths so nothing really happens with me for numeracy other than sometimes I don't manage to finish my work and then sometimes I can finish it the next day but sometimes she will just mark it up to where I have done, even if I have not finished it. Sometimes she will help me with the first few things and she will give me clues and stuff but sometimes,*

just to help us learn, she will say I am not going to give you the answer, this is for you to do, so that you can work it out yourself. But we can put our hand up whenever we like and she will either come to us or we will go to her". At this point David highlighted his situation by saying "s*he does the same thing for me but with me she puts me at a single desk cause then no one can talk to me and distract me and ask me for the answers. It helps me to concentrate by being at a single desk".*
Finally Matthew explained that *"sometimes if you are struggling and you can't get the words, then she will call people to the mat and help them. There are some girls in the class who do extra maths after school because they battle with maths. But with me she helps me concentrate because I often get distracted. If I am staring at something then she tells me that I need to do my work and if I am stuck on something then she'll come and help me. Sometimes in class there are people who finish before everyone so they go and play on the mat and then the teacher can help the rest of the class who have not finished".*

Most of the learners with ADHD who were interviewed have spent most, if not all, of their schooling thus far within this particular school and are obviously accustomed to being individually assisted. The manner in which the learners behaved and the ease with which they could be themselves indicated to me that these learners have indeed been developing in an environment that accepts diversity and individuality. The learners acknowledged the most obvious forms of support, such as being able to ask the educator for help during lessons and educators helping them to focus and control their behaviour, but, after interviewing the educators, it became apparent that the learners with ADHD were receiving a far higher degree of individualised support than even they had seemed to realise during the focus group interview. All the educators acknowledged the fact that every learner is an individual and therefore requires individualised support. One particular educator explained how different each participant was, and indicated the need for an educator to provide support which caters for a learner's individual needs. "David *is a very active, positive person. He takes part and learns so I can only say positive things about him. Michael is, if I had my way of summing it up, he is neglected from home. So there is no home support, but in class he works well, he is also very good and proactive. Andrew is a quiet child and also a good worker, he also has a very strong character. Matthew has got tremendous home support but out of the four, academically, he is the weakest. I*

don't think he would cope by himself but he has got fantastic support from his mother, where Michael has not got that. Michael's book is never signed but then I support Michael and say 'Ok Michael go for it'".

It appeared that these educators were aware of the individuality of each learner and therefore made attempts to make adjustments to cater for their individual needs, as was indicated by the following educator: *"There are two learners in the class which I take for extra lessons outside the classroom. When teaching, once you have given the instructions or while you are giving them, those are the ones that you will ask again, 'so what did I say?' So you can sort of reinforce what they are doing and then you will point out specific things that you know they are poor at. So say if it's reading, then I will make sure that they get an opportunity to read again or if it's more like a listening thing then the educator will say 'repeat the instruction again'. Like if they are weaker at maths, then obviously you are going to take them behind and do a little bit more with them. So it just depends on where they are weak. The one little boy is not actually academically weak his is more an organisation and a chaotic thing so there you try and help him by saying 'clean your desk', 'pack everything away' and 'keep it neat and tidy' and sort of try and help him in his organisation".*

When discussing with this particular educator what she might do differently to support and discipline the learners with ADHD in her class, she referred to adjustments to cater for a learner's individual needs. She responded by saying that *"I think it's more subtle because with those kids, they are already on their back foot, so you would probably do it more quietly. I would maybe go up to them and tap their desk or their head and say 'Come on you need to settle down' or 'I've been watching you for a while now and you actually not towing the line'. So I do things differently to support them but to a certain degree, unfortunately, you are catering for the extended child, the ADHD child and so on, so you do the best you can, that's always what I say. Personally, I don't think it's ever enough, but you do the best you can".* Another educator added to the topic by stating *"what I do because I don't have enough time with them, sometimes they work so slow, I always give them a chance to take their books home to catch up with their work. And also if the child is stuck in the class, I go to the child and I help the child, you know explain to him. It is*

important to give them support all the time and maybe arrange extra lessons for the children".

Taking into account the views of both the learners with ADHD and their educators, it can be concluded that these learners are respected for their individuality, and educators have acknowledged the need to provide support that caters for the individual learner. During the observation, I was able to ascertain that educators did indeed attempt to provide for individual requirements. Learners felt comfortable asking for assistance and the educator responded by taking into account the individual needs of each learner. The educator interacted with learners who were struggling or needed assistance on a one to one basis, and all attempts were made to include the learners with ADHD in the classroom. While learners were working on a literacy task, for example, the educator would call learners individually so that they could show her what they had done so far. Learners were provided with feedback, which was generally positive, and then continued to complete the task individually.

According to Peterson and Hittie (2003, p. 3) "if we seek to be inclusive teachers we would focus on the strengths and gifts of each person, valuing people with differences as human beings. Teaching is easier and more effective if we start with the understanding that our students will have a wide range of abilities. This understanding is vital if we're to be an inclusive teacher".

Dean (1996, p. 25) advises that "when a child appears to be making little progress, it is essential to seek information about the nature of the problem and to seek it fairly systematically. This should include studying the child as an individual, with individual home circumstances, experiences and interest, personality traits, abilities and limitations and any individual learning style and preferred modes of learning. It is particularly important to discover what interests and motivates him or her".

From the above it is evident that educators have acknowledged the diversity that exists among learners with ADHD and that every learner may require individualised support, specific to his or her learning needs. Therefore, as educators it is of paramount importance that we create a classroom atmosphere that is accepting of diversity and difference.

- **Enjoying a variety of lessons and resources**

Due to the fact that this particular school is a private school, the classrooms all had a wide variety of resources that were available to all learners, regardless of whether they had ADHD or not. Therefore the learners with ADHD are well accustomed to learning in an environment that offers a variety of resources. All the learners indicated that they were provided with a variety of resources within the classroom. David informed me that *"for dividing she sometimes gives us blocks and a white board".* Andrew listened carefully and then stated *"they don't really give you anything for literacy they only give you for maths. They give you like a chart or an abacus or we just use calculators and sometimes we also get flard cards.*
Matthew then excitedly explained that *"sometimes when we are finished we are allowed to play chess because it's a mind game. We have got lots of games but all our games are thinking games. We have got Uno. Most people think it's a fun game but you have got to think about your next move. There is also a space game. We also have lots of space posters on the wall. Last year we did the big five so we had those posters on the wall, so whatever we are doing, is what is on the wall".*

It became apparent that, not only did the learners enjoy a variety of resources, but they also enjoyed a variety of different lessons. Learners appreciated special treats and lessons, but at the same time acknowledge the importance of including formal lessons as well. It appeared that the learners felt that 'fun' lessons must be reserved for fun topics while formal lessons must still be included when focusing on academic learning. Andrew said, "*I like doing stuff in the classroom, its fun and I like doing maths and literacy because sometimes my teacher puts on music and that's nice. Some lessons we do something at our desks and then later we will move on to the mat".* Michael then commented that *"we often do group work together and we do it all at once, we all have our groups and then we will go and choose what we want to do and then we do it. For, like, news there will be a whole group of us and we will go and tell news in a circle. I also like it when we sometimes get forms and we get to choose who we want to interview. There are three people in a group and its fun. I also like to work on my own because when we in work in a group it's all the best friends and they want to talk and stuff".* Following the previous learners' comments, Matthew added to the conversation by saying that "*sometimes we work in groups,*

but there are some lessons where I like to be in a group and sometimes I like to work by myself. For fun stuff it's nice to be in a group though. David also enjoyed a variety of lessons as he stated that *"I think it's good that the teacher is teaching us about our body and how to keep it healthy, because if you don't have a healthy body you could die or get sick and you might have to go to the doctor. We also learn about animals at school. At the moment we're learning about the big five and we're going to the game reserve".*

The importance of educators providing a variety of different lesson or themes was made explicit by Michael who generally struggled with literacy as he stated "*I don't know if this really counts, but last term we did the big five and I am pretty good with animals and so I did really well. It helps to have lessons that I enjoy".*

After interviewing the learners' educators, they concurred that their particular school was equipped with a variety of resources that are incorporated into the different lessons that the learners experienced. One particular educator said *"We use lots and lots of games, so you could use particularly a group game, or a class game, especially for things like tables and bonds. When we introduce fractions we use a game to do that and then we have enough games so that you can sit with three groups of about seven learners and each group can work with a game. We ensured that the games we bought or made can be played in small groups if there is a need".*

Another educator informed me by saying "*we have produced a term plan so that before the term starts we have got the term planned out. So for example at the moment we are doing space and we make sure we cover a few things, like the solar system, the sun, and galaxies. Some lesson I will introduce it to them but sometimes a student will have to go to the box and find the information and they will be responsible for explaining that to the class, instead of me always feeding the information. We also make use of posters, and other resources but there are different ways of doing it depending on what you teaching. Like for shapes we use the play dough and the one time we did measuring and we made pizzas, we all went down to the kitchen, and they had to measure, a cup of cheese, two teaspoons of baking powder and a pinch of salt, so you obviously do what you can depending on what lesson you are teaching".*

Finally, another educator stressed the importance of incorporating a variety of techniques and resources. "*If I think of their learning styles, they are usually quite kinaesthetic, which means they have to do to learn, be with, or part of, to learn. You also have to introduce them to the visual and the auditory because usually that's one of their weaknesses so you have got to have all modalities. Sometimes they are very strong verbally but then they can't put it down on paper so then you take the strength and filter in the weakness so that they can eventually get exposed to all the different parts".*

As the researcher it was wonderful for me to see the learners with ADHD engaging in a variety of activities using a variety of resources. During the maths lesson, the educator firstly introduced the lesson by providing each learner with a set of flard cards with each card displaying a different number. The first nine cards represent the 'units' and ranges from one to nine. The second group represents the 'tens' and ranges from ten to ninety. Finally the last group of cards represents the 'hundreds' and ranges from one hundred to nine hundred. As a class, the learners played a game with these cards to assist them in gaining a thorough understanding of the topic. The learners were then instructed to work individually and complete the activities. They were also provided with a fun worksheet which they could do once all the other activities were completed. The educator therefore ensured that she catered for all the learners' needs and provided a range of techniques and resources to assist these learners. Furthermore, on the classroom walls were posters and charts. A display table was set up and the bookshelves contained interesting and exciting books. The learners with ADHD are clearly provided for with a wide range of learning materials to assist them in their learning and development. A similar situation was observed during the literacy lesson, where learners were again provided with white boards while sitting in a group on the mat and were asked to spell certain words. Individual learners were then asked to spell the words out in front of the class and the rest of the class would mark their own work. Learners who had made mistakes were given the opportunity to correct their mistakes. Once all the learners had spelt the words correctly, they were instructed to return to their desk and complete the first worksheet. Once learners had completed the first task they were provided with a second fun worksheet that they were required to complete alone, without assistance from their peers or the educators.

Specifically, when teaching learners with ADHD, Green and Chee (1997, p. 107) argue that “boredom is a big problem in ADHD and variation helps this loss of interest. Clever teachers change their tone of voice and the speed of presentation, or stop unexpectedly. The child is asked to answer questions or to play teacher and teach the lesson back to the class. Pictures, diagrams, tapes and models all give variety, and help reinforce listening. Some teachers provide a clip board to allow the ADHD child to keep their work in front of them, no matter how much they move or wriggle around”. Barkley (2000, p. 236) holds a similar view that the educator should change the style of presenting lessons and task materials, to help maintain the interest and motivation of children with ADHD.

By focusing on the above, it can be concluded that the educators in this particular school are attempting to conform to the policy of inclusive education and are catering for a wide variety of learning needs by ensuring that they incorporate a variety of resources, techniques and themes into the teaching and learning process. According to Engelbrecht, et al. (1999) inclusive education “requires teachers to be flexible in their thinking and innovative and creative in their approaches to teaching and learning. Teachers are expected to have the knowledge and skills to accommodate a range of diversity among learners”.

4.2.2 Theme 2: Varied feelings towards educator support

According to the DoE (2001, p. 16) “Inclusive education is about acknowledging that all children and youth can learn and that all children and youth need support in their learning and development”. However, providing support within the education setting will only be successful if educators are able to acknowledge the diversity amongst their learners. This view is further confirmed by the DoE (2001, p. 16) who maintain that “Inclusive education focuses on accepting and respecting the fact that all learners are different in some way and have different learning needs which are equally valued and an ordinary part of our human experiences”. Educators who have acknowledged this fact and are able to identify the uniqueness of every learner, will try to provide support according to the learner’s specific needs. As each learner has developed within a unique environment, it stands to reason that the findings display a relative sense of individuality in the learners with ADHD, as no two learners are the

same, and are therefore bound to have unique and individual feelings towards the educator and her support within an inclusive classroom.

- **Being acknowledged by the educator**

Educator acknowledgement appeared to be among the most important factors in motivating these learners to learn. A clear pattern emerged from the learners indicating their need for educator acknowledgement and praise. It appeared that these learners strove to be liked by their educators and enjoyed the attention given them as a result of their good work or behaviour. Although all the learners strove for acknowledgement from their educator, it was also clear that certain individuals had a greater need for acknowledgement than others. Firstly Andrew said, *"When I behave well or do something well my teacher lets me know and rewards me for it, like moves you on the star chart or she'll just say you have done well".* At this point Michael immediately brightened up and stated with eyes wide open, *"Yeah, that is a reward for me too. Sometimes we do get to put a star on our star charts and for every five stars we get a sweet but I also like the congratulations that I get from her".*

On returning to interview the learners a second time, the need for educator acknowledgement became even more apparent. David explained his situation regarding the topic of educator acknowledgment and stated, "*Well I don't like it when we get sweets because then if you have a bit too much then you get hyper and then it goes down and then you feel all sleepy. So I like it when the teacher just says well done. It makes me feel happy and proud".* This view was again confirmed by Matthew who further maintained that "*I like it when I have done well and she congratulates me and supports me, because last time I had too many sweets and then I was sick afterwards".*

It appeared that by educators responding to the good work and behaviour of learners with ADHD, the learners developed a relative sense of self-confidence in themselves. They evidently feel proud when they achieve, and this sense of pride is enhanced when their educators acknowledge their success. All of the learners with ADHD interviewed displayed a keen interest in their academic success, acknowledged the importance of achieving in their schooling and appeared

passionate in trying to do so. However, it was also apparent that factors other than future goals impacted on the learners' motivation to learn and develop. The learners indicated that educators made use of a variety of positive reinforcement techniques including educator praise, stars and sweets, moving their tokens up a space on the motivational chart, and 'thumbs up' (a technique used at the school whereby learners can gain points for their houses). However, all these factors appeared to relate directly to the fact that the learners' success was being acknowledged. This therefore leads me to assume that it actually does not matter what the reward is as long as it implies that the educator is aware of their success.

One educator explained the procedures she incorporates within her classroom. *"When they have got an activity I will tell them what the reward is. If we're doing maths but today we're going to concentrate on what's actually written, so whatever you do as long as you've got everything right you going to get...generally it's a star, otherwise if its something that's more challenging, then I have special stickers. Then I'll also say every now and then, 'today we doing an activity, so if you're first finished you get a sweet, but if you make a mistake then it doesn't count.' Sometimes it's a sweet, sometimes it's a star, sometimes it's a sticker, sometimes they go up to the principal and take their work up there. It just depends on what my emphasis is going to be though. If its a lot of stuff then its going to be an accuracy thing, but if it's math's it's going to be to work quicker, you know 'if you finish what is on the board today you going to earn a star' and you kind of make it achievable for everyone. Most of the time they will get a star in their book for what they have done in class".*

Another educator indicated that she too incorporated a variety of positive reinforcement techniques into her lessons. "*If the learners behave well or do something really well I will praise them. Sometimes I give them a token, you know like a 'thumbs up' and things like that. And if the child is doing lovely work I go to the child and I tell them 'you are doing lovely work', 'I really like your work'. They get happy about it and feel, all you know, proud of what they have done.*

One educator also emphasised how learners need to be acknowledged by their educators. *"If I think of Andrew, he is a very affectionate, but also quite a needy little boy, he needs me, even if it's just, 'my boy, that is excellent' or you know 'I really am*

proud of what you have achieved today'. So it's acknowledgement and I think they eventually want to please you, you know they do, if you are giving them that, they are actually desperate to please you. But I am absolutely so fond of him. He is divine. I am actually very lucky. I have a gorgeous set of children".

Observing the ADHD learners in the class highlighted the fact that the learners strive to be acknowledged by their educators. In one particular case, a learner opened his book to see he had received full marks for an activity. He immediately started smiling and looking for his educator. He then went up to her and said 'I got everything right, do I get a sweet'? The educator responded by saying 'you have to get everything correct today as well to get a sweet'. The learner was in no way disappointed, which led me to believe that he only asked the educator for a sweet so that he could remind her that he got everything correct and therefore receive his anticipated acknowledgment from her. On returning to observe the learners a similar situation was observed. Learners were instructed to check their books, and those who received a sticker were allowed to collect a sweet from the jar. Even though the normal sweets had run out learners did not mind receiving a far smaller sweet, indicating again that educator acknowledgment was more important to learners than actually receiving the tokens or sweets.

According to Barkley (2000, pp. 254-255) "Praise and other forms of positive teacher attention such as a smile, nod, or pat on the back are some of the most basic management tools teachers have at their disposal. Positive attention is valued by most children. Giving praise and acknowledgement may seem simple, but the organised and systematic use of such attention requires great skill. The teacher must be specific about what is praiseworthy and must convey genuine warmth. A variety of more powerful rewards, often in the form of special privileges such as helping the teacher, earning extra recess, playing special games, having computer time and doing art projects, can be given. Also, because frequent rewards are important in helping a child with ADHD, it should be possible to earn some of these rewards a few times a day. More valuable rewards should be earned over a longer period of time". It appears that being acknowledged by the educator, either through praise or through the use of rewards, assists in motivating learners to work harder. According to Grossman (2004, p. 500) this is due to the fact that "students appear to be able to

exert some degree of control over their inattentive and hyperactive behaviour when they are motivated to do so by extrinsic consequences". Green and Chee (1997, p. 185) further agree that "for children to feel good about themselves, they must see that their words are valued, that their talents are appreciated and that they themselves are respected and trusted. Take time to listen as the ADHD child talks. Acknowledge what the child says, and keep eye contact throughout the conversation and let them finish without interrupting them. Show you are interested and let them know you care. Use plenty of encouragement. 'You're great'. 'I like it'. 'Give it a go'. 'I believe in you'". Taylor (1994, p. 71) also asserts that to "reward is not just a matter of giving sweets or pocket money. Rewards like these will probably be useless if they are given grudgingly with sarcastic remarks and a sour face. Often the biggest reward of all is simply the way the other person reacts".

Taking the above into account, it can be concluded that these learners strive to be acknowledged by those around them. The acknowledgement that they receive is important to them and assists them to develop a sense of pride in their own achievements, and also to feel accepted and included.

- **Being helped to develop a sense of responsibility and autonomy**

All these learners had a sense of responsibility for their own learning and development. They linked achieving at school with increased opportunity as future adults and evidently wanted to be successful, hard workers in school. When the learners were asked what they would do if they were battling with a specific task, Andrew responded by saying, "S*ometimes if I am stuck, I will try for a little bit on my own to figure it out and then if I can't, then I will ask the teacher".*

During a discussion focusing on the emotional support provided by the educator, the learners were asked what the educator should or should not do when a learner is upset. David responded by saying, *"I would not give him sweets from the jar, because it would make me feel hyperactive and then that only lasts for a little time and then I feel sleepy once it wears off".* Michael then stated that if a learner's work was not completed appropriately the educator should "*call you up and tell you quietly so that you can teach yourself and rub it out and think of it and do it again. One time*

I could not do this word problem and she helped me with it, but then she started to get frustrated because I kept coming to her and asking for help and saying I couldn't do it. She kept saying 'try', 'you must think', 'fix it up' and then she drew five circles for me. I think it was a good thing that she got frustrated because it was a very simple thing and she wanted me to be first".

In contrast to these learners, Matthew was not as concerned with being responsible and developing autonomy. It appeared that he was far more reliant on educator intervention than the other learners. It was indicated by many of his educators that his mother provided him with a great deal of support and assistance. Although in many ways this is a positive aspect, too much assistance from more competent individuals may result in increased dependence on others. This sense of responsibility and autonomy that had developed in the learners possibly had resulted from the fact that many of their educators encouraged them to be responsible for their own development and not to simply rely on the educators or adults in their environment. Most educators were aware of the importance of learners' having a sense of independence in order to ensure that they develop into responsible and independent adults who are not reliant on others in later years. The emphasis appeared to be on finding a middle ground whereby learners can be assisted and supported but at the same time not deprived of their independence. One particular educator stated that "*Matthew's mother sits with him and learns and learns and learns. So he has got a chance in life which he probably would not have if the mother didn't. The disadvantage is that if there is too much parental involvement they never learn to be independent, so even in a higher grade they will be reliant on these structures. It's very difficult what advice to give. When I think of Michael, if the mother is too involved the child never uses that independence and will be dependent on others, actually for the rest of their lives. So there is a middle way, because if they are not involved at all, then the child has not really got a chance either and they will hate school, if they have no support from parents or teachers then they can't really cope in life. They hate school and they hate life overall. I just think the parents have to learn to back off some or other time to get more independence, with their own children. Like their own choices, and also learn the consequences.*

Another educator also held a similar view and encouraged her learners to become responsible and independent in their own learning and development*. "I have one thing that I drill with my children and that is 'don't give me second best', that is my policy, I have no problems with mistakes, I love teaching you, that is what I am here for, if you battling come to me but don't give me second best. My reasoning is when that employer chooses somebody, he will choose the person that gives their best, he will not just choose the person who is the brightest, more often than not".* When discussing the responsibility that learners have for themselves, the same educator stated, *"I think it's a combination, input from home, motivation from home, emotional aspects. You know every week I put up a different card on the board. So one week we focus on responsibility and then the next week we look at effort and then if you look there, we have perseverance, caring, team work and then next week is problem solving, and then I have got common sense left. So the focus for the week will be on that. For a child to be motivated they need to use their initiative they need to have team work, they need to have common sense and problem solving skills. I won't say to them 'could you just stand still', instead I say 'where is your self control, have you forgotten?' 'Just remember', so you try and use tactics that will work rather than always putting in rules. So I will say 'have you used your initiative today?' rather than 'what's the rule!'"* [Shouting it out].

The educators clearly had an effect on the learners in motivating them to take responsibility for many aspects of their own development. One educator commented by saying "n*ext week they will know that they have to come in for break and they will come on their own accord. But now did you see how the one owned up and told me that he had not finished his work, because he knows that he has not done it all".*

When I was observing the learners with ADHD in the classroom, I noticed that educators wanted to provide learners with a sense of independence and responsibility in their learning. When a learner asked for assistance, the educator would guide the learner individually and provide him with assistance but would then leave the learner to practice on his own. At a later stage the educator would return to check the progress of the learner. This ensured that the learners did not become too reliant upon the educator and were able to be responsible for their own learning. This was further emphasised when I returned to observe the learners in another class.

The educator gave the instructions to the class and when learners appeared to be moving off track, the educator made a point of reminding the learners of their instructions and what they were expected to do. Furthermore, the educator encouraged learners to be responsible by assigning them tasks, such as helping another educator carry her bags and handing out books to the class.

The need for educators to encourage learners to become autonomous and responsible individuals cannot be overemphasised. Bester (2006, p. 43) highlights this by claiming that "an underdeveloped sense of responsibility is often associated with ADHD sufferers. I believe that this facet of behaviour of ADHD sufferers causes the most tension in the home. But I also believe that something can be done about it. These children can be taught to accept responsibility bit by bit. An inadequate sense of responsibility has serious implications for one's whole life. Your career, relationships and social functioning are all negatively influenced by irresponsible actions". Furthermore, according to Goldstein as cited by Kruger and Adams (2002, p. 184) "learners should be given opportunities to control as many aspects of their destiny in the classroom as possible".

From the above it can be concluded that, although learners with ADHD may have an underdeveloped sense of responsibility, there are things that educators can do to assist learners to become independent and less reliant on others. Encouraging them to be responsible for their own learning and development is by far the best form of support that can be provided to learners because they are not always going to have others who can assist them. It is therefore crucial that techniques are set in place to equip learners with ADHD with these skills in the initial stages of learning.

- **Being favourably compared**

As stated previously, these learners with ADHD appeared determined to be successful in their learning and development. The competitive nature of the learners appeared to foster a healthy sense of determination to strive to be good at what they did. They compared themselves with their peers, as if status was given to learners with the greatest talents. Although all the learners with ADHD were competitive, they differed individually in their degree of competitiveness. When discussing with the

learners how comfortable they feel to ask for assistance in front of the class, Andrew responded by saying *"sometimes I get a little bit shy, because people might just go 'oohhhhh' like that. Like let's say it's something really easy and then I don't know it, they will say 'that's so easy I could have done that with my eyes closed'".* Matthew held a similar view and stated that *"if you are confused you can always put your hand up and ask the teacher for help if you are stuck on something but if everyone knows the sum, then I feel embarrassed because sometimes they make noises and stuff".* Later on in the discussion Michael stated that "*sometimes I don't know how to set it out and my friends just give me the answer but I don't know how to set the actual thing out and that is a bad thing because sometimes I get the feeling like I am not going to pass because in the first term I was not doing well at all and sometimes and I am worried that they going to carry on looking at my first term work".*

When asked what should be done if they do not manage to complete their class work during the school day, Matthew again responded by saying that *"if you don't have a lot of work then you can finish it the next day because you will still have time to catch up".* In response to this Michael stated, *"I think you should finish it the next day".* Although the latter participants displayed competitiveness in the fact that they want to complete all tasks in the same way as the rest of the class, they still were not as competitive, as they did not object to being slightly behind their classmates for a brief period of time.

Michael had clearly developed a sense of responsibility in his learning and strove to achieve in all that he does. "*I really like the subject we're doing now, we're doing space at the moment, because I like challenges. I know a lot about space and I try really hard.* At this point Matthew added to the conversation by saying, "*Our friend Nick, he rushes through everything and then it's not neat, so he gets in trouble for everything. His work is right but the teacher can't see what he has done. But it's always a competition between him and his friend to finish first*".

Taking into account the views of the educators, it became apparent that they were aware of the competitiveness of the learners with ADHD as is indicated by the following educator. "*With Andrew, I am fortunate enough because he is very diligent. Often if you have an ADHD child that is not diligent and actually does not have that*

motivation to do well and isn't competitive, you have a bigger problem. Andrew is very competitive and very diligent so he aims to give me his best. You see, because he is quite competitive he is quite demanding on himself, he puts quite a bit of pressure on himself. So I think with him he doesn't cope with too much competition so I have to be careful how I seat him from that angle, and not put him with a child that is very competitive and makes him anxious. I have had that before and I had to move him. He is the kind of child that won't come and tell you but you can see that something is not right. The anxiety is starting to make him anxious".

Another educator indicated that the approach educators have with the learners can assist them to be determined in their learning and development. "*Obviously the loyalty, the perseverance, the drive that a lot of them have. Sometimes we as educators and parents we kill it because we keep on making them do things again, so we stamp out the drive. Eventually he doesn't want to drive so you basically have to have a happy medium so you don't kill that spontaneous reaction, that drive or the aggression in them, cause I think these are all very good things, you know that aggression 'I am going to do it all by myself'", if they don't have that they just sit back and then they just get swallowed up".*

The observation period allowed me to see that learners with ADHD were indeed determined to achieve success in their learning and development. When playing a game with the whole class, the learners tried to be the first person to answer the question correctly. When the learners were instructed to complete a task most of them sat calmly and concentrated on the activity. They appeared to be diligent in their approach to learning and worked well individually. A very similar situation was observed during a literacy lesson where learners strove to be the first finished so that they could be the first to put their hand up and ultimately be chosen to read their words out to the class.

Barkley (2000, p. 205) highlights that "experts believe that children with ADHD have more favourable experiences when their peer contacts do not involve a lot of competition. These can trigger emotional overarousal, increased disorganised behaviour and frustration. An exception can be made when your child has a clear talent in the area of activity and can be successful despite its competitive nature".

With this in mind, finding a balance of competiveness within a classroom is of paramount importance. Learners are at a stage in their lives where they tend to compare themselves with their peers and other learners in order to gain a sense of competence. Therefore, in most instances learners will naturally strive to compete against each other in order feel a sense of pride and achievement. Taking into account Erikson's theory of child development, Donald, et al. (2002, p. 77) maintain that "associated with this period are expanded social relationships with teachers, peers and mentors. The challenge at this stage is to begin to take on tasks and acquire basic skills that are required in the adult world. The peer group becomes especially important as a model and a basis of comparison in relation to these tasks and skills. A sense of industry results from success at these task and a sense of inferiority results from failure". Because of this, educators attempted to encourage a healthy sense of competiveness, but at the same time tried to ensure that the learners with ADHD did not feel overanxious due to the increased pressure to succeed, which would consequently override the natural motivation within them.

- **Being treated like all other learners**

The learners with ADHD appeared to accept the use of punishment as they believed that if they misbehave it is fair to the rest of the class that the educator reprimands or punishes the learner involved. The learners with ADHD were aware that there are socially acceptable behaviours that are expected from people and that if an individual is not maintaining this level of behaviour, the educator may reprimand the learner to discourage the undesirable behaviour. David indicated his acceptance of being reprimanded by stating "*if we do terrible work she might write NO in our books. It makes me feel like I have to concentrate harder".*

The learners were clearly aware of the methods of punishments that were used within the classroom, as is indicated by Michael who states: *"She does what our Afrikaans teacher does. Our Afrikaans teacher gives you a red card and says if you kids want to know what the red card is for; it is to make you think. So I don't really mind. We get red and green cards. If we get three green cards we get a star and if we get three red cards we miss break".*

Furthermore, as stated previously, all the learners with ADHD had an innate desire to succeed and perform. Having ADHD, in many instances makes it far more challenging for learners to achieve on specific tasks due to lack of concentration. In many instances the learners with ADHD felt that punishment for undesirable behaviour was necessary to encourage them to stay on task and behave in the desired fashion. However, although this may be the case, none of the learners appreciated being reprimanded in front of others and felt that certain issues are of a personal matter and only concerns the educator and the learner involved. David explained that *"things that help me when I get distracted and I'm looking at something, is when the teacher helps me or shouts at me and then tells me to concentrate on my work and then I concentrate. This helps me because I don't want to be shouted at again".* The learners also indicated that they feel embarrassed when the educator shouts at them in front of the class, and they would prefer the educator to call them to her desk and tell them quietly what they are doing wrong, as is indicated by Michael. *"Well, I feel embarrassed and then I think, 'Come on, you do that to me all the time'. I would rather she just said it quietly or she called me to her desk".* Matthew also held a similar view as he stated, *"Well I don't like her to shout at you because then all the people would stare and I would rather like to go and talk somewhere private".*

The need for punishment was further highlighted when discussing the effects of bullying at school. Andrew indicated that learners are never bullied in the classroom and when asked why, he explained *"Because the teacher is there to see what's going on. And she will say 'cut that out' and then she will say 'you mustn't do that' and then sometimes she will send them to the principal".*

These views emphasise that learners with ADHD accept the need for punishment to not only assist themselves in maintaining self control, but also to protect them by ensuring that all learners behave according to socially accepted norms. This view became clearer when discussing defiant children in the school. Andrew further explained, *"The last time he did something bad, he punched a girl and then she went to tell on him because she got hurt really badly. The teacher said 'Go to the principal's office' and then he said 'No I'm not going' and the teacher came and said 'Go to the principal right this minute'.* [Loudly] *Then he went and got in big trouble. I*

would say that is a good thing because he is always a big bully to us and now at least he can be more disciplined". In response to this Michael said, *"I think that was a good reaction because the guy was cheeky and they should say you're in trouble, you getting thumbs down for your house or something like that".*

Focusing specifically on the educator's views, it emerged that most educators believed that all learners should be expected to behave in a socially accepted manner. If they do not conform to this behaviour, they should experience the consequences of their actions in the same way as all the other learners. In accordance with this view, educators developed a variety of successful techniques to be used as incentives for learners to behave according to society's expectations of them. One educator explained her techniques as follows: "*I would say in the first instance I have them for half an hour at a time, I am a very strict person so they have not got time to be naughty, they don't have time not to concentrate because then, if they don't work or concentrate, they get a red card which makes them focus, and if they get three red cards, they stay in at break, but I make sure they never get three red cards. So if they make a mistake, when they mark something in their books, if it is wrong they are allowed to rub it out, but if they mark something right which is wrong, they also get a red card so I have got their focus the whole time".*

Another educator explained her techniques by stating; "*Sometimes I get them to sit in the corner, if they're not listening. I also speak to them. Sometimes I take the child in the storeroom and I just talk to the child nicely and then they apologise and then they go back into the classroom. They understand what they have done wrong".*

Throughout the interviews with the educators a common theme emerged whereby educators all felt that learners need some form of punishment to curb undesirable behaviour. However, they also indicated that they adapted their methods depending on the nature of the individual learner. No learners were exempted from learning that certain behaviours have consequences, but adjustments were made to cater for the individual needs of the learners with ADHD, as is indicated by the following educator. *"He is an over-anxious child, so with him I have to be cautious. I can't shout or blurt out with him. He just does not cope with that. He responds very well to reason, so if you just sit him down and have a small talk with him, he responds well to that. I think*

that they are moving in that transition where recognition from peers is becoming more valuable and important. I think, especially at this part of grade three, you have to be more sensitive to that and be careful how you reprimand them in front of their peers. If they are struggling, be careful how you deal with the struggling child".

During my observations in the classroom, one particular learner interrupted the educator while she was talking. The educator made a point of saying he must wait his turn. At a later stage she returned to the learner when she had completed the conversation with the other learners, and allowed him to tell her what he wanted to say. The educator did not make a big fuss but made it clear to the learner that he needed to wait his turn just like everyone else in the class. During another lesson, one of the learners had not achieved to his full potential in the previous task the day before, and the educator again made a point of speaking to him and letting him know that on that day she would not accept his work if it resembled the work from the day before. The learner accepted this and appeared to try harder in the current task. However, the educator did not speak to the learner with ADHD in private, and as a result he appeared a little embarrassed in front of his peers.

The need for taking into account that learners with ADHD are, in many instances, over-sensitive, cannot be emphasized too strongly. Grossman (2004, p. 500) concurs that "students with Attention Deficit Hyperactivity Disorder respond better to negative feedback when they receive it privately rather in front of their peers". Grossman (2004, p. 328) goes further to advise educators to "speak to students privately in a calm, soft voice. Avoid yelling at students from across the room. Speak to them privately at your desk, at their seat, or somewhere where no one else can hear what you say. Speaking to students privately, especially older ones can protect them from being embarrassed in front of their peers".
Learners with ADHD clearly tend to accept most forms of punishment or feedback to assist them in their learning and development. However, educators need to be aware of the fact that these learners may be more sensitive than their peers to this approach, therefore situations where learners are made to feel embarrassed or overanxious should be avoided.

4.2.3 Theme 3: Learning in a happy atmosphere

During the focus group interviews, it emerged that one of the most important factors to consider in assisting learners with ADHD in their learning and development was learning in a happy atmosphere, regardless of their individual differences. The implementation of Education White paper 6 emphasises the need to develop welcoming and caring environments for all learners. Previously, many learners with disabilities or barriers to learning were evidently unwelcome in mainstream schools. The DoE (2001, p. 11) states that "our constitution (Act 108 of 1996) founded our democratic state and common citizenship on the values of human dignity, the achievement of equality and the advancement of human rights and freedoms (Section 1a). These values summon all of us to take up the responsibility and challenge of building a humane and caring society, not for the few, but for all South Africans. In establishing an education and training system for the 21st century, we carry a special responsibility to implement these values and to ensure that all learners, with and without disabilities, pursue their learning to the fullest".

Most educators appeared to acknowledge the importance of learners being happy in their learning environment, as is explained by the following educator. "*I believe that these children will all make a success in life because they had to struggle but we can make it easier for them so that they don't hate school and that they don't hate reading and they don't hate spelling. They need help and guidance so they don't hate their childhood, they don't hate school and they don't hate their teachers and they don't hate work. That's when we the parents and the educators and the friends join them".* Another educator summed up the ethos at the school by saying *"I always say that the EQ is far more important than IQ, you know 'emotional quotient'. They actually have to be happy if they are going to learn. I have three things that I emphasise in my class; love laughter and fun".*

Taking the above into account, it emerged that educators at this particular school made attempts to create a welcoming and caring classroom environment. During the interviews with the learners with ADHD, there were a variety of aspects that were discussed which were all important in influencing the happiness of these learners at school.

- **Personal relationships with the educator**

The relationships that the learners with ADHD developed with their educators appeared to play a significant role in determining their happiness at school. Each learner evidently strove to develop a personal relationship with their educator based on their specific needs and individual personality traits. Michael, who was not provided with much support from home, appeared to be more concerned than other learners in developing a special relationship with his educator. *"Yeah, I like her a lot, she is the first person I would ask for help. My teacher also encourages me a lot. She actually said to my mum that I'm her favourite student and that makes me feel really nice and it makes me want to work harder".* In one particular instance, Michael was unsure if he was allowed to use a calculator during maths. His explanation of this experience emphasises the special bond that he has personally developed with his educator. *"And then my teacher looked at me and said 'Michael, are you thick? Use your calculator'* (Laughs hysterically)*. She was joking, though, so I really don't mind.* (Laughs again) At this point Andrew appeared horrified as he stated *"It would make me feel very sad if my teacher said that to me".* This indicates the importance of taking into account the individual differences among learners with ADHD, and building a relationship with them which is based on the personal characteristics and needs of each learner. This particular learner appeared to be far more sensitive, and as a result, he needed a relationship with his educator that would support him, especially when he felt sad. Andrew further indicated that he relied on his educator for far more than simply academic support. He stated, *"Sometimes I get sad and then my teacher will ask me what is wrong".* David then added to the conversation by saying, *"If I was feeling sad, my friends would call the teacher and she would cheer me up in some sort of way".*

When focusing on the need for developing personal relationships with the learners with ADHD, it emerged that, from the learners' point of view, their educators were viewed as far more than simply educators, but also as mothers during school time. The role of the educator evidently ranged from being an educator, who supports these learners in their learning, to being a figure who protects, solves problems and provides emotional support. Although the learners with ADHD viewed their class educators as mother figures, they also found comfort from other educators at the

school, as is indicated by Andrew: *"If I am feeling sick I would go to sick bay. It's like a lady doctor and you will lie on the bed and then she will help you and they will give you some medicine and then see if you feel better".* David also felt secure and comfortable in his environment, and relied on the caring role of the educators. *"It's a caring place because if you hurt yourself you can always go to somebody to help you. I would go to sick bay or the teacher on duty. Normally the teacher on duty will send you to sick bay and then you would probably get a plaster and some cream".* The same learner was asked who the main person to take care of you is and his response was his mum. When asked who the main person to take care of you at school is, he responded that it is his educator. This emphasises that these learners tend to view their educators as caring for them when they are separated from their mothers. David went on to explain, *"Well I will just tell you that not a single person will get hurt because, if someone gets bullied in the classroom, someone will see it and then the person or the bully will get into big trouble. But sometimes at break time, when the senior primary are kicking the ball and I don't know they're there, to tell me to get out of the way, they kick the ball and it hits me in my mouth or in the back. It makes me have an ugly feeling so I would rather go under the shade cloth or the jungle gyms. There is normally a teacher at the shade cloth and sometimes some friends that she has found. If she saw the bigger boys kicking the ball at me, she would tell them not to do that again or, if it is really bad, she will send them to the principal".* A similar view was held by Matthew who recounted that *"If I have a scraped knee or grass burn then the teacher will help me, but like when the hornet stung me, then I had to go to sick bay".*

When learners experienced challenges with regards to their academic work, they appeared most comfortable to confide in their educators for assistance in the classroom. Andrew explained, *"If I am stuck I will try and figure it out for a little bit, and if I can't, I will ask the teacher. I will put my hand up and then I will say 'Mrs Smith would you come and help me I am really stuck'? She comes and says, 'What are you stuck on? Let me see'".*

The role of the educator in solving problems or challenges faced by learners with ADHD thus extended from academic problems to emotional and physical problems. Most of the educators interviewed also sought to develop healthy relationships with

their learners to ensure their success and development, as is indicated by the following educator, *"I am a friendly teacher. Although I am strict and firm with the children, I am also friendly with them. I listen to them if they come up with stories, you know I don't chase them away, I listen to them all the time".* This was further supported by another educator who stated, "*I am often called 'Mum' and always answer, 'Yes my son, yes my daughter'. Often, you know they talk or think quickly, and then they call you' Mum'. My role is definitely more than just simply an educator in the children's eyes. I think, for me, it's not just teaching, it's not just academics. And more so than ever before, you know, these children are needing just to be taught life skills".*

The learners with ADHD appeared to be extremely content in their learning environment, and comfortable in their relationships with their educators. All learners showed that they were confident to ask their educator for assistance and include them in their lives. One learner, for example, asked the educator if she could do a prayer for a family he knows, because they are experiencing a difficult time.
On returning to observe the learners from the other class, I noticed that their educator had also developed a personal relationship with the learners in her class. Learners talked openly to their educator and felt comfortable to approach her at any stage during the lesson. She had developed a variety of nicknames for most of the learners in the class, which appeared to be appreciated by the learners who responded to those names.

From the above, it can be emphasised that building supportive and caring relationships between the educator and learners with ADHD is of paramount importance. This type of relationship is likely to foster successful learning by making learners feel comfortable in their environments. This view is supported by Peterson and Hittie (2003, p. 43) who highlight the importance of "building a community amongst children, staff and parents: a community, in which all feel welcome, all belong, emotional intelligence and social skills are taught, and relationships nurtured. Part of building this community is responding proactively to the needs of children who have behavioural and emotional problems and challenges".

The importance of a personal relationship with the learners with ADHD clearly emerged from this study. These learners with ADHD appeared happy and content in their learning environment, which impacted positively on their motivation to learn and succeed. Grossman (2004, p. 24) states that "the ways in which you choose to relate to your students in the three aspects of your role – as instructor, manager and person – can increase your students' willingness to cooperate, learn and behave appropriately and can motivate them to use you as a role model. Students attend far more often, behave better, and work more diligently for teachers they like, admire and respect".

Taking the above into account, it can be concluded that learners with ADHD respond better to educators that they respect. Building healthy relationships between educators and such learners can assist them to feel comfortable and happy within their learning environments. If learners are not happy and do not like their educators, they are less likely to achieve to the best of their ability.

- **The need for friends**

Throughout the interviews with the learners with ADHD, a common theme developed which indicated that these learners are more likely to succeed in their learning and development if they have special relationships with their friends at school. This theme goes together with the idea of being happy at school, as all learners with ADHD indicated a need for friends to ensure their happiness and success in life. In the learners' opinions, the need for peer relations was of paramount importance and in many instances appeared to be of higher priority than actually learning and succeeding. Andrew explained that *"I like playing with my friends because they're fun and they care about you. They always nice to me and they choose me to be on their team and they like me. They are never mean to me because they're my friends. When my friends are not around I feel pretty lonely. It's not nice when they get sick and don't come to school because I want them to come and play with me. I want them to come to school even if they are sick".*

Michael explained the effects of telling on others when they did something wrong. *"I could tell the principal what this one girl did, but I won't because that would be a big*

snitch and then everybody doesn't like you. They just don't like it and then they won't play with you and it's important to have friends around you because otherwise you're just going to be one of those people who sits on the stairs waiting, and I would keep thinking about what I am and then I would not be concentrating on my work". David then commented on a picture from his collage by saying, *"It's nice to have friends all around you because when you feeling sad then your friends can help you in the classroom, or if you feeling sick, then your friend can take you to sick bay. When you're feeling sad, my friends help me and do nice things for me. Like at break time, I don't know why but if I am feeling sad, they will give me sweets. I think it's important because if you're not happy at school then you might stay in bed and you won't get out of your bed to come to school".* Matthew also held a similar view regarding the importance of friends. He explained that *"I always look forward to coming to school because I am normally always happy and my friends are always there to play with me. Also when I am sad, my friends will find a way to cheer me up. When my friends are not there it makes me feel a little bit sad, because then I don't have anyone to play with and then I don't have anything to do".*

Educators appeared to acknowledge the need for friends in ensuring the success of learners with ADHD. *"It is very important that they have a buddy who can cope, so if they don't know what their homework is, they can phone their friends".* Another educator responded by saying *"I think they need a lot of positive reinforcement at this age, you know. Sometimes you can go up to a child and say 'I am so proud of that'* [whispering]*, but I think they are reaching an age where they are looking for their friends' recognition as well. So more so now than in the lower grades, you actually need to say it quite openly, 'Wow excellent work today, boy'.* [Loudly]

One educator approached the topic from a slightly different angle. *"Sometimes you basically have to pair them off with somebody so that they definitely have some friend, but I think they can learn from their friends. This is like the playground for future bullies and for future people that they have to interact with, so friends is a huge thing. Another thing is they assess themselves where they fit in with their peers. You know, benchmark themselves with where their friends are".*

When observing the learners with ADHD, the one learner opened his book and realised he had done very well in his previous activity. He immediately turned to his friend and made him look at his book so that they could compare marks, which indicated that learners in many ways rely on their peers for recognition and support. This was again identified when I returned to observe the learners in the other class. While I was waiting for them outside the classroom, the learners started returning from assembly and immediately went to stand with their peers. They were laughing and talking together and appeared curious as to what other groups of learners were doing. They were obviously happy in their groups to which they clearly seemed to belong.

Green and Chee (1997, p. 31) confirm the above findings and maintain that "although ADHD children are sensitive and caring, many are socially out of tune. They want to be popular with their mates but don't seem to know how to make this happen. In the playground they want to be part of the main game, but rather than let things take their natural course, they barge in, poke, taunt and annoy. These children function best in the small group setting or with one good friend". Furthermore, according to Cowie, et al. (2004, p. 26) "peer relationships are important indicators of a person's psychological health and predict their future functioning. Peer acceptance and withdrawal are extremely important determinants and indicators of psychopathology. As relationships with peers are crucial to a person's emotional well-being and form an important part of daily life in school, schools should be encouraged to do what they can to promote healthy positive peer relations and to assist those who are withdrawn and rejected by their peers or who misuse their power by bullying others".

The learners with ADHD all clearly displayed a need for friendships and appeared to have sound relationships already set in place. However, it was also evident that the learner-to-educator ratio was far lower in this particular school, and therefore, in most instances, learners rarely experienced excessively large group situations. Although learners with ADHD are known for their social clumsiness, all the learners appeared to be coping sufficiently in terms of social relations at school. This could have also resulted from the fact that this school is accommodating of diversity and, as a result, learners are far more accepting of differences in their peers.

- **Classroom environment arrangements to suit learners' individual needs**

It appeared that the learners with ADHD were aware of the fact that the educators had made alterations in the classroom to cater specifically for their individual needs and, as a result, these learners were content and happy there.

David firstly explained his specific situation in the classroom. "*I sit right in front of the teacher's desk in a row. I only have one girl next to me and she is very quiet and doesn't distract me. I have enough light and space around me but sometimes I get distracted by the grade noughts because they sing and shout all the time and we can hear it, which can be very annoying".* Matthew also indicated that he was individually catered for within the classroom as he stated, "*I sit right across from Michael in the middle of the classroom. I sit next to people who don't talk a lot. I used to be fast and I used to sit by myself and then my teacher wanted to see how I would work with people like Nick and them, and that's where I am still sitting now".* Finally Michael also provided valuable information on the topic. "*Sometimes at the beginning of the year, the teacher will keep changing the tables around to see how we fit in with the other people. I sit at the back in a group by the door, which is nice, because the light comes through right by where I sit and I like that. Sometimes there is a lot of noise and that bothers me. There is a naughty girl that is always getting shouted at which disturbs me a lot. There were these two girls and they have now been moved because they talk too much, so now it's much better. I used to sit in the corner and I could not write things down off the board because of the glare, but it's much better now".*

Focusing on what the educators did within the classroom also helped in understanding what classroom arrangements were needed to assist the learners with ADHD. The first educator stated, "*If they come into my class there is so much to look at. There are sport and music pictures and photos of the students themselves. The children will also bring me lots of pictures. So it is far too lively, but I think it would be terribly dull in a dull classroom. So according to the book, I think my class is wrong but they are all happy in the class and they all love the class. We have a lot of people walking up here outside the window and so that is why we have the curtains. We close the door and we close the curtains and we also have*

soundproofing on the walls and the kids actually love it. It's actually quite cosy and they can't hear anything. So once we have closed the door and the curtains, they can concentrate nicely. The environment does play a role and it's definitely important, but I don't believe in dull classes".

Another educator added, *"I think the seating arrangements are important. A lot of the educators do change the way they sit in the classroom now and then. But then sometimes you go into the classroom and you find that this child should not be sitting with that child. Music can also play a good role. I think with my subject I would prefer to have more space in the classroom, but it's difficult because I go to the learners' classroom, I don't have a classroom. I would be able to do more activities with them. Sometimes I need the children to sit in a circle, so if there are desks in the classroom you cannot work properly, but I cannot say to the teachers, 'Please rearrange the desks so that it suits my subject'. Maybe if I can get my own classroom then I would be able to do these things".*

The effects of classroom environment issues in the learning and development of learners with ADHD was further stressed by an educator who explained her specific situation. "*I am struggling because this is a particularly dark classroom, so I feel like there is not enough light and I don't think it's helpful to any of the children, not just the ADHD learners. Andrew sits right there in the front, with very little distractions so he can see the board right in front of him. I love group seating, but then they are not able to face the overhead as they not in the direct line of the board, so they have to turn their heads or turn their bodies. I start off by seating them in groups because I feel that they need that personal sort of group seating, but by this time of the year I have moved them back into rows, but we still do a lot of group work and that sort of thing".*

Another educator stated, "*I think in most cases if they can sit on their own, I think group work for a group activity, but not when they have to sit all day in a group activity. The other thing is there must be quiet time allowed in the classroom. It cannot be always busy because eventually they get overloaded and they don't know how to filter any more, and the anxiety and the frustration eventually gets to a point that they cannot handle. They're usually quite sound-sensitive or light-sensitive and if you over load that, you have a child totally out of control".*

The classroom environment in which these specific learners learn on a daily basis, is clearly geared to supporting learning and development. The classroom is neatly organised in rows to ensure that all learners can see the board. The learners with ADHD have specifically been separated from each other within the classroom, generally being placed between learners who are diligent and quiet. Furthermore, the educator has made sure that the learners with ADHD are seated near her desk so that they can be provided with support, and are less likely to be distracted and lose concentration. One particular learner was battling to see the board and as a result, the educator asked the learner in front of him to move her chair to the side, allowing the learner to concentrate again on his work. On returning to observe the learners with ADHD in the other class, I noticed that this particular educator had arranged her classroom in much the same way as the previous educator. The only difference was that learners with ADHD who were seated in a group, were placed at tables with fewer people. This allowed them to enjoy the company of their peers, but at the same time ensured that distractions were kept to a minimum.

Peterson and Hittie (2003, p. 44) claim that educators implementing inclusive education must ensure that they "design the physical environment of the classroom and the school to promote learning and growth among all children with diverse sensory and physical characteristics, adapting the environment and using assistive technology to help children learn more effectively".

The impact of the physical environment cannot be overemphasised when teaching learners with ADHD. According to Kruger and Adams (2002, p. 191) "Your classroom space should be organised to meet the requirements of your learning activity and the needs of your students. Some of those requirements and needs change continuously, you should be prepared to move your furniture and change your groups". Donald, et al. (2002) further highlight a variety of aspects that educators need to consider within the physical classroom environment in order to promote development and learning: firstly, the building facility needs to be accessible to all students; distractions must be minimised and noise levels reduced; lighting and ventilation and extreme temperatures must be controlled; displays related to the

learning topic, seating facilities and arrangements within their classrooms should cater for a wide range of learning needs.

By focusing on the above, it is therefore of paramount importance that the classroom environment caters for the individual needs of learners with ADHD. The classroom arrangements are vital in determining the success of learning, and all attempts should be made to arrange the classroom in a manner that promotes and enhances learning for every learner, and in particular, for the learner with ADHD.

- **Not always perfect**

Although these learners strove to develop special relationships with others, it was also evident that there were some negative aspects with regards to friends and other learners in the school which impacted on their experiences at school. Due to the fact that the learners with ADHD were positively affected by having good and healthy relationships with their peers, it emerged that when these relationships turned unpleasant, learners were affected in a negative way.

The first aspect that all the learners with ADHD appeared to have difficulty with, was the fact that their peers and friends were sometimes a distraction to them in the classroom. Some participants were more affected by this than others. Andrew firstly commented that *"Sometimes my friends just won't stop talking to me. I just ignore them and pretend I'm listening to them, but I just keep on writing".* Michael held a similar view to this and explained that *"I actually have quite a lot of friends that are not distractions, so sometimes friends can be a distraction but sometimes they can be support".* Matthew also felt that there were some instances where his peers affected his classroom experiences, as he stated that *"Sometimes when my friends try to talk to me, and then I don't know how to say stop talking because one time, when I didn't want them to talk and I told them, they said I am not your friend anymore".* At this point David added to this discussion by saying *"I would just ignore them. Sometimes my friend says 'I don't think I am your friend anymore' but then the next day he doesn't seem to remember. So if I am doing something important I will ignore them, and if I am not doing something important, I will answer the question".* Although the latter learner did not find other peers distracting in this respect, he did,

however, indicate that there are instances where other learners in the class make it more difficult for him to complete his work. *"When people go onto the mat when they are all finished their work and I haven't, they normally play Uno, and when they only have one card left they shout UNO really loud, and it distracts me. I don't really know what they could do instead, but maybe they could play a different game, like Go Fish".*

The importance of having friends was made even more apparent when I was able to observe the sadness that the learners with ADHD displayed when they explained some instances when their friends were mean to them. Andrew sadly commented, *"I like friends but when they start to be ugly to you I don't like them".* Most of the learners with ADHD indicated that they were affected to a large degree by the way their peers interacted with them. Finally, Matthew explained his feeling when the class singles him out, *"Sometimes, when it is a hard sum, my teacher puts pressure on me. Like, if I have not finished my work and then the whole class was telling me to go faster, like I have to hurry up".*

Taking into account the following definition of ADHD illustrates the challenges that learners with ADHD are faced with on a daily basis. According to Barkley (2000, p. 19) "Attention-Deficit/Hyperactivity Disorder, or ADHD is a developmental disorder of self-control. It consists of problems with attention span, impulse control, and activity level". According to Rief (2005, p. 53) learners with ADHD "frequently need more room to themselves (for example table top/desk space, more distance and buffer space sitting on the carpet) in order to stay better organized and reduce problems interacting with peers". As this is also the case for the participants in this study, the need for intervention to support learners with ADHD in this regard cannot be overemphasised. Learning in an educational setting requires, to some degree, that learners have a measure of self-control. To assist learners with ADHD, educators should attempt to place the learner in an area with minimal distractions. Green and Chee (1997) assert that if ADHD learners are "going to learn, the child needs to be near to the front, preferably sandwiched between their two most placid classmates". All the ADHD learners who were interviewed appeared to be largely affected by bullies or mean children in the school. Andrew appeared extremely distressed by bullies. He explained that *"Sometimes I get sad because some people like to bully*

me on the field. I won't tell you the person but he pushes me around. I don't push him back and he keeps on pushing me and I just don't like it and I get upset. When you ask to play in the game, they say I don't want you in the game and then I don't know what to do". Michael was also clearly affected by bullies at school, but not to the same degree as the previous learner. He explained that *"Simon is a big bully. He can lift somebody up his throat and just push you. He looks at you angry and then he starts laughing. I mean the one time he started crying in rugby because someone tripped him. If somebody punches me I don't start crying".* From this it can be deduced that the presence of bullies is well known amongst the learners, but the degree to which learners are affected by bullies is dependent on the learner's individual personality. A discussion between Matthew and David indicated that they, too, were affected by bullies at school. Matthew explained that *"There is this one boy in the JP and he mostly bullies everyone. Kevin is also one of them and, for some reason, when his friend was not playing with him, he just started to fight and kick him. When Eric is bullying someone, then I mostly try to take them away from him".* David then continued the discussion and said, *"He is in grade two. We don't know why he bullies people but he is always naughty. Yesterday he hit a child. It was a skinny child who picked up the rugby ball, and then Eric jumped on him and wrapped himself around him and then the guy fell to the ground. We try and stay away from them. It makes me angry".*

Although the educators were aware of the fact that there are also negative aspects with regards to peers, most educators felt that social relations at this level assist learners to develop socially acceptable behaviour. For this purpose, educators attempted to provide learners with a sense of responsibility by allowing them to solve their own problems with guidance from their educators. "W*e had a lot of fighting at one stage during break time on the field over the soccer game so, instead of stopping all sports on the field at break time, even though we did threaten to, we sat with the boys at break time and workshopped it. We must have done about five workshops, where we actually said to the boys, 'What is the solution?' They are now managing on their own. We even brought a senior primary sports master in and said 'Ok, how we are going to sort this out?' So I think it is so important that we as educators are not always directly involved, but to actually give them the life skills. You know we can't change children's certain circumstances that they live with, but you can give them skills and teach them a way to deal with it and a way to cope and*

be happy. So instead of stepping in and sorting things out for them, they have got to learn to own their own behaviour". Another educator also agreed and stated "f*riends play a huge role, in both ways: bad influence and good influence. A lot of them can't make friends because they are so in their face that they are just so overwhelming that they frighten other children".*

During the interviews, the learners with ADHD indicated that bullying and teasing does in fact take place in school, but usually never when the educator is present. As this is the case, I was unable to observe any forms of teasing or bullying in the classroom, and therefore have based the validity of this topic on the impressions that were given to me during the interviews. The expressions of the learners during the interviews helped me to understand that the learners were extremely sensitive to any form of nastiness at school, and that friends can sometimes negatively affect learners with ADHD in the classroom. The learners with ADHD tended to lose concentration, not only when a peer asked them something, but also when other peers were communicating with each other or the educator. The learners would stop working and look in the direction of the people who were talking. In another instance during the literacy lesson, one of the learners was not behaving, and the girl sitting next to him went and told the educator. The learner appeared highly distressed that she had told the educator what he had done, and appeared concerned about the opinion that the other learners had formed of him as he tried to explain his reasons for what he did. Throughout the lesson it was observed that there were many instances where peers distracted learners with ADHD from their work. If another learner tried to communicate with these learners, they immediately stopped what they were doing to answer. It then took the learners with ADHD a while before they recommenced with their task. Similarly, when the educator was talking or reprimanding other learners, all the learners with ADHD appeared to be far more distracted, and tended to stop what they were doing and look in the direction of the educator. Again, it took learners a while before they were able to concentrate again on their work. However, in the same respect, it was also identified that learners with ADHD would communicate with their peers during lessons about the work that they were doing. In this way learners found support and encouragement from other learners in the class.

According to Green and Chee (1997, p. 109) “we often see gentle, sensitive children who are labelled as aggressive. They are not deliberately nasty; their problem is an overreaction to taunts and teasing. These children are sought out by school bullies, who stir them up for their own sick needs. Teachers need to be aware of the vulnerability of ADHD and soothe, not inflame. Those who tease and bully are aggressive and should be punished appropriately”. Educators must ensure that bullying is dealt with quickly and efficiently in the best interest of all the parties concerned. Grossman (2004, p. 13) asserts that “because habitual bullies and habitual victims tend to develop more serious problems as adults, intervening as soon as possible not only saves the situation at the moment but may also forestall students from developing serious problems later on in life”.

Taking this into account it appears to be of great importance that learners with ADHD are taught skills that enable them to cope in social situations. However, educators must still be in control of these processes but at the same time allow such learners to take part in resolving issues related to the peer group, to ensure that they are able to cope in later years with the demands that their social lives often place on them.

4.3 CONCLUSION

In this chapter the findings have been presented, analysed and discussed. There are clearly a variety of aspects that need to be taken into account in ensuring the success of all learners with ADHD, but the positive effects of inclusive education are clearly becoming more and more evident within schools, such as the one in the study, across South Africa. It appears as if the experiences of the participants, i.e. the learners with ADHD, are no different from learners without ADHD, and therefore possibly support the notion that an educator in an inclusive classroom could provide a satisfying experience for learners with ADHD. The next chapter deals specifically with the conclusions and recommendations that have been identified in this chapter.

CHAPTER FIVE
CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The purpose of this research study was to explore how grade three learners with Attention Deficit Hyperactivity Disorder experience the support provided by their educators. This chapter discloses the conclusions of the study and provides recommendations for supporting learners with ADHD in a similar context. The limitations of the study will be acknowledged before providing suggestions for further research.

5.2 CONCLUSIONS

5.2.1 Variations of support experienced

When reflecting on the ***whole school support*** provided, it can be concluded that the learners with ADHD had clearly benefited from the wide range of support structures set in place by various members within their school environment. Collaborative relationships were developed among learners, educators, parents and professionals within the school and the broader community. The Accelerated Education Unit (AEU) situated on the school grounds, proved highly beneficial and supportive to both the learners with ADHD and their educators. The learners were supported from the moment they entered the school, and this support was maintained throughout to ensure that successful learning could be sustained. Educators were always provided with advice and support from the specialists within the AEU, which ensured that they did not become overwhelmed or feel as though they were solely responsible for removing barriers to learning. Educators ensured that they worked with each other in a wide variety of areas, assisting each other and fostering a healthy community environment where teamwork and collaboration were encouraged. Educators were also encouraged to collaborate with specialists in the broader community to ensure that they were equipped to cater for their learners' needs. Learners with ADHD and their parents were provided with constant support and advice from educators who based their decisions on the views of a variety of specialists and professionals.

It is evident that these learners with ADHD experienced ***individualised support*** and that they were comfortable with their own individuality. They were confident in their behaviour and mannerisms, and acknowledged the fact that they may have unique needs that differ from those of other learners. Educators appeared to encourage individuality and accept diversity, and acknowledged that alterations in the classroom may need to be made to cater for individual requirements. Most of the educators highlighted the uniqueness of each learner with ADHD and the importance of taking into account the individual strengths and weaknesses of each learner. The methods of support that each learner with ADHD experienced were directly related to the personality of the individual learner. Most of the learners were comfortable enough to explain the areas they had difficulties with in their learning and development because they were proud of the tasks they were good at. They indicated that, with the support and assistance they receive from their educators, they will soon be good at the tasks they currently battle with.

The learners with ADHD were happy at school and appeared to enjoy learning because they were provided with a ***variety of lessons and resources*** which helped to foster this attitude. Their lessons were exciting and diverse as educators attempted to be creative and developed stimulating, yet at the same time enjoyable, lessons. As educators made use of both visual and auditory stimuli and materials, learning was further enhanced through the use of exciting and colourful resources throughout the classroom. During free time learners were provided with a variety of educational games to extend their learning in a calm and informal manner; this all helped to foster a healthy attitude towards learning. Educators ensured that they catered for a vast array of learning needs, providing a balance between formal and informal lessons. Learners were able to work individually during formal lessons, but also experienced group work activities during informal and fun lessons.

5.2.2 Varied feelings towards educator support

The findings indicate that ***educator acknowledgement*** was one of the most important factors in motivating learners with ADHD to learn. Although the learners indicated that a variety of reinforcement techniques were incorporated, such as stars and sweets, most learners were more concerned with the acknowledgement they

received from their educators. Most learners with ADHD strove to achieve, and have clearly experienced many challenges throughout their journey thus far. The praise and acknowledgement that they receive from their educators appeared to assist them to develop a relative sense of self-confidence in themselves, and made them feel proud of their achievements. In most instances the learners indicated that, when they receive praise from the educators, they are inspired to work harder.

The learners with ADHD appeared to be active in their own development and strove to be successful, as their educators encouraged them to ***develop a sense of responsibility*** in their own development. Most learners were able to acknowledge the importance of education in determining their future as adults, and therefore appeared diligent in their approach to learning. The learners with ADHD appeared to be less dependent on adults for guidance and were confident to work independently. They took responsibility for their own actions and maintained a relative sense of responsibility over their own learning. Although the learners with ADHD relied on their educators for support, the learning process was clearly a two-way process with learners and educators finding a meeting point whereby both parties could share the responsibility and contribute to the learning process.

The learners with ADHD appeared to be determined to succeed in their learning and were at an age where they ***compared themselves*** with their peers to establish where they fit in with their social group. As a result, most of the learners tended to be rather competitive, although in some instances this competiveness could cause learners with ADHD to be overanxious, due to the increased pressure they place on themselves to succeed. It was also evident that there were positive aspects to the competitive nature of learners. Educators appeared to create a healthy environment of competitiveness in their classrooms to maintain their natural drive to succeed, but at the same time ensured that learners did not become overanxious.

These learners appreciated ***being treated like all other learners***, and accepted the need for punishment as a consequence to negative behaviour, to help them, as well as other learners, to control their behaviour according to socially accepted norms, and achieve in their school work. In some instances the learners with ADHD felt a sense of security in knowing that bullies and badly behaved learners could be

controlled through the use of punishment. Although learners with ADHD were not exempted from experiencing consequences to negative behaviour, educators did make alterations according to the needs of each learner. Most of these learners disliked being confronted or disciplined in front of the class, and felt that certain issues were of a personal nature and should therefore only concern the educator and the learner. Most learners indicated that they respond well to reason, and that simply communicating with the learners in private was far more effective in maintaining and controlling their behaviour. The learners with ADHD are at an age where peer recognition is highly valuable so educators should ensure that they do not single out or embarrass learners in front of their peers.

5.2.3 Learning in a happy atmosphere

The ***personal relationships that the learners with ADHD developed with their educators*** played a crucial role in their advancement. The learners drew comfort from their educators who evidently had a variety of roles to fulfil to cater for the learners' needs. The educator's role was not limited to providing academic support within the classroom; the learners with ADHD appeared also to view their educators as there to mother them at school, protect them, solve their problems and cater for their emotional needs. Educators who fulfilled these roles were ultimately respected by these learners, who were happy and content in the educational environment. Furthermore, the respect that the learners with ADHD developed for their educators motivated them to succeed in their learning, as they had a greater tendency to please their educators in all that they did. The importance of developing healthy relationships between educators and learners with ADHD cannot be overemphasised. As every learner is unique and has specific needs, the relationships that educators formed with each learner were based on personality and individual needs. Thus every learner with ADHD had a unique and special bond with his educator who supported and enhanced learning and fostered a happy classroom environment.

The necessity of ***belonging to a circle of friends*** is quite clear, as the learners with ADHD strove to be popular amongst their friends, indicating that being surrounded by friends was the most important factor to consider in ensuring their success at

school and in life. Friends ensured that these learners felt happy in their environments and enjoyed coming to school. Without friends, the learners with ADHD indicated that they would not succeed in life because they would hate school and would not want to attend. Learners indicated that loneliness was amongst their greatest fears. Having a circle of friends was of paramount importance to them and, in many instances, was of higher priority than actually succeeding in their education. It can therefore be concluded that developing sound relationships with other learners was crucial to the positive experience of all learners, regardless of their individual needs.

A ***classroom environment, supportive*** of the particular characteristics of learners with ADHD, is important. Educators attempted to arrange their classroom environments in a manner that catered for individual needs. In most instances learners were positioned between quiet learners who were less likely to disturb them during lessons. As there are a number of ADHD learners in each class, educators could not simply position them all in the front rows. The learners with ADHD were separated in the classroom and positioned in areas where the educator could easily access each child and provide assistance. Due to the fact that educator-to-student ratio was far lower at this particular school, learners benefited from the extra space in the classroom which ensured that they could move freely around the room. Taking different needs into consideration, all educators ensured that they provided different learning spaces where learners could go into the classroom during free time.

Although the experiences of the learners with ADHD were mostly positive, the world of school is ***not perfect***. In some instances even friends distracted learners with ADHD from their learning in the classroom. Taking into account the fact that learners with ADHD strove to be popular amongst their friends, placing this in many instances as a higher priority than actually succeeding in their education, the learners also experienced nastiness in the form of teasing or bullying and were deeply affected by it. Educators were aware of bullying in the school and believed that learners needed to develop social skills through problem solving in real life issues, and therefore included learners when finding solutions to bullying on school grounds. An awareness of this can assist educators to cater for their learners needs and ensure that they are in a safe and comfortable learning environment.

5.3 RESPONSE TO RESEARCH QUESTIONS

In response to the primary research question, *"How do learners with ADHD in grade three experience the support provided by their educators in an inclusive education context?"* the experiences and feelings of the learners in the study indicated that they are happy and content in their learning environment and strive to achieve success in all that they do. The findings of the study indicate that attempts are being made by educators to cater for the individual requirements and needs of learners with ADHD. Educators collaborate with such learners and ensure that emotional and academic support is provided to all learners, as their happiness at school is clearly of paramount importance to them. In many instances the learners with ADHD placed a greater emphasis on their happiness than on academic success. All educators acknowledged the uniqueness of their learners and attempted to make alterations to cater for their specific needs. The school fostered an ethos of teamwork and collaboration between all members in the school and specialists in the broader community, which ensured that solid support structures were set in place and maintained throughout the learner's education. In my opinion, the positive effects of inclusive education are becoming more and more evident in this school, which can serve as a model to other schools across the country in terms of implementing this policy.

In response to the secondary research question, *"What guidelines or recommendations can be developed on how learners with ADHD can be further supported in their learning and development?"* the following **recommendations** based on the findings, are offered.

- **Support needed to overcome barriers to learning**

It is imperative that schools understand the importance of developing collaborative relationships among learners, educators, parents, specialists and professionals within the school and the broader community. The benefits of these relationships were clearly highlighted in this study, showing that teamwork fostered healthy and supportive relationships and ensured that learners with ADHD were provided with professional and ongoing support and intervention. Barriers to learning need to be

identified in the initial stages and appropriate support provided and maintained, before learning breakdown occurs.

The department of education needs to ensure that they collaborate with educational institutions and provide training to educators to ensure that they are provided with adequate skills to teach effectively within the policy of inclusive education. This will ensure that educators are equipped to cater for a diversity of learning needs within the educational setting. Learners who are educated by educators who acknowledge individuality clearly reap many benefits, as these educators are more willing to make alterations to meet the diversity of needs evident amongst all learners, in particular those with ADHD. An ethos valuing difference should be fostered amongst learners and educators to ensure that all learners develop in a happy and welcoming environment.

Educators need to be creative in their planning and ensure that they make use of a variety of resources while teaching different themes in the classroom. The diversity among learners with ADHD implies that a wide range of learning materials, resources, themes and methods need to be incorporated to ensure that meaningful learning can occur for all learners.

- **Guidelines to maintain behaviour**

Educators must ensure that they provide consistent and authentic reinforcement for positive behaviour and achievements in the classroom to ensure that learners with ADHD develop a sense of pride and achievement in themselves. A variety of positive reinforcement techniques should be drawn upon, and educators must be observant to ensure that they identify when the learners' behaviour and achievements are conforming to what is expected from them in the classroom. Educator acknowledgement helps to motivate learners with ADHD, who eventually want to please the educator in all that they do.

Although it is essential that learners with ADHD be provided with adequate support and intervention, it must be ensured that learners develop a sense of responsibility for their own development. Educators are advised to encourage learners with ADHD

to be actively involved in the teaching and learning process, and to provide a certain degree of freedom to learners to be responsible and autonomous individuals at school. Learners with ADHD must be taught skills that foster responsibility and independence, to ensure that they are equipped to develop in an environment that expects them to have a certain degree of independence.

Educators must ensure that they promote the natural inclination in learners with ADHD to achieve, but at the same time ensure that they do not subject them to overwhelming stress in addition to the pressure these learners already place on themselves. Although a healthy atmosphere of competition in the classroom can be beneficial to learners with ADHD, educators also need to acknowledge their individual strengths and weaknesses, and recognise that not every learner will excel in the same area and at the same level.

In the initial stages of schooling, all learners need to be made aware of socially accepted behaviour and conform to rules and expectations of society. Learners with ADHD often find this transition far more challenging than other learners, but should not be excused from conforming to society's expectations of them. Educators must ensure that learners experience consequences to negative behaviour and performance at school, but at the same time must ensure that they acknowledge the individual needs of learners. Most learners with ADHD respond well to reason, and appreciate their educator's intervention on their behalf to assist them in maintaining behaviour and performance at school. However, learners with ADHD are in many instances far more sensitive than other learners, and educators should ensure that any negative reinforcement is done privately with the learners to avoid subjecting them to embarrassment in front of their peers. This will foster the learner's respect for the educator, and is more likely to suppress negative behaviours.

- **Provision of emotional support**

Learners with ADHD clearly respond better to educators whom they respect. Educators need to ensure that they present a professional attitude towards teaching, but at the same time respond to such learners in a caring and friendly manner. The department of education should focus on providing training to educators in order to

develop their support and counselling skills. This will ensure that they are equipped to cater for the learners' emotional needs, and that they are able to fulfil the multiple roles required of them to cater for all learners.

Learners with ADHD often find it difficult to make friends, yet they continue to strive to be popular among their peers. Educators must provide opportunities for social interaction in the classroom, and develop lessons that focus on teaching skills related to teamwork and collaboration. Learners need to be taught life skills related to accepting diversity and acknowledging difference so that the strengths and weaknesses of all individuals can be acknowledged and accepted.

It is of paramount importance that classroom environment arrangements are made to enhance learning in the classroom for learners with ADHD. Educators must position these learners in an area with minimal distractions from classmates and ensure that they are provided with an individual workspace that is easily accessible and organised. If possible, learners with ADHD should be positioned as close to the educator and the front of the classroom as possible to ensure that learners are provided with individual support when needed. Finally, classrooms should be inviting and stimulating to all learners.

Although learners with ADHD strive to form solid friendships, they will still have some negative experiences with regards to friends and bullies. Educators need to be aware of any forms of negativity and intervene accordingly. Social skills should be included in life orientation to ensure that methods of prevention are enforced. To avoid distractions in the classroom, learners with ADHD should be positioned between quieter learners, and educators should avoid embarrassing individual learners in front of their peers.

5.4 LIMITATIONS OF THE STUDY

Due to the fact that this research was conducted in a private educational setting, the findings from the study are rather limited in terms of transferability as they may not necessarily be a true reflection of how the majority of South African learners experience support at their schools. The majority of South African schools are under-resourced and overcrowded. As this is the case, the findings from this study can possibly only be transferable to settings that are similar to the one in which the study was conducted, which in most South African cities are few and far between.

5.5 RECOMMENDATIONS FOR FURTHER STUDY

Further research is recommended in the following areas:

- To explore how girls in grade three with ADHD experience the support provided by their educators
- To study the experiences of learners with ADHD at a public school
- To explore the experiences of educators who have taught learners with ADHD
- To explore the experiences of learners with other barriers to learning and development, in an inclusive classroom

5.6 CONCLUSION

In this chapter the conclusions, limitations and suggestions for further research have been indicated. Recommendations were presented to provide guidelines for educators who teach learners with ADHD to ensure that they cater for learners' unique needs. It is evident that the implementation of inclusive education is indeed being practised in most private schools in South Africa, as educators are attempting to remove the barriers to learning experienced by ADHD learners. If support and intervention is maintained at this level, learners with ADHD will clearly reap the benefits of the system, and are likely to achieve success in their learning and development.

“If a child lives with criticism,

He learns to condemn.

If a child lives with hostility,

He learns to fight.

If a child lives with ridicule,

He learns to be shy.

If a child lives with shame,

He learns to feel guilty.

If a child lives with tolerance,

He learns to be patient.

If a child lives with encouragement,

He learns confidence.

If a child lives with praise,

He learns to appreciate.

If a child lives with fairness,

He learns justice.

If a child lives with security,

He learns to have faith.

If a child lives with approval,

He learns to like himself.

If a child lives with acceptance and friendship,

He learns to find love in the world.”

(Nolte, 1969, p. 3)

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Appendix A – Principal consent

Mrs. S. Jackson
Cliffview College
17 Ealing Avenue
Durban
3620

REQUEST PERMISSION TO DO RESEARCH

My name is Kate Alberda and I am currently completing my master's degree at the University of KwaZulu Natal, Edgewood campus. As a future foundation phase educator, my interest in Attention Deficit Hyperactivity Disorder amongst young children has been kindled. I am particularly interested in how young learners with ADHD are being supported by their educator's in schools and how the learners respond to the support they receive. As a result I have decided to explore this issue further for the purpose of my dissertation for my Masters of Education. The title of my study is; "A case study exploring how grade three learners with Attention Deficit Hyperactivity Disorder (ADHD) experience the support provided by their educators, in an inclusive education context."

As a past pupil of Cliffview College I would like to request permission to conduct my study at your school in February 2008. Due to the fact that the staff at Cliffview College value the happiness and success of all their learners and attempt to support each individual learner to ensure their success and development in future years, I believe I could get rich data from your staff and learners. With my keen interest in understanding ADHD, I believe that the key to assisting learners experiencing the difficulties that arise from such a disorder lies in understanding the experiences that the learners themselves have on a daily basis.

Although, I will require information from the learner's educators, the views of the learner's regarding such a topic will be highly beneficial to my study and should help me to establish how learners with ADHD can best be supported within the educational setting. Therefore to answer my research questions I will require the participation of four learners who have been diagnosed with ADHD and are currently prescribed stimulants,

as well as the participation of the learners' educator/s. As this is the case it would be necessary that the learners involved in the study are all from the same class.

My first question focuses on how learners with ADHD experience the educator and her support and to gather data for the purpose of answering this question will require the participation of the four learners who have been diagnosed with ADHD. As I am aware of the fact that learners in grade three may have difficulties in expressing themselves during a formal interview process, I have chosen to incorporate a focus group interview with a maximum of four learners with ADHD, using an arts-based (collage) method as a prompt for a discussion during the focus group. The learners will be provided with magazines, stationary and cardboard and will be asked to represent their experiences in the classroom with the educator as well as with other learners. Once the learners have completed their collages, a focus group interview will take place allowing the learners to explain and discuss the pictures that they have created. This will take about 45 minutes and I will be asking the learners for permission to use a dictaphone during the interview process.

In order to understand how learners with ADHD experience the educator and her support, therefore requires that I identify how educator's support learners with ADHD, and to gather data which will assist me to answer this question will require the participation of the learners' educators. I will conduct individual interviews, which should take approximately 40 minutes with each of the learners' educators, which will focus on how they support the learners with ADHD. During this process I will be requesting permission to use a dictaphone.

Finally to ensure that the data that I have collected is reliable and meaningful I will need to observe the educator and the learners interacting with each other, during this time I will be using an observation schedule to affirm my findings.

Participation within my study is purely voluntary and participants need not feel obliged to participate and are also free to withdraw from the study at any point, if they so desire. Any participants who withdraw from the study or chose not to participate will not be disadvantaged. Within my study all participants are assured of their confidentiality and that all attempts will be made to disguise any identifying details. The data that is

gathered during the interviews will be stored safely at the University of KwaZulu Natal, Edgewood, for a period of five years, after which the data will be disposed of.

Should you wish to discuss matters further, please feel free to contact me or my supervisor. My contact details are as follows:

Kate Alberda: (Home) 031 262 9952
(Cell) 0826881062
E- mail: alberdat@iafrica.com

My supervisor is:
Prof Naydene de Lange:
(Tel) 031-2601342;
(Fax) 031-2607003
E-mail: delangen@ukzn.ac.za

Kind Regards,

_____

Kate Alberda

Declaration:

I…… hereby confirm that I understand the contents of this document and the nature of the research project, and I therefore give consent to Ms Kate Alberda to conduct her study at Cliffview College.

_____ _____

Signature Date

_____

Student's signature

Appendix B – Parent Consent

To whom it may concern

My name is Kate Alberda and I am currently completing my master's degree at the University of KwaZulu Natal, Edgewood campus. As a future foundation phase educator, my interest in Attention Deficit Hyperactivity Disorder amongst young children has been kindled. I am particularly interested in how young learners with ADHD are being supported by their educator's in schools and how the learners respond to the support they receive. As a result I have decided to explore this issue further for the purpose of my dissertation for my Masters of Education. The title of my study is; "A case study exploring how grade three learners with Attention Deficit Hyperactivity Disorder (ADHD) experience the support provided by their educators, in an inclusive education context".

As a past pupil of Cliffview College I have requested permission to conduct my study in this school in 2008. Due to the fact that the staff at Cliffview College value the happiness and success of all their learners and attempt to support each individual learner to ensure their success and development in future years, I believe I could gather rich data from the staff and learners at Cliffview College. Although, I will require information from the learner's educators, the views of the learner's regarding such a topic will be highly beneficial to my study and should help me to establish how learners with ADHD can best be supported within the educational setting. Therefore to answer my research questions I will require the participation of four learners who have been diagnosed with ADHD and are currently prescribed stimulants, as well as the participation of the learners' educator/s.

My first question focuses on how learners experience the educator and her support and to gather data for the purpose of answering this question will require the participation of four learners who have been diagnosed with ADHD. As I have been informed that your son has been diagnosed with Attention Deficit Hyperactivity Disorder, I would like to request the participation of your son within my study. With my keen interest in understanding ADHD, I believe that the key to assisting learners experiencing the difficulties that arise from such a disorder lies in understanding the experiences that the learners themselves have on a daily basis. As I am aware of the fact that learners in grade three may have difficulties in expressing themselves during a formal interview

process, I have chosen to incorporate a focus group interview with a maximum of four learners with ADHD, using an arts-based (collage) method as a prompt for a discussion during the focus group. The learners will be provided with magazines, stationary, glue and cardboard and will be asked to represent their experiences in the classroom with their educators as well as with other learners. Once the learners have completed their collages, a focus group interview will take place allowing the learners to explain and discuss the pictures that they have created. This will take about 45 minutes and again I will be asking the learners for permission to use a dictaphone during the interview process.

In order to understand how learners with ADHD experience the educator and her support, therefore requires that I identify how educators support learners with ADHD, and to gather data which will assist me to answer this question will require the participation of the learners' educators. I will conduct individual interviews, which should take approximately 40 minutes with each of the learners' educators, which will focus on how they support the learners with ADHD. During this process I will be requesting permission to use a dictaphone.

Finally to ensure that the data that I have collected is reliable and meaningful I will need to observe the educator and the learners interacting with each other, during this time I will be using an observation schedule to affirm my findings.

Participation within my study is purely voluntary and participants need not feel obliged to participate and are also free to withdraw from the study at any point, if they so desire. Any participants who withdraw from the study or chose not to participate will not be disadvantaged in any way. Within my study all participants are assured of their confidentiality and that all attempts will be made to disguise any identifying details. The data that is gathered during the interviews will be stored safely at the University of KwaZulu Natal, Edgewood, for a period of five years, after which the data will be disposed of.

Should you wish to discuss matters further, please feel free to contact me or my supervisor.

My contact details are as follows:

Kate Alberda:

(Home) 031 262 9953

(Cell) 0826881062

E- mail: alberdat@iafrica.com

My supervisor is:

Prof Naydene de Lange:

(Tel) 031-2601342;

(Fax) 031-2607003

E-mail: delangen@ukzn.ac.za

Kind Regards,

_____

Kate Alberda

Declaration:

I,……....., hereby confirm that I understand the contents of this document and the nature of the research project. I therefore give consent to Ms Kate Alberda to interview my child……, and for her to use the information that my son discloses to her for the purpose of her masters research. I have been informed that my sons identity will be will be kept confidential and that he is at liberty to withdraw at anytime, should he so desire.

_____ _____ _____

Signature Date Place

_____

Student's signature

Appendix C - Learners informed consent

My name is Kate Alberda and I am studying at the University of KwaZulu Natal. For my degree I am doing a study to find out how learners with Attention Deficit Hyperactivity Disorder (ADHD) experience the educator and her support, in an inclusive education context.

To help me find out more about this I would like you to participate in my study, along with three of your classmates. I will be asking you and your friends to explain your experiences in the classroom with your educator and other learners. To help you answer this question you will be asked to make a collage using magazines and cardboard. You will choose pictures from the magazines, cut them out and paste them onto cardboard and add some writing to it, to tell your story. We will then use the collage to discuss the experiences that you and your classmates have at school.

If you choose to participate in my study you are free to withdraw at any point if you decide you do not want to take part.

I……..agree to participate in a study conducted by Kate Alberda for the purpose of her masters research.

_____	_____	_____
Signature	Date	Place

_____

Student's signature

Appendix D - Educator consent

To whom it may concern

My name is Kate Alberda and I am currently completing my master's degree at the University of KwaZulu Natal, Edgewood campus. As a future foundation phase educator, my interest in Attention Deficit Hyperactivity Disorder amongst young children has been kindled. I am particularly interested in how young learners with ADHD are being supported by their educators in schools and how the learners respond to the support they receive. As a result I have decided to explore this issue further for the purpose of my dissertation for my Masters of Education. The title of my study is; "A Case Study exploring how grade three learners with Attention Deficit Hyperactivity Disorder (ADHD) experience the support provided by their educators, in an inclusive education context."

As a past pupil of Cliffview College I have requested permission to conduct my study at your school in 2008. Due to the fact that the staff at Cliffview College value the happiness and success of all their learners and attempt to support each individual learner to ensure their success and development in future years, I believe I could get rich data from your staff and learners. With my keen interest in understanding ADHD I believe that the key to assisting learners experiencing the difficulties that arise from such a disability lies in understanding the experiences that the learners themselves have on a daily basis and I would therefore like to request your participation within my study.

Although, I will require information from the learner's educators, the views of the learner's regarding such a topic will be highly beneficial to my study and should help me to establish how learners with ADHD can best be supported within the educational setting. Therefore to answer my research questions I will require the participation of four learners who have been diagnosed with ADHD and are currently prescribed stimulants, as well as the participation of the learners' educator/s. As this is the case it would be necessary that the learners involved in the study are all from the same class.

My first question focuses on how learners experience the educator and her support and to gather data for the purpose of answering this question will require the participation of the four learners who have been diagnosed with ADHD. As I am aware of the fact that learners in grade three may have difficulties in expressing themselves during a formal

interview process, I have chosen to incorporate a focus group interview with a maximum of four learners with ADHD, using an arts-based (collage) method as a prompt for a discussion during the focus group. The learners will be provided with magazines, glue, stationary and cardboard and will be asked to represent their experiences in the classroom with the educator as well as with other learners. Once the learners have completed their collages, a focus group interview will take place allowing the learners with ADHD to explain and discuss the pictures that they have created. This will take about 45 minutes and I will be asking the learners for permission to use a dictaphone during the interview process.

In order to understand how learners with ADHD experience the educator and her support, therefore requires that I identify how educators support learners with ADHD, and to gather data which will assist me to answer this question will require the participation of the learners' educators. I will conduct individual interviews, which should take approximately 40 minutes with each of the learners' educators, which will focus on how they support the learners with ADHD. During this process I will be requesting permission to use a dictaphone.

Finally to ensure that the data that I have collected is reliable and meaningful I will need to observe the educator and the learners interacting with each other, during this time I will be using an observation schedule to affirm my findings.

Participation within my study is purely voluntary and participants need not feel obliged to participate and are also free to withdraw from the study at any point, if they so desire. Any participants who withdraw from the study or chose not to participate will not be disadvantaged in any way. Within my study all participants are assured of their confidentiality and that all attempts will be made to disguise any identifying details. The data that is gathered during the interviews will be stored safely at the University of KwaZulu Natal, Edgewood, for a period of five years, after which the data will be disposed of.

Should you wish to discuss matters further, please feel free to contact me or my supervisor. My contact details are as follows:

Kate Alberda:
(Home) 031 262 9953
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E- mail: alberdat@iafrica.com

My supervisor is:
Prof Naydene de Lange: office
(Tel) 031-2601342;
(Fax) 031-2607003
E-mail: delangen@ukzn.ac.za

Kind Regards,

_____

Kate Alberda

Declaration:

I,……....., hereby confirm that I understand the contents of this document and the nature of this research project. I therefore give full permission to Ms Kate Alberda to use the information that I disclose to her for the purpose of her masters research and understand that the learners identity will be will be kept confidential.

_____ _____ _____

Signature Date Place

_____

Student's signature

Appendix E

Arts-based (collage) Focus group interview schedule - Learners

The focus group interview should take approximately an hour and a half. As my participants are children I am incorporating the use of collage to use as a prompt during the discussion with the learners with ADHD. The learners will be provided with cardboard, glue, scissors, and stationary. I will then explain to the learners what the purpose of the interview is and how the information that they provide me with will be used.

I will be asking the learner's one open question which is as follows;

> **"Find pictures in the magazines and newspapers which show me what it is like for you in the classroom with your teacher and with other class mates. Paste them on the cardboard and then add writing to tell your story."**

During this stage I will facilitate the process but will avoid intervening to a large extent and only if it is necessary will I clarify the question and prompt the learners, so as to ensure that the pictures produced by the learners represent their experiences and have not been impacted by what I have said to the learners.
The learners will then be given 20 – 30 minutes to create their collages individually, before we begin the focus group interview where the learners will be provided with an opportunity to explain and discuss what their pictures mean. Once each learner has been given the opportunity to explain their collage, a whole group discussion will take place allowing the learners to discuss the similarities and differences between their collages.

At the end of the interview I will provide the learners with some drinks and snacks as a token of my appreciation for their input and involvement.

Appendix F

Individual interview schedule - Educator

- Thank participant for their assistance.
- Explain purpose of interview
- Explain purpose of my study.
- Permission to use a dictaphone.

"Tell me about the ADHD learners in your class and how you support them."

The following probing questions were used as needed:

- What is your relationship like with the learners who have been diagnosed with ADHD?
- What do you believe is your role in assisting these learners?
- What are the general problems that these learners experience and how do you deal with them?
- How do you respond when the learners behave well/misbehave? How do they respond?
- What do you do differently to support and discipline these learners compared to the other learners in the class?
- What suggestions would you provide to the learners future educators to ensure that they develop to their full potential?
- What in your view is the role of friends in the development of learners such as these?
- At this age what role do you believe the learners have in their own development?
- Can you tell me a little bit about the collaboration between educators and the specialists in the AEU department?
- What environmental issues do you believe may play a role in assisting learners with ADHD in the classroom?
- Can you tell me a little bit about the resources that are offered to learners to assist them with their learning?

Thank you very much for your participation!!

Appendix G: Observation Schedule

TEACHING	**Learner A**	**Learner B**	**Learner C**	**Learner D**
Looking at the learner				
Interacting with the learner				
Resources/lessons/techniques				
Specific inclusion				
Additional notes				
SUPPORTING				
Individual support from teacher				
Peer support				
Include				
Environmental arrangements				
Additional notes				
RELATING				
Praise /reprimand				
Criticize/ encourage				
Punish/ reward				
Exclude/include				
Additional notes				
OTHER LEARNERS INTERACTION				
Assistance				
Encouragement				
Avoidance				
Tease				
competitiveness				
Additional notes				

Appendix H

Example of an arts-based (collage) focus group interview transcript section

"Find pictures in the magazines and newspapers which show me what it is like for you in the classroom with your teacher and with other classmates. Paste them on the cardboard and then add writing to tell your story."

R : Ok let's have a look at your pictures you have quite a few nice pictures here. Did you make a title?

L : Yes, "At school there is a whole lot of things to do"

R : Can you tell me a little bit about that title?

L : Cause when you are finished working and you don't know what to do and if there are no games then you would just have to sit there and do nothing and then if there are games there then you can play with them and then you don't feel bored.

R : Ok and do you often feel bored?

L : No not really at school, at home a little bit because I like to be busy.

R : Ok lets start at the top and then we can move down. What is this picture about?

L : A man that is confused. At school you will always be helped if you are confused. Like if you confused then you can always put your hand up and ask the teacher if you are stuck on something.

Appendix I

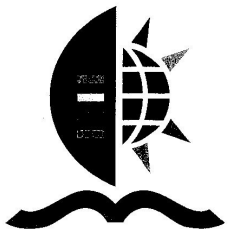
Example of an individual educator interview transcript section

- Thank participant for their assistance
- Explain purpose of interview
- Explain purpose of my study
- Permission to use a dictaphone

"Tell me about the ADHD learners in your class and how you support them."

Ok I have only got two children on medication; they actually came up on medication. The one little boy is particularly aware of the fact that he needs his tablet and even today actually he really struggled to finish his work, in fact he was just all over the place, he was doing a reading study and he kept leaving out questions. I could see that he wasn't actually following what the instruction was and he came to me and he said, 'I haven't had my tablet today, I haven't finished my work and I am really struggling'. It was quite interesting because he is a repeat child and, he is the only one, and so he is a bit older than these kids and he has probably been...his mum is a teacher and she has probably gone and explained it to him and he is very aware. And this is not the first time, I would say this is about the third time he has come to me and said, 'I have got a problem'. So he is taking responsibility for himself. He is a typical child where the Ritalin has been day and night for him.

Now with the little boy that you interviewed it is also day and night for him but I have never seen him off it. His mum is very good about helping him to take it. He has obviously had a lot of input from paediatricians and previous teachers to the point that he is at now.



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5 FEBRUARY 2008

MS. KJ ALBERDA (202521017)
EDUCATION PSYCHOLOGY

Dear Ms. Alberda

ETHICAL CLEARANCE APPROVAL NUMBER: HSS/0014/08M

I wish to confirm that ethical clearance has been granted for the following project:

"A case study: Exploring how grade three learners with Attention Deficit Disorder (ADHD) experience the support provided in a class"

PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years

Yours faithfully

P Xi mba
.....
MS. PHUMELELE XIMBA

cc. Supervisor (Dr. N de Lange)
cc. Derek Buchler

2008 -02- 12