UNIVERSITY OF JOHANNESBURG

How to cite this thesis

Surname, Initial(s). (2012) Title of the thesis or dissertation. PhD. (Chemistry)/ M.Sc. (Physics)/ M.A. (Philosophy)/M.Com. (Finance) etc. [Unpublished]: University of Johannesburg. Retrieved from: https://ujdigispace.uj.ac.za (Accessed: Date).

A WORKSHOP FOR EDUCATORS WITH REGARDS TO ATTENTION DEFICIT HYPERACTIVITY DISORDER

by

SHANTHA NAIDOO

RESEARCH ESSAY

submitted in partial fulfillment of the requirements

for the degree

MAGISTER EDUCATIONIS

in

EDUCATION AND LEARNING SUPPORT

in the

FACULTY OF EDUCATION AND NURSING

at the

RAND AFRIKAANS UNIVERSITY

Supervisor: Mrs J V Fourie

JANUARY 2003

TABLE OF CONTENTS

Abstract

A workshop for educators with regards to Attention Deficit Hyperactivity Disorder

Shantha Naidoo

Abstract

This study focused on the design, implementation and reflection of the development of a workshop for educators with regards to understanding and effectively managing learners with Attention Deficit Hyperactivity Disorder (ADHD) in their classrooms. This study was done in an action research framework in four specific stages, (a) the educators role, (b) educators knowledge about teaching, (c) teaching practices, and (d) reflective practices. Data was collected from a video recording of the workshop on ADHD, an informal focus group assessment questionnaire, and collection of participant's artifacts of the activities during the workshop. Educators who were engaged in the stages of action research during the workshop were provided with theory, strategies, and a checklists on ADHD. This structure assisted educators through the process of becoming knowledgeable, effective, and reflective managers of learners with ADHD.

DEDICATION

This manuscript is dedicated to my late father, Vengates Naidoo, who continues

to guide me with his courageous spirit. To my mother, Dhano Lutchmee Naidoo,

who is my eternal pillar of strength and for instilling in me the belief that I could

accomplish anything that I set out to do in life.

And to my fiancé Devandran Naidoo, whose motivation and encouragement will

always be endured.

ACKNOWLEDGEMENTS

UNIVERSITY
OF
JOHANNESBURG

List of Tables

List of Figures

SECTION ONE

ORIENTATION TO THE STUDY

1. INTRODUCTION

I work as an educator, counsellor and learning support specialist in an Indian community, which serves a disadvantaged and urban population of learners. Several educators who have observed a large number of learners with Attention Deficit Hyperactivity Disorder (ADHD) in this school have approached me. The educators have a lack of understanding about ADHD and require training in how to manage ADHD learners in their classrooms. Educators in inclusive environments often experience this lack of training in managing ADHD (Reid & Maag, 1998: 12).

In order to meet the needs of the educators and to provide them with strategies to manage ADHD learners, I propose to design and implement a workshop on ADHD in inclusive settings. The process of developing the workshop will be studied. The purpose of the study is to document the process of designing, implementing and evaluating the workshop on ADHD.

2. BACKGROUND TO THE RESEARCH STUDY

The incidence of attention deficit hyperactivity disorder (ADHD) in mainstream classrooms is increasing, with current estimates showing it affecting three percent to five percent of all school-aged children (Taylor & Larson, 1998: 161). It has recently been established that the inclination towards ADHD is present at birth, in other words, it is hereditary. Moreover, the extent of the problem depends on how early it is diagnosed and treated, in relation to both the behaviour and the education of the learner. Diagnosis is usually made about two years before formal schooling begins. Learners who are diagnosed prior to this are seen

as clinically normal. For instance, two-year-olds are active, easily distracted, and unable to concentrate on one activity for more than a few minutes and are impulsive. Early intervention however can help to prevent the demoralizing effects of underachievement, poor self-image and, in the long term, probable delinquent behaviour (Lucker & Molloy, 1995: 260).

Educators throughout the nation are hearing about learners with attention deficit hyperactivity disorders (ADHD), and many are confused as to what ADHD is about, and what educational provisions are necessary for the learner to be included successfully into the mainstream class (Bender & McLaughlin, 1995: 20). Both mainstream and special educators are presently uncertain about their roles in the education of learners who are identified with ADHD. Information on this topic is not generally available to in-service teachers (Bender, McLaughlin & Ehrhart, 1993: 96-100).

ADHD is a condition, which affects many learners and adolescents in schools today. Educational and Learning Support Specialists often become involved with learners who eventually are found to have ADHD. Educators may initially complain to Learning Support Specialists about these learners in their classes because of their *hyperactivity, distractibility, or impulsivity*. In fact these behaviours associated with ADHD are present in all learners to some degree (Silver, 1992:2).

When learners' display these types of behaviors excessively compared to their peers, however, the underlying problem could be ADHD. Consequently many educators in South Africa have negative biases based on incorrect assumptions regarding learners having attention deficits. As a result learners with ADHD may develop a low self-concept. In addition it is important for all learners to be productive and accepted in schools and in other social situations, for instance, home, peer groups etc. (Lucker & Molloy, 1995: 262).

Furthermore, these educators teach in an Indian, disadvantaged, urban mainstream school where there is a lack of human resources which creates a barrier to the teaching and learning process, not only for the learners but for the educators as well. The absence

of continuos in-service training of educators often leads to insecurity, uncertainty and lack of innovative practices in the classroom. Therefore, teachers need to be assisted to learn from their own experience and from their colleagues, by becoming reflective practitioners so that they are able to become responsible for their own professional development (Ainscow, 1991:1).

3. PROBLEMATISING THE RESEARCH QUESTION

Although many learners with attention deficit hyperactivity disorder are incorporated into mainstream classes, many educators lack practical information because ADHD is conceptualized as a psychiatric construct (Cains, 2000: 161). As a result, much of the literature approaches ADHD from a medical perspective. There have, for instance been more than 1000 studies examining the effects of psychostimulant medication. In contrast, there are fewer than 100 methodologically unassailable studies that have addressed school-based interventions (DuPaul & Ervin, 1996:601-622), and there are even fewer that have analytically addressed training and service provision for educators. This discrepancy is a cause for concern in light of a recent survey which found that many classroom educators expressed the need for training in techniques that would enable them to work effectively with children with ADHD in the classroom environment (Reid & Maag, 1998:2). The research question is:

Studying the training of educators with regard to Attention Deficit Hyperactivity Disorder in an Indian, disadvantaged, urban mainstream school.

"The Department of Education's White Paper 1 on Education and Training (1995) acknowledged the importance of providing an effective response to the unsatisfactory educational experiences of learners with educational needs, including those within the mainstream whose educational needs were inadequately accommodated" (Department of

Education, White Paper No. 6). In the light of the preceding statement, the research problem could be encapsulated as follows:

- What interventions can educators implement within the classroom to accommodate learners with ADHD?
- What is the role of the Learning Support Specialist with regard to learners with ADHD and their educational needs?
- What is the role of the Learning Support Specialist with regard to the educators of learners with ADHD?

4. INTRODUCING THE THESIS STATEMENT

It is useful to analyze the learning process of learners with ADHD from an ecosystemic perspective so that an integrated and comprehensive approach to barriers to learning and development can be administered within the learning system. The claim draws its emphasis from the fact that in order for children with ADHD to be successfully included into the mainstream class, "a systems orientated approach" needs to be implemented. This approach focuses on the development of children with ADHD and their ability to function more effectively in their school, in their home and in their community (Barkley, 2000: 595).

Following the claim above, the following sub-claims can be made:

Although learners with ADHD may need more intensive and specialized forms of support to be able to develop to their full potential, many educators feel uncertain as to how to accommodate them in their mainstream classes. However, the implementation of Outcome Based Education (OBE) is an inclusive practice, which shifts the emphasis from a deficit approach to one capitalizing on the learner's strengths and abilities.

There are many children in mainstream classes that have not yet been diagnosed as having ADHD. Identifying learners as having ADHD requires a multifaceted diagnosis and

evaluation. Therefore, a multidisciplinary team which consists of educators, remedial educators, school psychologists, speech and hearing therapists, doctors, parents and other learners should all be involved in making decisions about the assessment and identification of learners who have problems related to ADHD (Montague & Warger, 1997: 4).

Educators who lack understanding may prohibit the child from reaching the required outcomes. However, educators who are aware of the classification, diagnostic procedures and behavioural characteristics of children with ADHD will be able to use instruction to address the varied needs of these children. There should be enough resources to assist educators in their classrooms, for instance human resources, valid research material on the topic, aids and apparatus and support services.

The Learning Support Specialist does not only assist the child with ADHD but also the educators, parents and other learners who interact with these learners. Learning Support Specialists need to decide on the best method for helping these children through consultation aimed at providing information and resources for teachers and other stakeholders with whom these children interact.

5. AIMS

In exploring the problem as stated above, the general aim of this research project is to investigate the various aspects for the successful inclusion of learners with attention deficit hyperactivity disorder into mainstream classes. In order to consummate the general aim, the specific objectives of this research project are to:

- Read literature on the development of a workshop and Attention Deficit Hyperactivity Disorder for the training for educators.

- Implement a workshop to educators in order to develop their role as effective managers of learners with ADHD in the classroom;

- Evaluate the strengths and weaknesses of the workshop.

6. THE RESEARCH PLAN AND DESIGN LOGIC

"Research methodology refers to the logic or reason for application of a particular scientific perspective or approach to the study or research undertaken. The type of research question determines the type of research" (Edwards, 1990: 33-36). When conducting research, we move from the known to the unknown. In other words, research is conducted to bridge the gap in the existing knowledge. According to Merriam (1991:6), deciding on a research design is to a large extent influenced by what the research question is, and how it is shaped with consideration to what the desired end product of the research is.

The research methodology, which will be employed in this study, is a *qualitative approach*. The qualitative approach of Merriam (1999:5) to research "is an umbrella concept covering several forms of inquiry that help us understand and explain the meaning of social phenomena with little disruption of the natural setting as possible." In addition qualitative research focuses on the observation of participants and interviews which are done in an unstructured manner (Wilkinson, 2000:7).

The study will employ the following methods of data collection: interviews with educators, observation of participants during the workshop, and video recording of the workshop. After purposely using a stratified method of data collection, interviews will be carried out with the representatives of teachers that are involved in the education of the learner with ADHD (McNiff, 1998: 2).

Furthermore, an action research method will be implemented during the process of the workshop on ADHD. In the book by McNiff, (1988: 50) it is stated that:

"Action research is a form of self-reflective enquiry undertaken by participants (teachers, students or principals, for example) in social (including educational) situations in order to improve the rationality and justice of (a) their own social or educational practices, (b) their understanding of these practices, and (c) the situations (and institutions) in which these practices are carried out" (Carr and Kemmis, 1986).

Action research is usually collaborative in those educators, researchers and other stake holder's work together on a project (Wilkinson, 2000:4-5). Action research can take place in diverse settings e.g. schools. Moreover, observations and interviews are the two methods of data collection that are most often associated with action research (Wilkinson, 2000:4-5).

However, the social source of action research is involvement and the educational source is improvement. Action research with regard to the development of a workshop on educator training involves both the system and the educators involved in the system. This method creates room for changes. Action research is a method of improving education through change by encouraging educators to be aware of their own practice (self-reflection), to be critical of their practice and to be prepared to change. This forms the rationale of the workshop – the ability to change and improve (McNiff, 1988:3).

According to Merriam (1999: 69-70), data analysis is the only facet of doing qualitative research in which there is a right way and a wrong way. The right way of doing data analysis is to do it simultaneously with your data collection. For instance, in a qualitative study the researcher is aware of what the problem is and has selected a sample in which data can be collected so that the problem can be addressed. However, the researcher does not know what to expect, what will be discovered, what or whom to concentrate on or what the final analysis would be. Therefore, the final product will depend on the data that is collected and analyzed during the process (Merriam, 1999:156-160)

The findings of the empirical research together with the above methods of data collection and analysis will be used to make recommendations to assist the Education Support Unit of the Department of Education, principals and all other stakeholders. The result of this

study should develop awareness among all stakeholders in understanding and addressing the barriers to learning and development of children with ADHD in mainstream schools.

7. VALIDITY AND RELIABILITY

In qualitative research there are two notions of validity, (a) internal validity, and (b) external validity. *Internal validity* revolves around issues of trustworthiness as opposed to objective truth (Maxwell, 1996:86). Basically, validity means the way in which a researcher observes, identifies and measures what is being observed, identified and measured (Mason, 1996:21). Therefore, validity within the qualitative research is seen as a goal which is constantly moved, and this movement is constantly questioned about the "credibility of description, conclusion, explanation or interpretation" (Maxwell, 1996: 89).

External validity is traditionally termed "generalisability", which refers to the extent to which the conclusion of a study can be transferred to the other context (Miles and Huberman, 1994: 279). In qualitative research generalisability is not a crucial issue for the simple reason that conclusions can be generalised beyond the study (Maxwell, 1996:97). However, in qualitative research validity and reliability are closely linked which means that if a study is valid, it is also reliable.

Throughout the period of my research, I sought to gather data from many sources and to find ways of triangulating my evidence. I had a good supportive validation group for the duration of my research. It consisted of three educators from the School Based Support Team (SBST), two fellow M.Ed. students from the University of Zululand and Pretoria University, a Principal, a doctor in linguistics, and my supervisor. My findings were shared with a critical friend and the validation group. The authenticity of this research study was critically analysed over a period of months by the validation group, making sure that validation of this study was preserved.

Reliability involves the accuracy of the research methods and techniques (Mason, 1996:24). When the analysis of a research is substantial to both the researcher and the reader, explanation of this data should be ensured. Analysis that is convincing should guide the reader systematically along each step of the process towards a developing explanation.

8. ETHICAL CONSIDERATIONS

Research ethics starts with the identification of the research topic and proceeds throughout the publication of the study (Burns and Grove, 1993:89). In research the researcher is morally obligated to consider the rights of participants (Streubert & Carpenter, 1995: 44). Trust between the researcher and participants are of vital importance. Furthermore, the researcher needs to respect them autonomously and provide them with opportunities for making reliable decisions (Burns & Grove, 1993: 83; Streubert & Carpenter, 1995: 44).

Experts who are actively involved in qualitative research at the Rand Afrikaans University (RAU) will supervise this study. Ethical codes guides the researcher in protecting the rights of human participants, balancing benefits and risks in a study, and obtaining informed consent (Dane, 1990: 38-60). Throughout my research I wanted to safeguard the anonymity of the educators. I wrote to the Board of Management of the school, and sought and obtained their permission to do the research. I also wrote a letter to the educators and sought permission from them.

In the letters I explained the work that I was undertaking, my data collection methods and I also reassured them that I would not reveal the name of the school, and educators in the report, I undertook to have the report available at the school for scrutiny. Furthermore, I explained that if anyone wished to withdraw from the research at any time, they were at liberty to do so. Written consent forms was given to the Principal to conduct the research in her school (Appendix A). The Principal was fully informed of the consequences of the research.

9. CONCLUSION

This section provides a synopsis and corroboration of the proposed research as well as the intended methodology. The research essay advocates analysis from an ecosystemic perspective within a qualitative action research framework. Data will be collected in order to study the process of the workshop design, implementation and effectiveness. Data will be collected from the researcher's journal, reflecting on the video recordings of the workshop, focus group evaluation questionnaires, and one-month thereafter. Data will be analyzed to document the process of the workshop and to provide recommendations to the Education Support Unit of the Department of Education and the relevant stakeholders on the effectiveness of ADHD workshops.

The literature review and theoretical framework will be discussed in section 2.

SECTION TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

1. INTRODUCTION

A brief look at history reminds us that during the latter part of the 20th century there was an increased emphasis on notions of integration. Therefore, the current emphasis on *inclusive education* is but a step along this historical road (Ainscow, 1998: 76). My research attempts to contribute directly to thinking and to practice in relation to the development of an inclusive education, particularly at mainstream school and classroom levels.

Inclusive education involves the processes of increasing the participation of all learners in ordinary pre-schools, schools, colleges and universities, with an appropriate network of support and reducing their exclusion from the cultures, curricula and communities. In addition, the implementation of inclusive education depends on the human resources, fiscal resources, the state of development of the education system related to the education training, physical facilities, the extent to which the concept has been debated and the value attached to human dignity.

One of the most fundamental problems facing the world currently is the growing number of individuals who are excluded from meaningful participation in the economic, social, political and cultural life of their communities. In the light of this, the Jomtien World Conference on Education for All (1990) set a goal of Education For All. UNESCO and other international and national non-governmental organizations, including other UN agencies, have been working towards achieving this goal (UNESCO, 2001:1-20). Regardless of hopeful developments, there are still approximately 113 million primary school aged

children not attending school (International Consultative Forum on Education for All, 2000), who live in low and lower middle income countries, including over 80 million in Africa (UNESCO, 2001:1-20).

Inclusive education means that

> *"... Schools should accommodate all children regardless of their physical, intellectual, social, emotional, and linguistic or other conditions. This should include disabled and gifted children, street and working children, children from remote and nomadic populations, children from linguistic, ethnic or cultural minorities and children from other disadvantaged or marginalised areas or groups" (The Salamanca Statement and Framework for Action on Special Needs education, paragraph 3).*

With regard to the needs of children who are vulnerable to exclusion, there have been strategies and programs that are presently inappropriate. However, there are in existence programs that are developed for the excluded group of children, and which function outside the mainstream, for instance, special programmes, specialized institutions, and specialist educators. Despite the best intentions of these programmes, the results have been *exclusion* in which children are left outside the mainstream environment and later, as adults, outside their communities' social and cultural life (UNESCO, 2001: 1-20).

The Dakar World Education Forum in April 2000 pointed out the importance to address the needs of learners who are vulnerable to "marginalisation" and "exclusion" through responsive education opportunities. The following is an expanded commentary on the Dakar Framework for Action, paragraph 9):

> *The key challenge is to ensure that the broad vision of Education for All as an inclusive concept is reflected in national government and funding agency policies. Education for All ... must take account of the need of the poor and the most disadvantaged, including working children, remote rural dwellers and nomads, and ethnic and linguistic minorities, children, young people and adults affected by conflict,*

HIV/AIDS, hunger and poor health; and those with special learning needs... (UNESCO, 2001: 1)

In light of the above, this research is the result of expressions of interest on Inclusive Education of learners with Attention Deficit Hyperactivity Disorder (ADHD). Firstly, I will briefly describe the current situation of education in South Africa. I will then contextualise an integrated theoretical framework for understanding the role, nature and provision of learning support for inclusive education. The role of the education in an inclusive setting follows with a final personal philosophy statement of education.

1.1. INCLUSIVE EDUCATION– a developmental approach

The principle of inclusive education was adopted at the Salamanca World Conference on Special Needs Education and was restated at the Dakar World Education Forum (2000), taken out from (UNESCO, 2001:3). The specific focus of this developmental approach was to address the learning needs of all children, youth and adults, especially those who are vulnerable to marginalisation and exclusion.

At the focal point of inclusive education are the human rights to education, which was prominent in the 1949 Universal Declaration of Human Rights. In conjunction Article 2 of the Convention on the Right of the Child UN, 1989) states that children have the right not to be discriminated against on the grounds of their disability, ethnicity, religion, language, gender, capabilities and so on (UNESCO, 2001: 4).

The Salamanca Statement and Framework for Action (1994), states that in order to pursue a policy and approach of inclusive education, the focus of personal development and building relationships among individuals, groups and nations should be encouraged so that education for all can be achieved. The following assertion (UNESCO, 2001: justifies the statement below:

"Regular schools with inclusive orientation are the most effective means of combating discrimination, creating welcoming committees, building an inclusive society and achieving education for all" *(Salamanca Statement, Article 2).*

From this it can be argued that inclusive education is concerned with providing suitable responses to the "broad spectrum" of learning needs in formal and non-formal educational settings. A developmental approach to inclusive education focuses on how to transform education systems in order to respond to the learner's diverse needs. It aims at enabling both teachers and learners to become more comfortable with diversity. Inclusive education should be viewed as a challenge and enrichment in the learning environment, rather than as a problem (Stubbs, 1995: 2-5).

1.2. BARRIERS TO LEARNING AND DEVELOPMENT

Although I have mentioned the benefits of an inclusive education system, it is equally important to be aware of the barriers to learning and development that might still exist within the South African context (NCSNET&NCESS, 1997-19).

- **Inadequate Human Resource Development**

Human Resource Development is an integral part of addressing special needs of learners. However, there is little or no training to meet the needs of staff at all levels. Therefore, no opportunities exist for community resource people, particularly, learning support assistants. Professional development of educators, service providers and other human resources are often unattainable.

The absence of continuous in-service training of educators often leads to insecurity, uncertainty and lack of innovative practices in the classroom. As a result this may create resistance and harmful attitudes towards those learners who experience learning difficulties (NCSNET/NCESS, 1997: 19). The ability to

identify and understand the nature of the barriers which cause learning breakdown and lead to exclusion are central to bridging the gap in the educator's knowledge base (NCSNET/NCESS, 1997:19).

Educators and learners are the greatest resources available for promoting inclusive practice. Educators' knowledge needs to be built on existing practice where all development must start (Ainscow, 1998: 1-5). Therefore, teachers need to be assisted to learn from their own experience and from their colleagues, by becoming reflective practitioners so that they are able to become responsible for their own professional development (Ainscow, 1991:1-5). Schools are places where teachers need help to become more successful at understanding and dealing with problems they encounter. However, the more problems teachers are likely to meet, the more successful they are likely to become at overcoming these barriers. These problems can be seen as opportunities for collaborative learning in contexts where there are children who have 'special needs' such as ADHD, Downs Syndrome etc.

Inclusive education does not bring about anything further on the educational agenda with regards to pedagogy, curriculum, and educational organization or funding. On the contrary, it analyses why the education systems and educational programmes are not succeeding in providing education for all. "It tries to bring together within a cohesive framework what is known about quality education in order to work towards systems that are more responsive to diversity" (Dakar Framework for Action, 2000). Strategically, inclusive education examines the existing resources and innovative practices on learning contexts.

There is a vast amount of information available in the area of learning difficulties, the concept of Attention Deficit Hyperactivity Disorder (ADHD) will be isolated in order to illustrate how problems in the early stages of childhood development impact on learning difficulties in the inclusive classroom. More specifically, how a

problem of attention in children can and will cause the emergence of specific symptoms which affect the learning ability of the individual.

2. ATTENTION DEFICIT HYPERACTIVITY DISORDER

Attention Deficit Hyperactivity Disorder (ADHD) is one of the most contentious issues in education at present. Society has traditionally thought of people with Attention Deficit Disorder (ADD) as being 'hyper'. Children who have ADD with no hyperactivity are not identified or treated because the child is simply viewed as not having a problem. These children are sometimes seen as daydreamers (Tailor & Larson, 1998: 1-3). This section of the research essay is intended to provide a framework for teachers and educational service providers to examine the theory about ADHD, focusing on what it is, what it is not, and its prognosis. Whilst reading through the information, it is important to bear in mind that the field of ADHD is still relatively young. Although there is a growing amount of information on ADHD, there are gaps in some of the knowledge base, for instance, a universally effective treatment for ADHD has not been found as yet. Some strategies may work with one child while they may fail with others (Montague & Warger, 1997: 1-25).

The condition known as ADHD was described almost 100 years ago as the association between trauma to the brain and behavioural disorders was noticed, and this became known as Brain Damage Syndrome (DSM IV-TR, 2000: 70-73). However, the term Minimal Brain Dysfunction was coined during the late 1960's (DSM IV-TR, 2000: 75).

Although ADHD has been defined in a variety of ways over the past 20 years, much confusion exists among educational professionals. In professional literature, the term ADHD refers to a "child who has a small, but definite difference in 'normal' brain function". This causes a child to underachieve

academically, and to behave poorly, irrespective of such factors as parenting and schooling (DSM-IV-TR, 2000:75).

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR, 2000: 66), ADHD is estimated to occur in 3 to 5 % of children from diverse cultures and geographical regions (DSM-IV-TR, 2000: 77). ADHD occurs three times more frequently in males than females and commonly occurs co-morbidly, that is, with other disorders. For instance, ADHD occurs in 20% to 50 % of students with learning disabilities, in 65 % of students with oppositional defiant disorder, and in 20 to 30% of the students with conduct disorder (Taylor & Larson, 1998:11).

2.1 CHARACTERISTICS OF ADHD

ADHD has four main features, which are diagnosed according to the criteria specified in the DSM IV-TR. These features are:

- **Inattention** refers to learners with ADHD who experience difficulty sustaining attention when effort is required to complete a task. Concentration and attention problems fluctuate and frequently depend on the situation. Children with ADHD need more stimulation and variety than other children (Westman, 1988: 452)

- **Impulse control** is lost when manifested through acting without thinking, carelessness, shifting between activities, difficulty organizing work, interruption and inappropriate speaking in class and difficulty taking turns. Impulsiveness goes hand-in-hand with distractibility. Learners with ADHD commonly blurt out answers before questions have been completed (Westman, 1988: 452).

- **Distractibility** applies to learners who have difficulty staying with tasks. They are easily distracted, do not listen at times, and seldom finish their work without close supervision (Westman, 1988: 453). Distractibility is one of the less understood aspects of ADHD. In the classroom, the teacher's instructions (foreground) are interpreted as having equal worth to the conversation taking place in the immediate (background) environment of the ADHD learner.

- **Overactivity** refers to children who display high levels of hyperactivity that are frequently present with this disorder. Learners with ADHD tend to make noises at inappropriate times, leave their seats repeatedly without permission, and talk during quiet times (Westman, 1988:454).

Much focus is placed on the visible manifestation of ADHD. Hyperactivity, together with distractibility and impulsivity is responsible for most of the behaviour problems. Inattention difficulty is much more disabling and less apparent than other features (DSM-IV-TR, 2000: 78-85), and is very difficult to measure. Children who have problems with poor vision do not know how tasks should be done until they are given spectacles (metaphorically).

Although many children have characteristics and behaviours that interfere with their learning, the core symptoms of ADHD are inattention, hyperactivity, and impulsivity, defined by Montague & Warger (1997) as primary characteristics. However, when two of the following are present, the diagnosis of hyperactivity is added: running, climbing, excessive fidgeting, difficulty in sitting still etc. (Westman, 1988:452).

For the diagnosis of Attention Deficit Hyperactivity Disorder (ADHD), children must not only display the symptoms related to primary characteristics, of the DSM-IV-TR (2000). The resulting evidence is that the individual must have exhibited either symptoms of 'inattention and/or hyperactivity, and impulsivity as

listed in the DSM IV for a period of at least six months and to a level that is 'developmentally inappropriate' (Montague & Warger, 1997:22).

In addition, children must have displayed these symptoms prior to seven years of age, and the symptoms must be present in three or more settings (e.g. school, home, work, etc). Lastly, the symptoms presented must be serious enough to cause clinically significant distress or impairment in social, academic, or occupational performance (Montague & Warger, 1997:23).

2.2.1 CAUSES OF ADHD

The exact causes of ADHD are still unknown, but three possibilities exist:

- **Hereditary** conditions, in which approximately 80% of ADHD cases have parents or close relatives with the disorder (Hannaford, 2000:132).

- **Imbalance of neurotransmitters** (chemical messengers) in the brain. The genetic factors may predispose the child to ADHD by interfering with the brain's development during pregnancy. Events such as traumatic birth or severe illness close to the time of birth may be responsible (Hannaford, 2000:132).

- **Damage by toxins** may have an internal bacterial or viral effect. Externally, fetal alcohol syndrome, metal intoxication, e.g. lead poisoning, may cause ADHD (Hannaford, 2000:132).

2.2.2 OTHER DISORDERS ASSOCIATED WITH ADD/ADHD

As mentioned above, the complexity of ADHD is made worse by it occurring co-morbidly, that is, with other disorders. These include the following:

- **Specific Learning Disabilities**

According to research, approximately 50% of learners with ADHD also have specific weaknesses in learning. These children often have difficulty with the processing of information. They have normal or above average IQs (Barkley, 2000:595).

- **Visual perceptual problems**

Children with ADHD who experience visual perceptual difficulties may have normal eyesight, but lack the ability to interpret what they see. For instance, the child's recognition of shapes (e.g. letters of the alphabet) and the ability to arrange those shapes (letters of words) on the page (space) are skills that the child needs to know in order to learn to read (DSM-IV-TR, 2000: 78-83).

An example of the difficulty encountered by children with ADHD who have visual perceptual problems can be illustrated by comparing the following two sentences. A person who does not have the problem could read the first as:

These are skills, which those of us who can read take for granted.

For ADHD children with visual perceptual problems, the above statement will look something like this:

Hsee era 5liii5 hwieh fo u5 hwo ean rcob tokc ofr grontcb

The children confuse letters and numbers that look the same: **p** and **q, b** and **d, s** and **5.** These children are capable of memorising readers for the first few years of school, thus appearing to read, however, their inability to read is only noticed once the readers become too lengthy to memorise (DSM -IV-TR, 2000: 78-83).

- **Auditory perception problems**

Children with ADHD who have auditory perception problems are able to hear perfectly but are unable to interpret what they hear. Parents and teachers often report that these children are unable to follow complex instructions and will only complete part of the task. In the classroom situation this causes immense problems, especially where the teacher issues several instructions at the same time (DSM -IV-TR, 2000:78-85).

- **Delays in Fine Motor Development**

In the ADHD child, this condition is manifested by difficulty with colouring in, drawing and writing and as a result creates a feeling of reluctance to take part in these activities (withdrawn). Sufferers are perceived by teachers unaware of the conditions as untidy and careless, even though they may be trying their best (DSM -IV-TR, 2000: 85-88).

2.2.3 Other Disruptive Behaviour Disorders

Oppositional Defiant Disorder (ODD) and Conduct Disorder (CD) are two other behaviour disorders that are associated with ADHD. They often overlap where the child could have one, two or all three disorders.

- **Oppositional Defiant Disorder (ODD)**

Children with ADHD who have ODD deliberately do things to annoy others, particularly adults. They have a tendency of saying 'no' when ordered to do things. ODD on its own is a problem, but when it is combined with the impulsiveness of ADHD, it can turn into violence, and can even be dangerous. Parents and teachers who confront this behaviour with hostility could risk increasing the child's ODD behaviour (DSM- IV-TR, 2000:85-88).

- **Conduct Disorder (CD)**

ADHD children with CD are not only 'naughty' but they show no remorse for what they have done. For instance, a child with CD when caught would rather become angry than sorry, and would even blame others for what s/he has done. The behavior of a child with CD includes, lying, cheating, cruelty, stealing, and destruction of property (DSM-IV-TR, 2000:85-89).

2.2.4 Emotional Difficulties

Emotional difficulties are commonly associated with ADHD, in that the children struggle with their environment by trying to do their best, but simply do not produce good work and behave appropriately. Thus, they often get into trouble, and consequently they develop a poor self-esteem (Lucker & Molloy, 1995:260-278). Once children have a poor self-esteem they regard themselves as being "no good" or "stupid", because this is the way they are constantly being made to feel. Therefore, the result of this process may be a psychiatric disorder, such as Generalized Anxiety Disorder, or less commonly, a Major Depression (Lucker & Molloy, 1995: 260-278).

Some emotional disorders result from ADHD, while others look like ADHD, e.g. severe anxiety. By this I mean that when most people are anxious, they become restless, and apprehensive, their concentration level decreases and they struggle with short-term memory. To someone who has a limited knowledge of ADHD this could look like ADHD. Similarly, a child who experiences depression could appear hyperactive and uninterested (Kerns, Eso & Thomson, 1999:273-296). If anxiety or depression is treated with the medication that is recommended for

ADHD, they can be aggravated. Therefore, treatments that are specific to either disorder are usually effective (Kerns, Eso & Thomson, 1999: 273 -296).

- **Tourette's Disorder**

This disorder is a relatively uncommon condition. In order for a child to be diagnosed as having Tourette's Disorder, both motor tics (spasmodic repetitive movements) and vocal tics (typically repeated vocal sounds like throat clearing, grunting etc.) must be present, not necessarily at the same time (DSM IV-TR, 2000:101). It is important to identify the existence of this disorder in a child for two reasons:

- Medication used to treat ADHD can cause tics, and even trigger Tourette's Disorder in a child that is predisposed.

- Some of the medication to treat Tourette's Disorder has long term complications, resulting in 15% of patients on medication developing a movement disorder called *tardive dyskinesia (TD)*. TD is a group of abnormal movements that typically start mildly with subtle involuntary snake-like and/or chewing-like frequent movements of the tongue and mouth, and may progress.

2.2.5 Obsessive Compulsive Disorder (OCD)

OCD can occur in conjunction with ADHD. A person with OCD has an unusual fixation, e.g. they may be obsessed with washing their hands, closing doors or switching off the lights (Hendrick, 2002: 3). This disorder displays recurring and upsetting thoughts that cannot be controlled and stopped. Many learners who have OCD know that their actions often do not make sense. This illness effects women and men in equal numbers. The exact cause of OCD is not known (Hendrick, 2002:4).

2.2.7 Summary

This section has defined the basic concept of Attention Deficit Hyperactivity Disorder (ADHD) and has briefly outlined its causes and the disorder associated with it. In discussing ADHD, it was concluded that it is the most prevalent chronic health condition affecting school-aged children. The core symptoms of ADHD include inattention, hyperactivity and impulsivity.

Children with ADHD may experience functional problems, such as school difficulties, academic underachievement, problems with interpersonal relationships with family members and peers, and low self esteem.

ADHD that is present in children may continue to show symptoms as they enter adolescence and adult life. However, early recognition, assessment and management of this condition can help 'redirect the educational and psychosocial development of most children with ADHD' (Cains, 2000: 1-24).

The paper will develop the design and implementation of a workshop on ADHD in an inclusive setting in the next section.

SECTION THREE

THE RESEARCH DESIGN

1. INTRODUCTION

In section 2 the literature review and the theoretical framework of the research study were discussed. In this section, a description of the research design and data of inquiry will be given.

1.1 THE RESEARCH PLAN

A research design is a series of guidelines and instructions that needs to be followed when addressing a research problem (Mouton, 1996:107). A qualitative design was used in this study, in order to develop an understanding of the development of a workshop for educators with regards to ADHD. According to Denzin and Lincoln (1994: 5), qualitativeness of the study focuses on finding questions that centers the social experiences, that is, how it is created and how it gives meaning to human life.

Caine and Caine (1994:22) elaborated, "We urgently need more qualitative measures in education". The reason for this is that, the way in which human experiences are studied and interpreted in authentic settings are not best represented *quantitatively*. Qualitative research is a preferred strategy for research studies dealing with current phenomena within a real life context.

Furthermore, Anderson (1998: 119) stated that, "Qualitative research is a form of inquiry that explores a phenomena in their natural settings and uses multi-methods to interpret, understand, explain and bring meaning to them". Considering these ideas, the most appropriate method for conducting a study on the impact of action research on the development of a workshop for educators is to use qualitative methodology.

1.3. ACTION RESEARCH

'Action Research is continual professional development and a direct route to improving teaching and learning' (Calhoun, 2002:1).

Over the past years this statement has been used to introduce action research to school teams, educators, administrators, and departments of education. Action research can be more formally defined as a continual disciplined inquiry conducted to inform and improve our practice as educators (Calhoun, 2002:1). This methodology asks educators to study their own practice and its context and to explore the research base for ideas.

These ideas are then compared to what they find in their current practice, where they were actively involved in training to support these needed changes, and reflect on the effects of this training on themselves, their learners and their colleagues (Calhoun, 2002:1).

For the past 60 years, action research has been an opportunity for creating communities of professional learning where members are engaged in exploration and problem solving, and attaining individual goals. As Lewin (1946) wrote, action research can

> *"transform...a multitude of unrelated individuals frequently opposed in their outlook and their interests, into cooperative teams, not on the basis of sweetness but on the basis of readiness to face difficulties realistically, to apply honest fact finding, and to work together to overcome them (p. 211)",* as outlined in Calhoun (2002).

The researcher has used the method of action research in her study, to transform professional development. The reason for this is that, the social system of schools can be changed so that formal learning can be both expected and supported. It can replace impractical and passive workshops to active and

experiential generated workshops. Furthermore, data can be generated to measure the effect of various programmes and methods, on students and educator's who are involved in learning (Calhoun, 2002:1).

1.3.1 PROCESS OF ACTION RESEARCH

Action Research is an increasingly popular movement in educational research. Until the 1980's, in-service support was offered to practicing teachers in the form of taught courses. The courses usually focused on specific areas of concern in the curriculum, so that the efficiency of schools and schooling could be improved.

The ultimate objective of action research encourages a teacher to be reflective of his/her own practice, so that the quality of education for her/himself and his/her learners can be enhanced. It is in a form of self-reflective enquiry, which is presently being used in, for example, school-based curriculum development, professional development, and school improvement schemes. This approach actively involves teachers as participants in their own educational process (McNiff,1997: 23-41).

In education, action research is seen as an alternative to the theory-based approach to educational research. This approach gives credibility to education as a unified exercise where the teacher is critically aware of his/her own educational experiences in class. This method bridges the gap between the theory and practice of education, such that teachers develop their own personal theories of education from their own class practice (McNiff, 1997:23-41)

Anderson, Herr, and Nihlen define action research as "insider research done by practitioners using their own site as the focus of their study" (Yost & Mosca, 2002: 264-268). The components of action research are reflection, inquiry, and action (Brown, 2002: 2-3).

1.1.1 CHARACTERISTICS OF ACTION RESEARCH

According to Wilkinson (2000, 6), action research is a process about diagnosing a specific problem, (for example, management of ADHD learners in a mainstream class), in a specific setting (school) and attempting to find alternative solutions to solve it. Carr & Kemmis (Wilkinson, 2000:6) have characterized action research in the following statement:

> "Action research is a form of self-reflective enquiry undertaken by participants (teachers, students or principals, for example) in social (including educational) situations in order to improve the rationality and justice of (a) their own social or educational practices, (b) their understanding of these practices, and (c) the situations (and institutions) in which these practices are carried out" (McNiff, 1988: 2).

Action research usually involves a team of researchers and practitioners who work collaboratively on a project. Alternatively, the practitioners themselves, without the involvement of any researchers (Wilkinson, 2000: 7) can conduct action research. Practitioners (i.e. Educators) play an active role in designing, collecting data, and implementing change (Wilkinson, 2000: 5). McNiff (1988) has pointed out that:

> "Action research is an alternative to the academy-based notion that, in order to qualify as a legitimate researcher, you need to be at a university, doing research on other people (p.xiii)" (Wilkinson, 2000:5).

Action research has two methods of data collection, which are observation and interviews. The researcher has chosen this method for several reasons: Firstly, it helps teachers facilitate improvement via change in the classroom. According to Dick (2000:16), "when change is a desired outcome, and it is more easily achieved if people are committed to the change, some participative part of action research is often indicated".

Secondly, educators should participate in action research because it focuses on improving learner achievement (Anderson, 1998: 27). Finally, teachers learn more from professional development experiences which equip them with the power to make decisions and take responsibility for their own professional growth (Danielson & McGreal, 2000: 24-25).

1.2 THE RATIONALE FOR ACTION RESEARCH

The main focus of action research is involvement, and the pedagogical (educational) focus is improvement. Action research means action in both the system and those who are involved in it (McNiff, 1997: 23-25). When action research is applied to the classroom, this approach is seen as improving education through change by encouraging educators to become aware of their own teaching practice, to be more critical of their teaching and to be more willing and prepared to refine and transform their teaching process.

It encourages educators to become more adventurous and critical in their thinking of how to develop theories and rationale for their practice. The research on educational change indicates that change is more likely to occur when participants feel ownership of a problem and connected to the Action research can engage educators in a process of examining the effectiveness of teaching, and to convince them to want to reform solution (Kosnick, 2000:133-142).

According to Hustler, Cassidy and Cuff (1986:68), most educators were never trained to reflect on their own teaching practice. Action research is a cycle of continuous movement. Reflection on both theory and practice associations are made, and each influences the other (Hancock, 1993: 1-19). In action research, the teacher-participant draw up a plan, implement action, observes and reflects. On the ground of this reflection, a new plan is created and a new cycle begins (Kosnick, 2000:133-142).

Action research demonstrates the versatility in teaching and learning. This approach serves as an agent for development and change (Hustler et al., 1986: 77-81). It embodies a professional, analytical and self-critical attitude, which serves as a benchmark for good teaching. Moreover, this attitude will not flourish in an environment where there is a demand for accountability, performance appraisal and self-evaluation, rather than mutual collaboration in pursuit of professional development (Hustler et al., 1986: 78).

1.3. ACTION RESEARCH AS A REFLECTIVE PRACTICE TO EDUCATORS

Action research is beneficial to most educators because it allows them to be critical of their own practice. In this regard, educators are able to develop and refine their insights as to the nature of their practice, professional autonomy and competence, and as a result these educators may become equipped to give a reasoned justification of their own educational work.

Action researchers are deliberately encouraging change in both the educator's teaching practice and the educator's knowledge about teaching (McNiff, 1988:49). Action research can be seen as a way to systematically monitor ones own practice, so that whatever findings can be made public. According to Lawrence Stenhouse (1979), it is "a systematic enquiry made public " (quoted in McNiff (1988:12).

According to Danielson and McGreal (2000: 24), "teaching is highly complex, and most teachers have scant opportunity to explore common problems and possible solutions, or share new pedagogical approaches with their colleagues". The process of action research engages educators in collaboration and investigation where practitioners work together to design and research practical problems in their classrooms. Furthermore, action research can also be scientific, in that the action of one's research can be based on clear logic and procedural analysis of educational systems (McNiff, 1988: 49-50).

Professional development of teachers must be a priority for any education system. In South Africa there are recent policy documents that recognize this (Department of Education, 1995; COTEP, 1996; Department of Education, 1996b) found in Department of Education, White Paper 6 (2000). According to Donald et al. (2000: 98) professional developments is seen as a life-long journey, a process of professional development that deserves to be mentioned is *action research.*

This research combines strategic planning, evaluation, self-reflection, and further development in systematic and continuous cycles. Action research is consistent with the constructivist perspective, which relates to the systematic idea of educators being interdependent and active 'agents' in their own development (Donald et, al, 2000; 95-98).

Most educational practitioners are involved in the process of inquiry to improve teaching practices by studying the literature and research related to their questions and then choosing an approach or designing an alternative that might result in achieving success in their current practice (Brown, 2002: 10). According to Sparks and Simmons (1989:7), action research is seen as a form of staff development that encourages educators to become more *reflective practitioners,* more methodical problem solvers, and more thoughtful decision makers.

Moreover, Danielson and McGreal (2000: 24), and McNiff (1997: 49-54) discussed the importance of educators critically reflecting on their practices. Each asserted that the process of action research provides a structured, and disciplined approach to reflecting about the teaching and learning process.

Similarly, Schon (1987: 66) described this type of reflection as a way of helping us gain a deeper understanding of what we already know. Danielson and McGreal (2000:48) in a more recent study elaborated the importance of reflection

for professional growth and stated, " The very act of reflection, it appears, is a highly productive vehicle for professional learning".

1.4. MODELS OF THE FIVE STEP ACTION RESEACH PROCESS

These four models are the primary models of action research that incorporate a process of five steps. As noted in the table below, the McNiff Model, Sagor Model, Kemmis and McTaggert Model, and the Calhoun Model, these models might have some differences but they share the same steps of data collection and analysis.

Table 1

Five Step Action Research Process

5 Step Process	McNiff Model	Sagor Model	Kemmis & McTaggert Model	Calhoun Model
Step 1	Statement of Problem	Problem Formulation	Planning	Selecting the Area of Focus
Step 2	Imagination of a Solution	Data Collection	Acting	Collecting Data
Step 3	Implementing the Solution	Data Analysis	Observing	Organising Data
Step 4	The Evaluation of the Solution	Reporting of Results	Reflecting	Analysing and Interpreting Data
Step 5	Modification of the Practice in the light of the Solution	Action Planning	Re-planning	Taking Action

The essence of taking action on an identified focus action research can be summarised as a "spiraling that facilitates planning, acting, collecting, observing, reflecting, analysing, data driven action, and problem redefinition identity action research" (Brown, 2002:11). These models of spiraling cycles identify the process of action research.

Figure 1. Action Research Model.
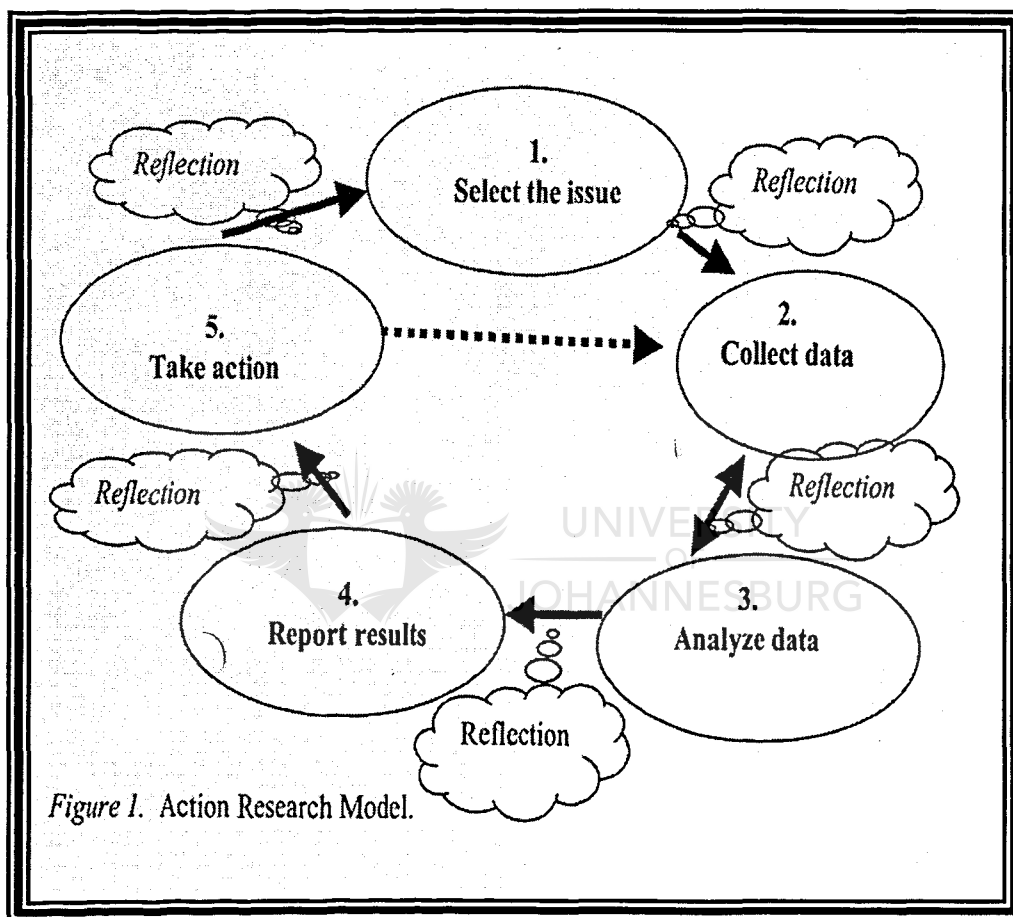
Figure 1. Action Research Model

The Sagor Model suggested the five-step action research process have five sequential steps: (a) problem formulation, (b) data collection, (c) data analysis, (d) reporting of results, and (e) action planning (Brown, 2002: 12). The researcher firstly, identifies the problem issues. Secondly, during data collection individuals in this process design a plan for collecting and combining three sets of different data.

Sagor believed that data enables researchers to view issues through different perspectives. Thereafter, the data is analysed and it is during this step that conclusions are reached. It is during this fourth step that researchers communicate and share their findings about teaching and learning (Sagor, 1992: 11). In the final step action plans are used to redirect the problem and to improve on teaching practices.

The Kemmis and McTaggert Model is a five-step process of educational action research. Their five steps were (a) planning, (b) acting, (c) observing, (d) reflecting, and (e) re-planning. In the first step researchers develop their research questions as to how they will address a specific problem. In the second step researchers implements a plan of action to experiment with ways that may lead to solutions. The third step, observing, is crucial for data collection such that researchers record a series of lessons in order to find patterns. In the fourth step, the researcher reflects on the plan, action, and observations.

This reflection guides the researcher to re-plan according to the data. Then the next spiral of acting, observing, and reflecting continues. Kemmis and McTaggert (1990: 3) states that action research a systematic research process for educators to implement throughout their teaching practice, in order to broaden their knowledge and to improve the processes of instruction, teaching, and learning.

The Calhoun Model (1994), views action research as a vehicle to facilitate change through shared decision making within the context of a school (Brown, 2002: 13). This process includes five sequential phases: (a) selecting the area of focus, (b) collecting data, (c) organising data, (d) analysing and interpreting data, and (e) taking action.

This cyclical step-by-step process involves educators through steps of inquiry, which are: choosing a focus area, collecting and analysing data, studying professional literature, focusing on the best practices, and implementing action.

Calhoun (1994: 5) also stresses that educators must study and research literature on areas of problem issues, which in turn will provide them with a foundation for further study (Brown, 2002:13).

The McNiff Model (1988: 50), after reviewing all four models, the action/reflection model, simplistically explained the relationship of action research and its influences on introspective thinking within the components of professional development in the context of teaching and learning. After reviewing the literature several studies that have been conducted on the use of action research in different contexts and for different reasons. I decided to use the McNiff Model of action/reflection in the development of the workshop on ADHD because it is directly related and significant in understanding how teaching practices are influenced by this method.
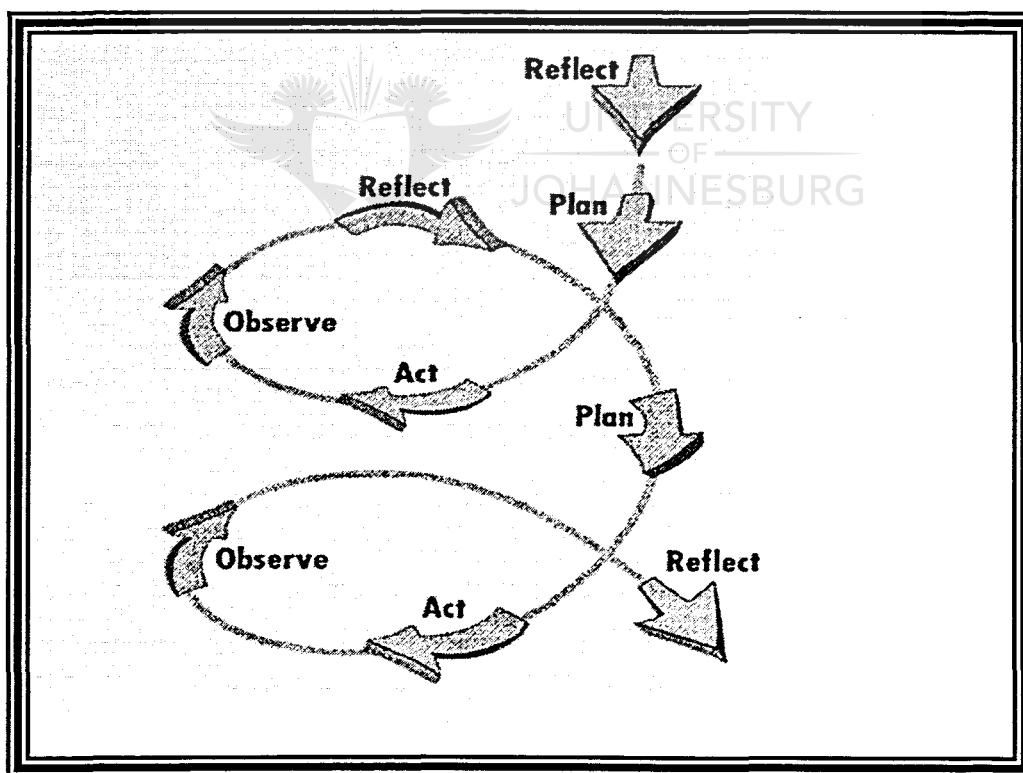

Figure 2. Four step action/reflection cycle by McNiff (2001:1).

The workshop on ADHD that was presented on the 16 and 17 of October 2002 was part of the first action research cycle, which was aimed at improving the quality of learning to all educators in an inclusive setting in a disadvantaged community. The workshop focused on two levels: (1) the researchers practice as an in-service supporter was studied. (2) A group of educators were encouraged to 'investigate' their own teaching practice in their classrooms (McNiff, 1988: 58). Moreover, according to McNiff (1988, 50), educational reforms begin when there is a sense of dissatisfaction with present practice.

In other words, the research question comes from a sense of conflict or uncertainty, which may arise from classrooms (Royer, 2002:3). In framing the research question the action researcher must develop a research plan that includes a clear statement of purpose, the subjects, and the innovation. After creating a plan of action, the researcher must determine how the data will be collected, so that, meaning can be derived from it (Royer, 2002:3-4).

The action-reflection cycle (McNiff, 1988:58-59):

1. The statement of problems

The researcher works as an educator, counsellor, and learning support specialist in an Indian community, which serves a disadvantaged and urban population of learners. Several educators who have observed a large number of learners with ADHD in this school approached her. Many of educators felt that they lacked the understanding about ADHD and required training in how to manage ADHD learners in their classrooms. Teachers in inclusive environments often note this lack of training (Reid & Maag, 1998:3).

Several key questions were posed at the outset of the study by the researcher:

1) What innovation can I do to improve educator's knowledge about learners with ADHD?

2) In the context of my work as an education and learning support specialist, how effective am I in my role as a providing support to these educators?

3) Is there any evidence to support my claim to help these educators to improve the quality of their learners learning?

2. The imagination of a solution

The researcher hypothesised possible solutions focusing on these main areas of concern. First, in attempting to formulate a strategy that would involve all the educators in a collaborative research project, the researcher referred to journal articles, books, Internet sites, colleagues, and professionals in the area of professional development through workshops for guidelines and information.

Secondly, the researcher decided that each educator required their own information package on ADHD, which included the identification of an ADHD child, the characteristics of an ADHD child, the causes of ADHD, an ADHD checklist, and tips on managing learners with ADHD in the inclusive classroom. A researcher's journal was formulated to document the entire process of this endeavour.

Thirdly, her response to the problem was to explain the lack of understanding and training that educator's experienced concerning learners with ADHD, to the members of the School Based Support Team (SBST) at the outset. The researcher imagined that if these educators were actively involved in performing the criteria of an ADHD child, they would be able to understand and manage the ADHD child in their classrooms.

3. Implementing the solution

In order to meet the needs of these educators and to provide them with strategies to manage learners with ADHD, the design and implementation of a two-day workshop on ADHD in an inclusive setting was carried out. These educators had expressed a sense of dissatisfaction with their current practice concerning learners with ADHD, and so were particularly interested in trying out new approaches.

Educators filled out consent forms and signed a register for research purposes. During the preparation of this workshop the researcher was available to them after school. The researcher made class visits to observe the educators during their instructional lessons to see whether they needed any assistance, and in return a collaborative relationship was maintained.

4. The evaluation of the solution

First, there was a clear indication that the groups undertook a more sustained discussion in the second workshop. The educators showed increased confidence in their discussion, presentation and role-play. Several possibilities were discussed. As noted in the video recording, a few educators were confused as to how many symptoms a child should display before being diagnosed as an ADD/ADHD child. The researcher explained to them that the child needed to display at least 6 symptoms over a period of six months.

There was some evidence that the little child came out of each participant, irrespective of the cue cards handed to them. After playing back the videotape, the researcher felt that the participants enjoyed the first workshop because each member was actively involved in their learning process.

The researcher designed the first workshop in which the participants had no time to sit and take down 'boring' notes. The participants were immediately placed in activities from the time the workshop began. During the first workshop many educators were talking to other members of the group, therefore, creating distortion in the video recording. At the second workshop the researcher explained the criteria for the session to them.

During the second workshop the researcher planned a lesson with even more activities so that all discussion would be focused on the activities rather than trivial discussions. This was validated in the second video recording, where all members only had the time to focus on their tasks. The criteria given to them were seen as a process of improvement.

Arising from the study on "How can a workshop be designed for educators in an inclusive school in a disadvantaged community?" the researcher was asked to design an Inclusion Policy for this school. In addition, for next year (2003) the researcher has been asked to design and implement a 'team building' project for all the members of the staff.

Furthermore, at the end of the year 2002's Christmas party, most of the educators that were present at the two-day workshop were able to recognize symptoms of ADHD in some of the staff members. Actually, they recalled most of the symptoms of ADHD that evening. A group of six educators who attended the workshop participated in a focus group interview. They were asked questions pertaining to the development of the workshop.

5. *The modification of the practice in the light of the evaluation*

The validation of this two-day workshop represented one completed cycle of action/reflection by the researcher. In reviewing the videotape the researcher saw the extent to which the educators had learnt. The researcher felt that in

order to modify her practice for a new cycle, she needed to discuss the criteria at the beginning of the workshop so that all participants were aware of what was expected of them.

Most of the educators who attended the workshop were pleased that they learnt a lot about ADHD just in just two hours, and most importantly, that they remembered what they had learnt. The evaluation of the solution proved that the researcher designed and implemented a workshop to improve the classroom situation. She was effective in her role as an education and learning support specialist, and supporter of innovation. Lastly, the educator's reflections of the knowledge they had learnt were evidence that the researcher had helped them improve the quality of their learners' learning.

1.5 INTERGRATION OF ALL FOUR MODELS

Participants in this research study used all four models combined with the process of reflection being an intentional step throughout the process (Figure 1. pg.31). The integration of the five intentional reflections was incorporated into the above model to guide the researcher so that more informed decisions about which direction in the cycle to follow can be made.

In relation to the workshop, the findings were interrelated in that educators experienced a change in (a) reflective practices, (b) instructional practices, or (c) knowledge about teaching, ultimately influenced the underlying role of the educator. The findings showed that educators found that action research helped them to critically assess their practice.

Both Sagor (2000) and Schon (1983) explained that reflection on previous experiences makes thinking more critical about ones actions. As a result, reflection becomes a natural part of their professional practice. Likewise, according to Brown (2002:38), the nature of teaching is a never-ending process

of change. Figure 2 provides a visual representation of the relationship between change in the educator's knowledge about teaching and change in their teaching practices.
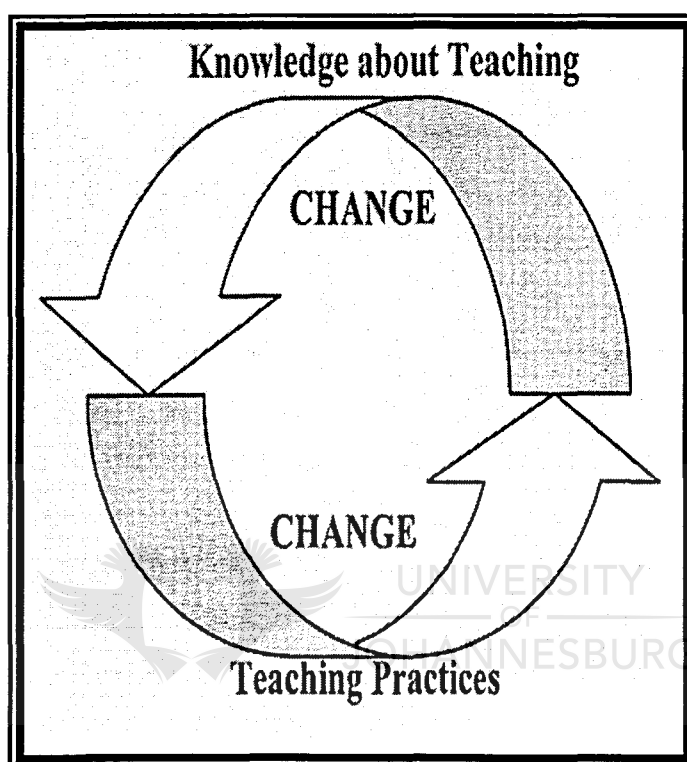

Figure 3. Relationship between Change in Knowledge and Change In Teaching

When this research began many educators stated that they expected or hoped that the workshop on ADHD would help them to improve their teaching practices and ultimately improve learners learning. When action research was introduced intentionally into the workshop development. The main purpose of the workshop was that, I wanted educators to see this process as a way for them to look at a journey that children take in growing, seeing the way they start, seeing the way they end, and measuring that growth. That is what we are really looking for.

1.2 WORKSHOP DEVELOPMENT

The research study will be an exploratory study with the main aim of developing a workshop for educators with regards to ADHD. Workshops are the processes in which educators are able to engage in educational development. Through this process educators develop both professionally and personally. A workshop is not a seminar, nor is it a discussion; it is merely an event where all participants actively contribute for most of the time. Furthermore, it is a training session in which the outcomes are dependent on the contributions of the participants rather than contributions from the leader (Bourner, Martin & Race, 1993:1).

Workshops last between a half a day to a week. There are also mini-workshops which last as little as an hour. Effective workshops involve participants in active learning rather than just impractically hearing about them. Workshops are based on experiential learning. In other words, knowledge, skills and attitude are the three main fields in which learning can occur.

Experiential learning is most effective when learning occurs in areas of skills and attitudes. This learning involves the learner directly in a situation where they are able to draw conclusions from it (Bourner, Martin & Race, 1993:2). Experiential learning is active rather than passive and contrasted with learning based on the experiences of others.

David Kolb (1984) has developed a model of experiential learning. He offers a way of conceptualizing the experiential learning process in a cycle of activities made up of four elements (Bourner, Martin & Race, 1993:2). The process includes concrete experience followed by observation/reflection, following the formation of abstract concepts and generalizations and finally testing the implications of concepts in new situations (Bourner, Martin & Race, 1993:2).
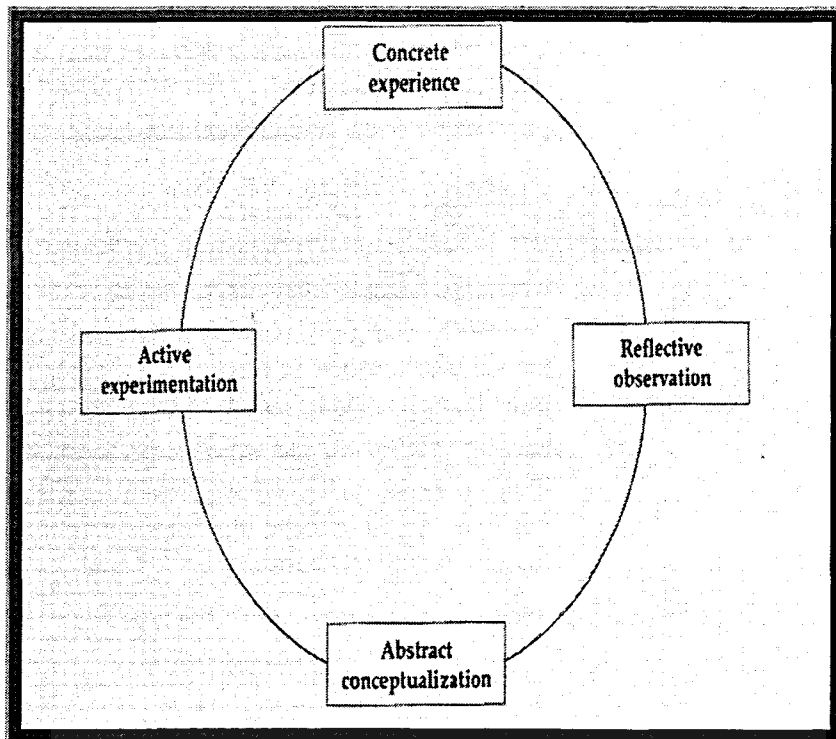
Figure 4. Model of Experiential Learning

The training workshop was designed to educate educators about how to develop management skills of learners with ADHD. The training workshop conveys the reason why management skills are essential for the successful inclusion of learner with ADHD in a disadvantaged school. The workshop centers on the rationale for inclusion of learners with ADHD.

The workshop was divided into sections so that educators were given enough time to process the content and reflect on their teaching practice. Therefore, the workshop was geared towards helping the educators apply what they have learnt from the workshop into their classroom. Workshops enable all participants to be actively involved in their own learning process.

The training of educators with the implementation of the workshop was educative as well as experimental in nature (Todes, 1999:133). By the end of the workshops educators knew how to apply principles underpinning the content of

the workshop successfully in their classroom. The workshop conveyed to educators how vitally important it was to develop learners to their full potential. In reviewing the literature on ADHD and workshop development, I needed to clarify the way in which adults learn. Fullan (1990: 22) stated, "Those involved in staff development must think and act more holistically about the personal and professional lives of teachers as individuals".

Furthermore, professional growth can be explained by the change in the individuals' knowledge, understanding, behaviour and skills (Hord, 1994: 1). As a researcher I needed to design a workshop to create a change, not only in educators perceptions of learners with ADHD but in a more structured process where educators are engaged in action research in order to develop their understanding of learners with ADHD.

1.3 . DATA COLLECTION

The focal point of this research is the process of educating educators in the field of ADHD. Therefore, the collection of data was intended to gain access into this educational process. Burns and Grove (1993:423) corroborate that data collection is a process of selecting subjects and gathering data from these subjects. Data was collected through the use of various methods, namely, researcher's journal notes, artifacts, and video recording. Furthermore, the use of different data sources helps the researcher to "validate and crosscheck findings" (Patton, 1990, 244).

1.3.1 RESEARCHER'S JOURNAL

The researcher kept a journal of observation notes, inquiries and discussions. After each informal observation, meeting, or discussion the researcher recorded this information in the journal. In writing up this research essay the researcher

used most of the information found in this journal. Maykut and Morehouse (1994:73) corroborate the use of this data collection technique, by stating that "The keen observations and important conversations one has in the field cannot be fully utilized in a rigorous analysis of the data unless they are written down".

1.3.2 ARTIFACTS

Artifacts were collected from the workshop such as A2 charts that were reduced in size are included in Appendix D. These artifacts were then used to support the data collection to further define and clarify participants involvement in the process of action research. The researcher used these artifacts to analyse whether the participants understood the symptoms of ADHD and the way in which to manage these learners.

1.3.3 VIDEO RECORDINGS

The workshop was video recorded in order to assist the researcher on her reflection of the action research process. This recording helped the researcher to record all the information observed during the workshop more completely. This recording focused on the detail of the workshop, for instance, group discussion, role-play, and brainstorming. The data collection of the researcher journal notes, including this video recording enabled the researcher to become aware of the progress of the workshop and each participant.

1.4. DATA ANALYSIS

The data that was collected from the workshop was analysed on an on-going basis using the constant comparative method (Brown, 2002: 52). This data analysis was used to guide the researcher through identifying themes and patterns within the action research process. The data provided the researcher with the means to analyse and identify each participant's change and growth.

It also enabled the researcher to evaluate the progress of the workshop as well. In addition, the artifacts of the workshop were compared and analysed to find emerging themes and patterns among the groups. This was done by reviewing the video tape of the two separate workshop from the beginning to the end.

1.5. TRUSTWORTHINESS OF THE FINDINGS

Lincoln and Guba (1985: 57) suggested that trustworthiness is responsible for the credibility and dependability in qualitative research. A variety of strategies must be used so that trustworthiness of the findings and interpretations are maintained. Throughout this study the researcher collaborated with expertise at RAU. There were weekly appointments with the supervisor and work was checked and corrected on a regular basis.

The supervisor, school support committee and the editor, reviewed the data collection and data analysis processes. At the end of the workshop the findings were shared with the participants and they had to evaluate the validity of their learning process. In workshop participants play an important role in verifying the data collected and the interpretations of that data (Lincoln and Guba, 1985:57).

1.6 SUMMARY

Many educators expressed their need to implement effective instructional strategies that would help them observe, perfect, and transform their teaching practices. I found that the action research process enabled educators to actively participate in the development of practical knowledge about effectively managing learners with ADHD. Therefore, after I reflected on the design, implementation and evaluation of the workshop, I noticed that action research could be an effective method for professional development that leads to self-efficacy in educators (Brown, 2002: 53).

In this section, a description of the research design and the data of inquiry were given. In section 4, the guidelines of the development of a workshop will be discussed.

SECTION FOUR

OVERVIEW OF THE ACTION RESEARCH CYCLE AND GUIDELINES

4.1. INTRODUCTION

In the previous section the design and the inquiry of the research study were discussed and compared with relevant literature. In this concluding section, guidelines and recommendations will be provided to assist educators on how to run a workshop on ADHD. In validating and verifying the proposed guidelines for this research study, a literature control will be done. The problems encountered during the study will be discussed. Thereafter conclusions and recommendations will be presented.

The whole focus of this study was the design, implementation and reflection of a workshop on ADHD. Many educators who participated in this research felt that they were not adequately equipped with the knowledge on ADHD. They required training on how to manage ADHD learners in their classrooms. According to Reid and Maag (1998: 44), there are a few studies that have analytically addressed training and provision for teachers that would enable them to work effectively with these children.

Educators have found themselves frustrated, helpless, alone and incompetent concerning learners with ADHD in their classroom. The problems that they encounter on daily basis are so overwhelming that they are unable to bring about changes in such circumstances. The researcher tries to explore opportunities that will facilitate and enable these educators to having a better understanding of themselves and their interaction with these learners, so that they will be able to

cope and meet the challenges in their inclusive classrooms in a disadvantaged community.

An ADHD workshop was conducted that involved educators from an Indian, urban, disadvantaged mainstream school. The objective of the workshop was to develop the knowledge of these educators in the field of ADHD. The researcher developed a workshop with its main focus being action research based on the needs and concerns of all participants.

It is important to remember that all four stages of the experiential learning cycle should be included in the development of a workshop. This is the sequence that has the most impact on learning because the learner is directly involved in the situation, and then draws conclusions from it (Bourner, Martin & Race, 1993: 2-3). Furthermore this cycle has considerable significance in the design and implementation of workshops that are intended to affect competence or attitudes of individuals.

The general layout of the cycle of activities in experiential learning is concrete experience followed by observation/reflection, leading to conceptualisation and finally experimentation, which involves the testing of implications of concepts in new situations. This provides the starting point for the next experiential learning cycle in workshop development (Bourner et al., 1993:2-3).

This experiential learning cycle should be practiced in conjunction with the action/reflection cycle of McNiff (1988, 58). The reason for this is that experiential learning is essentially active rather than passive and can be characterised with the learning based on the experience of others. This also forms the basis for action research with the operative word being 'participatory'. The educator is involved in his/her own enquiry, and collaboratively, it involves other colleagues as part of this shared enquiry (McNiff, 1988: 4).

4.2. WORKSHOP DESIGN

The structure of the workshop was to establish the knowledge on ADHD through proactive approaches developed by the researcher. The "think-pair-share" approaches were used throughout the workshop, which built up a collaborative network among these educators (Plevyek & Heaston, 2001: 2). Since the whole emphasis of the workshop was to develop educator's knowledge on ADHD, an understanding of shared responsibility, respect and teamwork needed to be established.

A workshop was designed to reach participants by appealing to their multiple intelligence, according to the principles developed by Howard Gardner. During the workshop participants compared and discussed concepts, which guided them to learn to develop and adapt their own teaching strategies. Collaborative involvement of each participant contributed to an effective constructivist classroom. Presently, cooperative and collaborative learning are growing in popularity. With the implementation of these inclusive practices educators are able to think differently about structuring learners learning (Donlevy & Donlevy, 2000:129).

The rationale for developing an educational workshop emerged from information gathered from literature studies, professionals in the field of ADHD, and officials from the Department of Education. Within this framework, the workshop was intended to document how a diverse educator population would seek help in a crisis where learners with ADHD are looked upon as being 'naughty', 'stubborn', 'bossy' etc. rather than charactised as hyperactive, impulsive, distractible and inattentive.

To make meaningful and sustained changes in the lives of these educators, participants had to be willing to explore and discover new ideas and strategies that needed to be implemented in their classrooms in order to be successful with

the teaching of these learners. The role of the researcher was to facilitate discussions by asking questions, contributing additional information and providing guidance at appropriate times. After reflecting on the second day's workshop, final decisions regarding the strategies on ADHD were made by the participants collectively, not by any one group represented and most definitely not by the workshop researcher.

The development of the workshop was initiated by a group of educators of an inclusive school in a disadvantaged community who contacted me about possibly guiding them in finding ways to help the ADHD learner in their classrooms. After further discussions with School Governing Body (SGB), and the management staff, the real concern was brought to light and was more specific than just a lack of understanding of ADHD.

The researcher's real concern involved the way in which a learner was diagnosed as being ADHD, and the strategies educators needed to know in order to manage these learners successfully in their classrooms. After much thought, the researcher felt that a diverse team of professionals consisting of educators, psychologists, doctors, education support personnel, the school management staff and the researcher had to be formed in order to create a network of support.

I structured the workshop with the intention of establishing collaborative relationships through proactive approaches. The think-pair-share process was used throughout the workshop. Participants were asked to think about each concept, discuss their ideas in small groups, and then share their ideas with the rest of the class. During the months of August through to September, the researcher took time in designing the objectives of the workshop.

The objectives included the way in which one could learn how to diagnose a learner with ADHD, how to use a checklist during this process, and how to provide educators with the information on how to mange learners with ADHD in

their classrooms. The members of the support team formulated the workshop goals and objectives.

At first, the researcher met with individual professionals who provided her with relevant information materials about ADHD. Meetings with them were devoted to discussions concerning the participants and the workshop format. Although it soon became clear that other neighbouring schools would also benefit from this workshop, the researcher decided to focus on this particular school as a pilot process for further workshops.

I reviewed relevant literature on the experiences of others on the development and format of a workshop. The format of the workshop that I designed included discussion, transparencies, a focus group evaluation, and handouts with information on the characteristics, symptoms, checklist, and management strategies on ADHD. A thorough literature review enhanced the content of the workshop. The researcher found that most of the resource materials such as DSM-IV-TR (2000: 78-85), books, journal articles, and Internet sites that referred to ADHD were similar in setting forth concepts, characteristics and criteria.

The greatest challenge for me was to integrate this essential content into the overall design of the workshop. When the workshop plan and design was completed, the SGB and the teacher representative council were contacted, and a letter was given for permission to conduct this research. Approval was obtained to conduct the workshop at the school.

4.3. PRATICAL PROBLEMS ENCOUNTERED

Somehow it was difficult for me to start immediately with the research because the school was busy with their fund-raising campaign and preparation for their excursion, which were to take place during the months of August through to

October. This led the researcher to postpone the focus group interviews, which was important for the evaluation of the workshop.

Another problem encountered was that the researcher found that some educators on the staff did not want to attend the two-day workshop. The researcher therefore went personally to each educator on the staff to confirm their presence at the workshop. A role count was taken into consideration so that the activities involved a smaller group of participants.

The most difficult part was to persuade educators to attend the workshop. During assembly the principal of the school had to remind the staff of the workshop. What the researcher realized was that many educators were unaware of the learners with ADHD in their classrooms. They felt that the workshop did not apply to their needs and in return they were not willing to attend because this was a waste of time.

Eventually the researcher had to find ways to attract her audience (participants) in order to create awareness to the rest of the staff. In view of the researcher's practical problems, the groups were quite 'noisy' which created distortion during the video recording of the workshop. The reason behind this was that no workshop rules were explained to the participants. As a result, the in-service supporter was unaware of warning signs of irrelevant conversations from the participants, therefore resulting in a problem with discipline.

However, the findings of this study are significant in that it focuses on how impractical most workshops are where participants are inactive, and passive. Personally, I feel that in impractical workshops most participants are frustrated and bored rather than being part of the learning process, which they were in the workshop on ADHD.

4.4 OVERVIEW OF THE ACTION RESEARCH CYCLE

From the outset of the research study, the researcher aimed to design, implement and reflect on a workshop on the management of learners with ADHD in an inclusive school in a disadvantaged community. The researcher read literature on the development of a workshop and Attention Deficit Hyperactivity Disorder (ADHD) and thought of ways to design a workshop on the relevant literature. Although the entire process was time consuming, one needs to go through this process so that there are no hiccups during the presentation of the workshop.

This research study arose from the following:

- Many educators felt that they lacked the understanding of ADHD. The findings of the workshop made the researcher aware that most of the educators knew some of the symptoms that the learners displayed as mentioned in DSM-IV-TR (2000: 78-85). However, they did not know that the learner had to display 6 or more symptoms of these criteria in order to be diagnosed as an ADHD child.

- A study needed to be conducted to bridge the gap of the knowledge base of these educators so that they will be able to be effective managers in their classrooms.

The rationale of this study was twofold. Firstly, it was to develop the knowledge of the concerned and helpless educators with regard to learners with ADHD. Secondly, it was to describe the guidelines in designing, implementing and evaluating the development of a workshop on ADHD.

The fundamental questions asked for this research study were:

- What innovation can I do to improve this classroom situation?

- In the context of my work as education and learning support specialist, how effective is my role as a supporter of innovation?

- Is there any evidence to support my claim to help these educators improve the quality of their learners learning?

- How can the information obtained be used to describe the guidelines to assist these educators to effectively manage learners with ADHD?

To find appropriate and relevant answers to these questions the researcher used the qualitative, exploratory, descriptive and contextual design. The results of the action/reflection cycle conducted indicate the occurrence of interested and motivated educators who were eager to learn. One main point was identified; namely, many educators experienced confusion in their roles as effective managers among the ADHD learners. With the suggested guidelines it is believed and hoped that these educators will be able to manage learners with ADHD more effectively and successfully in their classrooms irrespective of the symptoms that learners with ADHD may display, for instance, fidgety, runs, climbs, bossy, etc.

4.5 RECOMMENDATIONS FOR FURTHER RESEARCH

There are specific areas from this study that warrant further research. The recommendations stated here are based on the findings of the research study.

- *Action Research at all levels of the National Qualifications Framework (NQF)*

I recommend that further study of how action research influences educators thinking and teaching practices will be needed. Efforts should be made to expand

the consortium of educators to other schools and districts. Additionally, all the participants in this study were from an inclusive school in a disadvantaged community, therefore efforts should be made to study educators conducting action research at all levels of the National Qualifications Framework (NQF).

- *Long-term*

Future research will be needed to investigate the long-term changes in educator's knowledge and practice as related to action research in this study. In the findings of this study, I felt that most educators changed their teaching practice while they were engaged in action research. After reflecting on workshop one, most of the educators found themselves interacting in a more productive manner to learners with ADHD.

They knew most or if not all the symptoms of ADHD and they were eager to find out whether they could identify the symptoms in these learners. Therefore, studies investigating long-term influences of action research on teaching practices would be beneficial to education.

- *Reflection*

When the researcher analysed the data of the workshop, many changes were noted. The changes that occurred as a result of educators participating in action research influenced their role in education. The researcher went on to analyse the data even further. Educators were seen as thinkers, learners and practitioners. In section 3, figure 3, discussed the relationship of change. However, in this section the same figure was enhanced to show that change in one area could inspire change within other areas (Figure 4).
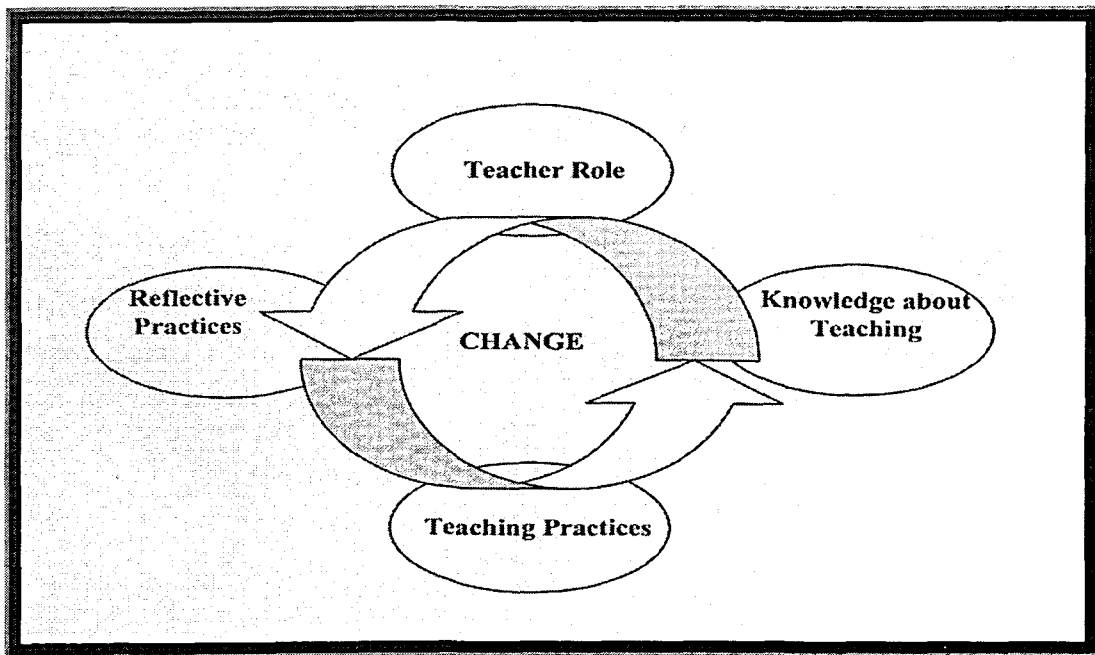
Figure 5. Change in One Area Inspired Change within the Other Three Areas (Brown, 2002:55).

Additionally, action research is a mean by which educators combine the practice of teaching and the practice of research (Brown, 2002:55). In other words, the educators' reflection needs to be inspired by new knowledge of the previous "instructional intervention", which as a result improves their teaching practices (Brown, 2002: 56).

Ultimately the researcher realised that learning through reflection enables educators to grow from previous experiences. Sagor (2000: 10) can corroborate this statement with the explanation that reflection on previous experiences makes thinking more analytical and critical about one's actions after they have taken place. Therefore, I recommend that educators should deliberately *reflect* on their teaching practice because it helps them improve their role as effective managers.

- *Second Action/Reflection Cycle*

It was found in this study that educators' engagement in the action research cycle was highly contingent on *reflection* of their teaching and learning process. Deliberate and more detailed reflection equipped educators' with the learning and growing that ultimately lead to changed and improved instructional practices to learners with ADHD. Basically, after reviewing the literature on action research we can deduce that it is an approach to improve ones own teaching practice. The first cycle of planning, acting, observing and reflecting therefore usually leads to second, and so forth, in which you incorporate improvements suggested by the initial cycle.
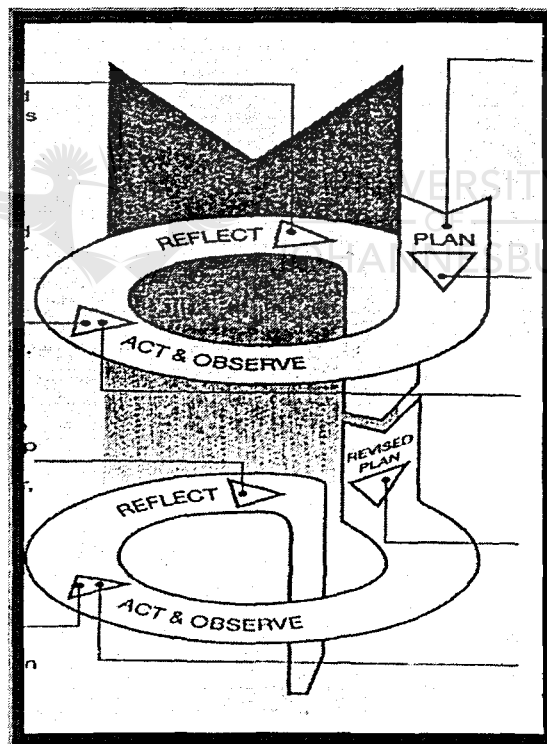

Figure 6. Planning, acting, observing, reflecting and re-planning (McNiff, 2002:9)

The results of this study pointed out the ways in which educators have embraced the complexities of teaching and learning by their committed work towards improving their individual teaching practices. For instance, the way in which they

approached the researcher (i.e. the in-service facilitator) about the problem of managing learners with ADHD in their classrooms. Therefore, in order to promote, maintain and re-establish skills for coping with ADHD learners, it is imperative to design and implement the second action/reflection cycle.

The action/reflection cycle will enable educators to interrogate the teaching practice in a more systematic and intentional manner (Brown, 2002:59). The aim of the second cycle should focus on the classroom situation, as to how educators implement the workshop-based teaching strategies appropriate to their instructional outcomes of their learners.

In addition educators can use the second cycle to improve the quality as well as the effectiveness of instruction through action research. This will empower educators to conduct their own research and to connect that research to the implementation of new teaching approaches, which will equip them with strategies that will ultimately promote, improved teaching and learning practices.

4.6 CONCLUSION

To design and implement a workshop based in action research encourages educators to involve themselves as active learners. This workshop encouraged educators to use action research to uncover explanations of questions about the best way to improve their own teaching and learning practices with regards to the management of learners with ADHD in their classrooms. The method of action research engaged the researcher in the process of examining and reflecting on how to improve the practice, studying the literature and research related to the inquiries, and then implementing a strategy intended to improve present practice of these educators.

Furthermore, the evidence of this study showed that reflection is the key element of professional development. Action research encourages educators to be reflective of their own practice so that the quality of education is enriched for

themselves and their learners (Brown, 2002: 61). Evidently, action research requires time and resources (Schlechty, 1990: 73). Skills concerning data collection and analysis, collaboration, and reflection are needed in pre-service, in-service, on-going professional development, and post service programmes.

The main aim of this study was to promote educator effectiveness, professionalism, and empowerment. However, further research concerning the implementation of action research at all levels of the NQF, long-term influences of action research on teaching practices, on-going reflection, and the design and implementation of the second action/refection cycle are needed in the field of education to fully embrace this process.

Reference List

Ainscow, M. 1991. *Effective Schools for All*. London: David Fulton Publishers.

Ainscow, M. 1998. Reaching Out to All Learners: Some Lessons from Experience. Keynote address at the International Conference on School Effectiveness. London: David. Fulton Publishers.

Anderson, G. 1998. *Fundamentals of educational research*. London, Falmer Press. Improvement, Manchestor.

Barkley, R.A. 1996. *Resources for teachers*. Curriculum Review, Mar96, Vol. 35 Issue 7, p3-11.

Barkley, R.A. 2000. *Commentary on the multimodal treatment study of children with AD/HD*. Journal of Abnormal Child Psychology, 28,595-598.

Bender, W & McLaughlin, P.J. 1995. *The ADHD Conundrum*. Intervention in School & Clinic: March95, Vol.30 Issue 4, p196-199.

Bender, W. N., McLaughlin, P.J., & Ehrhart, L.M. 1993. *ADDNET network: A low- end technology success*. Technological Horizonhs in Educational Journal, 21.

Bourner, T., Martin, V., & Race, P. 1993. *Workshops that work: 100 ideas to make your training events more effective*. London: McGraw-Hill Book Company.

Brown, B.L. 2002. *Improving Teaching Practices through Action Research*. Blacksburg, Virginia.

Burns, N. & Grove, S.K. 1993. *The practice of nursing research. Conduct, critique and utilization*. WB Saunders: Philadelphia.

Caine, R. & Caine, G. 1994. *Making connections: Teaching and the human brain.* Reading, MA: Addison-Wesley.

Cains, R. A. 2000. *Children Diagnosed ADHD: factors to guide intervention.* Educational Psychology in Practice: Vol. 16 Issue 2, p159-184.

Dane, F.C. 1990. *Research Methods.* Pacific Grove, CA: Brooks Cole.

Danielson, C., & McGreal, T. 2000. *Teacher evaluation: To enhance professional practice.* Alexandria, VA: Association for Supervision and Curriculum Development.

Denzin, N.K. & Lincoln, Y.S. 1994. *Handbook of Qualitative Research.* Thousands Oaks, CA: Sage.

Department of Education. 2001. Education White Paper 6: *Special Needs Education-Building an inclusive education and training system.* Triple CCC Advertising and Research. P1-56.

Donald, D., Lazarus, S., & Lolwana, P. 2002. *Educational Psychology in social context.* Cape Town: Oxford University Press.

American Psychiatric Association. 2000. Diagnostic and Statistical Manual of Mental Disorders. American Psychiatric Association : Washington, DC.

Donlevy, J and Donlevy, T. 2000. *Concept to classroom: Web-Based workshops for Teachers.* International Journal of Instructional Media: Vol. 27, Issue 2.

DuPaul, J.G., & Ervin, R.A. 1996. *Functional assessment of behaviors related to Attention Deficit/Hyperactivity Disorder: Linking assessment to intervention design.* Behavior Therapy, 27.

Edwards, S.D. 1990. *A model of research stages.* University of Zululand: Journal of Psychology, 6(1): 54-56.

Fullan, M. 1990. Staff development, innovation, and institutional development. In B Joyce (Ed.), Changing schools culture through staff development. *The 1990 ASCD Yearbook* (pp.3-25). Alexandria, VA: ASCD.

Hancock, J. 1993. *Sow a thought, reap an action. Teachers are researchers: Reflection and action.* Newark, DE: International Reading Association.

Hannaford, C. 1995. *Smart Moves: Why learning is not all in your head.* USA: Great Oceans Publishers.

Hustler, D., Cassidy, A., & Cuff, E.C. 1986. *Action Research in Classrooms and Schools.* United Kingdom: Allen & Unwin.

Hord, S. 1994. *Staff development and change process: Cut from the same cloth.* Austin, Texas: Southwest Educational Development Laboratory.

Katisyannis, A & Landrum, T. 1997. *Practical guidelines for monitoring treatment of attention deficit hyperactivity disorder.* Preventing School Failure: Spring 97, Vol. 41 Issue 3, p132-139.

Kemmis, S. & McTaggart, R. 1990. *The action research planner.* Victoria, Australia: Deakin University Press.

Kerns, K & Eso, K & Thomson, J. 1999. *Investigation of a Direct Intervention for Improving Attention in Young Children with ADHD.* Developmental Neuropsychology: Vol. 16 Issue 2, p273-298.

Kosnick, C. 2000. Looking back: Six teachers reflect on the action research experience in their teacher education. *Action in teacher education.* 22(2), 133-142.

Learner, J.W., Lowenthal, B. & Learner, S.R. 1995. *Attention deficit Disorder: Assessment and Teaching.* Pacific Grove, CA: Brooks/Cole.

Lincoln, Y.S., & Guba, E.G. 1985. *Naturalistic inquiry.* Beverly Hills, CA: Sage.

Lucker, J & Molloy, A.T. 1995. *ATTENTION-deficit hyperactivity disorder – Information services.* Elementary school guidance and Counseling: April95, Vol. 29 Issue 4, p260 – 279.

Mason, J. 1996. *Qualitative Researching.* Thousand Oaks, CA: Sage.

Maxwell, J.A. 1996. Qualitative Research Design: An interactive approach. Thousand Oaks, CA: Sage.

Maykut, P., & Morehouse, R. 1994. Beginning qualitative research: A philosophical and practical guide. London: Falmer Press.

McNiff, J. 1997. *Action research: Principles and practice.* Chatham, Kent: McKays of Chatham.

McNiff, J. 1988. *Action Research: Principles and practice.* Macmillan: London.

Merriam, S.B. (1999) *Qualitative Research and Case Study Applications in Education: Revised and Expanded from Case Study Research in Education.* Jossey-Bass Publishers: San Francisco.

Merriam, S.B. 1991. *Case Study Research in Education: a qualitative approach.* San Francisco.

Miles, M.B. & Huberman, A.M. 1994. *An expanded Sourcebook: Qualitative Data Analysis.* London: Sage Publishers.

Montague, M & Warger, C. 1997. *Helping students with attention deficit hyperactivity disorder succeed in the classroom.* Focus on Exceptional Children, Dec 97, and Vol. 30 Issue 4, p 1-29.

Otto, W., & Smith, R.J. 1980. *Corrective and Remedial Teaching.* USA: Houghton Mifflin Company.

National Commission on Special Needs in Education(NCSNET) and Training and National Committee on Education Support Services(NCESS). !997. Quality Education For All: Overcoming barriers to learning and development. CTP Printers: Parow.

Patton, M. 1990. *Qualitative Evaluation Methods.* Thousand Oaks, CA: Sage.

Plevyak, L. 2001. *The communications triangle of parents, school administrators and teachers: A workshop model.* Educational Journal.

Raza, S.Y. 1997 *Enhance your chances for success with students with Attention Deficit/Hyperactivity Disorder (ADHD).* Intervention in School & Clinic, Sep97, Vol.33 Issue 1, p 56-61.

Reid, R & Maag, J.W. 1998. *Functional Assessment: A method for developing classroom-based accommodations and interventions for children with ADHD.* Reading & Writing Quarterly: Jan/Mar.98, Vol. 14 Issue 1, p 9-44.

Rief, S.F. 1993. *How to Reach And Teach ADD Children.* West Nyack, New York: Center for Applied Research in Education.

Royer, R. 2002. *Supporting technology integration through action research*. Clearing House, Vol. 75, Issue 5.

Russell, J. 1997. *The pill teachers push*. Good Housekeeping, Dec 97, Vol.225 Issue 6, p110-119.

Sagor, R. 1992. *How to conduct collaborative action research*. Alexandria, VA: Association of Supervision and Curriculum Development.

Sagor, R. 2000. *Guiding school improvement with action research*. Alexandria, VA: Association of Supervision and Curriculum Development.

Schlechty, P. 1990. Schools for the 21st century: Leadership imperatives for educational reform. San Francisco: Jossey-Boss.

Schon, D. 1983. *The Reflective Practitioner: How professionals think in action*. NY: Basics Books.

Schon, D. 1987. *Educating the reflective practitioner*. San Francisco: Jossey Bass.

Sparks, G & Simmons, J. 1989. *Inquiry-orientated staff development*. Oxford, OH: National Staff Development Council.

Sprafkin, J., Gadow, K.D & Nolan, E. 2001. *The Utility of a DSM-IV—Referenced Screening Instrument for Attention Deficit/Hyperactivity Disorder*. Journal of Emotional and Behavioral Disorder: Vol. 9 Issue, 3, p182-192.

Silver, L.B. 1992. *The misunderstood child: A guide for parents of children with learning disabil8ities*. Blue Ridge Summit, PA: Tab.

Streubert, H.J & Carpenter, D.R. 1995. Qualitative Research in Nursing: Advancing the humanistic imperative. Philadelphia: Lippincott.

Stubbs, S. 1995. Supporting sustainable change in developing countries. Lessons from the South: pioneers of the future. A paper presented to the International Special Education Congress (ISEC), Birmingham.

Taylor, H & Larson, S. 1998. *Teaching children with ADHD – What do elementary and middle school social studies teachers need to know?* Social Studies: Jul/Aug98, Vol. 89 Issue 4, p161-165.

The Southern African Association For Learning and Educational Difficulties (SAALED). 2000. *First Intentional Southern African Conference on Attention Deficit Hyperactivity Disorder: Research and Practice.* South Africa: Clareinch.

Todes, K. 1999. *A career guidance programme: Training workshops for community workers in disadvantaged communities.* Vol. 2: Addenda.

UNESCO. 2001. *Overcoming Exclusion through Inclusive Approaches in Education: A Challenge and a Vision.* p. 1-20.

Westman, J.C. 1990. *Handbook of Learning Disabilities: A multisystem Approach.* Allyn and Bacon: USA.

Wilkinson, D. 2000. *The Researcher's Toolkit: The complete guide to practitioner research.* USA: Taylor and Francis Group.

Yost, D.S., & Mosca, F.J. 2002. *Beyond Behavior Strategies: Using reflection to manage youth in crisis.* Clearing House: Vol. 75, Issue 5.

Appendix A
Permission to conduct a research

R · A · U

RANDSE AFRIKAANSE UNIVERSITEIT
Posbus 524, Auckland Park 2006
Republiek van Suid-Afrika
Tel (011) 489 2911
+ 27 - 11 - 489 2911
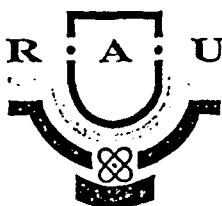
RAND AFRIKAANS UNIVERSITY
PO Box 524, Auckland Park 2006
Republic of South Africa
Fax (011) 489 2191
+ 27 - 11 - 489 2191

1 October 2002

The Principal

Greyville Primary School

P O Box

Lenasia

1827

Dear Madam

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

I am a M.Ed. (Education and Learning Support) student at the Rand Afrikaans University in Johannesburg. Presently engaged in a research project entitled "A workshop for educators with regards to Attention Deficit Hyperactivity Disorder".

This study is to be conducted at your school if possible under the supervision of Mrs Jean Fourie of the Faculty of Education and Nursing of the Rand 'Afrikaans University.

The objects of this study are:

- to read literature on the development of a workshop and Attention Deficit Hyperactivity Disorder and to design a workshop on the relevant literature.

- to implement a workshop to educators in order to develop their role as effective managers of learners with ADHD in the classroom.

- to reflect on the workshop.

To complete this study successfully, I need to design and implement a workshop on ADHD for approximately 2 hours, which will be video recorded.

The anonymity of each participant and the institution will be kept confidential by observing the following ethical standards throughout the research:

- Pseudonyms will be used for each participant's name.

- RAU and the researcher will only use the findings of this study for research purposes and it will be kept confidential.
- Participants are at liberty to withdraw or terminate their involvement in the study at any stage.
- This study will be beneficial to you in that a workshop will be designed and implemented to create opportunities for educators to be part of an action research cycle that will help them develop their knowledge and skills as effective manager for learners with ADHD.

Further information can be obtained from the researcher telephonically:

- (011) 8542762 (Home)
- 072 181 3239 (Mobile)
- (011) 8522343 (Work).

Your participation would be much appreciated.

Miss S Naidoo
M Ed (Education and Learning Support)
Researcher and In-service facilitator

Appendix B

Permission Form from the Principal

GREYVILLE PRIMARY SCHOOL.
P.O.BOX.71.
LENASIA
1820
CRN.GARDENIA AND ANEMONE
852-2343[PHONE]   854-7027[FAX]   E-MAIL:110106@gde.za.net

Date:....................

16 September 2002

ATTENTION: Miss S Naidoo

Dear Madam,

RE: Request from a Rand Afrikaans University student, Miss S Naidoo, to conduct a research at Greyville Primary School.

Your request was discussed with the Board of management and the Executive Committee of the SGB and has been approved based on the conditions that the workshop will commence after teaching hours.

The General-Purpose room (GP) can be used for the presentation of the workshop and the Principal will inform the staff of this research study, in the next meeting from this date.
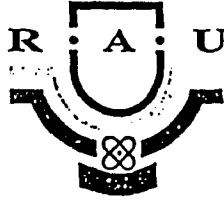
We hope that we have catered for your needs, enabling you, Miss S Naidoo a successful completion of your research.

Sincerely yours,

Mrs S Moodley
(Principal)

R · A · U

RANDSE AFRIKAANSE UNIVERSITEIT
Posbus 524, Auckland Park 2006
Republiek van Suid-Afrika
Tel (011) 489 2911
+ 27 - 11 - 489 2911

RAND AFRIKAANS UNIVERSITY
PO Box 524, Auckland Park 2006
Republic of South Africa
Fax (011) 489 2191
+ 27 - 11 - 489 2191

ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD) WORKSHOP FOR EDUCATORS

YOU ARE INVITED TO ATTEND A WORKSHOP ON THE MANAGEMENT OF LEARNERS WITH ADHD WITHIN THE CLASSROOM ENVIRONMENT, AS WELL AS OUTSIDE OF THE CLASSROOM.

Children who present attention difficulties have constantly challenged teachers. The role of teachers has been ambiguous in terms of recognizing some of the presenting factors of Attention Deficit Disorder (ADD), or Attention Deficit Hyperactivity Disorder (ADHD).

Learners with ADD/ADHD display symptoms of restlessness, hyperactivity, excessive talking, extrinsic motivation, disruptive behavior, easily distracted, poor attention span, temper tantrums and so forth.

You are invited to a workshop on strategies that teachers could use in their classroom so that your classroom can be managed more efficiently.

The purpose of this workshop is to develop ways in which teachers can implement strategies to manage and accommodate learners with ADD/ADHD successfully in the classroom.

VENUE: GENERAL PURPOSE (GP) ROOM (GREYVILLE PRIMARY SCHOOL)
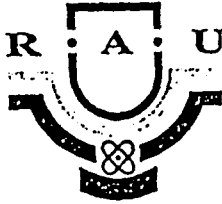   16-17 OCTOBER 2002

TIME: 13.30PM – 14.45PM

GREYVILLE PRIMARY SCHOOL

NAME OF TEACHERS											
1. MOODLEY.S.											
2. FRANCIS.CN	C										
3. MOODLEY C.S.											
4. DOCRAT R	R.DOCRAT.										
5. MOONSAMY.S											
6.SEEDAT.S											
7.AKOOJEE Z.E		C									
8.BAKER.I											
9.GOOLBHAI.F											
10.GOVAN.K.R.											
11.GOVENDER.I											
12.JINA.R		C									
13.JIVAN.N		C									
14.JOHN.D		C									
15. JOSEPH.N /D Thomas	Thomas	C									
16.KRISHNANUDH.S											
17. LATCHMAN.J	Latchman		C								
18.MAYES.E.W.		C	R.								
19.MOHAMED R.A.											
20. MOOSA S.E											
21. NAIDOO JJV											
22 NAIDOO T.											
23 PADIACHEE.V	Padiachee	C									
24. PATEL J.	C										
25. PATEL R.A.	Patel										
26. PILLAY KK	C										
27. PILLAYV.											
28. J.SMIT / S.JOSEPH	Joseph	C									
29. F.YACHAT / NASHER		C									
30.S.NAIDOO											
31 M.SUBRAMANI											
33. KISSOON. S.											
34. DOOKOO.M											
35. GAFOOR. J.	C										
36. GOVINDSAMY.V											
37. F.EBRAHIM.											
38.P.PILLAY.		C									
39. SHABALALA. M		C									

Appendix D

Request for consent from participants

R A U

RANDSE AFRIKAANSE UNIVERSITEIT
Posbus 524, Auckland Park 2006
Republiek van Suid-Afrika
Tel (011) 489 2911
+ 27 - 11 - 489 2911

RAND AFRIKAANS UNIVERSITY
PO Box 524, Auckland Park 2006
Republic of South Africa
Fax (011) 489 2191
+ 27 - 11 - 489 2191

1 October 2002

Dear Educators

REQUEST FOR CONSENT FROM PARTICIPANTS

I am a MEd (Education and Learning Support) student at the Rand Afrikaans University in Johannesburg, presently engaged in a research project entitled "A workshop for educators with regards to Attention Deficit Hyperactivity Disorder".

This study is to be conducted at your school if possible under the supervision of Mrs Jean Fourie of the Faculty of Education and Nursing of the Rand Afrikaans University.

The objects of this study are:

- to read literature on the development of a workshop and Attention Deficit Hyperactivity Disorder and to design a workshop on the relevant literature.

- to implement a workshop to educators in order to develop their role as effective managers of learners with ADHD in the classroom.

- to reflect on the workshop.

To complete this study successfully, I need to design and implement a workshop on ADHD for approximately 2 hours, which will be video recorded.

In this regard, I undertake to keep your anonymity confidential by omitting the use of your names of participants and the institution. Pseudonyms will be used for each participant's name. RAU and the researcher will only use the findings of this research for research purposes and it will be kept confidential.

According to the consent proceedings you are at liberty to withdraw or terminate your involvement in the study at any stage. Furthermore, your participation is voluntary, and you will not be penalised if you fail to comply with the research study.

This study will be beneficial to you in that a workshop will be designed and implemented to create opportunities for you to be part of an action research cycle that will help you develop your knowledge and skills as an effective manager for learners with ADHD. The research findings will be used to assist the researcher in developing guidelines to meet the needs of other in-service facilitators in the development of a workshop for educators.

Further information can be obtained from the researcher telephonically:

- (011) 8542762 (Home)
- 072 181 3239 (Mobile)
- (011) 8522343 (Work).

Your participation would be much appreciated.

Miss S Naidoo
M Ed (Education and Learning Support)
Researcher and In-service facilitator

Appendix E

Artifacts from participants

ADHD

1. RESPONSIBILITY
2. KEEP HANDS OCCUPIED
3. TASK TO SUIT ABILITY
4. AVOID DISTRACTION
5. MEDICATION
6. REWARD FOR GOOD ...
7. REACH AIM TO ...
& CONTROL CHECKS

ADD

RESPONSIBILITY
ACTIVITY IN GROUP
PRAISE/REWARD
ENCOURAGEMENT
LEADERSHIP ROLES
DISPLAY WORK
TASKS SUIT
ABILITY

EMERALD PLACE

ADHD - MANAGEMENT SKILL

- Confine his Learning Environment
- Reduce his Activities — Reward
- Monitor Medication
- Change Learning Environment
- Parents + G.P. — contact — Liaise — Act — Monitor eg.
- Responsibilities
- T.L.C. < Praise / Attention — Recognition / Love
- Monitor Food — Sugar Intake

leader of the
ADHD Pack

easily
listens

untidy

Smart

passive

short
fuse

attention
seeker

noisy fidget

clumsy

fast

Introvert

Loose
Laces

CLUMSY

tall
big.
shy

Big
mouth

Hands over

big ears

MANAGEMENT STRATEGIES

GET HIM INVOLVED

INNOLVE RESPONSIB ILITIES

PLAY THERAPY

TESTED MED/PSY

PRAISE EFFORT

MONITOR

PARENT INVOLVEMENT

HIGHLIGHT

PAIR HIM