CHAPTER ONE

INTRODUCTION

Introduction

Civil behaviour is highly treasured and expected of students and members of the public in Ghanaian society. The function of families has been, and is to raise children to behave in traditionally accepted ways. Traditional behaviour pattern translates into respect for authority, be it classroom rules or laws of the land. The school environment, as an academic setting, is supposed to be a safe and harmonious place where teaching and learning should take place. It is also a place where students can socialise and develop healthy relations among themselves and with relevant others irrespective of social class sex, creed, ethnic background and age (Owusu-Banahene, 2005).

Unfortunately, this may not be the case. The negative impact of school violence and aggression in schools does not only make our school environment a vulnerable place for the students and other staff to discharge their duties peacefully, but also affects the quality of education that is given to the learners (Werterin, 2003). According to Godwyll (1992), managing school violence and aggression involves two different approaches namely intrusive and non-intrusive or least intrusive. Two of the least intrusive methods of managing school violence and aggression are Reinforcement and Modelling.

Background to the Study

In Ghana, students' aggression on school campuses is on the increase and has caught the attention of and raised much concern from the Ministry of Education, school authorities, the media, civic society and the public in general (Amedahe and Owusu-Banahene, 2007). Many teachers, parents, and educational authorities in Ghana today, are worried about matters of classroom discipline. There have been complaints from teachers, parents, school authorities, educational administrators and the larger society deploring the spate of indiscipline, hooliganism and vandalism in our schools and generally among the youth. Some of the recorded and reported incidences of students' aggression in Ghanaian schools include: six students arrested for possessing weapons in school in 2005; Kumasi academy closed down after a violent clash between students and staff in 2006; a bloody clash between students of St Thomas Aquinas and Labone secondary school in 2005 ; Cape Coast Technical School students destroying school property in2006; and a student arrested for possessing a Reich Protector Automatic pistol ,with one round of ammunition in Aggrey Memorial Zion High School in 2005.(Amedahe and Owusu-Banahene, 2007).

Authority figures, such as teachers are often at a loss on how best to proceed in coping with such forms of deviant behaviour. Many teachers and school administrators still resort to the use of outdated and psychologically unsound disciplinary measures. These measures often border on physical force and corporal punishments of various forms (Agbenyega, 2006).All these are done to, maintain 'disciplined environment'. Yet the problem does not seem to be reducing

but rather moving from bad to worse. Although several countries, including New Zealand, Australia, United Kingdom and some states in the United States have recognized the deleterious effects of corporal punishment and thus have abolished it, Ghana officially still adopts the practice (Agbenyega, 2006). In Ghana, corporal punishment has been the main form of punishing students before and after independence. In the late 1970's, Ghana Education Service (G.E.S.) partially banned corporal punishment in schools but allowed head teachers or their deputies to administer it to children because it was felt that the majority of teachers were abusing it and injuring students(Boakye 2001). Punishment in Ghanaian schools is based on the thinking that it facilitates learning among pupils (Boakye 2001; Edumadze 2004). According to Woody (1969), as cited in Godwyll (1992), all educators, even those in positions that are only peripherally connected with the classroom, have encountered children with disordered behaviours in the course of their professional duties. Children with disordered behaviours are found in any educational programme and they influence it to some degree.

Charles (2002), Senter (1999) and Menera and Wright (1985) shared this view when they said pupils' disruptive behaviours are the source of most teachers' greatest fear. To them, teachers who are considered by their supervisors and others to have poor classroom control and discipline problems are teachers whose students display high level of disruptive behaviours.

Unless adults, such as teachers, are able to manage the child's behaviours they could lead to a series of critical configurations. Both teachers and students may

have to function in an unhealthy learning environment. School personnel and the community may discover conflicting objectives. The individual teacher may experience dissatisfaction that would modify both professional and personal aspects of his life (Charles, 2002).

It would not be an over exaggeration if one asserts that in most schools in Ghana today, discipline is simply non-existent. Heads of institutions and members of staff in some schools have had to live as if they were "sitting on time bombs" – in great uncertainty and insecurity – because of the destructive and unpredictable nature of some of the students (Amedahe and Owusu-Banahene, 2007). Thus, behaviour problems can be a serious threat to decent life and safety of property. It is important for any child to develop a balance between academic achievement, self-confidence with adults and peers, and active, curious exploration of the world. Behaviour disordered children especially those who fall into the category of personality problem children have particular difficulty achieving such balance.

According to Godwyll (1992), if a society would spend its scarce resources in educating people only to allow a good number of them to drop out or become unproductive in society, and further create serious problems that call for more spending to contain the situation then the planning strategies of that society leaves much to be desired. The fact that individuals and government spend money on education makes it imperative for any serious minded planner, researcher, parent or teacher to be interested in the disorders that interfere with

the normal learning process of pupils and students. Godwyll (1992) again alluded that scholars agree that in any given complex society about 25% of the population can be considered as individuals with disordered behaviours. This percentage of the population cannot be ignored if we are to build a vibrant nation. In view of the above consensus of scholars over the percentage of individuals with disordered behaviour in the population, it would not be incorrect to indicate that the more we expand educational facilities to absorb more children the greater we increase the probability of having higher numbers of behaviour-disordered individuals in the schools.

Suran and Rizzo (1983) observed that family relationships of behaviour-disordered children are characterized by continual struggles for control punctuated by outburst of anger and aggression. Most parents confronted by a child who creates tension in the family give vent to their own impulses in the form of harsh physical punishment. The young child has little defence against parental anger and often responds by displacing his or her own anger against siblings or peers. With little ability to empathize with others, the child behaves in a callous fashion, and impulses are restrained only when the fear of punishment outweighs potential gratifications. In some instances, punishment is inadequate and the child behaves impulsively regardless of the consequences. According to the US Department of Education (2004), children with Attention Deficit Hyperactivity Disorder (ADHD) and its associated conditions frequently have problems at school including underachievement, difficulties with social skills and low self-esteem. They may experience teasing or bullying. Because ADHD

children look like their peers it is not uncommon to find educators who consider the disorder an "excuse" for immature behaviour rather than the neurobiological disorder it is. Without intervention, teachers and administrators may simply label the child as a troublemaker and if the condition is not properly diagnosed and managed well in the classroom, children can become isolated from their peer group, and develop other problems such as depression (Olusakin, Osarenren, and Obi, 2008).

Behaviour disordered individuals present such a menace and threat that could break the bonds of family ties, disintegrate the cohesion of the school and destroy the fabric of society. Parents, teachers, researchers, planners and all those, who hold stakes in education, as well as all persons interested in the well-being of society as a whole should not take the challenges these threats pose lightly (Werterin, 2003)

Any casual observer in Ghana may argue that the existence of some Bostal Homes in the country is indicative of some serious and conscious attempt at integrating behaviour-disordered individuals (Godwyll, 1992). Agreeably, these Bostal Homes run by the Department of Social Welfare and Community Development, cater for delinquent children referred to them by the Juvenile Courts, parents, guardians, traditional authorities and some institutions as well as those identified by their own department or personnel. However, the fact remains that, in Ghana established public schools have their own methods of dealing with disordered behaviours of children who may not be referred to these

homes. Meanwhile, the schools have themselves become a place where all forms of disordered behaviours are found. Thus this study focused more on how these deviant individuals still in the classrooms are handled and how effective the methods applied thereof to modify behaviour can be in the light of the multiethnic nature of the Ghanaian classrooms, limited resources and personnel in our educational institutions.

The major ethnic groups in Ghana as recorded in the 2000 census are the Akan at 49.1% of the population who hail from the Ashanti, Eastern, Central and Western Regions of the country; the Mole – Dagomba at 16.5% who are mainly in the Northern Regions; the Ewe at 12.7% who are predominantly in the Volta Region; and the Ga – Adagme at 8% who are predominantly in the Greater Accra Region. The Mole – Dagomba are mainly Muslims by religion whereas the rest are predominantly Christians with minor traditional religions. Due to the constant migration of people in search of jobs in the larger cities, the various ethnic groups are dispersed all over the regions of Ghana.

The vast diversity in the tribal Ghanaian Society presents significant factors that warrant attention in classroom management of children coming from these various ethnic groups with their varying nuances in behaviour and general protocol. Such diversity of backgrounds elicits a great variety of management techniques and strategies to accommodate individual and tribal groups' differences in discipline in the classroom. The reality of this heterogeneous constitution, especially among student populations, means that teachers must

"understand the ethnic setting in which the school is located" as these "students bring to class different historical backgrounds, religious beliefs and day-to-day living patterns" (Gollnick and Chinn, 2002, p.5) that drive the manner in which they behave in the classroom. Children come to school with their own ethnic or tribal identities based on traits and values with which they have been socialized. These identities are manifestations of their religion, socioeconomic status, ethnicity, gender norms, language, and other distinguishing ethnic behaviours. These behaviours may be distinct or dissimilar to those expected by the classroom teacher, and special preparation to deal with such diverse groups may be necessary.

It is significant that attention is focused on the teacher and how he can effectively deal with or manage behaviour disorders in the school and classroom. This is so because literature reviewed in the area indicated that the regular classroom teachers are in the best position to identify behaviour-disordered children. Furthermore, behaviour disorders are frequently in-group situations and since teachers work with children five to six hours a day and five days in a week, they are in a very strong position to identify them through interaction and observation of their activities.

Bower (1981) and Walker(1982) have made similar conclusions, that teachers are in a particularly good position to make judgments about the significance of children's behaviour because they can observe behaviour directly and daily in the social context.

The Ghanaian educational institutions do not have many professionals such as school counsellors, school psychologists, special educators and social workers who could aid in the identification and management of behaviour-disordered individuals. Thus, if there can be any systematic and scientific way of helping such individuals the classroom teacher is the ultimate. Considering this state of affairs, it is imperative that the behaviour modification techniques to be employed in this study should be those that can easily be handled and implemented by the classroom teacher. Thus, in this research, the researcher used reinforcement, modelling, and multi-technique as techniques for modifying behaviour or behaviour disordered individuals in the classroom.

It must be recognized that these approaches are not far removed from the classroom situation and not above the capability of the ordinary classroom teacher. Teachers have used them in different classroom situations at one time or the other. However, for these techniques to be effective in modifying behaviour they must be consciously scheduled and consistently applied.

Statement of Problem

Disordered behaviours of pupils in Ghanaian schools are on the increase and this situation has caught the attention of and raised much concern from the Ministry of Education, school authorities, the media, the civic society and the general public (Amedahe and Owusu-Banahene, 2007).

Teachers and school administrators have over the years been trying to manage the situation. Their efforts have however, been largely unsuccessful. In a study

conducted by Agbeyenga in 2006 on discipline in Ghanaian basic schools, the findings revealed that an overwhelming percentage (94% to 98%) of the teachers and administrators use corporal punishment to enforce school discipline and to manage pupils' misbehaviours. Another surprising revelation from the study is that, a large number of teachers from all the schools indicate their unwillingness to discontinue corporal punishment in their schools. This punishment driven behaviour management has been counterproductive in Ghana leaving in its wake numerous cases of school violence, hooliganism, aggression, injuries and even death. Instances of this punishment-induced problem occurred in schools in the Central Ashanti, Eastern and Greater Accra regions in March 2008 (Source; Ministry of Education, Youth and Sports Home Page 28th March, 2008).

Several scholars and researchers have corroborated the counter productivity of punishment as school misbehaviour management method and have therefore called for more positive intervention than the use of punishment .Robinson, Newby, & Gazelle, (2005) underline the side effects of corporal punishment and question its effectiveness. Gershoff (2002) also attributes corporal punishment to increased aggression. Similarly, Ramsburg (1997) notes that spanking, used as a primary method, may have potentially harmful effects such as increasing the chances of misbehaviour. Cameron (2006) asserts that punitive behaviour management methods have been shown to be ineffective and in some cases harmful to students.

If corporal punishment may adversely affect a student' self-image and school achievement and may contribute to disruptive and violent student behaviour, yet Ghanaian teachers, administrators and other school staff, in the name of discipline, are using it thereby often contributing to students' misbehaviour and aggression then there is a problem. Several questions therefore arise. Is punishment the only way to correct pupils' disordered behaviours in Ghanaian schools? Have authorities tried other forms of correctional measures that are non-intrusive?

It is against this background that, the researcher believes that other effective strategies of managing such behaviours which cut across all such variables as ethnic, religious, or socio-economic barriers, that could be used by many people who interact with the child – the classroom teacher, the school authorities, the parents, guardians and the concerned citizens – to halt this negative trend can be explored. The study therefore seeks to investigate the relative effectiveness of two of those less intrusive strategies (reinforcement and modelling), which are not far removed from the classroom situation in managing pupils' disordered behaviour in the classroom. These two techniques are not far removed from the classroom situation and not above the capabilities of the classroom teacher. According to Morris and McReynolds (1986) these approaches in behaviour modification are less intrusive and restrictive to students.

Theoretical Framework

There are two broad theoretical considerations to this study. They are:

Operant Conditioning Theory and

Social Learning Theory

Operant Conditioning Theory

Operant conditioning (also called instrumental conditioning) theory as proposed by Skinner is the learning model based on behaviour of contingent events and the learning of the nature of the contingency. This theory of B.F. Skinner is based upon the idea that learning is a function of change in overt behaviour. Changes in behaviour are the result of an individual's response to events (stimuli) that occur in the environment. A response produces a consequence such as defining a word, hitting a ball, or solving a math problem. When a particular Stimulus-Response (S-R) pattern is reinforced (rewarded), the individual is conditioned to respond. The distinctive characteristic of operant conditioning relative to previous forms of behaviourism (e.g., Thorndike and Hull) is that the organism can emit responses instead of only eliciting response due to an external stimulus.

Reinforcement is the key element in Skinner's S-R theory. A reinforcer is anything that strengthens the desired response. It could be verbal praise, a good grade or a feeling of increased accomplishment or satisfaction. The theory also covers negative reinforcers -- any stimulus that results in the increased frequency of a response when it is withdrawn (different from aversive stimuli -- punishment -- which result in reduced responses). A great deal of attention was given to

schedules of reinforcement (e.g. interval versus ratio) and their effects on establishing and maintaining behaviour.

According to Skinner in operant or instrumental conditioning, one begins with a response for which no stimulus may be found. To him, many human behaviours appear to occur without being elicited by some unconditioned stimulus. Conditioning can occur by presenting the stimulus after the desired response rather than before it. The response is known as operant because it acts on the environment. The consequence of that behaviour that is, the stimulus that follows the operant response will:

- increase in frequency
- be maintained at the same rate
- reduce in frequency

In our everyday interactions we tend to feel encouraged to perform a step higher when an earlier performance is recognised and appreciated by others. This recognition is a form of motivation for improvement. On the other hand one would not want to turn back to a behaviour others in the group frowned at or disapproved of if one wants to remain in the group. Operant conditioning, according to Skinner is based on reinforcement, punishment and extinction. Skinner argues that the environment (that is, parents, teachers, peers) reacts to our behaviuor and either reinforces or eliminates the behaviour. The environment holds the key to understanding behaviour (Bales, 1990). For Skinner behaviour is a causal chain of three links: (1) an operation performed on the organism from without- a girl comes to school without breakfast; (2) some condition-she gets

hungry; and (3) a kind of behaviour-she exhibits listless behaviour in the classroom. Lacking information about inner conditions, teachers should not indulge in speculation. For example the child just mentioned is listless and disinterested during class. Skinner would scoff at those who say the girl is unmotivated. Skinner would ask, "What does this mean?" "How can you explain it behaviourally?" The teacher or counsellor searching for causes has mistakenly stopped at the second link: some inner condition (the girl is hungry). The answer lies in the first link: something done to the student (her lack of breakfast).

Skinner considers the term reinforcement as a key element to explain how and why learning has occurred. Reinforcement is typically used as follows:
A reinfocer is a stimulus event that if it occurs in the proper temporal relation with a response, tends to maintain or increase the strength of a response, a stimulus-response connection, or a stimulus-stimulus connection (Hulse et al, 1980). Skinner distinguishes between the basic principles of behaviour and various behaviour change procedures. Reinforcement is a principle of behaviour, in that it describes a functional relationship between behaviour ad controlling variables. In contrast, a behaviour change procedure is a method used to put the principle into practice. Praise, for example, is a procedure that may be a powerful reinforcer. If you praise a student's correct responses immediately and the student increases correct responses, praise can be identified as a behaviour change procedure that functions as reinforcer.

The term principle of reinforcement refers to an increase in the frequency of a response when certain consequences immediately follow it. The consequence follows behaviour must be contingent upon the behaviour. A contingent event that increases the frequency of behaviour is referred to as a reinforcer (Kazdin, 1989). Once you praise a child' correct response, you increase the probability that the child will exhibit the response in future, similar situations.

Reinforcement is not synonymous with reward. Parents may buy a child an ice cream cone as a reward for "being good", a basketball coach may take the squad out for pizza as a reward for "a good game". These are broad statements, in which no specific behaviour is identified. Psychologists, however, view reinforcement quite specifically. They believe that reinforcement becomes effective when applied to specific behaviours; a pupil receives a teacher's praise for solution to a problem or the correct answer to a question. The Skinnerian model attempts to link reinforcement to a response as follows:

Antecedents-response-reinforcement

The antecedents represent the range of environmental stimuli, the unknown antecedents acting on an organism at a given time. If we focus on what is observable (the response) and reinforce it, control of behaviour passes to the environment (that is, teachers and parents). For example, when a teacher praises a pupil, an environmental change occurs (in the pupil's behaviour) and we experience change in behaviour.

Skinner puts reinforcers into positive and negative reinforcers. Positive reinforcers are events that are presented after a response has been performed and that increase the behaviour or activity they follow. Negative reinforcers are stimulus events removed after a response has been performed, whose removal also increases the behaviour or activity they follow (Kazdin, 1989). This Skinner's exposition to the theory will form the major theoretical framework of the study. It offers the insight into the appropriate application of reinforcement in behaviour modification.

Social Learning Theory

Social learning theory emphasizes the role of both cognition and environmental influences in development. Albert Bandura (1977, 1986), Stanford University psychologist is one of the most important exponents of social learning theory. According to Bandura, the social learning theory is observing and modelling the behaviour, attitude, and emotional reactions of others. Bandura (1977) states "learning would be exceedingly labourious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what to do. Fortunately, most human behaviour is learned observationally through modelling: from observing others one forms an idea of how new behaviours are performed, and on later occasions this coded information serves as a guide for action." Bandura claims considerable evidence exists that learning occurs through observing others, even when the observer does not reproduce the model's responses during acquisition and therefore receives no direct, reinforcement For Bandura; social cognitive learning means that the information we process from

observing other people, things and events influences the way we act. Social learning theory explains human behaviour in terms of continuous reciprocal interaction between cognitive, behavioural, and environmental influences. The component processes underlying observational learning are: (1) Attention, including modelled events (distinctiveness, affective valence, complexity, prevalence, functional value) and observer characteristics (sensory capacities, arousal level, perceptual set, past reinforcement), (2) Retention including symbolic coding, cognitive organization, symbolic rehearsal, motor rehearsal), (3) Motor Reproduction, including physical capabilities, self-observation of reproduction, accuracy of feedback, and (4) Motivation, including external, vicarious and self reinforcement (Bandura, 1977).

Observational learning has particular classroom relevance, because children do not do just what adults tell them to do, but rather what they see adults do. Children learn a lot through observation and its attendant imitation. This fact makes the social learning theory, which tenets indicate that people learn from one another via observation and modelling, applicable to this study. Modelling and observation played lead roles in this work. Children in all cultures learn and develop by observing experienced people engaged in culturally important activities. In this way, teachers and parents help students to adapt to new situations, aid them in their problem-solving attempts, and guide them to accept responsibility for their behaviour (Rogoff, 1990).

According to Bandura teachers can be a potent force in shaping the behaviour of their pupils with the teaching behaviour they demonstrate in class (Bandura, 1986). The importance of models is seen in Bandura's interpretation of what happens as a result of observing others:

The observer may acquire new responses.

Observation of models may strengthen or weaken existing responses.

Observation of models may cause the reappearance of responses that were apparently forgotten.

If pupils witness undesirable behaviour that either is reinforced or goes unpunished, undesirable pupil behaviour may result; the reverse is also true. Classroom implications are apparent: Positive, consistent teacher behaviour contributes to a healthy classroom atmosphere. Research suggests that prestigious, powerful, competent models are more readily imitated than models that lack these qualities (Bandura, 1986). Based on the pretence influence of modelling in the teaching process, some programmes make heavy use of video modelling (Webster-Stratton, 1996). The three basic principles the theory espouses are:

The highest level of observational learning is achieved by first organising and rehearsing the modelled behaviour symbolically and then enacting it overtly. Coding modelled behaviour into words, labels or images results in better retention than simply observing.

Individuals are more likely to adopt a modelled behaviour if it results in outcomes they value.

Individuals are more likely to adopt a modelled behaviour if the model is similar to the observer and has admired status and the behaviour has functional value.

Social learning theory has been applied extensively to the understanding of aggression (Bandura, 1973) and psychological disorders, particularly in the context of behaviour modification (Bandura, 1969). It is also a theoretical foundation of the technique of behaviour modelling which is widely used in training programmes. In recent years, Bandura has focused his work on the concept of self-efficacy in a variety of contexts (e.g., Bandura, 1977). The most common (and pervasive) examples of social learning situations are television commercials. Commercials suggest that drinking a certain beverage or using a particular hair shampoo will make us popular and win the admiration of attractive people. Depending upon the component processes involved (such as attention or motivation), we may model the behaviour shown in the commercial and buy the product being advertised. This development makes the theory more relevant to the study.

The social learning theory thus, presents such a necessary outlook for this study's focus.

Purpose of the Study

The Purpose of this study therefore was to:

1. Determine the relative effectiveness of reinforcement, modelling and multi-technique approaches in modifying inattention and aggression behaviour problems in the multi-ethnic Ghanaian classroom.

Investigate the effects of the treatments on male and female participants with inattention and aggression behaviour problems.

Investigate whether there is a difference in the impact of reinforcement, modelling and multi-technique approaches on participants of different ethnic backgrounds who exhibit inattention and aggression behaviour problem.

Find out whether there is a difference in the behaviour change among participants of different socio-economic backgrounds administered with the treatments on inattention and aggression behaviour problem.

Research Questions

The following research questions were formulated to guide the study:

1. Is there any difference between the effects of reinforcement, modelling and multi-technique approach in modifying inattention behaviour problems in a multi-ethnic Ghanaian classroom?
2. Is there any difference between the effects of reinforcement, modelling and multi-technique approach in modifying aggression behaviour problems in a multi-ethnic Ghanaian classroom?
3. Does gender influence the effectiveness of the three programmes in reducing participants' inattention behaviour problems?
4. Does gender influence the effectiveness of the three programmes in reducing aggression behaviour problems?

5. Is there any difference in the impact of reinforcement, modelling and multi-technique approach on inattention behaviour problems of participants of different ethnic backgrounds?
6. Is there any difference in the impact of reinforcement, modelling and multi-technique approach on the aggressive behaviour of participants of different ethnic backgrounds?
7. Is there any difference in the behaviour change among participants of different socio-economic backgrounds administered with reinforcement, modelling and multi-technique approach on inattention behaviour problems?
8. Is there any difference in the behaviour change among participants of different socio-economic backgrounds administered with reinforcement, modelling, and multi-technique approach on aggression behaviour problems?

Hypotheses

1. There is no significant difference between the effects of reinforcement, modelling and multi-technique approach in modifying inattention behaviour problems in a multi-ethnic Ghanaian classroom.
2. There is no significant difference between the effects of reinforcement, modelling and multi-technique approach in modifying aggression behaviour problems in a multi-ethnic Ghanaian classroom.
3. There is no significant difference in the effects of the treatments on male and female participants with inattention behaviour problem.

4. There is no significant difference in the effects of the treatments on male and female participants with aggression behaviour problems.
5. There is no significant difference in the impact of the treatments on participants of different ethnic background who exhibit inattention behaviour problems.
6. There is no significant difference in the impact of the treatments on participants of different ethnic background who exhibit aggression behaviour problems.
7. There is no significant difference in the impact of the treatments on participants from different socio-economic backgrounds who exhibit inattention behaviour problems.
8. There is no significant difference in the impact of the treatments on participants from different socio-economic backgrounds who exhibit aggression behaviour problems.

Significance of the Study

The findings of this research should generate vast and very useful data on the behaviour patterns that our teachers are exposed to and the different non-intrusive strategies that can be employed in managing them in the classrooms. The findings will aid the Ministry of Education (M.O.E) charged with the responsibility of formulating policies on education in the country, to formulate meaningful policy guidelines for handling or managing behaviour disorder in schools.

The Ghana Education Service (GES) being responsible for the implementation of policies formulated by the M.O.E will be exposed to workable strategies for managing behaviour disorders. It can disseminate the findings through in-service training for heads of institutions, classroom teachers, special educators and other personnel who, in one way or the other do influence the life of the school-going child. Educational psychologists, who deal with the study of classroom and general behaviour of the educational enterprise will benefit from the study.

The Department of Social Welfare and Community Development will also benefit from the findings of the study. Its personnel will be exposed to a few more strategies they can adopt to deal with juvenile delinquency and with inmates of the Bostal homes placed in their care. Since the primary focus of this study is the classroom teacher and how he or she can manage disordered behaviour in the schools, the Colleges and Universities of Education can use the findings to enrich their curricula. This can be done with the view to equipping teacher trainees with the findings to enhance their competence in the skills of handling future discipline issues. Besides, the findings of the study will provide Guidance and Counselling coordinators in schools with empirical data on classroom discipline. It will serve as a baseline for counsellors to design other strategies besides those exposed in this research, in the course of their sessions with their clients.

Findings of this research will be very informative to parents and guardians. All other agencies dealing directly with youth clubs and associations, churches and organizations will find the findings of the research very important. All persons

who manage human behaviour in one way or the other such as coaches, police officers, traffic wardens and prison officers will also benefit from the findings of the research.

It is also envisaged that the findings of this study will add to existing knowledge on effective strategies of managing disordered behaviour in the classroom.

Delimitation

For the purpose of this research, the scope was limited to four public primary schools in four regions (Central, Eastern, Volta, and Greater Accra regions) of Ghana. Though disordered behaviour among pupils in classrooms takes different forms, the study was limited to investigation into the effects of three treatments on two of these forms of disordered behaviour (inattention and aggression) among primary four pupils of the sampled schools.

Operational Definition of Terms

Socioeconomic background:

In this study socioeconomic background refers to the work a participant's parent's do for a living, their income levels and their educational background as well as their social standing.

Ethnic background

The study was conducted in four different regions inhabited by people of diverse ethnic origin. In this context therefore, ethnic background refers to the ethnic groups to which participants belong, namely: Akan, Ewe and Gas.

Disordered Behaviour

With regard to this study, a disordered behaviour refers to any inattention or aggressive behaviour participants exhibit that is used in the study for its reduction or that requires the application of any of the intervention techniques (reinforcement, modelling or multi-technique). These were determined by the teachers through their observation of pupils and interviews with parents.

Negative reinforcement

Negative reinforcements in this study were such activities as ostracising, changing of the participants' seating position, and keeping pupils briefly in class during break time that the class teacher was instructed to employ whenever participants exhibited undesirable behaviours.

Positive reinforcement

In this study, positive reinforcement refers to the tangible and non-tangible rewards teachers were directed by the researcher to give to participants who exhibited the desired behaviours or to those who did not exhibit the undesired behaviours during the experiment period. They include to the claps, praises, chewing gum photos, and all the items participants listed.

Multi-technique approach

This refers to the combined techniques of positive reinforcement, negative reinforcement and all forms of modelling as used in the study as one intervention during the experiment period.

Inattention

In this study the inattentive child is the child who is not able to concentrate, pay attention for long or listen to the teacher for the period of instructional lessons, has difficulty following directions or can't sit still, restless or easily distracted. While lessons are going on, the inattentive child will be talking, doing something else or disturbing other pupils by distracting them.

Aggression

In this study the aggressive child is that child who is most of the time, not accommodating, does hit others, throws things at others, or pulls other pupils' dresses, hair, books, etc. This child doesn't seem to feel guilty after misbehaving.

Multi-ethnic

In this study, multi-ethnic refers to the heterogeneous population distribution of Ghana. However, since the Akans constitute almost half of the entire Ghanaian population and indeed about 65% of the population of the area of this study (i.e. the middle and southern belts of Ghana), multi-ethnicity in this study refers to the Akans on one side and all other ethnic groups on the other. Thus, for the purpose of this study multi-ethnic is Akans and non-Akans.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Introduction

The school environment, as an academic setting, is supposed to be a safe and harmonious place where teaching and learning should take place. It is also a place where students can socialise and develop healthy relations among themselves and with relevant others irrespective of social class sex, creed, ethnic background and age (Owusu-Banahene, 2005). Contemporary events in Ghanaian schools are a complete departure from this noble purpose for which the school environment was created. Maladaptive behaviour by pupils and students seems to be the order of the day. Literature on disordered behaviour in Ghanaian schools suggest that disordered behaviour defies corporal punishment, affects classroom work, adds pressure to the teacher's crucial role, is reinforced by the inability to properly manage it, has gender and ethnic as well as socio-economic undertones. The review of related literature for the study was therefore organized under the following headings:

The Concept of Disordered Behaviour

Disordered Behaviour and Classroom Work

Modelling

- Video Modelling as Behaviour Change Technique

Reinforcement

- Positive Reinforcement as Behaviour Change Technique
- Negative Reinforcement as Behaviour Change Technique

Gender Differences in the Forms of Aggression among Students in Ghana

Corporal Punishment and Discipline in Ghanaian Basic Schools

The Crucial Role of the Teacher

Ethnicity and General Behaviour Management in Ghanaian classrooms

The Concept of Disordered Behaviour

It is not an easy task delineating a set of ideas as an all-embracing definition for behaviour disorder. Kauffman (1997) says disordered behaviour is used to describe children who chronically and markedly respond to their environment in socially unacceptable ways. Slavin (1991) defines pupils with disordered behaviours as those whose educational performance is adversely affected over a long period to a marked degree of certain conditions. Quay and Werry (1986) also pointed out that pupils with disordered behaviour are frequently characterized as disobedient, distractible, selfish, jealous, destructive, impenitent, resistive, and disruptive. A young person is said to have a disordered behaviour when he or she demonstrates behaviour that is noticeably different from that expected in the school or community (Attherley, 2002). According to her, this can also be stated in simpler terms as a child who is not doing what adults want him to do at a particular time. Attherley (2002) further states that there are interchangeable terms for disordered behaviour, disordered conduct, disordered emotions, and emotional disturbances.

At one time or another most children and adolescents act out or do things that are destructive or troublesome to themselves or others as coping. Every teenager

has a coping method; only some of the methods are troublesome or destructive. According to Stantrock (2008) it is indicative of conduct disorder only if such behaviour persists. To him, this disorder is much more common among boys than girls. As many as 50% of parents of 4- to 6-year-old children report that their child has exhibited some such behaviour, but most such children show a decrease in **antisocial** behaviour within the next couple of years.

Those in whom this behaviour persists may be candidates for psychological help. It is estimated that 5% of children globally show serious *conduct problems*, being described as impulsive, overactive, and aggressive and engaging in delinquent behaviour. Some motives for such behaviour are genetic inheritance of a difficult temperament, ineffective parenting, and living in a neighbourhood in which violence is common. There is a lack of consensus on what actually works, despite considerable efforts made to help children with conduct disorders (Stantrock, 2008).

Like learning disabilities, disordered behaviours are hard to diagnose. There are no physical symptoms or discrepancies in the body that are observable or measurable. Disordered behaviours are therefore indentified by observing behaviour patterns in the child over a period of time (Attherley, 2002). According to Attherley (2002) if a child displays some of the following behaviours he may be labelled with a disordered behaviour:

Aggression to people and animals

Destruction of property- defacing school desks, graffiti, vandalism, etc.

Little empathy and concern for others. Shows no feeling when another is in pain or remorse for unkind deeds.

Takes no responsibility for behaviour. Also lies, cheats and steals easily.

Disregards rules and regulations. May be openly defiant.

Causation of Behaviour Disorders

A closely linked behaviour is juvenile delinquency. This term refers to an adolescent's tendency to break the law or to engage in illicit behaviour, a broad concept that ranges from littering to murder. According to U.S. government statistics, eight of ten cases of juvenile delinquency involve males. However, in the last two decades there has been a greater increase in female than male delinquency.

Juvenile delinquency has been found to vary among cultures. Delinquency rates among minority groups and lower-socioeconomic-status-youth are especially high in proportion to the overall population of these groups. However, such groups have less influence over the judicial decision-making process in the United States and may be judged delinquent more readily than their white counterparts and those of higher socioeconomic status (Patterson 2002).Some suggested causes of delinquency are heredity, identity problems, community influences, and family experiences

Although delinquency is less exclusively a phenomenon of lower socioeconomic status than it has been in the past, some characteristics of lower-socioeconomic-class cultures may promote delinquency. It is a complex problem, but

psychologists have found factors which may predict whether a youth is likely to turn violent. Violent youths are overwhelmingly male and driven by feelings of powerlessness. Ill-directed drives for power often motivate youth especially toward acts of violence (Stantrock, 2008). Behavioural models of disordered conduct focus on the function of early childhood conduct problems (Patterson, 2002).In essence; these models represent a microsocial model of the development of disordered conduct.

Using a matching law model of reinforcement, these models have shown that moment to moment success with conflict tactics as being either prosocial or antisocial; predict future conduct problems and arrest rates (Snyder, et al, 2003).

Lack of Empathy - Risk Factor of Disordered Behaviour

Some scholars have proposed that lack of empathy and empathic concern (callous disregard for the welfare of others) is an important risk factor for disordered conduct (Frick, Stickle, Dandreaux, Farrell, & Kimonis, 2005, Lahey and Waldman, 2003).When youth with aggressive disordered conduct watch an individual intentionally hurting another (like closing a piano lid), regions of the brain that process painful information are activated, as are the amygdale and ventral striatum (part of the neural circuit involved in reward processing (Decety, Michalska, Akitsuki & Lahey, 2009).

Developmental psychologists and social neuroscientists have hypothesized that empathy and sympathetic concern for others are essential factors inhibiting aggression toward others (Esiengerg, 2005; Decety and Meyer, 2008)

According to Blair (2005) the propensity for aggressive behaviour has been hypothesized to reflect a blunted empathic response to the suffering of others. Such a lack of empathy in aggressive individuals may be a consequence of a failure to be aroused by the distress of others (Raine, Venables & Mednick,1997). Similarly, it has been suggested that aggressive behaviour arises from abnormal processing of affective information, resulting in a deficiency in experiencing fear, empathy, and guilt, which in normally developing individuals inhibits the acting out of violent impulse (Herpetz and Sass, 2000).

Recently, a functional magnetic resonance imaging (fMRI) study conducted by neuroscientist Jean Decety and colleagues at the University of Chicago reported that youth with aggressive behaviour disorder (who have psychopathic tendencies) have a different hemodynamic brain response when confronted with empathy-eliciting stimuli (Decety, Michalsca, Akitsuki, and Lahey, 2009).In the study, researchers compared 16- to 18-year-old boys with aggressive disordered behaviour to a control group of adolescent boys with no unusual signs of aggression. The youth with the conduct disorder had exhibited disruptive behaviour such as starting a fight, using a weapon and stealing after confronting a victim. The youth were tested with fMRI while looking at video clips in which people endured pain accidentally, such as when a heavy bowl was dropped on their hands, and intentionally, such as when a person stepped on another's foot. Decety, Michalsca and Akitsuki (2008) state that results show that the aggressive youth activated the neural circuits underpinning pain processing to the same

extent, and in some cases, even more so than the control participants without disordered conduct.

However, aggressive adolescents showed a specific and very strong activation of the amygdale and ventral striatum (an area that responds to feeling rewarded) when watching pain inflicted on others, which suggested that they enjoyed watching pain. Unlike the control group, the youth with disordered behaviour did not activate the areas of the brain involved in understanding social interaction and moral reasoning (i.e., the paracingulate cortex and temporoparietal junction).

Disordered Behaviour and Classroom Work

According to Suran and Rizzo (1983) as cited in Godwyll (1992), scholars agree that generally there is no systematic relationship between the emergence of behaviour problems in children and intellectual ability though it exists. Conger and Keane also cited in Godwyll (1992) say in most children, timid, passive behaviour, dependency, isolation and withdrawal do interfere with adequate utilization of potential and consequently affect academic achievement. Quay, as cited in Godwyll (1992) indicated that a number of characteristics of behaviour disordered children such as disobedience, defiance of authority, disruptiveness, irresponsibility; attention seeking and boisterousness interfere with the learning efforts of these children. It can be observed that a child who chronically and markedly exhibits any of these characteristics is unlikely to endear himself to teachers. These children display school problems very early in their school

careers. Their unwillingness to submit to teacher authority and inability to control impulses create difficulty for them in regular classroom which has a telling effect on academic performance.

Frequently and understandably, they alienate their teachers and create problems in classroom control. As a consequence, patterns of interpersonal friction develop. This leads to a situation where the child resents every attempt of the teacher to exert control or authority while the teacher, on the other hand, becomes sensitive to potential infractions that might go unnoticed in another child. In this way the stage is set for the development of resentment of the learning process and a general aversion to the school experience. The effects are chronic problems with school authorities and truancy both of which undisputedly disrupt the academic achievement of the child and even those of his peers Godwyll (1992).

Within this context of continual tension between the child and the school, Suran and Rizzo (1983), emphasised that learning itself is impeded, and failure to learn further intensifies aversion to school. They further indicated that the result is often frequent truancy and eventual dropping out of school. These developments violently curtail the child's academic work.

In two independent studies, Quay and Robins (1986) as cited by Godwyll (1992), observed that failure to learn, truancy and dropping out of school, in turn, usually mean that the youngster will have limited opportunities to find satisfying or meaningful work. The resulting frustration and anger often set the stage for

embarking on a more intensive anti-social career. They concluded their observations by endorsing the idea that indeed the presence of a behaviour disorder in childhood is often predictive of adolescent delinquency and adult criminality (Godwyll, 1992).

According to Dunn (1973) as cited in Godwyll (1992), some behaviourally disordered pupils are brilliant or talented, while others have difficulty in learning to read and write and do not demonstrate skill in any area of endeavour. The majority of pupils labelled as behaviourally disordered are often behind their peers both in grade and level of achievement. In the extreme case of behaviour disorder especially with respect to childhood psychosis there is a general agreement among many authorities that there is a dismal prognosis for improvement with particular reference to cognitive development.

Many scholars such as Hingtgen and Bryson (1972), Ornitz, Guthrie and Farley (1977), Rutter (1974) and DeMyer (1975) as cited in Decety, Michalsca and Akitsuki (2008), advanced overwhelming evidence to support the view that occasionally, psychotic children show normal intellectual development, but in a majority of cases, rating scales and intelligence tests yield estimates of intellectual functioning in the retarded range. They further showed that though there is a somewhat greater variability in intellectual functioning among schizophrenic youngsters, it is only in rare instances that a psychotic child is ever able to function in a normal classroom setting, and even with special education provisions, the ability to function at or near normal levels is quite unusual.

Behaviour disorders come from brain injury, child abuse, trauma, etc. There has also been indication that it could be a genetic disorder. The behaviour therefore is an involuntary response to these experiences and the child should not be blamed for his behaviour Attherley (2002). Since the child has problems controlling his behaviour it stands to reason that his performance in school will be affected. A child with behaviour disorder will feel bad and that low self-esteem will be further worsened by the adults around him who do not treat his condition with understanding and willingness to help. Too often the child is blamed for his unacceptable behaviour and instead of being supported to deal with it he is castigated and alienated. There is therefore, a thin line between behaviour disorder, emotional disorders and learning disabilities, or one may lead to another Attherley (2002).

Behaviour problems in children and adolescents can be classified into two major domains of dysfunction, namely externalizing behaviours and internalizing behaviours (Achenbach & Edelbrock, 1978). The externalizing behaviours are marked by defiance, impulsivity, hyperactivity, aggression and antisocial features. The internalizing behaviours are evidenced by withdrawal, dysphoria and anxiety. Significant associations have been obtained consistently between learning disabilities and behaviour problems and various studies have supported this view. (Rutter and Yule (1970); Berger et al (1975) ; Scott 1981;Silver (1981); Sturge 1982; McGee et al (1986); Larson (1988); Mc Kinney 1989; Ritter 1989; Cantwell & Baker 1991; Fergusson & Horwood 1992 ; Faraone et al 1993; Vaughn, Zaragoza, Hogan, & Walker, 1993; Lyon 1996; Sanson et al 1996; Prior, Sanson,

Smart, & Oberklaid, 1999) as cited in Spagna et al (2000). Results of surveys have shown that between 24% and 54% of learning disabled children have behaviour problems (Mc Michael 1979; Mc Gee, Silva, & Williams, 1984; Schachter et al 1991) as cited in Tomblin et al (2000). Khurana (1980) in a study conducted at Baroda, India; on 100 learning disabled children, reported behaviour problems in 84% cases. Jorm et al (1986) studied a sample of 453 Australian children followed over the first three years of schooling. It was found that at school entry, backward readers were having more behaviour problems. Ritter (1989) estimated the problem behaviours of 51 adolescent girls with learning disability, using Child behaviour checklist and identified elevated problem behaviours in learning disabled group compared to adolescents without learning disability. Beitchman & Young (1997) described co morbidity of learning disorders with externalizing and internalizing disorders. Spreen (1989), Haager and Vaughn (1995), Vallance, Cummings, & Humphries (1998), Willcutt and Pennington (2000), and Grigorenko (2001) have also reported that both externalizing and internalizing behaviour problems are associated with learning disabilities.

According to Suran and Rizzo (1983) as cited in Godwyll (1992), some children with disordered behaviour however, may actively compensate for their fearfulness in interpersonal relationship by withdrawing into books and study. Thereby finding an area of personal worth and aggressive classmates. Such children, according to them thrive on adult attention, and certainly academic achievement is a sure road to parent and teacher praise. Thus they find important sources esteem. It must however be mentioned or hinted here that

these achievements are chalked at the expense of adequate interpersonal development which is crucial for a balanced personality and self- gratification .

Evertson, Emmer and Worsham (2003) posit that in describing the concept of disordered behaviour, rather than enumerating all possible misbehaviours that might occur in classrooms, it is more manageable to think of categories. They categorised behaviour problems into non-problem, minor problem, major problem but limited in scope and effects and escalating or spreading problem. Evertson, Emmer and Worsham (2003) describe brief inattention, some talk during a transition between activities, small periods of day dreaming, and a short pause while working on an assignment as common behaviours that are not really problems for anyone because they are of brief duration, common with both boys and girls and don't interfere much with learning and instruction.

With minor problem, Evertson, Emmer and Worsham (2003) describe them as behaviours that run counter to class procedures or rules but that do not, when occurring infrequently, disrupt class activities or seriously interfere with learning. Examples are calling out or leaving seats without permission, reading or doing unrelated work during class time, passing notes eating candy, scattering trash around, and talking excessively during independent work or group work. To them, these behaviours are minor irritants as long as they are brief in duration. "All of these constitute inattention behaviour and it is only when pupils engage in such behaviour for an extended period of time that classroom instruction will suffer" Evertson, Emmer and Worsham (2003, p.174).

Externalizing Behaviour Problems

In the Isle of Wight studies, Rutter, Tizard, Yule, Graham, & Whitmore (1976) as cited in Stantrock (2008), one quarter of the children with specific reading retardation showed antisocial behaviour. High rates of conduct problems, restlessness, poor concentration and over activity were seen among retarded readers in middle childhood. Two fifth of the children with antisocial behaviour problems were retarded in reading, compared with about one in every 20 of those with no disorder. (Cunningham & Barkley, 1978) as cited in Stantrock (2008), noted that reading disabilities might lead to behaviour problems such as hyperactivity. McMichael (1979) assessed Scottish children for behaviour problems and reading readiness at school entry. Two years later reading achievement and behaviour problems were again assessed. It was found that antisocial behaviour problems preceded the reading difficulties.

Bale (1981) in a cross-sectional study of backward readers confirmed that there was excess of behavioural disturbances, predominantly of anti-social nature, when the children were rated independently by teachers and by parents. The more serious the associated perceptual motor difficulties, the higher were the rate of antisocial disorder. Broder, Dunviant, Smith & Sutton (1981) reported that learning disability was strongly correlated with juvenile delinquency. Sturge (1982), in a study on 10 year old boys , found high rates of reading retardation and antisocial behaviour and the results showed a strong association between the two problems. In this study, motor restlessness and poor concentration differentiated between reading retarded and non-retarded boys. Kellam (1983)

as cited in Strantrock (2008) reported that reading disabled children are vulnerable to emotional as well as conduct problems. Badian (1983) reported that 42% of children with dyscalculia had problems with attention. Evidence indicates that children who exhibit attention deficits without motor hyperactivity are likely to have more learning disabilities than those who display attention deficits and motor hyperactivity (Edelbrock , 1984; Holborow & Berry, 1986). McGee, Silva,& William (1984) as cited in Santrock (2008), found that hyperactive behaviour rather than aggressive or anxious behaviour was associated with poor reading ability at age 7 years. Maughan, Gray & Rutter (1985) noted that boys with specific reading retardation had higher rates of delinquency compared with boys who could read normally; but the difference was not statistically significant. McConaughy and Ritter (1986) measured the behaviour problems of 6 to 11 year old students using child behaviour check list. Children with learning disabilities had highest scores of behavioural problems especially of the externalizing type. Kazdin (1987) noted that learning disabilities play an important role in delinquent behaviour. Rourke (1988) in the review of research on the relation between socioemotional functions and learning disabilities in children makes it evident that psychopathology worsens with age in children with non-verbal learning disabilities.

McGee et al (1988) in the study on reading disabled groups of boys and girls found that during the early school years, there was a significant relationship between behaviour problems and reading disability in both sexes. Behaviour problems seemed to have arisen as a consequence of the reading disability

rather than preceding it. By age 13, reading disability in boys and girls was associated with oppositional – defiant and inattentive behaviours. It is possible that association of reading disability with other behaviour problems at age 13 might lead to later delinquent behaviours. They have also documented increasing correlations between externalizing behaviour and learning disabilities up to age 11.

Venugopal and Raju (1988) in their study at Pondicherry, India; described learning disabled children to be over reacting. Ritter (1989) estimated the social competence and problem behaviour of 51 adolescent girls with learning disability using Child Behaviour Check List and identified poor social competence and elevated problem behaviours in learning disabled group compared to adolescents without learning disability.

Cornwell and Bawden (1992) examined the relationship between specific reading disabilities and aggressive behaviour. There was not enough evidence to conclude that reading disability causes aggressive or delinquent behaviour; although limited evidence suggested that reading disability may worsen pre-existing aggressive behaviour.

Fergusson & Horwood, (1992) noted that inattentive behaviours at age 12 exert significant effect on reading achievement at that age. Hinshaw (1992) in his extensive review of issues pertaining to the relationship between externalizing behaviour problems and academic underachievement, stated that , in childhood, inattention and hyperactivity were stronger correlates of academic problems,

than aggression. However by adolescence, antisocial behaviour and delinquency were clearly associated with under achievement. Overlap between externalizing behaviour problems and learning difficulty often begin during the pre school years, with significant association documented before the onset of formal schooling.

Gilger, Pennington, & DeFries (1992) pointed out that hyperactivity and specific learning disabilities co-occur more frequently than would be expected on the basis of chance.

Williams and McGee (1994), using data from a longitudinal study of child development in New Zealand (N=698) examined relationships between early reading attainment and antisocial behaviour at ages 7 and 9 years; and subsequent reading and delinquent behaviour in adolescence. While reading did not directly influence later delinquency, antisocial behaviour during the early school years was strongly predictive of delinquency at age 15 years, particularly for boys. Reading disability at 9 years of age, predicted conduct disorder at age 15 in boys, but not in girls. Shalev, Auerbach, & Gross-Tsur (1995) pointed out that children with dyscalculia demonstrated more behaviour problems than normal children. When associated with dyslexia, these children had more attentional problems and externalizing syndromes. Fergusson and Lynskey (1997) examined the relationship between early reading difficulties and later conduct problems in New Zealand children from the point of school entry to the age of sixteen. Children with early reading difficulties had increased rates of conduct problems up to the age of 16 years; which was more evident for boys.

Internalizing Behaviour Problems

In contrast to the voluminous literature on the relation between externalizing behaviour problems and learning disabilities, little has been written about learning disabilities and internalizing problems. Myklebust (1975) reported that children with dyscalculia had social withdrawal. McGee, William, Share, Anderson, & Silva (1986) noted that children with reading disability showed anxious-withdrawn behaviour. Cangelosi (1993) describes off-task behaviours such as students allowing their minds to wander from the topic at hand, daydreaming, being quietly inattentive because of the effects of drugs; failing to complete homework assignments, skipping class, and cheating on tests are all inattention behaviour engaged in almost the same measure by both boys and girls and are usually thought of as nondisruptive.

Stein and Hoover (1989) compared manifest anxiety in children with LD and without LD. They concluded that compared with non LD children, children with LD had higher total anxiety scores. Levine, Lindsay, & Reeds (1992) from the University of North Carolina in the study on mathematics disability, pointed out that demands of the mathematics curriculum impose increasing strains on a developing and differentiating nervous system and children with mathematics disabilities often experience profound feelings of intellectual inadequacy and sadness. This in turn can erode both self esteem and academic motivation. Such a child is likely to be exquisitely sensitive and even embarrassed when a parent tries to help him or her with home work.

Huntington and Bender (1993) concluded that adolescents with learning disabilities experience higher levels of trait anxiety and have higher prevalence of somatic complaints, as well as reduced self esteem. Nabuzoka and Smith (1993) from United Kingdom found that the learning disabled children were more shy, seeking help and were often victims of bullying.

McBride and Siegel (1997) of University of Columbia in a study on adolescent suicide reported that 89% of the 27 adolescents who committed suicide had significant deficits in spelling and handwriting.

The study by Prior, Sanson, Smart, & Oberklaid (1999) highlighted the risk for internalizing problems including anxiety, depression and phobias in preadolescent children with mathematics difficulties.

Modelling

A person's behaviour often changes merely as a result of observing the behaviour and behaviour consequences of someone else. A teenager may adopt some of the dress and mannerisms of his socially successful peers**.** Children who love and adore you want to be just like you. A new employee in an organization may best learn his job by observing an older employee. Modelling is a technique in behaviour therapy in which the client learns by observing a target behaviour performed competently by another person. According to Bandura (1986) as cited in Eliot, Kratochwill, Cook, & Travers (2000) most human behaviour is learned by observation through modelling. He postulates that by observing others, one forms rules of behaviour, and on future occasions this coded information serves

as a guide for action to other children. He continued that, modelling can be defined as one person's observation of another's behaviuor and acquiring of that behaviour in a representational form, without simultaneously performing the responses. Nwadinigwe (2006) describes modelling as the process whereby the individual is led to emit a desired behaviour through stimuli inducement and copying. Okoli (2002) on the other hand, sees modelling as the procedure of giving an opportunity for a student to observe a person who is interesting or significant to him initiate and perform the new and desired pattern of behaviour. He however, opines that modelling can only be effective if it is accompanied by verbal instructions.

Eliot, Kratochwill, Cook, & Travers (2000) add another dimension to their explanation of modelling. They suggest that four important processes seem to be involved in modelling. According to them, the first is attention. In their opinion, mere exposure to a model does not ensure the acquisition of behaviour. An observer must attend to (pay attention to) and recognise the distinctive features of the model's response. The modelling conditions also must incorporate the features such as attractiveness of the model (for example, gender) and reinforcement of the model's behaviour (for example, praise). Eliot, Kratochwill, Cook, & Travers (2000), continue that the second process is retention. Reproduction of the behaviour implies that the pupil or the observer symbolically retains the observed behaviour. They believe that "symbolic coding helps to explain lengthy retention of observed behaviour. For example, a pupil codes, classifies, and recognises the model's responses into personally meaningful units,

thus aiding retention. The third process, according to them, is motor reproduction processes. They noted that symbolic coding produces internal models of the environment that guide the observer's future behaviour. After observation and forming an image of the task's solution, the teacher should have his students demonstrate the solution as soon as possible. Finally, they suggest, the fourth process is what Bandura (1986 as cited in Eliot, Kratochwill, Cook, & Travers 2000) called motivational processes. To them although a child acquires and retains the ability to perform modelled behaviour, that behaviour or task will not be performed unless conditions are favourabe.

Through modelling, observation, and then imitation, children develop new behaviours. Modelling can be as simple as having a child watch another child sharpen a pencil. By watching the model, a child can learn a new behaviour, inhibit behaviour, or strengthen previously learned behaviour (e.g. saying "thank you"). Mather and Goldstein (2001) to use modelling effectively, you must determine whether a child has the capacity to observe and then imitate the model. In classroom settings, a student's response to modelling is influenced by three factors: 1) the characteristics of the model (e.g. is this a student whom the other students like and respect?), 2) the characteristics of the observer (e.g. is this child capable of observing and imitating the behaviour), and 3) the positive or negative consequences associated with the behaviour. Children are more likely to respond to teacher modelling when they view their teachers as competent, nurturing, supportive, fun, and interesting. Children are also more likely to

imitate behaviour that results in a positive consequence (Mather and Goldstein, 2001).

Younger children have been reported as more frequently imitating others than older children. Children consistently model someone whom they value or look up to. They also imitate the behaviour of a same-sex child more often than that of a different-sex child. They model someone whom they perceive as successful and socially valued regardless of whether the teacher perceives that child as successful and socially valued. Finally, if a child observes a model being reinforced or punished for certain behaviour, this influences the likelihood that the child will then model that behaviour.

Modelling is a powerful tool, often underutilized by teachers. When teachers are cheerful and enthusiastic, their attitudes are contagious. When they are respectful of students, students respect each other. When teachers are patient, fair, consistent, and optimistic, their students exhibit these traits as well. Teacher behaviour sets the tone for the classroom environment Mather and Goldstein, (2001).

In 1970, Kaplan (as cited in Haring, 1987), described a ripple effect in transactions between teachers and misbehaving students that affected not only those students but also the entire classroom. Teachers who were firm reduced the problem behaviours both from the first child who misbehaved and from those students who saw the initial problem behaviour. When teachers enforced rules, the ripple effect worked in their favour. When they failed to follow through with

rules, the ripple effect worked against them. Furthermore, the misbehaving student's social standing in the classroom was also an issue. When teachers successfully managed the behaviour of high-status troublemakers, their control tended to benefit the entire classroom. Likewise, the ripple effect when high-status offenders were not managed increased negative behaviours among others. Finally, when managing a disruptive behaviour, it is important to focus on tasks and behaviours rather than on approval. In the latter situation, teachers may focus on their relationship with the disruptive student when trying to get that student to behave. This strategy, unfortunately, is usually ineffective over the long term Mather and Goldstein (2001).

Video modelling as Behaviour Change Technique

Video modelling is defined as the demonstration of behaviour that is not live, but is presented via video in an effort to change existing behaviours or teach new ones (Dowrick, 1991). The learner views the model on the screen and is given the opportunity to imitate the observed responses (Reagon, Higbee, & Endicott, 2006). Video modelling is a relatively inexpensive and simple method of teaching learners who attend and respond well to video. Target behaviours can clearly be demonstrated which may reduce the stimulus over selectivity that individuals with autism often exhibit (Charlop-Christy & Daneshvar, 2003)... The video model method is an application with evidence basis, defined as watching and taking as a model the target behaviour exhibited by the person on the videotape. The video model method is a teaching method that can be used in teaching many different skills to children displaying normal development and to children with

developmental disabilities (Banda, et al, 2010). The Four Main Types of Video Modelling Techniques are; Priming, Error Correction Procedures, Video Prompting and Simultaneous Video Modelling.

Video Priming The learner watches a video model (i.e., training session) and is later provided with an opportunity to engage in the response with similar materials, people, and/or settings (i.e., probe session). During training sessions, learners are often prompted to attend to the video (e.g., Charlop & Milstein, 1989; Schreibman, Whalen, & Stahmer, 2000); however, not all studies have incorporated prompts for attending (e.g., Hine & Wolery, 2006; Lasater & Brady, 1995; Nikopoulos & Keenan, 2007). A few studies have included reinforcement contingent upon attending (e.g., Charlop-Christy, Le, & Freeman, 2000; Schreibman et al. 2000). According to them, to the best of their knowledge, no studies have collected data on attending to the video. During probe sessions, prompts and reinforcers may or may not be used for engaging in the target responses.

Error Correction Procedure Presentation of the video model of the target behaviour. There are a few review studies relating to the video modelling in the literature. The studies were examined according to video modelling types (Delano, 2007) and model (McCoy, & Hermansen, 2007) in terms of research conducted on autistic children. Research about people having growth deficiencies (Mechling, 2005) were examined according to video modelling types. The present study differs from other review studies due to some factors: First, this study

analyzed video model practices used in social skills training in terms of details such as subjects, environment, research model, whether or not maintaining and generalization were targeted; in terms of fundamental categories such as social validity of the social skills selected for training; reasons for such selection; and the practice and its effectiveness. Secondly, it was based on studies conducted with individuals diagnosed with autism and other individuals with developmental disabilities. Reeve, Townsend, and Poulson (2007) used a multi-component teaching package to assist children with autism in learning a generalized repertoire of helping responses. One component of this teaching package consisted of showing a video model of a correct helping response when the children did not display the correct helping response. The children were prompted to imitate the video, if necessary. Results showed that the use of the multi-component teaching package set the occasion for helping responses among all 4 participants.

Video Prompting involves showing the participant a video model of one step of the task and then giving the person the opportunity to complete that step before the next step is shown. Malone et al. (2006) compared acquisition rates for two daily living tasks when instruction occurred with video priming versus video prompting. Video prompting was shown to be effective in promoting rapid skill acquisition across both tasks in all but one case. Video priming was shown to be ineffective.

Simultaneous Video modelling . The learner imitates the video model as he or she watches it. Although used clinically with children with autism, only two published studies were found that utilized this technique. Kinney, Vedora, and Stromer (2003) used simultaneous video modelling embedded in Microsoft PowerPoint ® slides to teach spelling to a school-age girl diagnosed with autism. While a video of a model correctly writing a word was played, the participant imitated writing it on a worksheet. Taber-Doughty, Patton, and Brennan (2008) compared the effectiveness of simultaneous video modelling with video priming to teach library research skills to three children with moderate intellectual disabilities. During the video priming condition, access to materials was provided over one hour after watching the video. Results indicated that both types of video modelling resulted in acquisition of target skills, but more substantial gains were made using each learner's most preferred method.

Social skills which are defined as observable, definable, and learned behaviours that help the individual achieve positive results in a certain situation and be accepted by society are taught in a systematic manner using specific teaching methods (Begun, 1996). Among these methods are direct teaching, social reinforcement, feedback, cooperative learning, providing cues, opportunity teaching, shaping, modelling, behavioural rehearsal, peer tutoring, social stories, and video modelling (Baker, 2004; Çolak, 2007). Video modelling is one of the effective methods in teaching social skills. At the heart of this method lies the theory of learning through observation. This theory is based on the suggestion

that individuals gain knowledge and learn skills by just observing the behaviours displayed by other individuals without any need for behaviour training or learning-by-doing (Akmanoglu, 2008; Nikopoulos, & Keenan, 2006). Gabriel Tarde was the first researcher to establish the importance of learning through observation and learning from models for the development of human behaviours (Bandura, & Walters, 1963). The pioneers of this theory were N. E. Miller, J. Dollard and A. Bandura (Bandura, & Walters, 1963; Nikopoulos, & Keenan, 2006).

In the learning through observation theory, two fundamental processes are discussed: modelling and imitating (Charlop-Christy, Le, & Freeman, 2000). These two processes also form the basis of teaching with the video model which is an evidence-based practice, defined as watching and taking as model the target behaviour exhibited by the person on the videotape (Akmanoglu, 2008; Bellini, Akullian, & Hopf, 2007; Charlop-Christy, Le, & Freeman, 2000; Nikopoulos, & Keenan, 2006; Sansosti, & Powell-Smith, 2008). Teaching with video modelling is effective in the teaching of many different skills and can be used for both children showing normal development and children with developmental disabilities. In recent years, the literature has indicated that the video model has been successfully used in teaching various social, academic, and functional skills to individuals with developmental disabilities. According to Mechling (2004), facilitating behaviour change with the video model may be performed in four ways: (i) modelling with video, (ii) feedback with video, (iii) cue with video, and (iv) computer-aided video teaching.

Banda, Matuszny, & Turkan (2007); Charlop-Christy, Le, & Freeman (2000) explain that modelling with video is the process where the individual watches the video recordings in which all sub-steps of a skill is displayed by a peer, adult, or herself/ himself/ and then repeats these behaviours. In feedback with video, the individual watches her/his own performance in a non-edited videotape; may notice her/his appropriate and inappropriate behaviours; may discuss these behaviours with the practitioner; and make adjustments in future performance (Maione, & Mirenda, 2006; Mechling, 2004). Video modelling which provides individuals with the opportunity to carry out the skill step immediately on the basis of the cue given by the video and which actively involves the individual in the process is called cue with video (Payne, & Antonow, 1982; Mechling, 2004), implementations in which texts, graphics, animations, sound, music, slides, films and movie recordings are presented within a single system are called computer aided video training (Halisküçük, 2007; Mechling, 2005; Wissick, 1996).

Although forms of teaching with the video model vary, video model practices are comprised of the stages of defining and choosing target behaviours; obtaining required permissions; meeting parents and observing the child; selecting and training the subjects to be filmed; preparing the tools and equipment and the environment; recording the target behaviours; editing the video; collecting the baseline data; showing the video; collecting the intervention data and creating the graphics; planning the maintaining and generalization process; collecting data; and collecting inter-observer reliability, treatment fidelity and social validity data (Banda, Matuszny, & Turkan, (2007);). Social validity is very important in

teaching social skills. Researchers and practitioners hope that behavioural aims they choose to study are meaningful, the methods they improve are suitable and effects that are improved are important for people and the society (Fawcett, 1991). But, desired changes in the behaviours are important for the individuals and society as well as the practitioners not to be left to the return of the hope (Vuran, & Sönmez, in press as cited in Nikopoulos, & Keenan, 2007)

In 19% of the studies, the social skills aimed to be taught were determined according to the family, teacher and psychologists' view of which skills the individuals lacked (Charlop-Christy, Le, & Freeman, 2000, Graetz, Mastropieri, & Scruggs 2006; Emecen, 2008; Sherer, Pierce, Paredes, Kissacky, Ingersoll & Schreibman, 2001) while in 81% of the studies the reason for choosing the social skills aimed to be taught was not stated. In the second group of studies, first the skills to be taught were determined and then subjects lacking that skill were included in the study.

In 52% of the studies on the subject of teaching social skills to individuals with developmental disabilities, it was stated that toys appropriate to the developmental age of the child were used as stimuli (Bellini, Akullian, & Hopf, 2007; Charlop-Christy, Le, & Freeman, 2000; D'Ateno, Mangiapanello, & Taylor 2003; Emecen, 2008; Gena, Couloura, & Kymissis 2005; Kroeger, Schultz, & Newson 2007; Maione, & Mirenda, 2006; Nikopoulos, & Keenan,, 2007; Paterson, & Arco, 2007; Wert, & Neisworth, 2003). In all studies in which toys were used as stimuli, it was stated that "attention was paid to choose the toys that were

familiar to the child and appropriate to the child's developmental age." To maximize the effect of the independent variable, samples were not taught how to play with these toys except for the studies in which play skills were taught.

Video Model Practices and Models and their Effectiveness

Studies related to video model practices were examined in three categories: comparative studies, studies investigating the effectiveness of different teaching methods provided with the video model and the studies investigating the effectiveness of only one video model practice. In 24% of the studies, the effectiveness of the video modelling in social skills training was compared to those of different methods. Whilst in one of these studies, Charlop-Christy, Le, & Freeman, (2000) compared invivo model and video model practices in terms of their effectiveness in social skill training; in another study, Gena, Couloura,& Kymissis (2005) made a comparison between the practices in which video model and reinforcement were used together and the practices in which invivo model, error correction and reinforcement were used together. Sherer and friends (2001) compared the video model practices containing peers as models with the video model practices containing the participant him/herself as the model. Whilst Charlop-Christy, Le, & Freeman, (2000) concluded that the video model was effective in the acquisition and generalization of the target skills in a shorter period of time and that it was more efficient in terms of time and cost; Gena Couloura,& Kymissis (2005) were not able to find a significant difference between the effectiveness of the practices. Sherer, Pierce, Paredes, Kissacky, Ingersoll, & Schreibman (2001) concluded that in the intervention condition in which the

subjects her/himself took part as the model, the individual acquired the target skill in a shorter time. In one of the studies included in the comparative studies category, the direct teaching method which included video model practices was compared with the adaptation activities program (Kroeger, Schultz, & Newson (2007) and in another study in this category with the cognitive process approach (Emecen, 2008). Whilst, (Kroeger, Schultz, & Newson (2007) reached the conclusion that children in the direct teaching group were more successful in acquiring the targeted social skills compared to children in the play activities group; Emecen (2008) arrived at the conclusion that while helping samples to gain social skills, direct teaching approach was more efficient compared to the cognitive process approach in terms of total teaching duration and number of incorrect response.

In 24% of the studies, the effects of teaching methods presented along with the video modelling on social skill teaching were investigated. Bernad-Ripoll (2007); Sansosti and Powel-Smith (2008) and Scattone (2008) examined the effectiveness of social stories presented along with video model practices on social skill teaching; Akmanoglu (2008) examined the effectiveness of graduated guidance presented with video model practice on social skill teaching whilst Maione and Mirenda (2006) examined the effectiveness of practices in which the video model, feedback with video and cue were presented together. It was observed that all of the studies discussed in this category were effective in teaching social skills to individuals with emotional or conduct disorders. In the analysis of these studies -in which the effectiveness of video model intervention

was established- by both researchers separately, repeatability of intervention processes was also questioned. Researchers found that 80% of the practices were repeatable.

In 52% of the studies, the effectiveness of only one video model practice was investigated. These studies were analyzed in four categories in terms of the models used in the video model practices. Within the scope of the category of the studies investigating the effectiveness of video model practices only; the studies investigating the effectiveness on social skill teaching of practices which contained the peer, adult or subject her/himself (video self-modelling) as the model or which the subject watched from her/his own perspective (video priming) were examined and analyzed in four categories according to the model used in the video model practices. It was observed that in 38% of the studies peers were used as the model. Two of these studies in which peer models were used, the peers familiar to the subjects were used (Bidwell, & Rehfeldt, 2004; Nikopoulos, & Keenan, 2003) and in one other study in this scope the models were unfamiliar to the subjects (Sherer, Pierce, Paredes, Kissacky, Ingersoll & Schreibman, 2001). Whilst in 5 of the studies, no information was given as to whether or not the subjects knew the peers who were the models (Emecen, 2008; Gena, Couloura,& Kymissis 2005; Kroeger, Schultz, & Newson 2007; Nikopoulos, & Keenan, 2007; Sansosti, & Powell-Smith, 2008).

It was observed that in 33% of the studies, adults were used as the model. From these video model practices containing adults as the model; 4 used adults

familiar to the subjects (Charlop-Christy, & Daneshvar, 2003; Charlop-Christy, Le, & Freeman, 2000; Nikopoulos, & Keenan, 2003; Scattone, 2008), 3 used adults unfamiliar to the subjects (D'Ateno, Mangiapanello, & Taylor 2003; Maione, & Mirenda, 2006; Paterson, & Arco, 2007)

In 29% of the studies, the subjects themselves took part as models (Bellini, Akullian, & Hopf, 2007; Bernad-Ripoll, 2007; Buggey, 2005; Graetz, Mastropieri, & Scruggs 2006; Sherer, Pierce, Paredes, Kissacky, Ingersoll,& Schreibman 2001; Wert, & Neisworth, 2003). Only one video model study was found in which the person watched from her/his own perspective (video priming) (Schreibman, Paredes, Kissacky, Ingersoll 2000). The studies demonstrated that the video model practices which contained peer, adult or subject him/herself as the model or which the person watched from their own perspective were effective in teaching social skills to individuals with developmental disabilities.

In video model practices, the model may either display the target behaviour with very slow and heavy steps or in a natural manner (Nikopoulos, & Keenan, 2006). It was observed that the video model practices in which the model displayed the target behaviour with very slow and heavy steps were used in only one of the studies assessed within the scope of the present study (Charlop-Christy, Le, & Freeman, 2000).

It was observed that whilst in some of the studies using video model practices, directives such as "Now you do the same as in the video!" were presented to the subjects prior to the behaviour, in others such stimuli was not presented. In only

one of the studies using video model practices in teaching social skills to individuals with developmental disabilities, the directive "let's do the same as you watched in the video!" was presented to the subject prior to the behaviour (Charlop-Christy, Le, & Freeman, 2000). However, in the other studies no stimulus which reminded the subjects of the video or the images viewed was presented prior to the behaviour; rather, only skill directives appropriate to the target behaviour were presented.

The studies were also examined in terms of presenting of stimuli following the behaviour. It was concluded that in 19% of the studies, the subjects' correct responses during the practice were reinforced (Akmanoglu, 2008; Bernad-Ripoll, 2007; Nikopoulos, & Keenan, 2003), whilst in 81% they were not. In the studies in which the correct responses during the practice were not reinforced, subjects were reinforced only when they directed their attention to the screen and generally verbal, symbol, food and activity reinforcers were used.

It was observed that in 71% of the studies, the maintaining process was planned and data were collected related to the process (Akmanoglu, 2008; Bellini et al., 2007; Bidwell, & Rehfeldt, 2004; Buggey, 2005; Charlop- Christy, & Daneshvar, 2003; Emecen, 2008; Gena, Couloura,& Kymissis 2005; Maione, & Mirenda, 2006; Nikopoulos, & Keenan, 2003, 2007; Paterson, & Arco, 2007; Sansosti, & Powell-Smith, 2008; Schreibman, Paredes, Kissacky, Ingersoll 2000; Sherer, Pierce, Paredes, Kissacky, Ingersoll,& Schreibman 2001; Wert, & Neisworth, 2003). In terms of generalization, it was seen that in 24% of the studies the data were collected pertaining to generalization across people, environments and

stimuli (Bidwell, & Rehfeldt, 2004; Charlop-Christy, Le, & Freeman, 2000; Emecen, 2008; Nikopoulos, & Keenan, 2003; Sherer, Pierce, Paredes, Kissacky, Ingersoll & Schreibman, 2001); in 19% only across environments (Akmanoglu, 2008; Sansosti, & Powell-Smith, 2008; Scattone, 2008; Schreibman, Paredes, Kissacky, Ingersoll 2000); in 10% only across people (Gena, Couloura,& Kymissis 2005; Nikopoulos, & Keenan, 2007) ; in 5% only across stimuli (Paterson, & Arco, 2007); and in 5% only across situations (Bernad-Ripoll, 2007); whilst in 19% generalization and maintaining data was not collected.

In all of the studies, in which maintaining and generalization data were collected, it was stated that at least one of the subjects who participated in the study maintained the skill they acquired after the training ended and generalized it to different environment, people, stimulus and situations.

The following empirical evidences as cited by Nikopoulos, & Keenan (2009), show how video modelling is used to teach a variety of skills .Daily Living Skills like setting a table, preparing orange juice, preparing a letter to be mailed (Shipley-Benamou, Lutzker, & Tubman, 2002). Kinney Vedora, & Stromer (2003) used to teach a variety of skills like academics generative spelling. According to Buggey (2005) video modelling is used to correct inappropriate behaviours such as aggressive pushing and tantrums. Rehfeidt, Dahman Young, Cherry, & Davis (2003) used it to teach meal preparation. (Lasater & Brady, (1995) used video modelling to teach shaving, making a bed, hanging pants/shirts .Sigafoos, OReilly, Canella, Upadhyaya, & Edirisinha (2005) used video modelling to teach purchasing. Alcantara, (1994); Haring, Kennedy, Adams, & Pitts-Conway, 1987)

used in teaching brushing of teeth while Charlop-Christy, & Freeman, (2000) used video modelling to teach microwave oven use.

Wert & Neisworth (2003) used video modelling to teach a variety of communication skills: Spontaneous requesting, Recognizing emotions in speech and facial expressions .Corbett, (2003) used it for compliment-giving initiations and responses (Apple, Billingsley, & Schwartz, (2005) used it for Language production (Buggey, 2005; Charlop-Christy, Le, & Freeman, 2000) used it for teaching verbal responses to questions. Buggey, 2005; used video modelling for conversational speech training (Charlop & Milstein, 1989; Charlop-Christy, Le, & Freeman, 2000; Nikopoulos & Keenan (2003, 2004); Ogeltree & Fischer,(1995); Sherer, Pierce, Parades, Kisacky, & Ingersoll (2001) used to Teach a Variety of social skills . Nikopoulos & Keenan (2004) used it for play behaviours including reciprocal play motor and verbal play sequences. Ateno, Mangiapanello, & Taylor (2003) used it to teach independent play. Charlop-Christy, Le, & Freeman, 2000; used it for play-related comments, and Taylor, Levin, & Jasper (1999) used it for socio-dramatic play.

Reinforcement

Reinforcement can be defined as an operation or as a process. As an operation, reinforcement refers to the occurrence of a consequence subsequent to behaviour. As a process, it refers to the increase in responding as a function of the occurrence of the consequence (Catania, 1984 as cited in Godwyll, 1992). A difficulty is presented when a term is defined in dichotomous ways. According to Godwyll (1992) Catania recognises this problem by stating that term

reinforcement is descriptive and not explanatory. Catania (1984) further states that three conditions are necessary for reinforcement. They are:

A response must have some consequence.

The response must increase in probability (that is, the response must be more probable than when it does not have this consequence).

The increase in probability must occur because the response has this consequence, and not for some other reason.

It is very necessary to be acquainted with the vocabulary of reinforcement especially when the three conditions stated above exist. These are the terms reinforcer, reinforcing and to reinforce. According to Eliot, Kratochwill, Cook, & Travers (2000) reinforcer (noun) is a stimulus event that, if it occurs in the proper temporal relation with a response, tends to maintain or increase the strength of response .They give examples as, praise, and food pellets used as reinforcers for the rat's lever presses in the Skinner box experiment. To Catania (1989 as cited in Davidson and Neale, 1998) Reinforcing (adjective) is a property of a stimulus event. For example, the reinforcing stimulus was produced more often than the other, non-reinforcing stimulus. The last term to reinforce (verb) is an operation, to deliver a consequence when a response occurs or as a process, to increase responding through the reinforcement operation.

Reinforcement is a major tool in behaviour analysis. Daramola (1987) observed that it is a major condition for most learning. Cooper et al (1987) and Hall (1971) as cited in Godwyll (1992) see it as stimulus or event that follows behaviour and it is administered contingently.

Positive Reinforcement as Behaviour Change Technique

Positive reinforcement is the most widely applied principle of behaviour. It is one of the cornerstones upon which applied behaviour analysts have built the technology of behaviour change (Cooper, Heron, & Heward 1987). Positive reinforcement has been used successfully alone or in combination with other procedures in numerous training and development programmes across a wide range of populations, settings, and behaviours (Wilt and Adams, 1980; Matson, 1980; Geller, Winnet and Everett, 1982; Sindelar, Honsaker and Jenkins, 1982; parker, Cataldo, Bourland, Emurian, Corbin and Page, 1984; Haring, 1985; as cited in Mather and Goldstein (2001); and Okoli, (2002).The appropriate application of positive reinforcement has repeatedly been demonstrated to increase both on-task behaviour and work completion (Barkley, 1990; DuPaul & Stoner, 1994; Goldstein, 1995; and Walker & Walker, 1991; as cited in Mather and Goldstein, 2001). In the early elementary school grades, teachers exhibit a significant degree of positive reinforcement for desired behaviours (White, 1975 as cited in Mather and Goldstein, 2001). That is, when a desired behaviour is exhibited, teachers frequently respond with a consequence that is likely to increase the reoccurrence of that behaviour. By middle elementary school and through secondary school, however, teachers begin paying increasingly greater attention to undesirable behaviours and less attention to appropriate behaviours. Unfortunately, paying attention to the undesirable behaviour causes it to cease in the short run but occur more frequently in the long run.

Cngelosi (2004) maintains that, theories associated with behaviouristic psychology provide explanations for how behaviour patterns are formed; they also provide a basis for strategies used to teach students to terminate off-task behaviour patterns in favour of on-task ones. He further posits that, "positive reinforcement in conjunction with the behaviour modification principles of extinction, alternative behaviour patterns, shaping, cuing, generalisation, discrimination, modelling, and satiation are particularly powerful forces for you to understand and use in dealing with your students' off-task behaviour patterns.

Children with ADHD may often be more interested in tasks other than those on which the teacher is focusing (Douglas, 1972 as cited in Mather and Goldstein). This leads to significantly more non-productive activity and uneven, unpredictable classroom behaviour. Interestingly, the overall rates of negative teacher-child interactions involving typical students are also higher in classrooms containing children with ADHD (Campbell, Endman, & Bernfeld, 1977 as cited in Mather and Goldstein, 2001). According to reports, teachers are more intense and controlling when interacting with children with ADHD. Within school settings, children with ADHD appear to experience negative consequences because of their temperament and a performance history that often involves beginning but not completing tasks. Many teachers in this circumstance unfortunately tend to focus on the misbehaviour rather than on the reduction or termination of the behaviour. This may further disrupt the classroom by disturbing other students. This naturally occurring pattern of teachers paying less attention to desirable behaviour and more attention to undesirable behaviour, as children progress

through school, places children with ADHD at a greater disadvantage than their classmates. In the first few grades, when teachers appear to be making a conscientious effort to positively reinforce their students, the child with ADHD often does not receive his or her share of reinforcement. In the later grades, as teachers exhibit less positive reinforcement, perhaps because they feel that it is not needed, the child with ADHD is placed at even greater risk. Positive reinforcement programs should begin at the level at which children can succeed and be positively reinforced. All too often, teachers set up wonderful behavioural programs but set initial criteria for success too high. The child with ADHD in this system rarely reaches success. Problem behaviour must be defined operationally and then a level of baseline occurrence must be obtained. At first, provide reinforcement when the child is at or slightly better than baseline (Mather and Goldstein, 2001).

As a general rule, observe a student in two different settings or two different types of activities. Some students are only off task and distractible when presented with tasks they find uninteresting. Other students are distractible only during specific subjects, such as in a math class. Keep in mind that students' attention varies depending on the type of task, the difficulty of the material, the type of activity, the setting, and the classroom management skills of the teacher. Positive reinforcement should follow immediately after good behaviour. It should be specific and initially continuous, slowly moving to an intermittent schedule. Material reinforcers provide the child with something tangible. Social reinforcers are more versatile, and, even if material reinforcers are used, a kind word from

the teacher should always accompany them. It is also easier to increase behaviour than decrease it. (Mather and Goldstein, 2001). Thus, when choosing target behaviour, it is preferable to focus on behaviours to be increased rather than on those to be decreased. Shea and Bauer (1987) as cited in Cangelosi (2004), described the following process to apply positive reinforcement effectively:

Select target behaviour to increase, define the behaviour, and choose a reinforcer.

Observe the child and watch for the behaviour.

Reinforce the target behaviour every time it is exhibited.

Comment in a positive way about the behaviour when providing reinforcement.

Be enthusiastic -and interested.

Offer assistance.

Vary the reinforcer.

Selection of reinforcements

Some consequences that teachers provide for children are irrelevant and neither strengthen nor weaken the behaviour they follow (Bushell, 1973 as cited in Mather and Goldstein, 2001). Many teachers believe that placing stars on a chart as a reward or providing a prize are consequences that work with all children. Some children are motivated by these consequences; others are not. Furthermore, children with ADHD may find these consequences salient one day but lose interest in them quickly the next day. Therefore, the fact that certain consequences follow a child's behaviour may neither strengthen nor weaken the

chances for that behaviour to reoccur. Bushell (1973) as cited in Mather and Goldstein (2001), referred to consequences that are irrelevant as *noise,* neutral consequences that have no effect on the behaviour. Teachers must evaluate whether chosen consequences are positively

You must develop a hierarchy of the behaviours that you would like to see the child exhibit. For example, in response to out-of-seat behaviour, many teachers may initiate a reinforcement system to increase in-seat behaviour. Although the child may earn multiple reinforcers for remaining in his seat, this does not guarantee that he will engage in constructive or appropriate behaviour while remaining seated. Often, multiple reinforcers and multiple levels of reinforcement must be initiated. (Mather and Goldstein, 2001).Robinson, Newby, and Gazelle (1981) used a token reinforcement system for successful completion of four tasks, two involving learning to read and using vocabulary words and sentences and two involving teaching these tasks to other students. Tokens were exchanged for access to a pinball machine or electronic game. Using a reversal design, the token intervention program resulted in a nine-fold increase in the mean number of tasks completed over the baseline level and significant improvement in performance on the school district's standardized weekly reading level examinations. A reduction in disruptive behaviour was also anecdotally reported. This reinforcement system was managed by a single teacher working with 18 children, all of whom had received diagnoses of ADHD. Walker and Shea (1991) also described an in-depth model of structuring a token economy successfully in the classroom.

Negative Reinforcement as Behaviour Change Technique

Negative reinforcers are stimulus events removed after a response has been performed, whose removal also increases the behaviour or activity they follow (Kazdin, 1989). Negative reinforcements operate in many situations (Eliot, Kratochwill, Cook, & Travers 2000).

Negative reinforcement requires the child to work for the removal of an in-place, unpleasant consequence. The child's goal is to get rid of something that is unpleasant rather than to earn something that is desirable. In a negative reinforcement model, instead of working to earn a positive consequence, the child works to distance him- or herself from an aversive consequence. Negative reinforcement is often used in the classroom to manage problem behaviours. Teachers inadvertently pay attention to a child who may not be complying and withdraw their attention contingent on the child's compliance. Surprisingly, this strengthens rather than weakens the noncompliant behaviour. The next time a similar situation occurs, the child again will not comply until confronted with the aversive consequence (i.e. the teacher's attention). Mather and Goldstein (2001) .Negative reinforcement is often seductive and coercive for teachers. It works in the short run but in the long run is likely to strengthen rather than weaken the undesirable behaviour.

Many of the same variables that affect positive reinforcement-immediacy, frequency, consistency---affect negative reinforcement. Behaviours that in and of themselves may not be negative become negative reinforcers when paired with

certain events. For example, a teacher approaching a child who is not working quickly becomes a negative reinforcer, even though the action itself, the teacher walking up to the child, does not have a negative connotation (Favell, 1977). Clark and Elliott (1988) found that negative reinforcement was rated by teachers as the most frequently used classroom intervention. Children with ADHD often experience negative reinforcement because of their temperament, which makes it difficult for them to complete tasks; their consequent learning history reinforces them for beginning but rarely for finishing.

A number of simple, effective ways exist to deal with this problem. If you are using negative reinforcement, pay attention to the student until the assignment is completed. Although this too is negative reinforcement, it teaches the child that the only way to get rid of the aversive consequence (i.e. your attention) is not just to start but to complete the task at hand. As an example, you may move the student's desk next to your desk until that particular piece of work is completed (Eliot, Kratochwill, Cook, & Travers, 2000).

Clark and Elliot (1988) indicated that, a second alternative involves the use of differential attention or ignoring. The term *differential attention* applies when ignoring is used as the negative consequence for exhibiting the undesirable behaviour, and attention is used as a positive consequence for exhibiting the competing desirable behaviour. This is an active process in which the teacher ignores the child engaged in an off-task activity but pays attention immediately when the child begins working. Many teachers avoid interaction with the child

when he or she is on task for fear of interrupting the child's train of thought. It is important, however, to reinforce the child when working so that a pattern of working to earn positive reinforcement rather than working to avoid negative reinforcement is developed. Secondary school teachers at times complain that if they ignore the adolescent with ADHD during an hour-long class, they never have the opportunity to pay positive attention as the student may never exhibit positive behaviour. Waiting, however, even if one has to wait until the next day, is more effective in the long run than paying attention to off-task behaviour.

You need to make a distinction between off-task behaviour that disrupts and off-task behaviour that does not disrupt. Differential attention works effectively for the latter. However, when a child is off task and disturbing his or her neighbour, you may find that being a negative reinforcer holds an advantage in stemming the tide of an off-task behaviour that involves other students as well. Differential attention alone has been demonstrated to be ineffective in maintaining high rates of on-task behaviour and work productivity for students with ADHD Rosen, O'Leary, Joyce, Conway, & Pfiffner, (1984) as cited in Mather and Goldstein (2001). In part, they suggest that many factors other than teacher attention maintain and influence student behaviour.

Differential attention is a powerful intervention when used appropriately. Once the strategy of ignoring inappropriate behaviour is employed, *it must be continued despite escalation*. If not, you run the risk of intermittently reinforcing the negative behaviour, thereby strengthening its occurrence. For example, if you

decide to use differential attention for a child's out-of-seat behaviour but become sufficiently frustrated after the child is out of his or her seat for 10 minutes and respond by directing attention to the child, the behaviour will be reinforced rather than extinguished. The 10 minutes of ignoring will quickly be lost in the one incident of negative attention. If the teacher yells, "Sit down," the child has received the desired attention by persisting in a negative behaviour (Rosen, et al 1984, as cited in Mather and Goldstein, 2001).

Madsen, Becker, and Thomas (1968) as cited by Mather and Goldstein (2001) evaluated rules, praise, and ignoring for inappropriate behaviour in two children in a typical second-grade classroom and in one child in a kindergarten class. The results indicated that in the absence of praise, rules and ignoring were ineffective. Inappropriate behaviour decreased only after praise was added. Others have demonstrated the importance of praise in a general education classroom (Thomas, Becker, & Armstrong, 1968 as cited in Mather and Goldstein, 2001)). Specifically, whenever teacher approval was withdrawn, disruptive behaviours increased.

Overall, however, the research on differential attention with children with ADHD has been inconsistent. Rosen and colleagues (1984) evaluated the results of praise and reprimands in maintaining appropriate social and academic behaviours in second- and third-grade children with ADHD. Children's on-task behaviour and academic performance deteriorated when negative feedback was withdrawn but not when positive feedback was omitted. Students' on-task behaviour remained

high, even after 9 days of no praise from the teacher. Acker and O'Leary (1988) as cited in Slavin (1995) demonstrated that the use of only reprimands for behaviour management without positive consequences does not lead to dramatic improvement in on-task performance when praise is added. Dramatic deterioration in on-task behaviour was observed when reprimands were subsequently withdrawn, even though the teacher was still delivering praise for appropriate behaviour.

Children with ADHD perform as well as typical children with a continuous schedule of reinforcement but perform significantly worse with a partial schedule of reinforcement (e.g. reinforcement is provided only sometimes), which is typically found in most classrooms (Douglas & Parry, 1983 as cited in Mather and Goldstein, 2001)). Praise is important for the development of other attributes in human beings, such as self-esteem, school attitude, and motivation toward academics (Redd, Morris, & Martin, 1975 as cited in Mather and Goldstein, 2001)). In addition, the opposite is also true: A large amount of punishment can negatively affect emotional development and self-esteem.

Gender Differences in the Form of Aggression among Ghanaian Students

Godwyll, (1992) observed that there have been complaints from teachers, parents, school authorities, educational administrators and the larger society deploring the spate of hooliganism and vandalism in Ghanaian school. In Ghana, students' aggression on campus is on the increase and has caught the attention

of and raised much concern from the Ministry of Education, school authorities, the media, civic society and the general public (Amedahe and Owusu-Banahene, 2007). This probably, explains why corporal and other forms of physical punishment are still in use in Ghanaian public schools.

In recent times, some religious groups have requested government to give back their mission schools to them to manage due to the deteriorating nature of discipline and school aggression in Ghanaian schools (including the mission schools) since government took away the administration of all secondary (high) school some decades ago. Some of the recorded and reported incidences of students' aggression in Ghanaian secondary (high) schools include: six students arrested for possessing weapons in school, Kumasi Academy closed down after a violent clash between students and staff, a bloody clash between students of St Thomas Aquinas and Labone secondary school, Cape Coast Technical School students destroying school property, and a student arrested for possessing a Reich Protector automatic pistol, with one round of ammunition. According to Eyiah (2010) as cited by the Ghana News Agency (2010), recent reports from Aworowa in the Brong Ahafo region of Ghana speak of students of Akumfi-Ameyaw Senior High School at Aworowa in the Techiman municipality going on a rampage causing damage to a number of bungalows and other properties in the school. This act of vandalism is alleged to have been championed by young people between the ages of 17 and 20 years. In most of these reported cases, male students are seen at the forefront of such violent acts, making one wonder whether female students on campus also express their aggression in the same

direct aggressive acts as their male counterparts, or do they express their aggression on campus in a different mode, which goes unnoticed?

Although aggression as a construct lacks a universally accepted meaning among scholars (Ramirez, 2003), there seems to be agreement on the classification of human aggression among these scholars. A widely accepted criterion in which human aggression has been classified has been how aggression has been elicited in social interaction (Ramirez, 2003). Bjorkqvist Lagerspetz and Kauhiainen (1992) distinguish between direct and indirect aggression. They explain direct aggression to mean any act of aggression, including those acts produced mainly in a face-to-face confrontation during a direct social interaction, either physically or verbally. They further explain that indirect aggression involves the delivering of harm circuitously. In indirect aggression, there is no direct contact in the social interaction between the two parties, but a third party (another person or an object) may participate (Bjorkqvist, Lagerspetz,& Kauhiainen 1992). This type of aggression is also referred to as 'social aggression' (Galen and Underwood, 1997) or 'rational aggression' (Crick and Grotpeter, 1995) when it involves the manifestation of social relations or damaging reputation, friendship and social status.

Focusing on the possible existence of sex differences in the various forms of aggression, a study by Bjorkqvist Lagerspetz and Kauhiainen (1992) investigated boys' and girls' (aged 8 and 15 years) use of different forms of aggressive behaviour. Using the Direct/Indirect Aggression Scale (DIAS), their data suggest

that, while boys exceed girls on standard measure of direct physical and verbal aggression, the sex differences is reversed when a measure of indirect aggression is used. Thus, while boys employ more direct aggression than girls (in conflict behaviour), girls use more indirect aggression than boys. Other researchers have confirmed this sex difference in the exhibition of aggressive behaviour among adolescent males and females (Tapper and Boulton, 2004). Crick and Grotpeter (1995) found evidence to suggest that girls use more relational aggression than boys whilst boys use more overt aggression than girls. To establish cross-cultural validity of these findings, Osterman (1999) used the Attributional Discrepancy Index (defined as self-estimated data minus peer-estimated data) as used by Lagerspetz, Bjorkqvist and Peltonen (1988) and Bjorkqvist Lagerspetz and Kauhiainen (1992) to assess the sex differences in the forms of aggression in some countries (namely Finland, Israel, Italy and Poland). He found that in these cross-cultural comparisons girls across ethnic groups and nations used indirect aggression more than other means of aggression while boys used more direct aggression than girls. He notes that his results suggest that the female preference for indirect aggression (and male preference for direct aggression) is not only a culturally dependent phenomenon, limited to Finland, but occurs in other cultures as well, irrespective of religion and language.

There has been some disagreement among aggression scholars on the most suitable tool for assessing the sex differences of aggression. While some researchers strongly recommend the use of self-reporting to assess sex differences (Campbell Sapochnik and Muncer, 1997; Osterman, 1999), others

argue for the use of peer reporting, teachers' reports and observation (Lagerspetz, Bjorkqvist and Peltonen (1988); Pakaslanti and Keltikangas-Jarvinen, 2000). Lagerspetz, Bjorkqvist and Peltonen (1988), for example, used self- and peer reporting in their study and computed a correlation between self- and peer reporting for both sexes and found significant but low correlations between the techniques. They reasoned that self-reporting was less accurate than peer reporting and that girls are specifically unlikely to acknowledge their own acts of indirect aggression. Osterman (1999) acknowledges this assertion and attributes the rapid development of the peer estimation paradigm among researchers of sex differences in aggression to Lagerspetz ,Bjorkqvist and Peltonen (1988) observations. He notes that during the past decade peer estimation techniques have been increasingly popular.

Campbell Sapochnik and Muncer (1997) strongly disagree and sound unconvinced about the assertion that self-reports are less accurate than peer reports in studying differences in aggression. They put forward two counter-arguments to squash the earlier assertion. They note that, first, Lagerspetz ,Bjorkqvist and Peltonen (1988) methodology invited participants to give peer estimates for their own sex only, so that reported sex differences in (peer-nominated) direct and indirect aggression may be accounted for in terms of the sex of raters. Second, Campbell and others argue that Lagerspetz ,Bjorkqvist and Peltonen (1988) offered no external validity criteria against which to assess their belief that the low correlation reflected the inappropriateness of the use of self-report.

Although Osterman (1999) has been able to establish the cross-cultural validity of the findings of Bjorkqvist Lagerspetz and Kauhiainen. (1992), Lagerspetz, Bjorkqvist and Peltonen (1988) and Crick and Grotpeter (1995), his subjects did not include any African country or for that matter any African respondents. Again, most of the studies of sex differences in aggression reviewed focused on the direct (physical and verbal) and indirect forms of aggression and not specific aggressive behaviour exhibited by the different sexes.

A study, by Amedahe and Owusu-Banahene (2007) first to examine the sex differences in the forms of aggression (direct and indirect) among Ghanaian adolescent students in senior secondary (high) schools and, second, to examine the nature of adolescent students' aggressive behaviour on campus as well as to assess their sex differences on specifically the identified aggressive behaviours provides an understanding of adolescent students' aggression in the Ghanaian context as well as the sex differences. Their study differed from previous ones in two main ways. First, the study focused on adolescent students (14-19 years) in Ghanaian senior secondary (high) schools, thus providing an African perspective on sex differences in aggression compared with similar studies done in Western cultures. The study, therefore, provides evidence of the cross-cultural validity of other studies by Bjorkqvist and his colleagues in Western countries. Second, the study examined the nature of the students' aggression and the actual sex differences that exist in some specific aggressive behaviour commonly exhibited or reported among adolescent students in senior secondary schools.

From the results it was observed that the most common three aggressive behaviours reported by the students on school campuses are 'insulting the person concerned' (78.9 per cent of the respondents), 'verbal exchange' (76.1 per cent) and then 'teasing' (73.7 per cent). The least common three aggressive behaviours reported by the students are 'handling and threatening with firearms' (1.9 per cent of the respondents), 'fighting with other weapons' (18.5 per cent) and 'fighting among gangs' (19.3 per cent).

An issue of interest to their study was whether there is any difference between male and female adolescent students in their display of specific aggressive behaviours they exhibit on school campuses. To determine this, the sex distribution of the responses of the twelve identified aggressive behaviours was analysed and the frequencies for both male and female students were computed. The results showed that the three most frequent aggressive behaviours reported by male students are 'insulting the person concerned' (84.3 per cent), 'teasing' (72.7 per cent) and 'exchange of blows' (69.1 per cent). Among female adolescents studied, the data show that the three most common aggressive behaviours reported are 'refusing to talk to the person concerned' (87.9 per cent), 'gossiping' (84.8 per cent) and 'verbal exchange' (83.4 per cent).

The results show that Ghanaian male adolescent students reported a statistically significantly higher level of direct aggression than Ghanaian female students. This supports earlier research reports which indicate that Ghanaian adolescent students would report a higher level of direct aggression than Ghanaian female

students. This result compares with previous studies that show that there is higher level of direct aggression among schoolboys and male students compared with girls and female students (Bjorkqvist et al., 1992; Osterman, 1999).

Among Ghanaian male students, physical strength is highly associated with masculinity, fame and respect among school peers. Hence, in any given conflict situation, either among students, or between students and school authorities, male students are more likely to resort to the use of violent means in dealing with the situation (Amedahe and Owusu-Banahene, 2007). Most often the motive behind such an option on the part of these students is to gain popularity and fame among their peers for being tough and 'hard' on the victim or school administration. Because adolescent male students are known to be higher risk takers than females (Newberger, 2002) most of these students engage in such acts without thinking about the consequences of their action, which include punishment, suspension and dismissal from the school. In Ghanaian secondary (high) schools it is a common practice for some students to identify with such 'troublemakers' (violent students who often use direct aggressive behaviours to resolve conflicts) as their role models and adore them in school. This further reinforces such undisciplined adolescent students and also encourages others to engage in direct aggressive acts on campus Amedahe and Owusu-Banahene, 2007).

Second, the reported sex difference in direct aggression among Ghanaian adolescent students can be due to the invariance in the sex differences in the use of verbal aggression among the students. Among Ghanaian male and female

students there seems to be no significant difference in male and female use of verbal aggression against the victim. This suggests that the reported sex difference in direct aggression between male and female adolescent students is due to the high level of reported physical aggression among the male students alone. A closer look at students' conflict situations on Ghanaian high school campuses shows that physically aggressive acts (such as hitting, slapping, wrestling and pushing) are usually preceded by verbal insults and threats, with physical attacks seldom occurring out of the blue. Although both sexes would initially employ a verbal assault or verbal aggression, female adolescent students' verbal aggression is much less likely to escalate to physical aggression, unless the situation really demands it, such as for self-defence (Amedahe and Owusu-Banahene, 2007).

Finally, the differences in the socialisation process of Ghanaian boys and girls during their childhood years influence their preference for direct or indirect aggression during the adolescent stage. For instance, in childhood, Ghanaian male children are exposed to practices and comments which make male children associate maleness and masculinity with power and dominance. For example, boys are taught to fight back at their bullies and assailants who try to overpower them; they are conditioned to believe that it is wrong and culturally unacceptable for a male to cry and express pain; they are taught to be strong and courageous and always to try to resist any form of oppression, and also be tough and bold. Hence boys grow up to use threats, physical means and dominating tendencies to victimise those who oppose them and/or offend them in their social

interaction, either at school or at home. Most Ghanaian male students carry these learned direct aggressive behavioural tendencies to secondary (high) school, making them bullies, adventurous, testing the school authorities' power by violating school rules and regulations and sometimes engaging in risky behaviour concerning their sexuality, drugs and alcohol abuse (Amedahe and Owusu-Banahene, 2007).

Female adolescent students reported a significantly higher level of indirect aggression than male adolescent students. This result also provides support for previous studies that there is a higher level of indirect aggression among female adolescents compared with male adolescents (Bjorkqvist, Lagerspetz and Kauhiainen 1992; Osterman, 1999). Typically, Ghanaian female adolescent students do not like to use socially unapproved strategies within a social environment and within the school culture. Within the girls' school environment, female students are supposed to act and behave in a ladylike manner. This calls for them to be more feminine in their interpersonal relations with others than being masculine. In the face of provocation, any attempt to employ physical means to retaliate-such as fighting, kicking, wrestling, pushing or slapping-would be interpreted as uncultured behaviour. Such a female student might even be branded with nicknames like 'Yaa Asantewaa' (the name of a legendary heroine in Ghanaian traditional history), 'man-woman', and ‘witch’ and ‘iron lady’ among others. In the light of this, female students would choose an alternative strategy that would deliver their intention of causing harm to their victim, in a way that would not call for the use of direct physical or masculine means of causing harm

to the victim in order to achieve their intention as well as conform to social expectations. Using means such as 'gossiping about the person', 'insulting the offender' or 'socially manipulating them' is an effective way by which female adolescent students can cause psychological harm to their victim.

In investigating the nature of aggressive behaviour, Amedahe and Owusu-Banahene (2007) identified twelve behaviours as forms of aggression on school campuses in Ghana. The three most common aggressive forms of behaviour reported by the students studied were 'insulting the person concerned', 'verbal exchange' and 'teasing'. It should be noted that the three forms of aggression are all in the verbal realm of aggression. This implies that the students studied more frequently used direct verbal aggression than any other form.

There could be several reasons why Ghanaian students resort to the use of direct verbal aggressive behaviour (such as insulting, verbal exchanges and teasing in school) when they are annoyed or angry with friends or the school authorities. First, these forms of aggression can easily go unnoticed by the authorities and may not attract attention for punishment to be meted out against the perpetrator. Second, the use of verbal aggression does not inflict physical harm on the victim; hence most authorities would overlook its effect on the victim. Finally, direct verbal aggression could be seen as the 'lesser evil' compared with the use of physical aggression in settling disputes among students-although not the best.

The three least common aggressive behaviours that Amedahe and Owusu-Banahene (2007) found out are 'handling and threatening with firearms', 'fighting with other weapons' and 'fighting among gangs'. This finding agrees with those of other studies of weapon possession in schools. Although threatening with firearms, thankfully, is the least common form of aggressive behaviour on school campuses, the presence of any firearms or other forms of weapons on school campuses makes educational institutions less safe and more dangerous to learners, teachers and administrators.

Corporal Punishment and Discipline in Ghanaian Basic Schools

The Convention on the Rights of the Child is the first legally binding international instrument to incorporate the full range of human rights—civil, cultural, economic, political and social rights. The Convention sets out these rights in 54 articles and two optional protocols. It voices the basic human rights that children everywhere have: the right to survival; to develop to the fullest; to protection from harmful influences, abuse and exploitation; and to participate fully in family, cultural and social life. The four core principles of the Convention are non-discrimination; devotion to the best interests of the child; the right to life, survival and development; and respect for the views of the child. Every right stated in the Convention is inherent to the human dignity and harmonious development of every child. The Convention protects children' rights by setting standards in health care; education; and legal, civil and social services (UNICEF, 2009).

Ghana acknowledges the right of children to education and has enshrined this right in Article 25 (1) of the 1992 Republican Constitution of Ghana (Republic of Ghana 1992). This Constitution precipitated the launching of the Free Compulsory and Universal Basic Education (FCUBE) policy in 1996.

On the other hand it is widely believed that discipline is required for students in order for them to be successful in education, especially during the compulsory education period. Rosen (1997) defines discipline as either a branch of knowledge-training that develops self-control, character, efficiency and strict control to enforce obedience- or as a treatment that controls and punishes as a system of rules. Eggleton (2001) defines it as a training which corrects moulds or perfects the mental faculties, or moral characters, obedience to authority or rules, punishment to correct poor behaviours. However, discipline does not necessarily have to involve corporal punishment. Corporal Punishment is usually related to school discipline with the term discipline itself which is problematic and has several ramifications for all actors in education (Slee, 1995, Rosen 1997). Generally, school discipline is defined as school policies and actions taken by school personnel to prevent students from unwanted behaviours, primarily focusing on school conduct codes and security methods, suspension from school, corporal punishment, and teachers' methods of managing students' actions in class (Cameron, 2006).The use of discipline is necessary to provide obedience to school rules. However the use of corporal punishment to provide discipline might bring more harm than benefit. Gordon (1981) discusses that disciplining children is damaging their physical, emotional, and social well being. He also points out

the frequency of physical punishment in the public schools in Dallas where an average of 2000 incidents were reported per month of using corporal punishment. Almost double that number was reported by the Houston School District. Gordon also mentions the research of Reardon and Reynolds (1979) which shows that from 60% to 89% of parents support the legal use of corporal punishment on their own kids by the schools. The results of several studies (Scarr, 1995; Flynn, 1996; Ramsburg (1997) as cited in Agbenyega (2006) indicate that corporal punishment or spanking is usually considered as a primary discipline method in most countries, including the USA. Teachers and school administrators resort to corporal punishment to correct poor behaviours.

Agbenyega (2006) reports on the practice of corporal punishment in two basic schools in the Greater Accra Region of Ghana. The findings reveal that an overwhelming majority of the teachers (94and 98 percent) use corporal punishment to enforce school discipline. The results further indicate that the majority of the teachers in both school sites administer corporal punishment to students who perform poorly in academic work or who do not possess certain classroom necessicities. This implies that students with special learning problems who are not officially identified may be punished often for poor performance. Another surprising aspect of this result is that a large number of teachers from all the schools indicate their unwillingness to discontinue corporal punishment in their schools.

Cabral and Speek-Warnery (2005) in a study reported that children described physical punishments administered by teachers as varying in their impacts from mild to severe. Children reported that classroom teachers in all government schools administered physical punishments. Children described how some teachers would lash them arbitrarily as they walked around in class, hitting them on arms, legs, backs and sometimes the back of their heads. Corporal punishment administered in school had left some children in such pain that it was hard for them to continue their work and left some with permanent scarring. Teachers reported using corporal punishment not only to punish inappropriate behaviour, but also to impart their authority in the classroom and as a teaching tool, physically punishing children who could not learn fast enough.

Robinson, Funk, Beth, & Bush (2005) question the effectiveness of corporal punishment and underline the side effects of corporal punishment such as running away fear of teacher, feelings of helplessness, humiliation, aggression and destruction at home and at school, abuse and criminal activities. Gershoff (2002) also attributes corporal punishment to increased aggression and lower levels of moral internalization and mental health and adds that adults who were corporally punished when children are more likely to be criminals, be violent with their sexual partner, and spank their own children. The Psychiatric News (as cited in Cryan, 1995) states that the psychological effects may be as harmful as the physical effects are.

The reasons for student behaviour problems should be examined in depth to solve this problem because many factors contribute to student behaviour problems apart from the poor school and classroom management. Jenson, Reavis and Rhode (1998) as cited in Agbenyega (2006) point to the importance of positive support with the difficult students because they usually have a history of punishment to which they have grown immune and they state that permanent behaviour changes are maintained only by basic positive procedures. Similarly, Ramsburg (1997) notes that spanking, used as a primary discipline method, may have some potentially harmful effects such as increasing the chances of misbehaviour. Punitive behaviour management methods have been shown to be ineffective and in some cases harmful to students (Cameron, 2006).Verbal reprimands, persistent nagging of students about their behaviours may be effective in the short run but they do not work and students suffer from violence in the long run (Hyman and Perone, 1998 as cited in Agbenyega (2006), as it would cost more (Clark, 2004), cause aggression and violence (Straus, 1991). Abebe and Hailemariam (2007) note that the student behaviour problems must be viewed as "complex and multilevel" and add that Society's number one goal should be to prevent the development of less than positive behaviours in children. Policy makers must give priority to prevention and proactive practices in the form of mandated child development and parenting classes for parents and enrichment and intervention programs for children. If corporal punishment may adversely affect a student' self-image and school achievement and may contribute to disruptive and violent student behaviour, why, then, do the

teachers, administrators and other school staff, in the name of discipline, often contribute to students' misbehaviour and aggression? Public accountability demands that schools be places that turn out productive and useful school-leavers. This is one of the fundamental principles of inclusive education. Thus, good discipline is considered to be one of the major attributes of effective schools and many failing schools have been blamed for lack of discipline. Educators have recognised that teaching and learning cannot be effective without someone being in control (Rosen, 1997; Slee 1995). But being in control does not mean, 'being a warden at a prison, it means maintaining order and discipline' (Rosen,1997). The United States Department of Education, for example, has acknowledged that: Maintaining a disciplined environment conducive to learning does not necessarily mean adopting tough policies to keep students silent in their seats. …Most important, a learning environment requires an ethic of caring that shapes staff-student relationships (U.S. Department of Education 1993, p.1 cited in Rosen, 1997). This suggests that punishment of students is not synonymous with discipline although the two have been tied together. Punishment is usually associated with some form of forceful suffering or deprivation (Slee, 1995). On the contrary, discipline has more to do with teaching and self-control (Rosen, 1997; Slee 1995). Learning theories indicate that punishment was ineffective for producing significant and lasting behavioural change (Canter, 2000; Rosen, 1997). Kochanska and Thompson (1997) reiterated that power oriented forceful discipline elicits very high anxiety or arousal in the child and interferes with the effective processing of messages and thus inhibits discipline. Although discipline

remains one of the most common problems for educators, corporal punishment should not be used because no evidence suggests that it has produced better results academically, morally or that it improves school internalisation (Canter, 1989 & 2000). It has also been argued that despite the existence of learning theories signalling the barriers punishment regimes pose to effective teaching and learning, the practice continues to be predicated on traditional norms and expectations of society and this is true in our schools, where adults expect that children who misbehave in school or at home will be punished (Rosen, 1997).

Discipline in Ghana's Basic Schools.

Although several countries, including New Zealand, Australia, the United Kingdom and some states in the United States have recognised the deleterious effects of corporal punishment and thus have abolished it, Ghana officially still adopts the practice. In Ghana, corporal punishment has been the main form of punishing students before and after independence. In the late 1970s Ghana Education Service (GES) partially banned corporal punishment in schools but allowed head teachers or their deputies to administer it to children because it was identified that the majority of teachers were abusing it and injuring students (Boakye, 2001). The use of corporal is an antiquated thinking that it facilitates learning among pupils (Boakye, 2001, Edumadze 2004).

The results of a study conducted in two schools on punishment in Ghanaian schools by Agbenyega (2006) show, an overwhelming majority of the teachers [94 and 98 percent], use corporal punishment to enforce school discipline. The

results also indicate that the majority of the participants from both school sites are not aware of any government policy prohibiting corporal punishment. This may be attributed to lack of information flow from the Ghana Education Service (GES) to the schools. The persistence of corporal punishment in these schools may be attributed to lack of school-based policies that prohibit the use of this form of punishment. The results further indicate that the majority of the teachers in both school sites administer corporal punishment to students who perform poorly in academic work. Another surprising aspect of this result is that a large number of teachers from all the schools indicated their unwillingness to discontinue corporal punishment in their schools. The results of the study indicated that caning was the most common form of punishment in Ghanaian schools. The results also showed that pinching was the second common method of punishing students and ear pulling was found to be the least common type of corporal punishment students receive in all the schools. It was also observed that the punishment regimes are commingled with teaching and learning and students have no voice to resist its administration. It can be implied from the results that part of students' instructional time is wasted on punishment. This may invariably affect effective teaching and learning in the schools. Further, the observation records did not show significant differences between the levels of different corporal punishment regimes in the two school sites.

According to Agbenyega (2006), three themes capture the nature of punishment for school children by Ghanaian teachers in basic schools. First, punishment is motivational to learning.

Second, punishment is foundational to moral uprightness and shaping of society's future. Third, punishment is driven by religious (Biblical) and spiritual concerns. Punishment is motivational to learning:

The findings of his study indicated that one of the motives behind the use of corporal punishment in the schools was to motivate students to learn and improve academic standards. This ideology symbolises the relationship between traditional pedagogy before the colonial era when Europeans (British) introduced formal education to Ghana. Although the colonial pedagogy was rigid, oppressive and selective and favoured brilliant students, that cannot be attributed necessarily to why the practice of corporal punishment still persists in Ghana today. Traditional African teaching and learning is dominated by power relations. Children are expected to take instructions from adults and assimilate knowledge without questioning its source. Questioning the source or challenging the opinion of an instructor may be regarded as rude and is tantamount to punishment. The same master-servant relationships, oppressive and discriminatory pedagogy still permeate teacher education with little or no opportunity for teacher trainees and their trainers to dialogue with each other in academic matters. Thus teachers trained within this culture may regard the use of the cane as a catalyst to induce students to learn. This practice, however, undermines constructivist's philosophy of teaching and learning.

The moral imperative

Morality in Ghanaian society is held in high esteem (Gyekye, 2002). Teachers represent parents in schools and they are encouraged by parents to address all problems posed by students. The results of Agbenyega's study indicated a close collaboration between teachers and parents in terms of discipline. Thus the home and school are inextricably linked. The participants believe that the degeneration of the character of individuals in their homes or schools will lead to a fallen nation (Gyekye, 2002). As the notion of personal character occupies a central place in Ghanaian society, schools are seen as places of authority where children will be made to conform to the standards of society. Corporal punishment is therefore considered and used as a tool to align students for society.

Religious imperatives

This study has indicated that corporal punishment of children is underscored by religious motives. Ghana is intensely religious and all aspects of life, including all actions, moral behaviour, and thoughts are inspired and influenced from a religious point of view (Gyekye, 2002). Christian religion forms more than 70 percent of all religions and Christian teaching in Ghana does not abhor the use of corporal punishment but rather condones it. It is because of the recognition of the part religion plays in school life that worship is compulsorily scheduled on the school timetable for Wednesdays for all public and non-public schools in Ghana. The majority of the participants cited the Holy Bible as their source or reference point to justify why they use corporal punishment in schools. Using the Judeo-Christian perspectives, teachers quote phrases from the Holy Bible to support

their arguments. The rod and rebuke give wisdom but a child left to himself brings shame to his mother' (Proverb 29: 15)… 'Correct your son and he will give you rest.' (Proverb, 29:17)… 'A rod is for the fool's back.' (Proverb, 26: 3)…'Harsh discipline is for him who forsakes the way.' (Proverb, 15:10), (refer to The New King James Version).

The teachers believed that if the rod is spared in their classrooms they may be failing in their religious duties as teachers who are responsible for the moral upbringing of the child. These Judeo-Christian perspectives are not unique to Ghana but are demonstrated in the US as well (Greydanus, Pratt, Spates, Blake-Dreher, Greydanus-Gearhart and Patel, 2003).

Using corporal punishment is perceived to be counterproductive to inclusive pedagogy and the valuing of all students. Corporal punishment of students for the purpose of enabling them to learn can best be understood from a behaviourist perspective. In the behaviourist tradition, learning is conceived as a process of changing or conditioning observable behaviour as a result of selective reinforcement of an individual's response to events that occur in the environment (Hogan and Pressley, 1997, von Glasersfeld, 1995). The core of behaviourism is on students' efforts to accumulate knowledge of the natural world and the teachers' role to transmit it. It therefore relies on a transmission, instructionist approach which is largely authoritative, non-interactive teacher-centred and controlled (von Glasersfeld, 1995). The implication is that it does not offer fertile ground for inclusive practice as punishment contingencies are often used as part

of the conditioning process. In sharp contrast, the constructivists' pedagogy encourages students to become critical thinkers, self-directed learners who seek out learning experiences for themselves and challenge accepted practices and norms (Ernest, 1995, Hogan and Pressley 1997, von Glasersfeld, 1995b). Constructivists are aligned with inclusivists who believe that students should be provided with strong, structured, safe environments in which the student has freedom to learn. In the constructivist perspective, knowledge is constructed by the individual at his/her own pace through interactions with the environment (Ernest 1995, von Glasersfeld 1995). In this way no student is left out in the teaching and learning process and positive reinforcements replace aversive forms of discipline to encourage students to explore their own potentials.

The Crucial Role of the Teacher

In some ways, it seems that the classroom teacher's role in the life of the behaviour problem child is the most crucial (Godwyll, 1992). Several authorities have also acknowledged the role of education and for that matter the classroom teacher in managing the disordered behaviour of the child. Whelan (1974); Berkowitz and Rothman (1967); Knoblock (1964); as cited in Elliot et al (2000) do agree that teachers are capable of holding, and indeed do hold the responsibility of becoming involved in the detection and referral stage of helping behavioural problem children. Undoubtedly, the teacher spends more psychological hours outside the classroom with a given group of children than do most other educators.

In Ghana as well as in some other African countries, where almost all the schools do not have supporting personnel such as school counsellors, school psychologists and other psycho-educational personnel, the important role of the classroom teacher in detecting behaviour problems in children cannot be overemphasised. Even where such personnel exist in the schools, the classroom teacher has at his disposal much more of a sampling of a child's behaviour than would the school counsellor or psychologist who "audited" a classroom to look for behaviour problems. The important role played by the teacher in modifying or managing disordered behaviour of children in the school setting has been commented on by many authorities an researchers. In three different studies Whelan (1963, 1966, and 1974) as cited in Godwyll, (1992), who directed education at the children's division of the Menninger Psychiatric Clinic found that education is the mainstay of intervention in behaviour disordered children's lives.

Ethnicity and General Behaviour Management in Ghanaian Classrooms

Discipline is paramount in maintaining efficient utilisation of class time for academic activities, especially in the multi-ethnic classroom with its dynamic interaction of differences among students from varying ethnic or tribal backgrounds. Such varied ethnic backgrounds are representative of the population of Ghana, where this study was conducted. Ghana was a British colony until independence in 1957. The major ethnic groups in Ghana as recorded in the 2000 census are the Akan 49.1% of the population who hail from the Ashanti, Eastern, and Western regions of Ghana; the Mole-Dagomba at 16.5% who are mainly in the Northern regions; the Ewe at 12.7% who are

predominantly the Volta region; and the Ga-Adangme at 8% who are predominantly in the Greater Accra region. The Mole-Dagombas are mainly Muslims by religion whereas the res are predominantly Christians with very minor traditional religions. Due to the constant migration of people in search of jobs in the larger cities, the various ethnic groups are dispersed all over the regions of Ghana (Irwin, Anamua-Mensah, Aboagye & Addison, 2005).

George (1976 as cited in Irwin, Anamua-Mensah, Aboagye & Addison, 2005) reiterated that although the population remains predominantly rural, urbanisation has been proceeding rapidly and "the drift of people, including school leavers, has continued unabated from the poorer rural areas into towns, despite high unemployment rates in urban areas." As a result only a very small part of Ghana is ethnically homogeneous. Urban centres are the most ethnically mixed with differing ethnic groups defined in terms of language, cultural characteristics, and traditions of group identity (George, 1976).

The vast diversity in tribal Ghanaian societies presents significant factors that warrant attention in classroom management of children coming from these various ethnic groups with their varying nuances in behaviour and general protocol. Such diversity of background elicits a great variety of management techniques and strategies to accommodate individual and tribal group differences in discipline in the classroom. The reality of this heterogeneous constitution, especially among student populations, means that teachers must "understand the ethnic setting in which the school is located" as these "students bring to class

different historical backgrounds, religious beliefs, and day-to-day living patterns (Gollnick and Chinn, 2002) that drive the manner in which they behave in the classroom. Children come to school with their own ethnic and tribal identities based on traits and values which they have been socialised. These identifiers, such as the traits and values mentioned earlier, are manifestations of their religion, socioeconomic status, ethnicity, gender norms, language, and other distinguishing ethnic behaviours. These behaviours may be distinct or dissimilar to those expected of the classroom teacher, and special preparation by way of behaviour modification techniques, to deal with such diverse groups may be necessary (Irwin, Anamua-Mensah, Aboagye & Addison, 2005).

Alhassan (1992) proposed in his study that students' misbehaviour could be attributable to confusion as to which social norms are preferable or acceptable, especially in conditions where conflicting cultures exist and work in close proximities as is often the situation in African tribal societies. Under such circumstances, management in multi-ethnic classroom demands that teachers overcome ethnic or tribal stereotypical notions to effectively meet special demands in accommodating the various micro-ethnic groups of students and to embark on an anti-ethnic perspective in interaction with students.

According to Gollnick and Chinn (2002), a teacher often assigns academic expectations to students on the basis of their membership in class, race, ethnic, and gender groups, so it would not be far fetched to assume that management of student behaviour in the classroom would be similar. Consequently

management of multi-ethnic classrooms, compared to mono-ethnic classrooms, Gollnick and Chinn emphasised that teachers in multi-ethnic classrooms need to become proficient in multiple systems of perceiving, evaluating, believing in, and acting according to patterns of various micro-cultures in which they participate. The presence of students with diverse ethnic backgrounds in the classroom necessitates a differentiation of behaviour management techniques and strategies to accommodate ethnic and tribal idiosyncrasies or nuances, and diversity in classroom discipline issues.

Irwin and Nucci (2004) contended that attempts to understand the continuum of influencing factors on student behaviours in the classroom calls for teachers to be cognisant of the diversity of ethnic backgrounds of students, in addition to the myriad of possible causal factors emanating from such varied ethnic representation in the classroom population. Ethnic or tribal traditions are not rooted only in a student's ethnicity but general customs that define the Ghanaian personality. This includes such diverse factors as linguistic, religious affiliations, class or socioeconomic status exceptionalities, and general family values, beliefs, and identities. There are concomitant tribal-laden interpretations, explanations, expectations, and assumptions that may determine appropriate behaviour and also accentuate the multi-ethnic or multi-tribalism of the Ghanaian population. Understanding cultural frames of references and other ethnic issues that compel students to conform with, or rebel against, classroom discipline or authority figures such as teachers may be instrumental in determining ethnically sensitive and appropriate intervention strategies in the classroom. Effective intervention

involves recognising and intercepting or intervening in potential non-constructive or distracting behaviours of students in the classroom, and effective strategies include those that not only curtail or diminish undesirable behaviours but are least intrusive and refocus the students to the task at hand (Irwin and Nucci, 2004).

The source of behaviour oscillates between internal and external factors so that an external event may result in an internalisation of emotion whose source when manifested at a later time can be identified as internal, and vise versa. Hence, if teachers' interpretation of misbehaviour is based on clear knowledge of the root course of the misbehaviour, that misbehaviour could be interpreted as an isolated incident of insolence or disrespect. Such interpretations, according to Hoover and Kindsvatter (1997), as cited in Irwin, Anamua-Mensah, Aboagye & Addison, (2005), would certainly preclude one from an appreciable scrutiny of other possible causal factors, leading to actual causes of misbehaviour becoming obscure. According to Fields and Boesser (2002), in such situations misbehaviour will persevere until the root cause is addressed. Classroom studies by Ametepei (2002) as cited by Irwin, Anamua-Mensah, Aboagye & Addison, (2005), for example, identified excessive punishment and low academic achievement as contributors of classroom misbehaviour by pupils. Because of the vast disparity between rich and poor, the rate of illiteracy, and lack of access in Ghana, it can be assumed that a majority of students may be coming from homes whose cultures differ markedly from the culture they encounter at school. Their behaviour could therefore result from ignorance of acceptable behaviours, to

unfamiliar habits of behaviour in a group situation such as those of the classroom and school. According to Irwin and Nucci (2004), these experiences may educe internal conflicts for students as they may be alien to their home cultures. These students may become comfortable uncomfortable, inadequately prepared to cope with, or hesitant to accept behaviour expected by teachers as part of the classroom culture where rules and procedures exist to enhance classroom management and which students are required to abide by (Irwin and Nucci).

Summary

The review of the related literature was done to provide an insight into the concept of disordered behaviour, its prevalence in schools and efforts made so far to manage it with emphasis on Ghanaian classrooms. Evidence suggests that irrespective of the theoretical orientation of researchers they are unanimous in their support for the position of Amedahe and Owusu-Banahene (2007) and Werterin (2003) that aggression, violence and general indiscipline are on the increase in schools. Bjorkqvist, Lagerspetz and Kauhiainen (1992) do recognise that there are two forms of aggression (direct and indirect aggression) among school pupils and both impact deeply on classroom discipline. There was however no conclusive evidence among researchers as regards the impact of inattention on classroom discipline. Indeed, whilst researchers like Evertson, Emmer and Worsham (2003) see inattention as not impacting significantly on classroom discipline, others like Cangelosi (2004) and Canter (2000) do not see the impact of inattention on classroom discipline at all.

Furthermore, there was no conclusive evidence among researchers as regards the link between gender of pupils and their disordered behaviour in the classroom. Researchers hold varying and conflicting opinions on the link between gender and disordered behaviour of pupils. Researchers (Osterman, 1999; Frey, 2003; Campbell, Sapochnik and Muncer, 1997; and Buss, 2005) agree that there is a strong connection between gender and pupils' disordered behaviour. Other researchers (Archer, 2004; Card, Sticky, Sawalani and Little, 2008) suggest that male and female pupils are equal in their disordered behaviour.

With regard to the management of pupils' disordered behaviour, opinions and assumptions about the most ideal techniques vary among researchers. While some approaches (Boakye, 2001; Edumadze, 2004; Greydanus, Pratt, Spates, Blake-Dreher, Gearhart and Patel, 2003) maintain that corporal punishment is the most effective way of managing disordered behaviour of pupils in the classrooms, others (Canter, 2000; Rosen, 1997; Kochanska and Thompson, 1997; Agbenyega, 2006) insist that corporal punishment (and for that matter, punishment in any form) is not the best technique to use in enforcing school discipline. Evidence suggests that even among the proponents of the non-use of punishment in enforcing classroom discipline, there is no agreement as regards the form the non-intrusive techniques to be used in enforcing classroom discipline should take. Researchers (Maione & Mirenda, 2006; Paterson& Arco, 2007; Charlop-Christy, 2000; Emecen, 2008) advocate for the use of video modelling only in correcting pupils' disordered behaviour. Others (Elliot, Kratochwill, Cook & Travers, 2000; Kaplan, 1970) suggest the use of modelling in

all forms to mange pupils' disordered behaviour. While researchers (Page, 1984; Haring, 1985; Walker and Walker, 1991; Marther and Goldstein, 2001, Cangelosi, 2004) hold the opinion that the application of positive reinforcement is the most ideal way of managing pupils' disordered behaviour, others (Kazdin, 1989; Favell, 1977; Rosen, O'Leary, Joyce, Conway, & Pfiffner, 1984) maintain that the application of negative reinforcement strategies is the best way out. Other studies (Catania, 1984; Godwyll, 1992; Hall, 1971; Daramola, 1987) suggest the use of reinforcement (both positive and negative) to manage pupils' disordered behaviour. These conflicting and varying opinions make investigation into the effect of the simultaneous application of the two techniques (modelling and reinforcement) to manage pupils' disordered behaviour very necessary and urgent.

In the literature reviewed another major source of conflicting opinions held by researchers is the connection between socio-economic status of pupils and their disordered behaviour. One group of researchers (Aluede and Maliki, 1998; Okon, 2006; Maliki, 2009) have established a relationship between socio-economic status of pupils and their disordered behaviour. However, others like Efoche (2008) observed a zero connection between disordered behaviour and socio-economic status variable. This situation makes a study into the connection between socio economic status of pupils and pupils' disordered behaviour in Ghanaian classrooms imperative.

With regard to ethnicity, though few researchers (Hoover and Kindsvatter, 1997) do not see any link between ethnicity and disordered behaviour of pupils, many others (Irwin, Anamuah-Mensah, Aboagye, & Addison, 2005; Fields and Boesser, 2002; Irwin and Nucci, 2004; Ametepei, 2002; Gollnick and Chinn, 2002; Alhassan, 1992 ;) have established a link between the ethnic background of pupils and their disordered behaviour.

The foregoing suggests that studies reviewed indicate that findings are inconclusive and so caution must be exercised in their interpretations as they readily raise questions. Such questions include the relevance of such variables as gender, socio-economic background and ethnic background vis-à-vis disordered behaviour of pupils in the classroom. Furthermore, though suggestions for the application of less intrusive techniques of managing pupils' disordered behaviour have existed for a long time, the literature shows that there has been very little attempt to evaluate the impact of such intervention in Ghanaian classrooms.

CHAPTER THREE

METHODOLOGY

Introduction

This chapter presents the research methodology used in the study. It is examined under the following subheadings: Research design, the population, the sample, the sampling technique, instrumentation, pilot study and validation, reliability of instruments, data collection procedure and data analysis procedure.

Research Design

The study used the quasi-experimental, pre-test – post-test- control group design. The study was made up of four groups: three treatment groups and one control group. One treatment group was exposed to reinforcement, while the remaining two treatment groups were exposed to, modelling techniques and multi-technique (or a blend of some strategies in reinforcement, and modelling) approach in that order. The control group received placebo treatment on good story-telling and teaching of selected songs. The design was chosen because it provides some degree of control for possible extraneous variables that pose threat to both internal and external validity of the experiment. The design is diagrammatically represented below:

O1	X1	O2
O3	X2	O4
O5	X3	O6
O7	C	O8

Where

X1 represents treatment 1-Reinforcement

X2 represents treatment 2-Modeling

X3 represents treatment 3-Multi-technique

C represents control was administered with the treatment that worked

O1, O3, O5 and O7 represent pre-test scores.

O2, O4, O6 and O8 represent post-test scores.

Study Variables

There are four independent variables- experimental condition which has four levels

Reinforcement

Modelling

Multi-technique

Control

Gender

Ethnic background

Socio-economic background.

The dependent variables are:

Inattention

Aggression

Area of Study

The study was carried out in four education municipalities in four regions (Central, Eastern, Greater Accra, and Volta) sampled from the seven regions of the middle and southern belts of Ghana. The seven regions making up the middle and southern belts of Ghana are Greater Accra, Central, Western, Eastern, Volta, Ashanti, and Brong- Ahafo regions. These areas are the home regions of the three major tribes (Akan, Ga-Adagme and the Ewes) of the middle and southern parts of Ghana. The living styles of the population are indicative of different socioeconomic backgrounds, which encouraged different responses to different punishments and other disciplinary actions by their young ones. Two of these four selected regions namely, Central, and Eastern, constitute the Akans while the Volta and the Greater regions are made up of the Ewes and the Gas respectively.

Population

The target population for the study was the entire primary four pupils of the public primary schools in the seven regions of the middle and southern belts of Ghana selected for the study. The accessible population however, was the primary four pupils of four public schools randomly selected from four Education Municipalities in four of these regions.

Sample

The sample consisted of 64 participants. Boys and girls who bear behaviour characteristics of interest to the researcher (i.e. inattention and aggression) were selected from the four schools. The total population of the selected classes for

the study was 233; comprising 111 boys and 122 girls. Teachers were given copies of the Rutter's Child Behaviour Rating Scale (RCBRS) to complete on each pupil of their classes. This was done in order to isolate participants with the two characteristics of interest to the researcher (inattention and aggression). It was after the administration of the RCBRS by the teachers that 64 participants were selected for the study. The stratified sampling technique was then used to place participants into their gender groups. The sample size though may appear small, was preferable because of the nature of the research. Thus, the number should be such that the participants could easily be attended to and systematically observed on close basis.

The sample from primary four was due to the fact that they are in their first year of the upper primary segment. Secondly, they are likely to exhibit more problem behaviours than their seniors in the remaining two classes of the upper primary stage (primaries 5 and 6). They therefore have similar characteristics that in turn influence their behaviour giving them comparable characteristics.

Sampling Techniques

The initial step in the sampling procedure was to select four out of the seven regions earmarked for the study. The simple random sampling procedure was used to select the regions (Greater Accra, the Eastern, the Volta, and the Central), and the districts(Tema West Sub-metro, Komenda-Edina-Eguafo-Abirem Municipality, West Akim Municipality, and the Ho Municipality) The same simple random sampling procedure was followed to select one school each from

the selected municipalities after the stratified sampling procedure had been used to separate the few single sex public basic schools in the selected municipalities to avoid sampling bias. The Rutter's Child Behaviour Rating Scale was then administered to the primary four pupils in the schools to identify participants. This method was used to enable the researcher identify the specific respondents with typical behaviour characteristics of the selected behaviours of interest to the researcher (inattention and Aggression). Teachers of the selected classes were supplied with copies of the RCBRS according to the numerical strengths of their classes to administer to their pupils which were completed after one week. The researcher and the research assistants then analysed the results to determine those who met the bench mark for selection (the score of 10 and above). This exercise lasted for one week. After the analysis, 38, 37, 30, and 37 pupils from Tema Salvation Army Primary, Fiave E.P Primary, Topease Methodist Primary and Amissano Catholic Basic schools (making a total of 142 pupils) respectively qualified as participants for the study. The researcher then used stratified sampling method to select participants in each class on the basis of gender.

Table 1:

Distribution of Population before & after the Rutter's Child Behaviour Rating Scale

Before Administration of Rutter's Child Behaviour Rating Scale				**Administration of Rutter's Child Behaviour Rating Scale**		
School	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Salvation Army Basic	29	35	**64**	21	17	**38**
Ho Fiave E.P School	27	34	**61**	19	18	**37**
Topease Methodist	27	21	**48**	16	14	**30**
Amissaano Catholic	28	32	**60**	18	19	**37**
Total	**111**	**122**	**233**	**82**	**60**	**142**

The table 1 above illustrates the distribution of the population for the study before and after the administration of the Rutter's Child Behaviour Rating Scale to determine the baseline data. From the table out of a total of 64 pupils (29 male and 35 female) in the Tema Salvation Army Basic School 38 pupils (21 male and 17 female) qualified as participants for the study; Ho Fiave E.P. School had 61 pupils (27 male and 34 female) out of whom 37 (19 male and 18 female) qualified; Topease Methodist was made up of 48 pupils (27 male and 21 female) and of this number 30 (16 male and 14 female) qualified while Amissano Catholic Primary had 60 pupils (28 male and 32 female) out of whom 37 pupils (18 male and 19 female) qualified to be included in the study.

The study also used the simple random procedure to assign schools and their participants into four subgroups 'A' – reinforcement group, 'B'- modelling group, 'C'-multi-technique group and 'D'-control group. Each group was made up of eight boys and eight girls who were both Akans and non-Akans from both low socio-economic background and high socio-economic background. Each school formed a group. In order to establish the number of respondents in the ranges provided for by the instrument the table 2 below is presented:

Table 2: Selection Procedure for Participants in Quantitative Terms

Range	**0-9**			**10-19**			**20-29**			**30-39**			**40 & Above**		
School	M	F	**Total**	M	F	**Total**	M	F	**Total**	M	F	**Total**	M	F	**Total**
Salv.	2	1	3	1	1	2	1	2	3	10	8	18	21	17	38
E.P.	3	3	6	2	0	2	3	3	6	6	4	10	19	18	37
Meth.	1	1	2	4	2	6	0	2	2	7	1	8	16	14	30
Cath.	2	1	3	5	5	10	2	4	6	1	3	4	18	19	37
Total	8	6	14	12	8	20	6	11	17	24	16	40	74	68	142

From the table 14 pupils (8 male and 6 female) fell within the 0-9 range; 20 pupils (12 male and 8 female) were in the 10-19 range; 17 pupils (6 male and 11 female) fell within 20-29 range; 40 pupils (24 male and 16 female) were capture in the 30-39 range while 142 pupils (74 male and 68 female) fell within the 40 and above range. It was from the last range (40 and above) that the sample for the study was selected.

Instrumentation

This section discusses the three instruments used in the study namely Rutter's Child Behaviour Rating Scale, Achenbach's System of Empirically Based Assessment Teachers' Report Form/ 6-18, and Behaviour Count Table for Baseline.

(1) Rutter's Child Behaviour Rating Scale (Rutter, 1967)

This study adopted Rutter Child Behaviour Rating Scale (Rutter 1967). This behaviour rating scale was first designed by Rutter in 1967 and had obtained a reliability of 0.87. It was administered to primary 4, 5, and 6 pupils by Godwyll (1992) in Ghana, and had obtained a reliability coefficient of 0.83. Iloeje of the Department of Paediatrics, University of Nigeria Teaching Hospital, Enugu, used it and obtained a coefficient of 0.66. This scale describes various behaviour patterns often shown by children in the school setting. It was used in the first phase of this research to identify participants exhibiting the two forms of disordered behaviour (inattention and aggression) the study focused on. The choice of this instrument for the research is partly because it is simple and yet adequately developed. Woody (1969) reported that the scale has good retest and interater reliability and is an efficient screening device for children with behavioural and emotional disorders. This claim was corroborated by Iloeje (1992) when he said "the Rutter scale is of well established validity and reliability, and has been used extensively in assessing behaviour in children." Even though the scale was originally developed and standardized on British children, the individual items making it up are devoid of cultural bias (Iloeje, 1992).

This 30-item instrument is also structured to allow for the biodata of participants and teachers to respond to items that denote the two (inattention and aggressive) specific behaviour characteristics. There are three columns under "Doesn't Apply", "Applies somewhat" and "Certainly applies", where teachers are required to tick one, which most appropriately describes the child in question. Response category 3 is the highest of the 1-3 range. Twenty six of the items giving a total of 78 as the highest score and twenty six as the lowest score. The instrument is designed to measure the severity of a child's inattention and aggressive behaviour simultaneously. An individual whose score is 40 or above is regarded as one whose inattention and aggressive behaviour is severe enough to be investigated. The scoring is done by summing up the responses in categories 2 and 3.

Table 3

Examples of the items on the Rutter's Child behaviuor rating Scale (RCBRS)

Statement	**Doesn't Apply 1**	**Applies Somewhat 2**	**Certainly Applies 3**
Very restless often running about or jumping up and down. Hardly ever still			
Truants from school			
Squirmy, fidgety child			
Often destroys own or other's belongings			

(2) Achenbach's System of Empirically Based Assessment Teacher's Report Form/ 6-18

The second instrument used in this study is the Achenbach's System of Empirically Based Assessment Teacher's Report Form for Ages 6-18 (ASEBA TRF/6-18). This instrument was developed by Achenbach in 1983. It has since undergone several revisions. The current issue widely in use is the 1991 edition, which was co-authored by Achenbach and Rescorla. This 50- item instrument represents two of the eight subscales or syndrome scores that are empirically derived configuration of items, and they measure attention problems and rule breaking or aggressive behaviour problems. It has three sections with the first dealing with the biodata of the respondent; the second dwelling on statements measuring inattentiveness which responses are taken twice on separate days at specific intervals and compared to establish its reliability, while the third section has statements measuring aggressiveness which responses are also taken twice on separate days and compared to establish its reliability. The instrument is first administered to a subject and scored. After an interval (usually determined by the one administering), the instrument is administered to the same subject and scored. The scores on the two tests are then compared to establish the trend of one's scores. This will then inform the researcher of the severity or otherwise of the subject's behaviour. Scores on individual items are combined to identify general patterns of behaviour. The response category is a 0-2 column of "Not True (as far as you know)," "Somewhat or Sometimes True," and "Very True or Often True," to which teachers are required to tick one, which most appropriately

describes the child in question. The highest score from the responses is 80 whilst the lowest score is 40.

The ASEBA TRF/6-18 scales are scored by summing the 0-1-2 ratings of the constituent items and displayed on profiles. Higher scores reflect greater prevalence of problem.

The instrument adopted to produce the one used for the study was used by Engelbrecht in 2005 to determine the nature and range of the emotional, behavioural/conduct and concentration problems by participants in South Africa. The test-retest reliability is supported by an average correlation coefficient of 0.90 (Engelbrecht, 2005).

Table 4: Examples of items on the ASEBA TRF/6-18

Statement	0 Not True (as far as you know)	1 Somewhat or Sometimes True	2 Very True or Often True
(1) Hums or makes other odd noises in class (2) Argues a lot (3) Destroys own and others' properties			

(3) Behaviour Count Table for Baseline (Kozloff, 1974)

The third instrument used in this study was the Behaviour Count Table for Baseline. This instrument was adopted from Kozloff (1974). It was also given a face validation by the researcher's supervisors. The table provides for recording the following against each day of observation.

Number of minutes or hours used for watching or counting.

How often target behaviour happened.

Number of times target behaviour was rewarded.

Reliability index of the observation.

The advantage of this table lies in the fact that though it looks simple, it comprehensively caters for all relevant processes included in arriving at a reliable baseline data for any study similar to this one. Godwyll (1992) used it in a study of primary school pupils with behaviour problems in Ghana. The instrument was used in a close observation of both participants' and teachers' behaviour before the start of the treatment. This was to determine the type of behaviours of teachers that reinforced the undesired behaviour of participants. Field assistants and the researcher recorded the number of times these behaviours were reinforced by the teacher. The Behaviour count Table was used to record the frequency with which behaviours were reinforced. This helped the researcher determine which behaviour of teachers should be controlled during the experiment session.

Training and Appointment of Research Assistants

The researcher recruited five field assistants from the School of Graduate Studies of the University of Education, Winneba. They were trained to help with observation procedures especially with reliability checks as the pilot study might reveal. The training spanned two sessions of Sixty (60) minutes each, in which the purpose and nature of the study coupled with how to administer and score the instruments was explained to them. The training of the assistants was planned to achieve two objectives simultaneously. Firstly, it was to make the assistants conversant with the definitions of the behaviours we were to deal with and facilitate identification and subsequent observation and recording as the class teachers administered the intervention measures. Secondly, it offered the researcher the opportunity to confirm the identification procedures. Since five different persons confirmed the assessment of the teachers it increased the reliability of the post-experiment results produced by the teachers.

The training followed the highly recommended procedure which is presented below:

Table 5

The percentage of performance by researcher and field assistants

% of Expert's performance	% of Trainee's performance
100	0
75	25
50	50
25	75
0	100

This procedure is called backward chaining. As seen in the table above, the trainee watched the researcher go through the whole task without the former doing anything. The researcher went over the explanation of what was expected of them during the experiment period as many times as possible to ensure that the trainee had grasped the total picture of the process. In the last phase the researcher did nothing but the trainee went through the whole process from beginning to the end. A repetition of these training sessions to cover all relevant areas they were to be engaged in produced a highly satisfactory result, in terms of the competence of the field assistants.

Validity and Reliability of Instruments

The researcher's supervisors ascertained the content validity of the instruments by going through them to help remove ambiguities therein with researcher.

Pilot Study

A preliminary study was carried out to determine the reliability of the research instruments. For this purpose, thirty primary four pupils were used. To determine the stability of the test, the test-retest method was employed. The interval between the first test and second test was three weeks. The correlation between the two sets of scores of the instruments was determined using Pearson's product Moment correlation method. The test-retest reliability coefficients are 0.75 for inattention and 0.82 for aggressiveness. The instrument was adjudged to be adequate in assessing the variables raised in the study.

Table 6

Test-retest Reliability Coefficients for Inattention and Aggressiveness.

Instrument	Variables	No of Items	Test Position	X	SD	r
ASEBA TRF/ 6-18	Inattention	20	1st	26.2	6.59	0.75
			2nd	27.63	6.29	
	Aggressiveness	20	1st	23.6	9.02	0.82
			2nd	25.03	8.32	

These coefficients are deemed significant 0.05 level of significance.

Data Collection Procedure

Permission

With an introductory letter obtained from the department of Educational Foundations, University of Lagos, the researcher first introduced himself to the Municipal Directors of Education of the sampled Municipalities to seek permission to enable the research to be carried out in the selected schools. This was followed by an explanation of the objectives for carrying out the study and the wider implication the findings will have for the school and the educational enterprise as a whole to the headmasters of the schools. The next stage was an interaction with the teachers of the year-four classes.

The researcher then explained in detail to each of the four teachers how the experiment was to proceed and the part he or she was expected to play in ensuring its success and how to identify the target behaviours (aggressiveness and inattention) and how to rate them. After these specific target behaviours of interest to the researcher were selected they were defined. The details of the target behaviours as explained to both the teachers and the field assistants are as follows:

Inattention

When the child is unable to concentrate or listen to the teacher for the lesson period.

When the child is unable to concentrate on a given task.

When the child is unable to sit still for a good part of the lesson period.

If the child is constantly unable to complete given tasks.

When the child's work is always messy

When the child shows signs of hyperactivity.

Aggression

When the child is not sober, not quite, and not accommodating.

When the child talks out of turn.

When the child hits others.

When the child throws things at others.

When the child pulls other pupils' dresses, hair, books, etc.

When the child shows cruelty, bullying or meanness to others.

Administration

According to Godwyll (1992) it was always important to ensure that the subjects identified exhibited the target behaviours for a prolonged period of time. Since the time at the researcher's disposal was limited the following considerations were made:

Firstly, the experiment (that is, the administration of the intervention package) took place in the last of the three terms of the academic year. This allowed teachers to have enough interaction with their pupils to be better acquainted with them. Thus, at the time of completing the Rutter's Child Behaviour Rating Scale teachers relied on their cumulative knowledge of their pupils. Teachers were also expressly coached on the operational definition of the term disordered behaviour. Thus, the situation where temporary or one time misbehaviour would not be confused with a prolonged and consistent behaviour of a subject was avoided.

The next phase involved close observation of both participants' and teachers' behaviour by the researcher and research assistants. This was to determine the type of behaviours of teachers that reinforced the undesired behaviour of participants. Field assistants and the researcher recorded the number of times these behaviours were reinforced by teachers. The Behaviour count Table was used to record the frequency with which behaviours were reinforced. This helped the researcher determine which behaviour of teachers should be controlled during the experiment session.

Field assistants were distributed to the classes each responsible for observing participants just as the researcher did. The reliability checks involved the researcher and the field assistants watching, counting and recording the same behaviour at the same time and for the same period as the teachers. The count of the teachers, the researcher, and the field assistants were compared. If there was no dissimilarity in the counts, they would mean a 100% agreement. If the counts differed, the "percentage of agreement" was computed by dividing the bigger number into the smaller one. For example if the researcher or a field assistant had 18 counts and a teacher had 15 counts, 15 divided 18. (15/18*100)=83%

Any reliability check that recorded below 80% necessitated a retaking of that particular observation after the possible causes for the reliability had been ironed out. This observation period lasted for a week. The behaviour Count Table was completed for each of the 64 participants selected for the study. The mean score of this data was computed to confirm the participants' qualification as those who indeed exhibited the behaviour of interest to the researcher.

The last phase, which lasted for eight weeks or 40 school days, saw the independent variables, reinforcement, modelling and their combination administered to participants. Group 'A' was treated with reinforcement, group 'B' was treated with modelling, while group 'C' was treated with the combination of reinforcement and modelling (or multi-technique), with group 'D' being the control group. Other pupils who had not been sampled for the study but who

exhibited disordered behaviour were not entirely left unattended to by teachers. Teachers applied techniques other than the ones used in the experiment in managing such disordered behaviours. For example, offending non-participants were scolded by teachers.

Reinforcement

This was done by employing both positive reinforcement and negative reinforcement techniques (tangible reinforcers like toffees and exercise books, non –tangible, reinforcers like praise, ostracising pupils, repositioning pupils' seating arrangements and withdrawal of desired presents, and token economies).

Session I: The class teacher rewarded participants for the non-occurrence of undesirable behaviour through the use of tangible reinforcers. The tangible reinforcers were derived from the list prepared from the lists submitted by the participants. The researcher and field assistants ensured that the rewarding of participants was done sparingly. The exercise was always accompanied by verbalization to explain why the reward was done. The researcher and the field assistants recorded the number of times participants received reinforcers on daily basis.

Session II: Ostracising offending participants. Here participants who exhibited undesirable behaviour were asked to briefly stay outside the classroom and recalled later, after the teacher had satisfied himself that the pupil had felt the effect of his/her leaving the class briefly.

Session III: Repositioning of seating arrangement. The teacher was instructed to change offending participants from where they were seated and returned them only when they behaved appropriately.

Session IV: The class teacher used both tangible and non-tangible rewards to reward participants for the non-occurrence of undesirable behaviour and for the occurrence of desirable behaviour of participants. Anytime participants demonstrated desired behaviour they were either rewarded with a tangible reinforcer or praised, clapped for or asked to stand up for recognition. This was done accompanied by verbalization to explain why to pupils.

Session V: This saw the teacher using another form of negative reinforcement. Here the teacher used the withdrawal of desired presents or gifts. Anytime an undesirable behaviour was exhibited by participants teacher distributed some tangible materials to the rest of the class and excluded the offenders. This was done accompanied by verbalization to let pupils understand why the action was taken.

Session VI: Negative reinforcement technique was used during this session. The class teacher repositioned participants who did not exhibit the desired behaviour. This, he did by changing the seating place of the offending participants. Pupils are fond of their classroom seating place and therefore participants who were changed from where they always loved to sit were compelled to conform to desirable behaviour norms so they would be returned to their regular seats.

Session VII: Using Token Economy in rewarding participants for non-occurrence of undesirable behaviour. The Token Economy procedure was applied here. Participants who exhibited desirable behaviour received tokens and after an accepted number, exchanged them for something pleasurable. For example, talkative participants received tokens for every fifteen to twenty minutes they were silent; when had enough tokens; they traded them for extra recreation or other things they liked. Again, this exercise was accompanied by verbalisation for beneficiaries to know why the use of the procedure.

Session VIII: Withdrawal of desired presents or gifts. Teacher distributed some tangible materials to the class and excluded participants who exhibited the undesirable behaviour. This was always accompanied by verbalization to explain why those participants were excluded. Field assistants recorded through observation the number of times target behaviour occurred and were negatively reinforced.

Modelling

The objective of this treatment was to use various modelling techniques to determine the extent to which they would influence change in pupils' disordered behaviour.

Session I: The use of video modelling. The class teacher was instructed to show clips of celebrities who rose to stardom as a result of behaving well in class and in school. These video clips were shown at times agreed on by the teacher and the researcher. The clips were accompanied by commentaries by the teacher.

This was done because modelling can only be effective if it is accompanied by verbalisation.

Session II: The use of live models. Senior pupils who are well behaved and liked by most pupils were brought to the class to advise or share their background with participants. This was done only at times decided on by the teacher and the researcher. The invitation of the pupils was however done by the class teacher .The choice of those to be invited was however done through the sociometric strategies. The presentations by these models were accompanied by verbal instructions from the teacher.

Session III: The use of symbolic model (audiotape). Recorded speeches and stories of popular figures that bother on discipline and good behaviour were presented in class. The presentations were done on periods decided on by both researcher and the teacher. The first of these speeches was that made Dr. Kofi Annan (former U.N. Secretary General). This was followed by one delivered by Nelson Mandela. The presentations were accompanied by commentaries by the teacher to spell out their relevance.

Session IV: The use of cartoons and sketches. The teacher presented pictures and cartoons of models for pupils to observe. Most of these cartoons were from the Ministry of Education in collaboration with Zingaro (A Child Rights NGO) production. These presentations were accompanied by verbal instructions to enable pupils understand the moral lessons in them.

Session V: Using other live models. The class teacher introduced three professionals (a nurse, a security person, and a medical officer) to the class on

different occasions to share their experiences with pupils, stressing the need to be disciplined and eschew aggressiveness and other behaviour that would not help them in future. Pupils were allowed by the class teacher to ask questions during the interactions with the professionals.

Session VI: The use of video modelling. Teacher once more, showed pupils video clips of celebrities who rose to stardom as a result of behaving well in class and in school. The personalities in the clips were not the same as those in the earlier clip shown. The clips were accompanied by commentaries by the teacher. Here the Video Prompting method which involves showing the participant a video model of one step of the task and then giving the person the opportunity to complete that step before the next step is shown was used.

Session VII: The use of symbolic models. Stories of popular figures that bother on discipline and good behaviour were told by the class teacher in class. There were also traditional Ghanaian folktale stories that were told to them. The stories were told at times decided on by both the researcher and the class teacher. The stories were accompanied by commentaries by the teacher to spell out their relevance.

Session VIII: The use of live models. Senior pupils who are well-behaved and liked by most of the pupils were brought to the class to advise and share their backgrounds in terms of good manners in class with participants. This was done only at times decided on by the teacher and the researcher. The invitation of these good mannered pupils was done by the teacher. The choice of such pupils

was done through the sociometric strategies with emphasis on the direction the choices of the participants tilted.

Multi-technique Approach

This was the combination of the reinforcement and the modelling techniques. It was used to determine whether these combined techniques would have a different impact on participants from the individual measures (reinforcement and modelling) used.

Session I. The class teacher rewarded participants for the non-occurrence of undesirable behaviour through the use of tangible reinforcers. The tangible reinforcers were derived from the list prepared from the lists submitted by the participants. The researcher and field assistants ensured that the rewarding of participants was done sparingly. The exercise was always accompanied by verbalization to explain why the rewarding was done. The researcher and the field assistants recorded the number of times participants received reinforcers on daily basis.

Session II. The class teacher used both tangible and non-tangible rewards to reward participants for the non-occurrence of undesirable behaviour and for the occurrence of desirable behaviour of participants. Anytime participants demonstrated desired behaviour they were either rewarded with a tangible reinforcer or praised, clapped for or asked to stand up for recognition. This was done accompanied by verbalization to explain why to pupils.

Session III. The class teacher used negative reinforcers during this session. Teacher ostracized participants who displayed undesirable behaviour. This he did

by asking the offending participant to stay outside the classroom and recalled him or her later, after he/she had satisfied himself/herself that the pupil had felt the effect of his/her leaving the class briefly. Researcher and field assistants recorded the number of times the technique was used by the teacher.

Session IV. The class teacher used modelling techniques to elicit good behaviour from the participants. The first strategy used here was the video modelling. Teacher showed some video clips to participants accompanied by verbalization explaining to pupils why they would have to emulate the models in the clips.

Session V. The participants were administered with other modelling techniques. Here the teacher invited some senior pupils to the class for participants to observe. These were seniors who were very much respected by the pupils in the schools. Their presence in the class was always accompanied by verbalizations by the teacher explaining the need for participants to emulate them.

Session VI: The last form of modelling was used during this session. Here the teacher used symbolic modelling. Symbolic models of audio tapes were used by the class teacher to elicit good behaviour from participants. Periods for the airing of the tape were fixed at times which did not disrupt the normal lesson periods.

Session VII. Negative reinforcement technique was used during this session. The class teacher repositioned participants who did not exhibit the desired behaviour. This, he did by changing the seating place of the offending participants. Pupils are fond of their classroom seating places and therefore participants who were changed from where they always loved to sit were

compelled to conform to desirable behaviour norms so they would be returned to their regular seats.

Session VIII: This session saw the teacher using another form of negative reinforcement. Here the teacher used the withdrawal of desired presents or gifts. Anytime an undesirable behaviour was exhibited by participants teacher distributed some tangible materials to the rest of the class and excluded the offenders. This was done accompanied by verbalization to let pupils understand why the action was taken.

Control Group This was the waiting group who were administered the best method that works after the experimental period.

In all a total of nine weeks was used for the study. One week after the experiment period an additional one week period was used to do a follow up study to casually observe participants to ascertain whether the change in behaviour at the ninth week has been maintained. It was in the same week the treatment of the control group with reinforcement and multi-technique commenced.

Method of Data Analysis

For hypotheses 1 and 2 which state that 'there is no significant difference in the effectiveness of reinforcement, modelling and multi-technique in improving inattention behaviour problems' and 'there is no significant difference in the effectiveness of reinforcement, modelling and multi-technique in improving aggressive behaviour problems' respectively, they were tested with the one- way analysis of covariance (ANCOVA). Hypotheses 3 to 8 were all tested with the two-

way analysis of covariance (ANCOVA). All the hypotheses were tested at .05 level of significance. ANCOVA was chosen for the study because of the nature of the study. The study involved the comparing of the impact of three different interventions, taking before and after measures for each group where the scores on the pre-test were treated as' covariate ' to control for pre-existing differences between the groups. Besides, the sample sizes of the groups are small. Furthermore, ANCOVA was chosen because the groups were existing ones (i.e. classes of pupils of Primary 4) and as such, they might differ on a number of attributes (not the ones the researcher was interested in). Pairwise comparisons were done using the Bonferroni adjustment to determine which of the groups evidenced significant difference in the post-test means on all the variables.

CHAPTER FOUR

Data Analysis

The results obtained from the various statistical analyses carried out in the study are thus presented.

Hypothesis 1:

In the null form the hypothesis stated that there is no significant difference in the effectiveness of reinforcement, modelling and multi-technique in improving inattention behaviour problems.

To test this hypothesis, a one-way between-groups analysis of covariance was conducted to compare the effectiveness of reinforcement, modelling, and multi-technique designed to improve participants' inattention behaviour problem. The independent variables were the (reinforcement, modelling and multi-technique) used and the dependent variable was the inattention. Pairwise Comparisons were conducted to determine the effect size of the experimental groups. The results are presented in Tables 7, 8, and 9 below.

Table 7

Descriptive statistics of pre and post inattention scores of the experimental group

Pre-test and Post-test scores on inattention across groups

Experimental		Pre-test		Post-test	
Group	**N**	**Mean**	**SD**	**Mean**	**SD**
Reinforcement	16	24.06	4.343	7.19	1.974
Modeling	16	23.44	4.618	10.69	3.877
Multi-technic	16	22.81	3.449	13.56	3.425
Control	16	21.94	5.983	17.25	5.814
Total	**64**	**24.06**	**6.983**	**12.17**	**5.409**

*Higher scores on the inattention measure are indicative of low influence.

The descriptive data presented in table 7 indicates that the four experimental groups did not differ significantly in inattention behaviour before the treatment, with respective mean score ranging from 16.94 for the control group, 23.44 for the modelling group, 24.06 for to the reinforcement group to 31.81 for the multi-technique group.

Table 7 further shows that at post-test, the Reinforcement group recorded the greatest improvement in their inattention scores with a mean of 7.19 (Sd= 1.974), followed by the Modelling group with a mean of 10.69 (Sd = 3.877) and the Multi-technique group with a mean of 13.56 (Sd= 3.425), while the control group did not experience any significant improvement with a mean score of 17.25 (Sd= 5.814).

To determine if these differences were statistically significant, the ANCOVA results in table 8 are displayed:

Table 8: Tests of Between-Subjects Effects

Source	**Sum of Squares**	**df**	**Means Squares**	**F**
Corrected Model	1493.312	4	373.328	62.969
Pre-inattention	617.015	1	617.015	104.071
Group	1411.497	3	470.449	79.359
Error	349.798	59	5.929	
Total	11325.000	64		

***Significant at 0.05; df = 3 & 59; critical F = 4.16

After adjusting for pre-intervention scores, there were significant differences among the three intervention groups on post-intervention scores on the ASEBA TRF test [F (3, 59) = 79.36, p =.00, partial eta Square Squared = .80]. Further, to establish the effect size of each of these differences in the groups, Pairwise comparisons were conducted and the results are displayed below.

In summary, it was observed that reinforcement group and multi-technique group were homogeneous group as they equally affected improvement of participants' inattention behaviour problem. Table 9 shows the of results Pairwise Comparisons.

Table 9: Fisher's Least Square Method on Difference in Attention Behaviour across Experimental Conditions

Group	**Reinforcement n = 16**	**Modelling n = 16**	**Multi-technique n =16**	**Control n = 16**
Reinforcement	7.19a	-4.07*	-7.41*	-11.70*
Modelling	-3.50	10.69a	-3.34*	-7.63*
Multi-technique	-6.37	-2.87	13.56a	-4.29*
Control	-10.06	-6.56	-3.69	17.25a

*Significant at 0.05

a = Group means are in the diagonal; difference in group means are below the diagonal while protected t-test are above the diagonal.

Evidence from Table 9 shows that significant differences exist between the reinforcement and the modelling and control group with respective mean differences of -3.93, and -14.99 each of which was significant at 0.05 level of significance.

Table 9 also indicates significant differences between the modelling group and the multi-technique group (MD=2.91) and between the modelling group and the control group (MD=11.05). Significant difference was also found between the multi-technique group and the control group (MD= 13.97).

Hypothesis 2: There is no significant difference in aggressive behaviour problems due to reinforcement, modelling and multi-technique approaches

To test hypothesis 2, a one-way analysis of covariance (ANCOVA) was conducted to compare the effectiveness of the three different interventions designed to reduce or terminate participants' aggressive behaviour. The independent variable was the type of intervention (reinforcement, modelling, multi-technique) and the dependent variable consisted of scores on the ASEBA TRF test administered after the intervention was completed. Participants' scores on pre-intervention administration of the ASEBA TRF test were used as the covariate in this analysis. Preliminary checks were conducted to ensure that there were no violation of the assumptions of normality, linearity, homogeneity of variances, homogeneity of regression slopes, and reliable measurement of the covariate. The results are shown in tables 10, 11, and 12 below.

Table 10: Pre-test Post-test Scores on Aggression across Groups

Experimental Group	N	Pre-test Mean	SD	Post-test Mean	SD	MD
Reinforcement	16	17.50	7.528	8.38	2.604	9.12
Modeling	16	14.06	4.878	10.44	3.268	3.62
Multi-technic	16	15.39	5.099	12.00	3.246	3.39
Control	16	14.69	6.085	14.88	6.010	0.19

***p<.05**

The descriptive data presented in table 10 shows that with the four experimental groups it was the Multi-technique group that differed slightly from the three at pre-test but the rest were very similar in their aggressive behaviour before treatment. Their respective mean score ranged from 14.69 for the Control group, 14.06 for the Modelling group, 17.50 for the Reinforcement group and 30.44 for the Multi-technique group.

Table 10 also indicates that at post-test the reinforcement group recorded the greatest improvement in their aggressive behaviour with a mean score of 4.38 (SD =2.604), followed by the modelling Group with a mean score of 6.44 (SD =3.268), multi-technique group with a mean score of 12.00 (SD =3.246).

To determine if these differences were statistically significant, the one-way ANCOVA results in table 11 are displayed.

Table 11

Analysis of Covariance on Difference in Aggression across Groups

Tests of Between-Subjects Effects

Source	Sum of Squares	Df	Mean Square	F
Model	1761.611	4	440.403	77.796
Intercept	4.801	1	4.801	.848
Group	1235.628	3	411.876	72.757
Error	333.998	59	5.661	
Total	7777.000	64		

*Significant at 0.05; df = 3 and 59; critical F = 4.16

After adjusting for pre-intervention scores, there were significant differences between the three intervention groups on post-intervention scores on the ASEBA TRF test. [F (3, 59) = 72.76, p =.00, partial eta square =.79]. To determine the effect size of each of the differences, the Pairwise results are displayed below.

Table 12: Fisher's Least Square Method on Difference in Aggression across Experimental Conditions

Group	Reinforcement n = 16	Modelling n=16	Multi-technique n= 16	Control n =16
Reinforcement	8.38a	-2.45*	-4.31*	-7.74*
Modelling	-2.06	10.44a	-1.86	-5.29*
Multi-technique	-3.62	-1.56	12.00a	-3.43*
Control	-6.50	-4.44	-2.88	14.88a

*Significant at 0.05.

a = group means are in the diagonal; difference in group means are below the diagonal while protected t-values are above the diagonal.

In Table 12 the pair wise comparison of group means show that no significant difference in aggression existed between participants exposed to modelling and those exposed to multi-technique (t = -1.86; df =30; critical t = 2.04; p> 0.05). However, participants exposed to reinforcement and those in the modelling group exhibited difference between them (t = -2.45; df = 30; critical t = 2.04; p < 0.05).Similarly, the reinforcement group and the multi-technique group showed significant difference between them (t = -4.31; df = 30; critical t = 2.04; p< 0.05). Significant difference also existed between the reinforcement and the control groups (t = -7.74; df = 30; critical t =2.04; p< 0.05). Modelling and control groups exhibited significant difference as well (t = -5.29; df = 30; critical

t =2.04; p< 0.05).The multi-technique group participants and those of the control group also showed significant difference between them (t = -3.43; df = 30; critical t = 2.04; p< 0.05)

Hypothesis 3

There is no significant difference in the effects of the treatments on male and female participants with inattention behaviour problems.

To test this hypothesis a 2 by 4 between groups analysis of covariance was conducted to assess the effectiveness of three programmes in reducing or terminating inattention behaviour problem for male and female participants. The independent variables were the type of programme (reinforcement, modelling, and multi-technique) and gender. The dependent variable was the inattention status of participants. Scores on the ASEBA TRF administered prior to the commencement of the programmes (pre-inattention) were used as covariate to control the individual differences.

Preliminary checks were conducted to ensure that there were no violation of the assumptions of normality, linearity, homogeneity of variances, homogeneity of regression slopes, and reliable measurement of the covariate. The results of the analysis are shown in tables 13, 14, and 15 below.

Table 13

Descriptive Statistics for Pre and Post Inattention Scores for Male and Female in the Experimental Groups.

Experimental Group	Sex of participant	Pre-test N	Pre-test		Post-test	
			Mean	SD	Post-test Mean	SD
Reinforcement	Male	8	26.25	3.991	7.63	2.200
	Female	8	21.88	3.682	6.75	1.753
	Total	16	24.06	4.343	7.19	1.974
Modelling	Male	8	23.88	5.303	11.13	4.291
	Female	8	23.00	4.140	10.25	3.655
	Total	16	23.44	4.618	10.69	3.877
Multi-technique	Male	8	22.75	2.188	15.63	2.264
	Female	8	20.88	4.234	11.50	3.207
	Total	16	21.81	3.449	13.56	3.425
Control	Male	8	19.00	7.348	19.25	7.302
	Female	8	14.88	3.044	15.25	2.964
	Total	16	16.94	5.836	17.25	5.814
Total	Male	32	25.47	6.965	13.41	6.226
	Female	32	22.66	6.818	10.94	4.189
	Total	64	24.06	6.983	12.17	5.409

The descriptive data above indicate that males and females were very similar across the four experimental groups before treatment. With males the respective mean scores ranged from 19.00 for the Control group, 23.88 for the Modeling group, and 26.25 for the Reinforcement

The descriptive data above indicate that males and females were very similar across the four experimental groups before treatment. With males the respective mean scores ranged from 19.00 for the Control group, 23.88 for the Modelling group, and 26.25 for the Reinforcement group to 32.75 for the Multi-technique group.

The mean scores for the females ranged from 14.88 for the Control group, 21.88 for the Reinforcement group, 23.00 for the Modelling group, and 30.88 for the Multi-technique group.

At post-test however, though the Reinforcement received the greatest improvement of 7.19 (SD =1.974), the females received greater improvement with mean score of 6.75 (SD =1.753) than the males with mean score of 7.63 (SD =2.200). While the Modelling group followed in terms of improvement after treatment with a mean score of 10.69 (SD =3.877), the females recorded greater improvement after treatment than the males with mean scores of 10.25 (SD =3.655) and 11.13 (SD =4.291) for females and males respectively. The Multi-technique group followed with a mean score of 13.56 (SD = 3.425) and also the females recorded a greater improvement than the males. While the females recorded a mean score of 11.50 (SD =3.207), the males recorded a mean score of 15.63 (SD =2.264). The Control group did not record any significant

improvement with a mean score of 17.25 (SD =5.814).The mean scores for males and females respectively were: 19.25 (SD =7.302) and 15.25 (SD =2.964). To determine if these differences were statistically significant the two way ANCOVA results are displayed.

Table 14

Analysis of Covariance on Difference in Inattention Behaviour due to Gender and Experimental Conditions.

Source	Sum of Squares	Df	Mean Square	F
Model	1549.381(a)	8	193.673	36.265
Intercept	36.344	1	36.344	6.805
Exp Group	1359.992	3	453.331	84.885
Gender	4.105	1	4.105	.77
Group * Gender	51.174	3	17.058	3.194
Error	293.728	55	5.341	
Total	11325.000	64		
Corrected Total	1843.109	63		

After adjusting for pre-inattention scores, there was a significant interaction effect [F (3, 55) = 3.194, p<.05] with a small effect size (partial eta squared =.15) One of the main effects was statistically significant while the other was not [programme: F (3, 55) =84.89, p< .0005; gender: F (3, 55) = .77.p= .38]. These results suggest that males and females did respond differently to the three

types of interventions. Females appeared to have benefited more from the three intervention programmes than their male counterparts.

To find out the effect sizes of the differences in the responses the Pair wise results are displayed.

Table 15

Adjustment for Multiple Comparison: Bonferroni

(I)Experimental group of participants	(J)Experimental group of participants	MD(I-J)	Std Error	Sig
Reinforcement	Reinforcement			
	Modelling	-3.930 (*)	.818	.000
	Multi-technique	-1.044	.975	.289
	Control	-14.963 (*)	.953	.000
Modelling	Reinforcement	-3.930 (*)	.818	.000
	Modelling			
	Multi-tech	2.886 (*)	.999	.006
	Control	-11.034(*)	.931	.000
Multi-tech	Reinforcement	1.044	.975	.289
	Modelling	-2.886 (*)	.999	.006
	Multi-tech			
	Control	-13.919 (*)	1.309	.000
Control	Reinforcement	14.963 (*)	.953	.000
	Modelling	11.034 (*)	.931	.000
	Multi-tech	13.919 (*)	1.309	.000
	Control			

* The mean difference is significant at the .05 level

Evidence from Table 15 shows that significant between group differences exist between the reinforcement group and each of modelling group and control group with respective mean differences of -3.93 and -14.96 each of which was significant at 0.05 level of significance.

Table 15 also indicates significant differences between the modelling group and the multi-technique group (MD=2.89). Significant difference was also found between the multi-technique group and the control group (MD=-13.919).

To summarise therefore, it was observed that the reinforcement group and multi-technique group were homogeneous group as they were equally effective in improving attention behaviour of the participants.

Hypothesis 4: There is no significant difference in the effects of the treatment on male and female participants with aggression behaviour problems.

To test hypothesis 4, a 2 by 4 analysis of covariance was conducted to assess the effectiveness of three programmes designed to reduce or terminate aggressive behaviour by male and female participants. The independent variables were the type of programme (reinforcement, modelling, multi-technique) and gender. The dependent variable was the scores on the ASEBA TRF test administered following completion of the intervention programmes (representing the aggression status of participants). Scores on the ASEBA TRF administered prior to the commencement of the programmes (Pre-aggression) were used as a covariate to control for individual differences. Preliminary checks were conducted to ensure

that there was no violation of the assumptions of normality, linearity, homogeneity of variances, homogeneity of regression slopes, and reliable measurement of covariate. A Pairwise analysis was also conducted to determine effect size after the ANCOVA results.

Table 16

Descriptive Statistics Showing Pre-test and Post-test Aggression Results of Male and Females.

Experimental Group	Sex of participant	Pre-test			Post-test	
		N	Mean	SD	Mean	SD
Reinforcement	Male	8	23.00	6.302	7.63	2.200
	Female	8	12.00	3.546	6.75	1.573
	Total	16	17.50	7.528	7.19	1.974
Modeling	Male	8	17.50	4.408	11.13	4.291
	female	8	10.63	2.134	10.25	3.655
	Total	16	14.06	4.878	10.69	3.877
Multi-technique	Male	8	32.50	2.673	15.63	2.264
	Female	8	28.38	6.232	11.50	3.207
	Total	16	30.44	5.099	13.56	3.425
Control	Male	8	15.13	5.688	19.25	7.302
	Female	8	14.25	6.840	15.25	2.964
	Total	16	14.69	6.085	17.25	5.814
Total	Male	32	22.02	8.268	13.41	6.226
	Female	32	16.31	8.660	10.94	4.189
	Total	64	19.17	8. 798	12.17	5.409

The descriptive data indicates that, prior to the treatment; the females were similar in their aggressive behaviour across all the experimental groups. Their scores were slightly lower across all the groups than the scores of the males. The mean scores of the females and males respectively ranged from14.25 and15.13 for the Control group; 10.63 and17.50 for the Modelling group; 12.00 and23.00 for the Reinforcement group; and 28.38 and 32.50 for the Multi-technique group. At post-test, whereas the Control group did not record any improvement the Reinforcement group appeared to have benefited the most improvement with mean scores of 7.63 (SD=2.200) and 6.75 (SD=1.753) for males and females respectively. The modelling group followed with in improvement with the mean scores of 11.13 (SD=4.29) and10.25 (SD=3.655) for males and females respectively. The Multi-group recorded 15.63 (SD=2.264) and 11.50 (SD=3.207) for males and females in that order.

To determine whether these differences were statistically significant, the two-way analyses of covariance results are presented below.

Table17

Analysis of Covariance on Difference in Aggression due to Gender and Experimental Conditions.

Source	Sum of Squares	Df	Mean Square	F	Sig.
Model	1840.332(a)	8	230.042	49.563	.000
Intercept	39.318	1	39.318	8.471	.005
Exp. Group	1296.681	3	432.227	93.124	.000
Gender	28.954	1	28.954	6.238	.016
Group * Gender	62.578	3	20.859	4.494	.007
Error	255.277	55	4.641		
Total	7777.000	64			
Corrected Total	2095.609	63			

After adjusting for Pre-aggression scores on ASEBA TRF test, there was a significant interaction effect [F (3, 55) =4.64, p< .005] with a relatively small effect size (partial eta squared =.20). Both of the main effects were statistically significant [programme: (3, 55) =93.12. p< .0005; gender: F (3, 55) =6.24.p<.005]. These results show that males and females do not respond differently to the three types of interventions. The null hypothesis which states that there is no statistically significant difference in the effects of the treatment on male and female participants with aggression behaviour problems is thus rejected.

Table 18: Pair wise Comparisons

Adjusting for multiple comparison: Bonferroni

(I) Experimental group of participant	(J) Experimental group of participant	MD (I-J)	Std. Error	Sig
reinforcement	Reinforcement			
	Modelling	-4.343(*)	.787	.000
	multi-technique	.959	1.064	.371
	Control	-12.366(*)	.779	.000
modelling	Reinforcement	4.343(*)	.787	.000
	Modelling			
	multi-technique	5.302(*)	1.210	.000
	Control	-8.023(*)	.763	.000
multi-technique	Reinforcement	-.959	1.064	.371
	Modelling	-5.302(*)	1.210	.000
	multi-technique			
	Control	-13.325(*)	1.182	.000
control	Reinforcement	12.366(*)	.779	.000
	Modelling	8.023(*)	.763	.000
	multi-technique	13.325(*)	1.182	.000
	Control			

Based on estimated marginal means

* The mean difference is significant at the .05 level.

Evidence from Table 18 shows that significant between group differences exist between the reinforcement group and each of modelling group and control group with respective mean differences of -4.34 and -12.37 each of which was significant at 0.05 level of significance.

Table 18 also indicates significant differences between the modelling group and the multi-technique group (MD=5.30) and between the modelling group and the control group (MD=-8.02). Significant difference was also found between the multi-technique group and the control group (MD=-13.33).

In summary, it was observed that again, the reinforcement group and multi-technique group were homogeneous group as they were equally effective in improving non-aggression in the participants.

Hypothesis 5

There is no significant difference in the impact of reinforcement and modelling on participants of different ethnic backgrounds who exhibit in attention behaviour problems.

To test this hypothesis, a 2 by 4 analysis of covariance was conducted to assess the effectiveness of the three programmes designed to reduce or terminate the inattention behaviour problem of Akan and non-Akan participants. The independent variables were the type of programmes (Reinforcement, Modelling,

and Multi-technique) and ethnicity. The dependent variable was scores of the ASEBA TRF/6-18 test administered following completion of the intervention programmes (Post-inattention). Scores on ASEBA TRF/6-18 administered prior to the commencement of the programmes (Pre-inattention) were used as covariate to control the individual differences.

Preliminary checks were conducted to ensure that there was no violation of the assumptions for ANCOVA.

Table 19

Descriptive Statistics on Difference in Pre-test & Post-test Scores on Inattention Behaviour due to Ethnicity and Experimental Conditions.

Experimental Group	Ethnic Group	Pre-test			Post-test	
		N	Mean	SD	Mean	SD
Reinforcement	Akan	9	25.22	3.734	7.00	1.500
	Non-Akan	7	22.57	4.894	7.43	2.573
	Total	16	24.06	4.343	7.19	1.974
Modeling	Akan	8	23.63	5.476	11.00	4.690
	Non-Akan	8	23.25	3.955	10.38	3.159
	Total	16	23.44	4.618	10.69	3.877
Multi-technique	Akan	5	30.60	3.975	11.40	4.159
	Non-Akan	11	32.36	3.233	14.55	2.697
	Total	16	31.81	3.449	13.56	3.425
Control	Akan	10	17.30	6.929	17.60	6.835
	Non-Akan	6	16.33	3.882	16.67	4.082
	Total	16	16.94	5.836	17.25	5.814
Total	Akan	32	23.19	6.902	12.00	6.248
	Non-Akan	32	24.94	7.062	12.34	4.512
	Total	64	24.06	6.983	12.17	5.409

Table 20

Analysis of Covariance on Difference in Inattention Behaviour due to Ethnicity and Experimental Conditions

Source	Sum of Squares	Df	Mean Square	F	Sig.
Model	1527.075	8	190.884	33.220	.000
Intercept	46.956	1	46.956	8.172	.006
Exp. Group	1338.218	3	446.073	77.631	.000
Ethnicity	11.990	1	11.990	2.087	.154
Group * Ethnicity	22.427	3	7.476	1.301	.283
Error	316.034	55	5.746		
Total	11325.000	64			
Corrected Total	1843.109	63			

After adjusting for pre-inattention scores, there was no interaction effect [F (3, 55) = 1.301, p>.05] .The effect of programme was statistically significant while effect of ethnicity was not [programme: F (3, 55) =77.63, p<.0005; ethnicity F (3, 55) =2.09, p=.15]. These results show that both Akans and non-Akans responded equally on the post-inattention scores of the ASEBA TRF/6-18 test. The null hypothesis which states that there is no statistically significant difference

in the way reinforcement and modelling impact on participants of different ethnic backgrounds who exhibit inattention behaviour problems is thus accepted.

Hypothesis 6

There is no significant difference in the impact of reinforcement and Modelling on participants of different ethnic background who exhibit aggression behaviour problems.

In testing this hypothesis, a 2 by 4 between groups analysis of covariance was conducted to assess the effectiveness of three programmes in reducing or terminating aggressive behaviour among Akan and non-Akan participants. The independent variables were the type of intervention programme (reinforcement, modelling, multi-technique), and ethnic background. The dependent variable was the scores on the ASEBA TRF/6-18 (post-aggression) administered following completion of the intervention programmes. Scores on ASEBA TRF/6-18 administered prior to the commencement of the programmes (pre-aggression) were used as covariate to control for individual differences.

Preliminary checks were conducted to ensure that there was no violation of the assumptions of normality, homogeneity of variances and reliable measurement of the covariate.

Table 21

Descriptive Statistics on Difference in Post-test Scores on Aggression due to Ethnicity and Experimental Conditions.

Experimental Group	Ethnicity	Pre-test			Post-test	
		N	Mean	SD	Mean	SD
Reinforcement	Akan	9	20.00	6.423	5.00	2.828
	Non-Akan	7	14.29	8.077	3.57	2.225
	Total	16	17.50	7.528	4.38	2.604
Modeling	Akan	8	14.50	5.451	6.75	3.919
	Non-Akan	8	13.63	4.565	6.13	2.748
	Total	16	14.06	4.878	6.44	3.286
Multi-technique	Akan	5	17.80	5.215	10.80	3.347
	Non-Akan	11	21.64	4.802	12.55	3.205
	Total	16	20.44	5.099	12.00	3.246
Control	Akan	10	17.30	6.290	17.60	6.004
	Non-Akan	6	10.33	1.862	10.33	1.966
	Total	16	14.69	6.085	14.88	6.010

Total	Akan	32	19.00	7.162	10.28	6.788
	Non-Akan	32	19.34	10.434	8.56	4.472
	Total	64	19.17	8.879	9.42	5.767

The descriptive statistics show that before treatment Akans and non-Akans were similar across the four experimental groups. With Akans the respective mean scores ranged from 14.50 for the Modelling group, 17.30 for the Control group, and 20.00 for the Reinforcement group to 27.80 for the Multi-technique group. The mean scores for non-Akans ranged from 10.33 for the Control group, 13.63 for the Modelling group, and 14.29 for the Reinforcement group to 31.64 for the Multi-technique group.

At post- test, though the Reinforcement group received the greatest improvement of 4.38 (SD=2.604), the non-Akans received greater improvement with a mean score of 3.57 (SD=2.225) than the Akans with a mean score of 5.00 (SD=2.828). While the Modelling group followed in terms of improvement with a mean score of 6.44 (SD=3.286) the non-Akans again recorded a greater improvement with a mean score of 6.13 (SD=2.748) than the Akans with a mean score of 6.75 (SD=3.919). The multi-technique group followed with a total mean score of 12.00 (SD=3.246) where the Akans recorded greater improvement with a mean score of 10.80 (SD=3.347) than non-Akans with a mean score of 12.55 (SD=3.205).

To determine if these differences were statistically significant the two-way ANCOVA results are displayed.

Table 22

Analysis of Covariance on Difference in Aggression due to Ethnicity and Experimental Conditions.

Source	Sum of Squares	Df	Mean Square	F	Sig.
Model	1820.275(a)	8	227.534	45.452	.000
Intercept	1.129	1	1.129	.226	.637
Exp. Group	1012.863	3	337.621	67.442	.000
Ethnicity	6.027	1	6.027	1.204	.277
Group * Ethnicity	53.865	3	17.955	3.587	.019
Error	275.335	55	5.006		
Total	7777.000	64			

After adjusting for pre-aggression scores, there was significant interaction effect [F (3, 55) =3.59, p<.05] with a small effect size (partial eta squared= .16). One of the main effects was statistically significant while the other was not [programme: F (3, 55) =67.44, p<.0005; ethnicity: F (3, 55) = 1.20, p= .28]. These results show that though Akans and non-Akans responded differently to

the three types of interventions the differences to response were very minimal. Akans appeared to have benefited slightly more from the three intervention programmes than non-Akans.

To find out the effect sizes of the differences in the responses the Pairwise results are displayed.

Table 23

Pair wise Comparisons

Adjustment for Multiple Comparison: Bonferroni

(I) Treatment group to which a participant belongs	(J) Treatment group to which a participant belongs	Mean Difference (I-J)	Std. Error	Sig
Reinforcement	Reinforcement			
	Modelling	-3.731(*)	.811	.000
	multi-technique	-.940	1.061	.379
	Control	-11.386(*)	.826	.000
Modelling	Reinforcement	3.731(*)	.811	.000
	Modelling			
	multi-technique	2.791(*)	1.168	.020
	Control	-7.655(*)	.804	.000
multi-technique	Reinforcement	.940	1.061	.379
	Modelling	-2.791(*)	1.168	.020
	multi-technique			

	Control	-10.447(*)	1.186	.000
Control	Reinforcement	11.386(*)	.826	.000
	Modelling	7.655(*)	.804	.000
	multi-technique	10.447(*)	1.186	.000
	Control			

Based on estimated marginal means

* The mean difference is significant at the .05 level.

Evidence from table 23 indicates that significant between group differences exist between the reinforcement group and each of modelling group and control group with respective mean differences of -3.73 and -11.39 each of which was significant at 0.05 level of significance.

Table 23 also shows significant differences between the modelling group and the multi-technique group (MD=2.79) and between the modelling group and the control group (MD=-7.66). Significant difference was also found between the multi-technique group and the control group (MD=-10.45).

Over here also, it was observed that the reinforcement group and the multi-technique group were homogeneous group as they were equally effective in improving non-aggression in the participants.

Hypothesis 7:

In the null form the hypothesis stated that there is no significant difference in the behaviour change of participants from different socio-economic backgrounds who exhibit inattention behaviour problems.

To test this hypothesis a 2 by 4 between groups analysis of covariance (ANCOVA) was conducted to assess the effectiveness of three programmes in reducing or terminating inattention behaviour problem for participants of high and low socio-economic backgrounds. The independent variables were the type of programme (reinforcement, modelling, and multi-technique) and socio-econs. The dependent variable was the scores on ASEBA TRF/ 6-18 administered following the completion of the intervention programmes (post- inattention). Scores on the ASEBA TRF/6-18 administered prior to the commencement of the programmes (pre-inattention) were used as covariate to control for individual differences.

Preliminary checks were conducted to ensure that there were no violations of assumptions of normality, linearity, homogeneity of variances, homogeneity of regression slopes, and reliable measurement of covariate. The results of the analysis are shown in Tables 24, 25, and 26 below.

Table 24

Descriptive Statistics on Difference in Post-test Scores on Inattention Behaviour due to Socio-economic Background and Experimental Conditions.

Experimental Group	Socio-econs		Pre-test		Post-test	
		N	Mean	SD	Mean	SD
Reinforcement	Low	4	21.00	1.826	7.00	1.155
	High	12	25.08	4.502	7.25	2.221

	Total	16	24.06	4.343	7.19	1.974
Modeling	Low	14	23.00	3.783	10.43	3.480
	High	2	26.50	10.607	12.50	7.778
	Total	16	23.44	4.616	10.69	3.877
Multi-	Low	10	22.00	3.197	14.30	2.452
technique	High	6	21.50	4.135	12.33	4.633
	Total	16	21.81	3.449	13.56	3.425
Control	Low	12	16.67	5.499	16.67	5.399
	High	4	17.75	7.632	19.00	7.528
	Total	16	16.94	5.836	17.25	5.814
Total	Low	40	23.15	7.029	12.93	4.937
	High	24	25.58	6.775	10.92	6.014
	Total	64	24.06	6.983	12.17	5.409

The descriptive statistics above indicates that participants from both high socio-economic backgrounds were similar across the four experimental groups before treatment. With low socio-econs, the mean scores ranged from 16.67 for the Control group, 21.00 for the Reinforcement group and 23.00 for the Modelling group to 32.00 for Multi-technique group.

The mean scores for high socio-econs ranged from 17.72 for the Control group, 25.08 for the Reinforcement group and 26.50 for the Modelling group, to 31.81 for the Multi-technique group.

At post-test however, though the reinforcement group received the greatest improvement of 7.19 (SD= 1.974), participants of low socio-economic background received greater improvement with a mean score of 7.00 (SD=1.155) than those from high socio-economic background with a mean score

of 7.25 (SD=2.221). While the Modelling group followed in terms of improvement after treatment with a mean score of 10.69 (SD=3.877), participants from the low socio-economic background recorded greater improvement than those from high socio-economic background with a mean scores of 10.43 (SD=3.480) and 12.50 (7.778) for low and high socio-econs respectively. The Multi-technique group followed with a mean score of 13.56 (3.425) and also participants of high socio-economic background recorded greater improvement than those from low socio economic background. While low socio –econs recorded 14.30 (SD=2.452) high socio-econs recorded 12.33 (SD=4.633).The Control group did not record any improvement with a mean score of 17.25 (SD=5.814). The mean scores for low and high socio-econs respectively were 16.67 (SD=5.399) and19.00 (SD=7.528).

To determine if these differences were significant the two way ANCOVA results are displayed.

Table 25

Analysis of Covariance on Difference in Inattention Behaviour due to Socio-economic Background and Experimental Conditions.

Source	Sum of Squares	df	Mean Square	F	Sig.
Model	1531.283	8	191.410	33.761	.000
Intercept	45.374	1	45.374	8.003	.007
Exp. Group	1195.562	3	398.521	70.291	.000

Socio-econs	6.265	1	6.265	1.105	.298
Group * Socio-econs	29.661	3	9.887	1.744	.169
Error	311.826	55	5.670		
Total	11325.000	64			

After adjusting for pre-inattention scores, there was no significant interaction effect. [F (3, 55) =1.744, p<.05] with a small effect size (partial eta squared =.09). One of the main effects was statistically significant while the other was not [programme; F (3, 55) =70.29, p<.0005; socio-econs F (3, 55) =1.11, p= .30]. These results suggest that on inattention participants from low and high socio economic backgrounds responded almost similarly to the three types of intervention programmes. The null hypothesis which states that there is no statistically significant difference in the behaviour change of participants from different socio-economic backgrounds who exhibit inattention behaviour problems who received the treatments is thus accepted.

Hypothesis 8

There is no significant difference in the behaviour change of participants from different socio-economic backgrounds who exhibit aggression behaviour problems who received the treatments.

Results pertaining to testing of hypothesis eight are presented in tables 27, 28, and 29.

Table 27 presents the pre-test and post-test means and standard deviations for participants of low and high socio-economic backgrounds the four experimental groups. Table 28 presents the summary data of 2-way Analysis of Covariance on the effects of socio-economics and experimental conditions on the post-test scores ASEBA TRF/ 6-18 using the pre-test score as covariate.

Table 26

Descriptive Statistics of Socio-economics and Aggression

Experimental Group	**Socio-econs**	**Pre-test**			**Post-test**	
		N	**Mean**	**SD**	**Mean**	**SD**
Reinforcement	Low	4				
	High	12	19.67	7.451	4.83	2.855
	Total	16	17.50	7.528	4.38	2.604
Modeling	Low	14	13.86	4.538	6.00	2.774
	High	2	15.50	9.192	9.50	6.364
	Total	16	14.06	4.878	6.44	3.286
Multi-technique	Low	10	30.80	4.662	11.90	2.726
	High	6	29.83	6.178	12.17	4.262
	Total	16	30.44	5.099	12.00	3.246
Control	Low	12	14.17	6.562	14.25	6.552

	High	4	16.25	4.787	16.75	4.113
	Total	16	14.69	6.085	14.88	6.010
Total	Low	40	17.90	9.060	9.65	5.794
	High	24	21.29	8.322	9.04	5.827
	Total	64	19.17	8.879	9.42	5.767

The results of the descriptive data above indicate that participants from the two backgrounds were similar across the four experimental groups before treatment. With low socio-economics the respective mean scores ranged from 11.00 for the reinforcement group, 13.86 for modelling group, and 14.17 for the control group, to 30. 80 for the multi-technique group.

The mean scores for the high socio-economics ranged from 15.50 for modelling group, 16.25 for the control group, and 19.67 for the reinforcement group, to 29.83 for the multi-technique group.

At post-test, the reinforcement group recorded a mean score of 3.00 (SD=.816), the modelling group recorded 6.00 (SD=2.774), the multi-technique group recorded a mean score of 11.90 (SD=2.726), while the control group did not realize any change at all with a mean score of 14.25 (SD=6.552) all for the low socio-economics. As regards high socio-economics, the reinforcement group recorded the greatest improvement with a mean score of 4.83 (SD= 2.855), the modelling group followed with a mean score of 9.50 (SD=6.364), the multi-technique group followed with a mean score of 12.17 (SD=4.262), and the

control group followed with a mean score of 16.75 (SD=4.113) signifying no change.

To determine if these differences were significant the two way ANCOVA results are displayed.

Table 27

Tests of Between-Subjects Effects

Analysis of Covariance on Difference in Aggression due to Socio-economic Background and Experimental Conditions

Source	Sum of Squares	Df	Mean Square	F	Sig.
Model	1807.919	8	225.990	43.204	.000
Intercept	4.904	1	4.904	.938	.337
Exp. Group	987.611	3	329.204	62.936	.000
Socio-econs	1.538	1	1.538	.294	.590
Group * Socio-econs	45.443	3	15.148	2.896	.043
Error	287.690	55	5.231		

Total	7777.000	64

After adjusting for pre-aggression scores, there was significant interaction effect. [F (3, 55) =2. 896, p<.05] with a small effect size (partial eta squared =.14) One of the main effects was statistically significant while the other was not [programme: F (3, 55) =62.94, p<0005; socio-economics: F (3, 55) = .29, p=.60]. These results show that even though participants of the two socio-economic backgrounds differed on their responses across the treatments, these differences were not big.

Table 28: Pair wise Comparisons: Adjustment for Multiple Comparison: Bonferroni

(I) Experimental group to which a participant belongs	(J) Experimental group to which a participant belongs	Mean Difference (I-J)	Std. Error	Sig.
reinforcement	Reinforcement			
	Modelling	-4.208(*)	1.088	.000
	multi-technique	.465	1.184	.696
	Control	-11.655(*)	.934	.000
modelling	Reinforcement	4.208(*)	1.088	.000
	Modelling			
	multi-technique	4.674(*)	1.329	.001

	Control	-7.447(*)	1.088	.000
multi-technique	Reinforcement	-.465	1.184	.696
	Modelling	-4.674(*)	1.329	.001
	multi-technique			
	Control	-12.120(*)	1.188	.000
Control	Reinforcement	11.655(*)	.934	.000
	Modelling	7.447(*)	1.088	.000
	multi-technique	12.120(*)	1.188	.000
	Control			

Based on estimated marginal means

* The mean difference is significant at the .05 level.

Evidence from Table 29 shows that significant between group differences exist between the reinforcement group and each of modelling group and control group with respective mean differences of-4.21 and -11.66 each of which was significant at 0.05 level of significance.

Table 29 also indicates significant differences between the modelling group and the multi-technique group (MD= 4.67) and between the modelling group and the control group (MD=-7.45). Significant difference was also found between the multi-technique group and the control group (MD=-12.12).

In summary it was observed that the reinforcement group and multi-technique group were homogeneous group as they were equally effective in improving non-aggression in the participants.

Summary of Results

The results of the study indicate that the treatment programme was an effective intervention for reducing or even terminating behaviour disorders in primary school pupils. They are summarised as follows: Out of the 8 null hypotheses tested, 5 were rejected and 3 were accepted in favour of the treatment groups.

Hypothesis 1 that states that there is no significant difference in the effectiveness of reinforcement and modelling or multi-technique approach in modifying inattention behaviour was rejected. The reinforcement group recorded the greatest improvement in their inattention scores with a mean of 7.19 (Sd= 1.974), followed by the modelling group with a mean of 10.69 (Sd = 3.877) and the multi-technique group with a mean of 13.56 (Sd= 3.425), while the control group did not experience any significant improvement with a mean score of 17.25 (Sd= 5.814). It can be suggested that though the three techniques in the treatment impact positively on individual pupils they do so not equally. This confirms the findings of Gollnick and Chinn (2002) that since pupils bring to class different historical backgrounds, religious beliefs and day-to-day living patterns that drive the manner in which they behave in the classroom, a great variety of management techniques and strategies are required to accommodate individual differences in discipline in the classroom.

Hypothesis 2 that states that there is no significant difference in the effectiveness of reinforcement and modelling or multi-technique approach in modifying aggression behaviour problems was also rejected. Evidence of significant between group differences exists between the reinforcement group and each of modelling and control group with respective mean differences of-3.92 and-12.02 each of which was significant at 0.05 level of significance. Significant differences between the modelling group and the multi-technique group (MD=3.29 and between the modelling group and the control group (MD=-8.10) were also evident. Significant difference was also found between the multi-technique group and the control group (MD=-11.39).

In summary, it was observed that the reinforcement group and multi-technique group were homogeneous group as they were both equally effective in improving aggression behaviour in participants.

Hypothesis 3 that states that there is no significant difference in the effects of the treatments on male and female participants with inattention behaviour was also rejected.

After adjusting for pre-inattention scores, there was significant interaction effect [F (3, 55) = 3.194, p<.05] with a small effect size (partial eta squared =.15) One of the main effects was statistically significant while the other was not [programme: F (3, 55) =84.89, p< .0005; gender: F (3, 55) = .77.p= .38]. These results suggest that o inattention behaviour problems male and female participants did respond differently to the three types of interventions. Female

participants appeared to have benefited more from the three intervention programmes than their male counterparts.

Evidence shows that significant between group differences exist between the reinforcement group and each of modelling group and control group with respective mean differences of -3.93 and -14.96 each of which was significant at 0.05 level of significance.

The evidence also indicates significant differences between the modelling group and the multi-technique group (MD=2.89). Significant difference was also found between the multi-technique group and the control group (MD=-13.919).

This finding corroborates the finding of Amedahe and Owusu-Banahene (2007) that, the differences in the socialisation process of Ghanaian boys and girls during their childhood years influence their preference for direct or indirect aggression and their treatment during the adolescent stage. For instance, in childhood, Ghanaian male children are exposed to practices and comments which make male children associate maleness and masculinity with power and dominance.

Hypothesis 4 which states that there is no significant difference in the effects of the treatment on male and female participants with aggression behaviour was also rejected since evidence from the analysis shows that significant between group differences exist between the reinforcement group and each of modelling group and control group with respective mean differences of -4.34 and -12.37 each of which was significant at 0.05 level of significance. The result also

indicates significant differences between the modelling group and the multi-technique group (MD=5.30) and between the modelling group and the control group (MD=-8.02). Significant difference was also found between the multi-technique group and the control group (MD=-13.33).This may be due to the fact that since boys and girls respond differently to different social cues there is every likelihood that the intervention techniques would impact differently on male and female participants. This aligns with the finding of Amedahe and Owusu-Banahene (2007) that among Ghanaian male students, physical strength is highly associated with masculinity, fame and respect among school peers. Hence, in any given conflict situation, either among students, or between students and school authorities, male students are more likely to resort to the use of violent means in dealing with the situation.

Hypothesis 5 which states that there is no significant difference in the impact of the intervention strategies on participants of different ethnic backgrounds who exhibit inattention behaviour problems was accepted. After adjusting for pre-inattention scores, there was no interaction effect [$F(3, 55) = 1.301$, $p>.05$] .The effect of programme was statistically significant while effect of ethnicity was not [programme: $F(3, 55) =77.63$, $p<.0005$; ethnicity $F(3, 55) =2.09$, $p=.15$]. These results show that both Akans and non-Akans responded equally on the post-inattention scores of the ASEBA TRF/6-18 test. This finding is probably explained by George (1976) as cited in Irwin, et al, (2005) when he reiterated that although the population of Ghana remains predominantly rural, urbanisation

has been proceeding rapidly and "the drift of people, including school leavers, has continued unabated from the poorer rural areas into towns, despite high unemployment rates in urban areas." As a result only a very small part of Ghana is ethnically homogeneous.

Hypothesis 6 which states that there is no significant difference in the impact of the intervention strategies on participants of different ethnic backgrounds who exhibit aggression behaviour problems was rejected. After adjusting for pre-aggression scores, there was significant interaction effect [F (3, 55) =3.59, $p<.05$] with a small effect size (partial eta squared= .16). One of the main effects was statistically significant while the other was not [programme: F (3, 55) =67.44, $p<.0005$; ethnicity: F (3, 55) = 1.20, p= .28]. These results show that though Akans and non-Akans responded differently to the three types of interventions. Akans appeared to have benefited slightly more from the three intervention programmes than non-Akans. Evidence from the result indicates that significant between group differences exist between the reinforcement group and each of modelling group and control group with respective mean differences of -3.73 and -11.39 each of which was significant at 0.05 level of significance.

The result also shows significant differences between the modelling group and the multi-technique group (MD=2.79) and between the modelling group and the control group (MD=-7.66). Significant difference was also found between the multi-technique group and the control group (MD=-10.45).

It was also observed that the reinforcement group and the multi-technique group were homogeneous group as they were equally effective in improving non-aggression in the participants.

Hypothesis 7 which states that there is no significant difference in the inattention behaviour change participants of from different socio-economic backgrounds exhibited after the treatment was accepted. After adjusting for pre-inattention scores in the ANCOVA there was no significant interaction effect. [F (3, 55) =1.744, p<.05] with a small effect size (partial eta squared =.09). One of the main effects was statistically significant while the other was not [programme; F (3, 55) =70.29, p<.0005; socio-econs F (3, 55) =1.11, p= .30]. These results suggest that on inattention participants from low and high socio economic backgrounds responded almost similarly to the three types of intervention programmes. This may be due to the fact that the rapid urbanisation in Ghana is leading to an equally rapid bridging of the disparity in people's living standards. This is confirmed by George (1976) when he says that although the population remains predominantly rural, urbanisation has been proceeding rapidly and "the drift of people, including school leavers, has continued unabated from the poorer rural areas into towns, despite high unemployment rates in urban areas."

Hypothesis 8 which states that there is no significant difference in the aggression behaviour change participants of from different socio-economic backgrounds exhibited after the treatment was rejected. Evidence from the result shows that significant between group differences exist between the reinforcement group and

each of modelling group and control group with respective mean differences of-4.21 and -11.66 each of which was significant at 0.05 level of significance. The result also indicates significant differences between the modelling group and the multi-technique group (MD= 4.67) and between the modelling group and the control group (MD=-7.45). Significant difference was also found between the multi-technique group and the control group (MD=-12.12).

In summary it was observed that the reinforcement group and multi-technique group were homogeneous group as they were equally effective in improving non-aggression in the participants.

Summary of Findings

- There is a significant difference in the effects of reinforcement, modelling and multi-technique approach in improving inattention behaviour problems in a multi-ethnic Ghanaian classroom.
- There is a significant difference in the effects of reinforcement, modelling and multi-technique approach in improving aggressive behaviour problems in a multi-ethnic Ghanaian classroom.
- There is no significant difference in the effects of reinforcement, modelling and multi-technique approach in improving inattention behaviour due to gender.
- There is a significant difference in the effects of reinforcement, modelling and multi-technique approach in improving aggressive behaviour problems in a multi-ethnic Ghanaian classroom due to gender.

- There is no significant difference in the effects of reinforcement, modelling and multi-technique approach in improving inattention behaviour problems in a multi-ethnic Ghanaian classroom due to ethnicity.
- There is a significant difference in the effects of reinforcement, modelling and multi-technique approach in improving aggressive behaviour problems in a multi-ethnic Ghanaian classroom due to ethnicity.
- There is no significant difference in the effects of reinforcement, modelling and multi-technique approach in improving inattention behaviour problems in a multi-ethnic Ghanaian classroom due to socio-economic background.
- There is a significant difference in the effects of reinforcement, modelling and multi-technique approach in improving aggressive behaviour problems in a multi-ethnic Ghanaian classroom due to socio-economic background.

CHAPTER FIVE

DISCUSSION OF FINDINGS, SUMMARY AND CONCLUSIONS, IMPLICATIONS FOR CLASSROOM MANAGEMENT, RECOMMENDATIONS, SUGGESTIONS FOR FURTHER RESEARCH AND CONTRIBUTIONS TO KNOWLEDGE

Introduction

This study examined the effects of reinforcement and modelling on disordered behaviour of pupils in a multi-ethnic Ghanaian classroom. Sixty-four year four pupils, both male and female in four public co-educational primary schools in four

municipalities out of four of the ten regions of Ghana were selected for the study. The 64 participants were divided into four groups of 16 respondents each and each group was either assigned to one of the three treatment therapies or the control. The regions, the municipalities, the schools and the participants were all selected through random sampling methods.

The major objective of the study was to establish the effectiveness or otherwise of reinforcement, modelling or their combination in correcting disordered behaviour of pupils in Ghanaian classrooms, in lieu of corporal punishment; their effects on male as against female pupils, Akans and non-Akans as well as their effects on pupils from high socio-economic background vis a vis those from low socio-economic background. Thus, the above criteria were used to adjudge the extent to which pupils would react to teachers' use of other behaviour management procedures apart from the norm of punishment as emphasised by the literature of the study. The study being in the area of educational psychology, also sought to find out the effect of these behaviour change techniques in ameliorating classroom disordered behaviour exhibited by pupils.

This chapter thus, discusses the findings of the study based on the statistical testing of the hypotheses formulated. The chapter further presents the implications of the findings for classroom management, Government, schools, other policy makers and all other stakeholders in education who may be involved in shaping the behavioural path of the youth. Recommendations and suggestions for further research are also presented in the chapter.

Discussion of Findings

Assessing the impact of Reinforcement, Modelling and Multi-technique on Participants with Inattention Behaviour Problem

This was determined using a one-way between-groups analysis of covariance to compare the effectiveness of reinforcement, modelling, and multi-technique designed to reduce or terminate participants' inattention behaviour problem. The descriptive data presented in table 7, the ANCOVA results presented in table 8 as well as the results of the Pairwise Comparisons presented in table 9 indicate that differences exist in the effects of the four independent variables, reinforcement, modelling, multi-technique and the control group on participants. It can be suggested that there are significant differences in the participants' responses to the intervention package by way of effects. The effectiveness of the three treatments in ensuring change in pupils' disordered behaviour manifests in the fact that all three techniques did record significant positive effect on participants' inattention behaviour as measured via the ASEBA TRF scores after treatments. These positive changes in inattention behaviour among participants persisted even after the experimental period. This was shown after the post-experiment observation of participants. These effects in behaviour change however, differed from technique to technique The finding suggests that a behaviour change technique applied successfully and effectively in changing inattention behaviour in one Ghanaian classroom situation may not necessarily work effectively in another situation though the circumstances may be similar. This finding supports the assertion made by Irwin, et al (2005) that the vast diversity in tribal

Ghanaian societies presents significant factors that warrant attention in classroom management of children coming from these various ethnic groups with their varying nuances in behaviour and general protocol. Such diversity of background elicits a great variety of management techniques and strategies to accommodate individual and tribal group differences in discipline in the classroom. One should therefore not rely on one strategy or technique in managing disordered behaviour of pupils since little or no results can be achieved.

The finding also supports Begun's (1996) position that social skills which are defined as observable, definable, and learned behaviours that help the individual to achieve positive results in a certain situation and be accepted by society are taught in a systematic manner using different and specific behaviour change methods. Baker, (2004) Çolak (2007), support Begun's finding when they suggest that among these methods are direct teaching, reinforcement, feedback, cooperative learning, providing cues, opportunity teaching, shaping, modelling, behaviour rehearsal, peer tutoring, social stories, and video modelling. This is a confirmation of the fact that, to achieve results in classroom behaviour transformation, one does not have to rely on only one method.

This finding of the study clearly aligns with the findings of Robinson et al (2005) who question the effectiveness of corporal punishment alone as the behaviour change method and underline the side effects of corporal punishment such as running away, fear of teacher, feelings of helplessness, humiliation, aggression

and destruction at home and at school, abuse and criminal activities. Gershoff (2002) also reveals a relationship between the uses of only corporal punishments as behaviour change technique and increased aggression and lower levels of moral internalization and mental health and adds that adults who were corporally punished when children are more likely to be criminals, be violent with their sexual partner, and spank their own children. The finding thus reinforces earlier findings that suggest a complete shift by classroom teachers from punishment to least intrusive strategies in managing classroom behaviour. This finding further corroborates that of Gordon (1981) who says, disciplining children with intrusive strategies damages their physical, emotional, and social well being and will therefore achieve no meaningful results. The finding also gives credence to Agbenyega's (2006) observation that discipline in Ghanaian basic school has failed because of the excessive use of corporal punishment by teachers and school authorities.

Assessing the impact of Experimental Conditions Reinforcement, Modelling and Multi-technique on Participants with Aggression Behaviour Problem.

The second finding of the study is that reinforcement and modelling or multi-technique approach are effective in modifying aggression behaviour problems of pupils in a multi-ethnic Ghanaian classroom. This was arrived at when the one-way ANCOVA statistical tool was used alongside with the descriptive statistics. The results as revealed in Tables 10, 11, and 12, show evidence of significant

between group differences existing between the reinforcement group and each of modelling and control group with respective mean differences of-3.92 and-12.02 each of which was significant at 0.05 level of significance.

The results also indicate significant differences between the modelling group and the multi-technique group (MD=3.29 and between the modelling group and the control group (MD=-8.10). Significant difference was also found between the multi-technique group and the control group (MD=-11.39).

In summary, it was observed that the reinforcement group and multi-technique group were homogeneous group as they were both equally effective in improving aggression behaviour problems of participants. The results suggest that to achieve positive result when managing the aggression behaviour of pupils with strategies other than punishment, the classroom teacher may have to pair either reinforcement or multi-technique with any other strategy. The results further suggest that though reinforcement alone may not be wholly effective in managing aggressive behaviour, it is the single most viscous denominator across other non-intrusive behaviour change techniques (Godwyll 1992). This is probably so due to the fact that multi-technique is a blend of modelling and reinforcement while in modelling alone too, it is the interest in what is modelled that reinforces the one recognition and acceptance by the imitator, as suggested by Okoli (2006). This finding aligns with the finding of Daramola (1987) who observed that Reinforcement is a major tool in behaviour analysis; it is a major condition for most learning. Cooper et al, (1987) posit that positive reinforcement is the most widely applied principle of behaviour. It is one of the cornerstones

upon which applied behaviour analysts have built the technology of behaviour change. Positive reinforcement has been used successfully alone or in combination with other procedures in numerous training and development programmes across a wide range of populations, settings, and behaviours (Wilt and Adams, 1980; Matson, 1980; Geller, Winnet and Everett, 1982; Sindelar, Honsaker and Jenkins, 1982; parker, Cataldo, Bourland, Emurian, Corbin and Page, 1984; Haring, 1985; as cited in Mather and Goldstein (2001) and Okoli, 2002).

Negative reinforcement is also often used in the classroom to manage problem behaviours. Teachers inadvertently pay attention to a child who may not be complying and withdraw their attention contingent on the child's compliance (Mather and Goldstein, 2001).

The finding is in support of the work of Madsen, Becker, and Thomas (1968) as cited by Mather and Goldstein, (2001) who evaluated rules, praise, and ignoring for inappropriate behaviour in two children in a typical second-grade classroom and in one child in a kindergarten class. The results indicated that in the absence of praise, rules and ignoring were ineffective. Inappropriate behaviour decreased only after praise was added. Praise is a major aspect of reinforcement, so it confirms the effectiveness of reinforcement in behaviour change practices as the current finding captured and indeed corroborates the earlier one by Madsen, et al (1968) as cited in Mather and Goldstein (2001).

Others have demonstrated the importance of praise in a general education classroom (Thomas, Becker, & Armstrong, 1968 as cited in Mather and Goldstein, 2001)). Specifically, whenever teacher approval was withdrawn, disruptive behaviours increased. This position by Thomas, et al strengthens the finding in the current study that, multi-technique approaches are as equally effective as reinforcement. In their study, Madsen, et al found that when praise (reinforcement) was added to other methods different from reinforcement (rules and ignoring) inappropriate behaviour decreased. The two strategies, reinforcement and multi-technique are non-intrusive behaviour change methods that focus on the target behaviour hence their success. This fact confirms the observation by Mather and Goldstein (2001) that when managing a disruptive behaviour, it is important to focus on tasks and behaviours rather than on approval. In the latter situation, teachers may focus on their relationship with the disruptive student when trying to get that student to behave. This strategy, unfortunately, is usually ineffective over the long term. In this regard, it can be concluded that the strategy succeeded largely because it was systematically and sparingly applied during the experimental period in the study confirming the position of Mather and Goldstein (2001).

The success of this strategy in the study can be explained by the fact that because the classrooms used were heterogynous in terms of ethnicity and socio-economic background, teachers were made to apply the different aspects of the strategy (i.e. both negative and positive reinforcement, video, symbolic and live modelling, as well as the multi-technique) consciously and in systematic

manners. This confirms Cangelosi's (2004) observation that, you achieve success with the behaviour modification principles of extinction, reinforcement schedules, shaping, cuing, generalisation, discrimination, modelling and satiation by (1) consciously considering their influence when planning learning activities and interacting with students and (2) applying them systematically to off-task behaviour problems.

It could also be explained that the success of this strategy is partly as a result of the fact that not one type of reinforcement schedule only was used during the treatment process. Teachers were made to use both fixed and intermittent reinforcement schedules during the experiment. This aligns with the observation of Cangelosi (2004) that" how long a behaviour pattern, either on-task or off-task, persists is largely dependent on the scheduling of positive reinforcers." (p 318).This reason is also confirmed by Lewis & Doorlag, 1991, pp.124- 127; Martin & Pear, 1996, pp.77-89 as cited in Cangelosi (2004) that "fixed schedules of positive reinforcers are particularly powerful in motivating students to initiate a behaviour pattern, but intermittent schedules are far more powerful in getting students to retain a behaviour pattern once the pattern has been started. This is because the student whose behaviour pattern is being positively reinforced cannot accurately predict when rewards will occur because an intermittent schedule of reinforcement is irregular" (p. 319).

Assessing the Effects of Reinforcement, Modelling and Multi-technique on Male and Female Participants with Inattention Behaviour.

The third finding of the study is that there is no significant difference in the effects of reinforcement, modelling and multi-technique on participants between male and female. In other words, on inattention, male and female participants did not respond differently to the intervention measures used. Male and female pupils' reaction to the supposed change in behaviour as regards inattention will be the same.

In arriving at this finding, a 2 by 4 between groups of analysis of covariance (ANCOVA) was conducted to assess the effectiveness of three programmes in reducing or terminating inattention behaviour problem for male and female participants. The results show that in effecting a change in inattention behaviour, reinforcement is the most effective of the three strategies used. This is followed by modelling. This finding thus suggests that inattention behaviour in the classroom (exhibited by both girls and boys) can be corrected successfully or effectively with either reinforcement or modelling. Indeed when reinforcement is combined with modelling (multi-technique approach) the effect is not as much as the two individually on inattention behaviour change.

This finding corroborates the position of some scholars who see inattention as a minor behaviour pattern as compared to others, and which is exhibited commonly in the classroom by both male and female pupils. Evertson, Emmer and Worsham (2003) posit that in describing the concept of disordered behaviour, rather than enumerating all possible misbehaviours that might occur in classrooms, it is more manageable to think of categories. They categorised

behaviour problems into non-problem, minor problem, major problem but limited in scope and effects and escalating or spreading problem. Evertson, et al(2003) describe brief inattention, some talk during a transition between activities, small periods of day dreaming, and a short pause while working on an assignment as common behaviours that are not really problems for anyone because they are of brief duration, common with both boys and girls and don't interfere much with learning and instruction.

With minor problem, Evertson, et al (2003) describe them as behaviours that run counter to class procedures or rules but that do not, when occurring infrequently, disrupt class activities or seriously interfere with learning. Examples are calling out or leaving seats without permission, reading or doing unrelated work during class time, passing notes eating candy, scattering trash around, and talking excessively during independent work or group work. To them, these behaviours are minor irritants as long as they are brief in duration. "All of these constitute inattention behaviour exhibited equally by both boys and girls on daily basis and it is only when pupils engage in such behaviour for an extended period of time that classroom instruction will suffer" Evertson, et al (2003, p.174).

Implying from the position of Evertson, et al (2003), it can be concluded that since multi-ethnic Ghanaian classrooms are made up of pupils of diverse background, pupils whose parents can not afford to provide them with certain basic classroom requirements will once in a while leave their seats without permission, pass notes and do other related activity to solicit assistance from

friends or classmates. They do not usually take permission from teachers probably for fear of being caned or subjected to one form of punishment or the other.

This explanation is corroborated by Agbenyega (2006) who reports on the practice of corporal punishment in two basic schools in the Greater Accra Region of Ghana. The findings reveal that an overwhelming majority of the teachers (94and 98 percent) use corporal punishment to enforce school discipline. The results further indicate that the majority of the teachers in both school sites administer corporal punishment to students who perform poorly in academic work or who do not possess certain classroom necessicities required of them. This implies that students with special learning problems who are not officially identified may be punished often for poor performance. Another surprising aspect of this result is that a large number of teachers from all the schools indicate their unwillingness to discontinue corporal punishment in their schools.

The finding also aligns with the position of Cangelosi (1993) when he observed that off-task behaviours such as students allowing their minds to wander from the topic at hand, daydreaming, being quietly inattentive because of the effects of drugs; failing to complete homework assignments, skipping class, and cheating on tests are all inattention behaviour engaged in, in almost the same measure by both boys and girls from diverse backgrounds and are usually thought of as nondisruptive.

The finding confirms the unity and cohesion that exist in co-educational practice when it comes to certain attributes of the school system. It therefore goes to defeat the argument by opponents of co-education and strengthens that put up by the proponents and advocates of the system. Closely linked with this is the fact that children overcome some of their personal inadequacies when they socialise with both sexes and not same sex only.

The fourth finding of the study followed from the hypothesis that, there is no significant difference in the effects of the treatment on male and female participants with aggression behaviour problems.

The result of the analysis shows that whereas the Control group did not record any improvement the multi-technique group appeared to have benefited the most improvement. The reinforcement group followed with improvement. The modelling group came up after the two groups. This finding clearly suggests that aggression behaviour problems exhibited by both girls and boys are relatively more difficult to correct with only one method or one strategy. In assisting the average Ghanaian male pupil or the average Ghanaian female pupil to change or even eradicate their aggression behaviour problem the multi-technique approach has to be employed.

Further analysis showed that in all cases however, the female participants appeared to have benefitted more in improvement, by way of effects than their male counterparts. This could be explained that while boys employ more physical and direct aggression, girls resort more to verbal and indirect aggression.

This finding buttresses that of Crick and Grotpeter (1995) who found evidence to suggest that girls use more relational aggression than boys whilst boys use more overt aggression than girls. The finding also aligns with Osterman's (1999) work, where to establish cross-cultural validity of these findings by Crick and Gropeter (1995), he used the Attributional Discrepancy Index (defined as self-estimated data minus peer-estimated data) as used by Lagerspetz, Bjorkqvist and Peltonen (1988) and Bjorkqvist et al. (1992) to assess the sex differences in the forms of aggression in some countries (namely Finland, Israel, Italy and Poland). He found that in these cross-cultural comparisons girls across ethnic groups and nations used indirect aggression more than other means of aggression while boys used more direct aggression than girls.

Osterman (1999) further noted that the female preference for indirect aggression (and male preference for direct aggression) is not only a cultural phenomenon, limited to one culture, but occurs in other cultures as well, irrespective of religion and language. This can further be explained that since indirect aggression is seemingly lighter in intensity than direct aggression, it will be relatively easier for Ghanaian classroom practitioners to manage with least intrusive strategies such as reinforcement and modelling.

This finding clearly supports the earlier explanation that female pupils who exhibit aggressive behaviour problems in multi-ethnic Ghanaian classrooms are more easily prone to change than their male counterparts.

In investigating the nature of aggressive behaviour in Ghanaian schools, Amedahe and Owusu-Banahene (2007) identified twelve as forms of aggression in school campuses in Ghana. The three most common aggressive forms of behaviour reported by pupils were 'insulting the person concerned,' 'verbal exchange', and 'teasing'. These three however, were more frequently used by female than male pupils. The finding supports the position of Amedahe and Owusu-Banahene (2007) that, there could be several reasons why Ghanaian school children, especially female children, resort to the use of verbal aggressive behaviour (such as insulting, verbal exchanges and teasing) when they are angry with friends or the school authorities. First, these forms of aggression can easily go unnoticed by the authorities and may not attract attention for punishment to be meted out against the perpetrator. Second, the use of verbal aggression does not inflict physical harm on the victim; hence most authorities would overlook its effect on the victim. Finally, direct verbal aggression could be seen as the 'lesser evil' which is easier to correct or train the child to put a stop to, compared with the use of physical aggression which is more difficult to correct.

This finding also provides support for previous studies that there is a higher probability of female pupils giving up their aggressive behaviour than their male counterparts.(Bjorkqvist et al 1992; Campbell et al 1997; and Osterman, 1999). Typically, Ghanaian female school children do not like to use unapproved strategies within a social environment and within the school culture. This calls for them to be more feminine in their interpersonal relations with others than being masculine. (Amedahe and Owusu-Banahene 2007). In the light of this, female

pupils would choose an alternative strategy that will deliver their intention of causing harm to their victim in a way that would not call for the use of physical or masculine means of causing harm. Such means as 'gossiping about the person', and' insulting the offender' which female school children usually use are easier to correct or change than fighting, kicking, pulling of hair, destruction of own and other pupils property, and pushing or slapping used by male school children.

The conclusion therefore is that the three intervention strategies had more impact on female participants than male participants largely due to the forms of aggression each sex group uses. While the male pupils use direct and physical forms, their female counterparts do not.

The fifth finding of the research is that, though differences existed between the effects of the three techniques used in the experiment on participants due to ethnicity, these differences were not significant. The multi-technique is the most effective, followed by reinforcement and modelling in that order, this improvement was not significant. On inattention, pupils of different ethnic persuasions respond to these intervention measures in the same way.

This finding contradicts the observation by Gollnick and Chinn, (2002) that 'the reality of this heterogeneous constitution, especially among student populations, means that teachers must "understand the ethnic setting in which the school is located" as these "students bring to class different historical backgrounds,

religious beliefs, and day-to-day living patterns that drive the manner in which they behave in the classroom.'

Irwin, Anamuah- Mensa, Aboagye & Addison (2005) found out that, children come to school with their own ethnic and tribal identities based on traits and values which they have been socialised. These identifiers, such as the traits and values mentioned earlier, are manifestations of their religion, socioeconomic status, ethnicity, gender norms, language, and other distinguishing ethnic behaviours. These behaviours may be distinct or dissimilar to those expected of the classroom teacher, and special preparation by way of behaviour modification techniques, to deal with such diverse groups may be necessary. This position also clearly conflicts with the finding by this research. The study revealed that when assisting pupils to move away from their inattention behaviour problems with reinforcement and modelling strategies, their ethnic backgrounds do not play any influential role.

The finding however, aligns with the position of Cangelosi (1993) when he observed that off-task behaviours such as students allowing their minds to wander from the topic at hand, daydreaming, being quietly inattentive because of the effects of drugs; failing to complete homework assignments, skipping class, and cheating on tests are all inattention behaviour engaged in, in almost the same measure by both boys and girls from diverse backgrounds and are usually thought of as nondisruptive.

Another position this finding contradicts is that of Alhassan (1992) who, proposed in his study that ' students' misbehaviour could be attributable to confusion as to

which social norms are preferable or acceptable, especially in conditions where conflicting cultures exist and work in close proximities as is often the situation in African tribal societies. Under such circumstances, management in multi-ethnic classroom demands that teachers overcome ethnic or tribal stereotypical notions to effectively meet special demands in accommodating the various micro-ethnic groups of students and to embark on an anti-ethnic perspective in interaction with students.' Clearly, from the finding, participants' misbehaviour and for that matter, its correction was not influenced in any way by their ethnic background as proposed by Alhassan (1992).

According to Gollnick and Chinn, (2002), a teacher often assigns academic expectations to students on the basis of their membership in class, race, ethnic, and gender groups, so it would not be far fetched to assume that management of student behaviour in the classroom would be similar. Consequently, in the management of multi-ethnic classrooms, compared to mono-ethnic classrooms, Gollnick and Chinn (2002) emphasised that teachers in multi-ethnic classrooms need to become proficient in multiple systems of perceiving, evaluating, believing in, and acting according to patterns of various micro-cultures in which they participate. The presence of students with diverse ethnic backgrounds in the classroom necessitates a differentiation of behaviour management techniques and strategies to accommodate ethnic and tribal idiosyncrasies or nuances, and diversity in classroom discipline issues. From the finding however, in managing inattention behaviour problems, teachers should rather refrain from assigning ethnic expectations to it.

Irwin and Nucci (2004) contended that there are concomitant tribal-laden interpretations, explanations, expectations, and assumptions that may determine appropriate behaviour and also accentuate the multi-ethnic or multi-tribalism of the Ghanaian population. The finding in this study can therefore suggest that all ethnic groups in Ghana ascribe the same interpretations, explanation, expectations and assumptions to pupils' inattention behaviour problems.

The sixth finding of the study is that there is a significant difference in the effects of reinforcement, modelling and multi-technique approach in improving aggressive behaviour problems in a multi-ethnic Ghanaian classroom due to ethnicity. The reinforcement group experienced the biggest change in behaviour. The reinforcement group was followed in terms of improvement by the multi-technique group and the modelling group in that order. The finding suggests that, since pupils come from diverse ethnic backgrounds with their own nuances and idiosyncrasies, they are most likely to respond differently to various behaviour correctional measures.

Indeed, in the Ghanaian society, different ethnic communities have different ways of disciplining their young ones whose conduct violates the communities' norms, rules, conventions and other practices. Pupils, whose aggressive behaviour at home is met with corporal punishment by parents as a disciplining measure, become more aggressive in school when the latter applies the same measure to discipline children who exhibit disordered behaviour. It is therefore,

very crucial for one to consider the pupil's ethnic background when selecting which non-intrusive behaviour change technique one uses.

This finding is supported by the finding of Irwin and Nucci (2004) who contended that attempts to understand the continuum of influencing factors on student behaviours in the classroom calls for teachers to be cognisant of the diversity of ethnic backgrounds of students, in addition to the myriad of possible causal factors emanating from such varied ethnic representation in the classroom population.

The finding is again comparable to the finding of Irwin and Nucci (2004). They concluded that ethnic or tribal traditions are not rooted only in a student's ethnicity but general customs that define the Ghanaian personality. This includes such diverse factors as linguistic, religious affiliations, class or socioeconomic status exceptionalities, and general family values, beliefs, and identities. There are concomitant tribal-laden interpretations, explanations, expectations, and assumptions that may determine appropriate behaviour and also accentuate the multi-ethnic or multi-tribalism of the Ghanaian population.

Understanding cultural frames of references and other ethnic issues that compel students to conform with, or rebel against, classroom discipline or authority figures such as teachers may be instrumental in determining ethnically sensitive and appropriate intervention strategies in the classroom. (Irwin and Nucci, 2004). This observation clearly aligns with the finding of this study.

Effective intervention involves recognising and intercepting or intervening in potential non-constructive or distracting behaviours of students in the classroom,

and effective strategies include those that not only curtail or diminish undesirable behaviours but are least intrusive and refocus the students to the task at hand (Irwin and Nucci, 2004).

Gollnick and Chinn (2002), also support this finding when they observe that 'a teacher often assigns academic expectations to students on the basis of their membership in class, race, ethnic, and gender groups, so it would not be far fetched to assume that management of student behaviour in the classroom would be similar.' Consequently, in the management of multi-ethnic classrooms, compared to mono-ethnic classrooms, Gollnick and Chinn (2002) emphasised that teachers in multi-ethnic classrooms need to become proficient in multiple systems of perceiving, evaluating, believing in, and acting according to patterns of various micro-cultures in which they participate. The presence of students with diverse ethnic backgrounds in the classroom necessitates a differentiation of behaviour management techniques and strategies to accommodate ethnic and tribal idiosyncrasies or nuances, and diversity in classroom discipline issues.

This finding supports that of Alhassan (1992). He proposed in his study that students' misbehaviour could be attributable to confusion as to which social norms are preferable or acceptable, especially in conditions where conflicting cultures exist and work in close proximities as is often the situation in African tribal societies. Under such circumstances, management in multi-ethnic classroom demands that teachers overcome ethnic or tribal stereotypical notions to effectively meet special demands in accommodating the various micro-ethnic

groups of students and to embark on an anti-ethnic perspective in interaction with students.

Classroom studies by Ametepei (2002) as cited by Irwin, et.al, (2005), support this finding. The findings of those studies identified excessive punishment and low academic achievement as contributors of classroom misbehaviour by pupils. Because of the vast disparity between rich and poor, the rate of illiteracy, and lack of access in Ghana, it can be assumed that a majority of students may be coming from homes whose cultures differ markedly from the culture they encounter at school. Their behaviour could therefore result from ignorance of acceptable behaviours, to unfamiliar habits of behaviour in a group situation such as those of the classroom and school.

The seventh finding of this study is that there is no significant difference in the effects of reinforcement, modelling and multi-technique approach in improving inattention behaviour problems in a multi-ethnic Ghanaian classroom due to socio-economic background. This means that, virtually all pupils from both low and high socio-economic background responded equally to the intervention measures. This finding implies that in the management of inattention behaviour problems pupils' socio-economic background does not influence the non-intrusive techniques used by the classroom teacher. The techniques shall be effective across board; whether the beneficiary is from a poor background or from rich parents.

This finding supports the assertion by Gyekye (2002) that morality in Ghanaian society is held in high esteem. Teachers represent parents in schools and they

are encouraged by parents to address all problems posed by students irrespective of their social backgrounds. This can be explained that, as the notion of personal character occupies a central place in Ghanaian society, schools are seen as places of authority where children will be made to conform to the standards of society and not to parochial or selfish familial idiosyncrasies. This way, pupils will have to surrender all the social prestige, recognition, and other attributes associated with their familial background and conform to norms spelt out by the school. Be that as it is, the application of such non-intrusive methods as reinforcement, modelling or multi-technique in correcting inattention behaviour will meet little or no defiance from pupils.

The results of Agbenyega's (2006) study align with this finding. The results indicated a close collaboration between teachers and parents in terms of discipline. Thus the home (whether poor or not) and school are inextricably linked. Thus, when it comes to the use of non-intrusive techniques in correcting inattention behaviour problems in the multi-ethnic classroom, pupils' socioeconomic background does have little or no influence.

Hogan and Pressley's (1997), and von Glasersfeld's (1995) findings as cited in Agbenyega (2006) support the finding. They observed that in the behaviourist tradition, learning is conceived as a process of changing or conditioning observable behaviour as a result of selective reinforcement of an individual's response to events that occur in the environment. This implies that pupils respond equally to such techniques because of the kind of atmosphere created by the teachers when applying the techniques.

Another possible explanation to this finding is that, the source of behaviour oscillates between internal and external factors so that an external event may result in an internalisation of emotion whose source when manifested at a later time can be identified as internal, and vise versa. A child's socio-economic background therefore, can only play the role of influencing an internal or external condition that will subsequently make him or her emit certain behaviour, but it can not influence the behaviour directly exhibited by the child. Hence, if teachers' interpretation of misbehaviour is based on clear knowledge of the root course of the misbehaviour, that misbehaviour could be interpreted as an isolated incident of insolence or disrespect. Such interpretations, according to Hoover and Kindsvatter (1997), as cited in Irwin, et al (2005), would certainly preclude one from an appreciable scrutiny of other possible causal factors, leading to actual causes of misbehaviour becoming obscure. According to Fields and Boesser (2002), in such situations misbehaviour will persevere until the root cause is addressed.

The eighth finding is that there is a significant difference in the behaviour change of participants from different socio-economic backgrounds who exhibit aggression behaviour problems after the treatments. The results show that at post-test, the reinforcement group recorded the highest mean score followed by the modelling group and the multi-technique group in that order, while the control group which did not realize any change at all came after the multi-technique group for participants in the low

socio-economics class. As regards the high socio-economics class, the reinforcement group recorded the greatest improvement. The modelling group followed while the multi-technique group followed reinforcement and modelling. The control group followed with no change.

Evidence from further analysis shows that significant between group differences exist between the reinforcement group and each of modelling group and control group.

The result also indicates significant differences between the modelling group and the multi-technique group and between the modelling group and the control group. Significant difference was also found between the multi-technique group and the control group.

It is observed from the results that the reinforcement group and multi-technique group were homogeneous group as they were equally effective in improving non-aggression in the participants. This result shows that in the management of aggressive behaviour of pupils, pupils' socio-economic backgrounds must be taken into consideration. This is because the causes of aggression among pupils vary among perpetrators.

This finding supports the assertion of Frick, et al, 2005, Lahey and Waldman, 2003; that lack of empathy or empathic concern (callous disregard for the welfare of others) is an important risk factor for aggressive behaviour. It follows therefore, that, children from homes where violent scenes are encouraged or are rampant will necessarily be aggressive not because of the status of their parents but because of what they observe happen.

The finding suggests that pupils engage in aggressive behaviour not because of their economic status. Hence, their responses to any change in their aggression behaviour in the classroom, will not come about as a result of their socio-economic background. This aptly aligns with the Amedahe and Owusu-Banahene's, (2007) research finding. They posit that among Ghanaian male students, physical strength is highly associated with masculinity, fame and respect among school peers. Hence, in any given conflict situation, either among students, or between students and school authorities, male students are more likely to resort to the use of violent means in dealing with the situation. Most often the motive behind such an option on the part of these students is to gain popularity and fame among their peers for being tough and 'hard' on the victim or school administration and not because of their socio-economic status. Because adolescent male students are known to be higher risk takers than females (Newberger, 2002) most of these students engage in such acts without thinking about consequences of their action, which include bringing their names and that of their families into disrepute, punishment, suspension and dismissal from the school

The highest level of impact recorded by reinforcement and multi-technique on participants, irrespective of their socio-economic background, explains why reinforcement is regarded as the most effective non-intrusive technique for changing aggressive behaviour problems. This observation supports Cooper, Heron, & Heward (1987). They posit that positive reinforcement is the most widely applied principle of behaviour. It is one of the cornerstones upon which

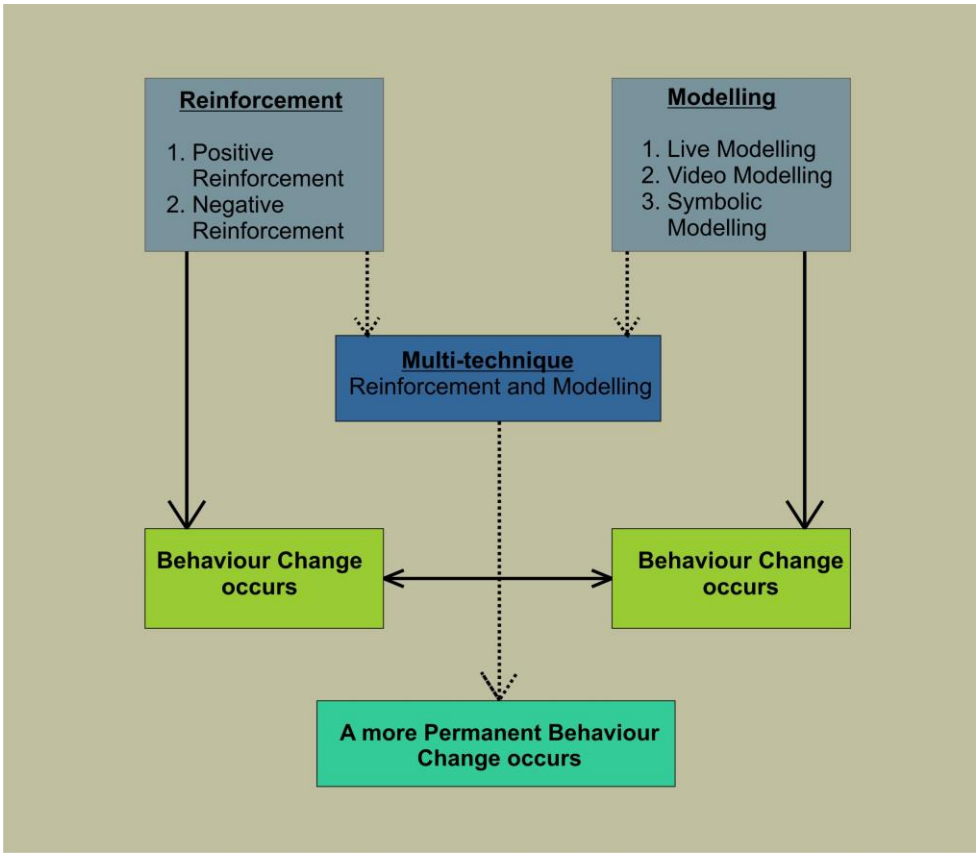
applied behaviour analysts have built the technology of behaviour change. Positive reinforcement has been used successfully alone or in combination with other procedures in numerous training and development programmes across a wide range of populations, settings, and behaviours (Wilt and Adams, 1980; Matson, 1980; Geller, Winnet and Everett, 1982; Sindelar, Honsaker and Jenkins, 1982; parker, Cataldo, Bourland, Emurian, Corbin and Page, 1984; Haring, 1985 all cited in Mather and Goldstein(2001); and Okoli, (2002).The appropriate application of positive reinforcement has repeatedly been demonstrated to increase both on-task behaviour and work completion (Barkley, 1990; DuPaul & Stoner, 1994; Goldstein, 1995; and Walker & Walker, 1991) as cited in Marther and Goldstein (2001).

Another position that supports this finding is that of Daramola (1987) who observed that reinforcement is a major tool in behaviour analysis. It is a major condition for most learning. Cooper et al (1987) and Hall (1971) as cited in Godwyll (1992).

The following position by some researchers lends support to the finding, and explains the differences in effects on pupils' aggressive behaviour problems by reinforcement, modelling and multi-technique. The vast diversity in tribal Ghanaian societies presents significant factors that warrant attention in classroom management of children coming from these various ethnic groups with their varying nuances in behaviour and general protocol. Such diversity of background elicits a great variety of management techniques and strategies to accommodate individual and tribal group differences in discipline in the

classroom. The reality of this heterogeneous constitution, especially among student populations, means that teachers must "understand the ethnic setting in which the school is located" as these "students bring to class different historical backgrounds, religious beliefs, and day-to-day living patterns (Gollnick and Chinn, 2002) that drive the manner in which they behave in the classroom. Children come to school with their own ethnic and tribal identities based on traits and values which they have been socialised. These identifiers, such as the traits and values mentioned earlier, are manifestations of their religion, socioeconomic status, ethnicity, gender norms, language, and other distinguishing ethnic behaviours.

Conceptual Behaviour Modification Technique Model (Multi-technique)



(Source: Researcher)

Summary and Conclusion

In summary, this study set out to explore how effective reinforcement and modelling would be in managing disordered behaviour. The idea behind the use of the two independent variables for the research is that teachers, school authorities, senior siblings, parents and guardians do make use of these methods in their everyday interaction. However, their effort with these strategies is short of deliberately structured approach meant to eradicate maladaptive behaviour. The research therefore directed the strategies involved in the two behaviour modification techniques at two specific disordered behaviours namely, inattention and aggression in the normal classroom environment.

This was against the background that the incidence of disordered behaviour is on the increase in the Ghanaian society. Additionally, school authorities seem to be at their wits end as to how to handle the upsurge of behaviour problems that confront them daily. Individual homes and the society at large have had their share of the effects of unchecked misconduct, hooliganism, gangsterism and vandalism. In view of the fact that attempts by teachers, school authorities, educational administrators and other personnel involved with the child at finding effective strategies for managing disordered behaviour of pupils have largely not been successful, the purpose of this study was to find out how effective reinforcement and modelling could be as behaviour modification strategies for disordered behaviour of pupils in a multi-ethnic Ghanaian classroom using the teachers as the key agents of change.

The findings of this research work confirm the effectiveness of reinforcement and modelling in modifying maladaptive behaviour among pupils in Ghanaian schools. However, the findings clearly showed that reinforcement is more effective on inattention behaviour change while its effects on aggression behaviour change were relatively less. Reinforcement is more effective on aggression behaviour change when combined with modelling. Multi-technique is thus, the most effective way of assisting pupils who are aggressive to have a change in behaviour. Modelling, as technique is only effective when combined with reinforcement. Through the findings, it can be concluded that if school authorities or the society can present an enabling environment that will make it possible for teachers and all those whose work involves managing behaviour consciously and

systematically apply reinforcement and modelling in the classroom setting, it will go a very long way to reduce or even eradicate disordered behaviour among pupils.

Responsibility therefore lies on all agencies and authorities responsible for the development of the educational enterprise in Ghana, to initiate policies and programmes that will offer this all important enabling environment.

Finally, the study has justified the call by earlier researchers for, the abolition of corporal and other forms of punishment in managing disordered behaviour of pupils in our classrooms. The alternative strategies, three of which (reinforcement, modelling and multi-technique) used in the study, successfully achieved the desired results, and are therefore recommended in place of punishment.

Implications for Educational Practice

The findings of the study provide empirical answers to some of the mindboggling questions that stakeholders in the Ghanaian Educational system have been asking. Several educational implications could be derived from this study in-as-much as its findings clearly demonstrate that reinforcement, modelling, and multi-technique approach are effective in changing disordered behaviour in the classroom.

Firstly, the fact that those least intrusive strategies are recommended for classroom behaviour management sends very serious imports to our educational enterprise. Since there is an acute shortage of professional counselling personnel in our educational establishments the adoption of these strategies can, to a very

large extent help solve or mitigate the impact of this problem. This view is clearly amplified by Godwyll (1991) when he suggested that "it will be less expensive, time-saving and less laborious to orientate teachers to these techniques through short in-service and training programmes, than to take them on long courses in Guidance and counselling.' This view point is in line with the thinking of Leff (1968) as cited in Godwyll (1991) who posited that behaviour analysis techniques such as the two above often lead to relatively rapid change, and do not require direct involvement of highly trained professionals. To him, they can be taught to parents, teachers and others who have direct contact with the child and do not necessitate the construction of a complex theoretical structure that ascribe responsibility for the child's problem to the parents and other sources.

It is also against this background that, it is critical that teachers redefine their roles as systematic change agents whose responsibility goes beyond traditional tasks related to education or academic assessment, teaching, and guidance, but also in mental, emotional and the physiological therapeutic activities aimed at assisting the holistic development of the child.

Furthermore, teachers are encouraged to apply reinforcement, modelling and or their combination in their daily interaction with their pupils. Since these three techniques are behaviours teachers engage in without much conscious effort it would be most inexpensive by simply consciously structuring their reactions to the maladaptive behaviour characteristics their pupils exhibit. This indeed, could be done by any average teacher even without any technical orientation to the

techniques. They are thus more natural, inexpensive and highly recommended for every classroom teacher.

The researcher is of the opinion that behaviour analysis technique with emphasis on less intrusive behaviour management techniques as described in this research, should be incorporated in the curriculum of Colleges of Education and the Universities that offer teacher education courses. It is even suggested that it is made one of the core courses of these institutions.

Recommendations:

On the basis of the findings of this research study, the following recommendations are made:

(1) There should be National support for comprehensive education that emphasizes among others:

   (a) Personal and social consciousness of the deleterious effects of corporal punishment in both schools and the society at large.

   (b) Promotion of acceptable social values such as patriotism, respect for authority, zero tolerance of violence, obedience, etc. in the youth both in school and outside school.

(2) There is the need to moderate the influence of western culture that has permeated various segments of the society on schools, especially the part played by violent and aggressive forms of entertainment. Express and positive rapport between the home (parents) and the school (teachers) will be a useful predictor in this regard.

(3) The legislature should as a matter of urgency revisit the state's position on the use of punishments in schools, and make amendments to emphasize the following among others:

(a) The national associations of teachers (i.e. NAGRAT and GNAT) should incorporate in their code of professional ethics sanctions for application of corporal punishment by members in schools.

(b) The teachers' associations should endeavour to stress the use of less intrusive methods in managing behaviour in teacher manuals and ensure that members have a mastery of their use.

(c) Discouraging parents from submitting their children who misbehave at home to be spanked by teachers in the schools, by prescribing sanctions for such parents.

(d) The two other tiers of government should assist with policies that will help accelerate implementation of the law.

(4) The state should as a matter of urgency ensure the training of more school counsellors and psychologists to intervene.

(5) The use of both symbolic and video modelling as employed in this study was effective for behaviour change. It is therefore recommended to guidance and counselling coordinators, social workers and others involved in assisting children and adolescents.

(6) It is also suggested that for effective behaviour modification in the classroom, the intervention should focus more on the multi-dimensional approach than only one method.

(7) Furthermore it is suggested that, though teachers have been using these less intrusive strategies over the years, for these techniques to be effective in modifying behaviour, they must be consciously scheduled and consistently applied.

(8) Every school district in the country should have a well equipped and well resourced guidance and counselling office, manned by competent counsellors who will be organising periodic guidance and counselling sessions on a wide range of issues, with particular emphasis on alternative behaviour management strategies without the use of violent measures like punishment.

Contributions to Knowledge

(1) In this study a conceptual behaviour modification technique called multi-technique was developed. The framework shows that if reinforcement strategies are paired with modelling strategies in behaviour management, there would be much more effective change in behaviour than the use of a single strategy.

(2) The study has revealed the behaviour modification methods that are more effective on either boys or girls who exhibit undesirable behaviours in the classroom. This has also helped to dispel the notion that boys and girls respond differently to these interventions by teachers in assisting pupils' to overcome inattention behaviour problems.

(3) This study has also helped to expose the hollowness in the opinion held by some individuals that people of certain ethnic extraction respond differently on measures of discipline as compared to the Akans when managing inattention problems. The study highlighted the strength in the multi-ethnic classroom unity.

(4) The study will re-orient and guide classroom teachers to apply the more non-intrusive strategies in mitigating classroom indiscipline among pupils. This will in turn help reduce, if not to eliminate completely the over reliance on application of corporal punishment in Ghanaian classrooms.

(5) Since most pupils see measures aimed at motivating them to study as their rights vis a vis their performance, there is the need for them to view these measures as reformatory as well. The study highlighted the importance of viewing such measures as such by pupils.

(6) A theory of non- systematic and non-conscious application of non-intrusive behaviour change technique leads to their failure to effectively manage behaviour was propounded during the study.

(7) The study has also shown why non-intrusive strategies instead of punishment should be used by classroom teachers to manage inattention and aggression behaviour problems.

(8) The study has been able to establish a causal link between direct physical aggression and male pupils in the multi-ethnic Ghanaian classroom and indirect non-physical aggression and female pupils in a multi-ethnic Ghanaian classroom.

(9) This study with psycho-social approach could be considered a timely and useful response to the Ghana government's clarion cry, soliciting for behavioural and attitudinal change in the youth and the generality of the Ghanaian citizenry.

The findings of this study clearly demonstrate that if proper attention is paid to the young pupils in the primary schools through well mapped out behaviour modification strategies, there is the probability of re-directing them and the much older youth from disordered behaviour.

Suggestions for Further Study

Though the hypotheses posed at the beginning of the study and other interests raised for investigation have largely been exhaustively dealt with, with the experience gained by the researcher in this study, some issues and new areas have cropped up for further investigations.

(1) On the basis of the scope and delimitations of the study, future researchers should endeavour to replicate the study in the three northern regions of Ghana who were left out in the study strategically due to the mono-ethnic nature of most of their classrooms.

(2) This study did not control for location. It is therefore suggested that a comparative study of rural and urban schools could be carried out.

(3) It is also suggested that any future research could explore the effects other non-intrusive or least intrusive behaviour management techniques other than the two used in this study have on disordered behaviour.

(4) Furthermore, future researches could focus on a comparative analysis of the four independent variables on high indices and low indices target behaviour group.

(5) A survey to gather a catalogue of techniques used in multi-ethnic Ghanaian classrooms could be embarked upon to roundly inform the powers that be of the extent of their use.

(6) A study could be conducted into the personal perception of teachers on the use of these least intrusive techniques to broaden the public's insight into how teachers feel about the use of these methods in classroom behaviour management.

(7) It is the conviction of this researcher that experimental studies of this nature should make room for a follow up study to establish whether the desired behaviour patterns were maintained after the experiment period. This will go a long way to confirm the effectiveness or otherwise of the technique in bringing about relatively permanent changes in behaviour patterns.

(8) Future studies concentrating on comparing the effects of more intrusive techniques such as Time Out and Response Cost with less intrusive and least restrictive techniques such as Shaping, Modelling, Reinforcement, Contingency Contracting and Extinction on disordered behaviour could be carried out.

Generalisation of the Results

The researcher took measures to reduce possible errors in the construction and validation of the research instruments used to adjudge the findings of the study for generalisation.

Since the participants used in the study were drawn from schools of the middle and southern belts of Ghana, it is reasonable to assume that the findings of the study represent the situation as it obtains in the entire seven regions of these belts of the country.

Teachers all over Ghana are confronted with the same classroom maladaptive behaviour by pupils. Teachers, irrespective of ethnic, socioeconomic, gender and age are faced with the challenge of managing such disordered behaviour of pupils and the attendant consequences. It is therefore logical to conclude that pupils' disordered behaviour anytime, anywhere, remain the same irrespective of geographical locations.

It does seem therefore pertinent to generalize the findings to all basic school classrooms.

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APPENDIX I

Distribution of Population before Sampling

Name of school	**Location Town/village**	**District/Municipality/ Metropolis**	**Region**	**Enrolment Boys**	**Girls**	**Total**
Salvation Army Primary School	Tema	Tema West Municipal	Greater Accra	29	35	64
Fiave E.P Primary School	Ho	Ho Municipal	Volta	27	34	61
Topease Methodist Primary School	Asamankese-Topease	West Akim Municipality	Eastern	27	21	48
Amissano Catholic Basic School	Amissano	Komenda-Edina-Eguafo-Abirem Municipality	Central	28	32	60
Total	**4**	**4**	**4**	**111**	**122**	**233**

APPENDIX II

RUTTER'S CHILD BEHAVIOUR RATING SCALE

Below are a series of descriptions of behaviour often shown by children. If the child definitely shows the behaviour described by the statement, place a cross in the box in column 3. if the child behaves somewhat according to the statement but to a lesser extent or less often, places a cross in the box in column 2. if, as far as you are aware, the child does not show the behaviour, place a cross in the box in column 1. Please show one cross for each statement.
Thank you.

	Statement	Doesn't Apply	Applies Somewhat	Certainly Applies
1.	Very restless. Often running about or jumping up and down. Hardly ever still.	☐	☐	☐
2.	Truants from school	☐	☐	☐
3.	Squirmy, Fidgety child	☐	☐	☐
4.	Often destroys own or Other's belongings	☐	☐	☐
5.	Frequently fights with other children	☐	☐	☐
6.	Not much liked by other Children	☐	☐	☐
7.	Often worried, worries about many things	☐	☐	☐

8.	Tends to do things on his own, rather solitary	☐	☐	☐
9.	Irritable. Is quick to fly Off the handle	☐	☐	☐
10.	Often appear miserable, unhappy	☐	☐	☐
11.	Has twitches, mannerisms or tics of the face or body	☐	☐	☐
12.	Frequently bites nails or fingers	☐	☐	☐
13.	Frequently sucks thumb or finger	☐	☐	☐
14.	Tends to be absent from School for trivial reasons	☐	☐	☐
15.	Is often disobedient	☐	☐	☐
16.	Has poor concentration	☐	☐	☐
17.	Tends to be fearful or afraid	☐	☐	☐
18.	Fussy or over particular child	☐	☐	☐

19.	Often tells lies	☐	☐	☐
20.	Has stolen things on one Or more occasions	☐	☐	☐
21.	Has wet or soiled self at school this year	☐	☐	☐
22.	Often complains of pains or aches	☐	☐	☐
23.	Has had tears on arrival at school or has refused to come into the building this year	☐	☐	☐
24.	Has a stutter or stammer	☐	☐	☐
25.	Has other speech difficulty	☐	☐	☐
26.	Bullies other children	☐	☐	☐

How well do you know this child?

Very well ☐

Moderately well ☐

Not very well ☐

Signature (Mr/ Mrs/ Miss) ……

Date……..

Position……

Other remarks: ……

……

……

APPENDIX III

Behaviour Count Table for Baseline (Kozloff, 1974)

DAY	Mon Tue Wed Thurs Fri
NUMBER OF MINUTES/HOURS WATCHING & COUNTING	
HOW OFTEN TARGET BEHAVIOUR HAPPENED. (NUMBER OF TIMES, MINUTES, HOURS)	
NUMBER OF TIMES TARGET BEHAVIOUR REWARDED	
RELIABILITY %	

APPENDIX IV

ASEBA-TEACHER'S REPORT FORM FOR AGES 6-18

The answer you provide now will be used to compare with the answers you provide later. The information from this form will also be used for comparison with other information about this pupil. Please answer as well as you can, even if you lack full information. Scores on individual items will be combined to identify general patterns of behaviours.

<table>
<tr><td>PUPIL'S GENDER

( ) Boy ( ) Girl</td><td>PUPIL'S AGE</td><td>PUPIL'S ETHNIC GROUP OR RACE</td><td>Parental usual type of w
now (please be specifi
mechanic, high school
labourer, lathe operato
sergeant, etc.
Father's type of work
_____</td></tr>
<tr><td colspan="3">Today's date
Mo…….. Date…… yr……</td><td>Mother's type of work__
Your gender: ( )male (
Your role at the school:
( ) classroom teacher ( )</td></tr>
<tr><td colspan="3">Name and address of school
_____
_____
_____
_____</td><td>( ) special educator ( )
( ) teacher's aide ( )</td></tr>
</table>

I. For how many months have you known this pupil? ……months

II. How well do you know him/her? 0. ( ) Not well 1. ( ) Moderately well 2. ( ) Very well

_____

Be sure to answer all items

Below is a list of items that describe pupils. For each item that describes the pupil now or within the past 2 months, please circle the 2 if the item is very true or often true of the pupil. Circle the 1 if the item is somewhat or sometimes true of the pupil. If the item is not true of the pupil, circle the 0. Please answer all items as well as you can, even if some do not seem to apply to this pupil.

INATTENTION

0=Not True (As Far As You Know) 1 = Somewhat Or Sometimes True 2 Very True Or Often True

1.	**Hums or makes other odd Noises in class**	**0 1 2**	
2.	**Argues a lot**	**0 1 2**	
3.	**Fails to finish things he/ she starts**	**0 1 2**	
4.	**Difficulty following directions**	**0 1 2**	
5.	**Disturbs other pupils**	**0 1 2**	
6.	**Easily jealous**	**0 1 2**	
7.	**Can't concentrate, can't pay attention for long**	**0 1 2**	
8.	**Can't sit still, restless, or hyperactive**	**0 1 2**	
9.	**Fidgets**	**0 1 2**	
10.	**Impulsive or acts without thinking**	**0 1 2**	
11.	**Bites fingernails**	**0 1 2**	
12.	**Hangs around with others get in trouble**	**0 1 2**	
13.	**Talks out of turn**	**0 1 2**	
14.	**Messy work**	**0 1 2**	
15.	**Inattentive or easily distracted**	**0 1 2**	
16.	**Talks too much**	**0 1 2**	
17.	**Teases a lot**	**0 1 2**	
18.	**Fails to carry out assigned tasks**	**0 1 2**	
19.	**Truancy or unexplained**	**0 1 2**	
20.	**Usually loud**		

AGGRESSION

0=Not True (As Far As You Know) 1 = Somewhat Or Sometimes True 2 Very True Or Often True

21. Cruelty, bullying, or meanness	**0 1 2**	**31. Gets in many fights**	**0 1 2**
22. Destroys his/her own things	**0 1 2**	**32. Not liked by other pupils**	**0 1 2**
23. Destroys property belonging to others	**0 1 2**	**33. Physically attacks people**	**0 1 2**
24. Disobedient at school	**0 1 2**	**34. Picks nose, skin, or other Parts**	**0 1 2**
25. Breaks school rules	**0 1 2**	**35. Disrupts class discipline**	**0 1 2**
26. Doesn't get along with other pupils	**0 1 2**	**36. Explosive and unpredictable behaviour**	**0 1 2**
27. Defiant, talks back to staff	**0 1 2**	**37. Steals**	**0 1 2**
28. Bragging, boasting	**0 1 2**	**38. Stubborn, sullen, or irritable**	**0 1 2**
29. Doesn't seem to feel guilty after Misbehaving	**0 1 2**	**39. Temper tantrums or hot temper**	**0 1 2**
30. Lying or cheating	**0 1 2**	**40. Threaten people**	**0 1 2**

APPENDIX V

Participants' scores on the ASEBA TRF/ 6-18 across gender, socio-economic background, ethnicity and reinforcement group

Experimental group	Ethnicity	Socio-economic	Pre-test inattention	Post test inattention	Pre-test aggression	Post test aggression	Gender
Reinforcement	Non-Akan	High	30	10	18	7	Female
Reinforcement	Akan	High	29	9	27	8	Male
Reinforcement	Non-Akan	Low	19	8	8	3	Female
Reinforcement	Akan	High	30	8	21	3	Male
Reinforcement	Non-Akan	Low	22	8	11	2	Female
Reinforcement	Akan	High	26	8	22	7	Male
Reinforcement	Akan	Low	23	6	12	3	Female
Reinforcement	Akan	High	21	8	21	3	Male
Reinforcement	Akan	High	30	8	25	10	Male
Reinforcement	Non-Akan	Low	20	6	13	4	Female
Reinforcement	Akan	High	25	5	27	6	Male
Reinforcement	Non-Akan	High	20	4	10	1	Male
Reinforcement	Non-Akan	High	29	11	31	6	Male
Reinforcement	Akan	High	22	6	9	2	Female
Reinforcement	Non-Akan	High	18	5	9	2	Female
Reinforcement	Akan	High	21	5	16	3	Female

APPENDIX VI

Participants' scores on the ASEBA TRF/ 6-18 across gender, socio-economic background, ethnicity and modelling group

Experimental group	Ethnicity	Socio-economic	Pre-test inattention	Post test inattention	Pre-test aggression	Post test aggression	Gender
Modelling	Akan	Low	20	9	15	4	Male
Modelling	Non-Akan	Low	24	14	13	5	Male
Modelling	Non-Akan	Low	20	8	23	12	Male
Modelling	Akan	High	34	18	22	14	Male
Modelling	Non-Akan	Low	29	16	13	5	Male
Modelling	Akan	Low	27	13	13	5	Female
Modelling	Akan	Low	20	5	13	6	Female
Modelling	Non-Akan	Low	28	11	9	7	Female
Modelling	Akan	Low	27	16	13	7	Female
Modelling	Akan	Low	18	13	8	2	Female
Modelling	Non-Akan	Low	22	10	15	6	Male
Modelling	Non-Akan	Low	18	7	16	7	Male
Modelling	Akan	Low	24	7	23	11	Male
Modelling	Akan	High	19	7	9	5	Female
Modelling	Non-Akan	Low	25	9	9	3	Female
Modelling	Non-Akan	Low	20	8	11	4	Female

APPENDIX VII

Participants' scores on the ASEBA TRF/ 6-18 across gender, socio-economic background, ethnicity and multi-technique group

Experimental group	Ethnicity	Socio-economic	Pre-test inattention	Post test inattention	Pre-test aggression	Post test aggression	Gender
Multi-technique	Akan	Low	34	15	32	13	Female
Multi-technique	Akan	Low	30	16	25	9	Female
Multi-technique	Non-Akan	Low	31	13	35	15	Male
Multi-technique	Non-Akan	Low	35	18	28	12	Male
Multi-technique	Non-Akan	High	35	15	35	15	Male
Multi-technique	Akan	Low	33	16	32	15	Male
Multi-technique	Non-Akan	Low	30	17	30	7	Male
Multi-technique	Non-Akan	High	35	19	35	18	Male
Multi-technique	Non-Akan	High	33	14	34	14	Male
Multi-technique	Non-Akan	Low	30	13	31	10	Male
Multi-technique	Non-Akan	Low	26	11	23	11	Female
Multi-technique	Akan	High	30	9	30	11	Female
Multi-technique	Non-Akan	Low	37	11	39	15	Female
Multi-technique	Akan	High	32	11	25	7	Female
Multi-technique	Non-Akan	Low	34	13	33	12	Female
Multi-technique	Akan	High	24	6	20	8	Female

APPENDIX VIII

Participants' scores on the ASEBA TRF/ 6-18 across gender, socio-economic background, ethnicity and control group

Experimental group	Ethnicity	Socio-economic	Pre-test inattention	Post test inattention	Pre-test aggression	Post test aggression	Gender
Control	Non-Akan	Low	21	22	11	10	Male
Control	Akan	Low	22	22	12	12	Male
Control	Non-Akan	Low	16	16	8	8	Female
Control	Akan	Low	29	28	26	26	Male
Control	Non-Akan	Low	21	21	8	8	Female
Control	Akan	High	29	30	22	22	Male
Control	Akan	High	12	13	14	16	Male
Control	Akan	Low	11	10	13	13	Male
Control	Non-Akan	Low	13	13	12	12	Male
Control	Akan	Low	16	16	15	15	Female
Control	Non-Akan	Low	12	12	12	12	Female
Control	Akan	Low	14	14	13	13	Female
Control	Akan	Low	11	12	11	13	Female
Control	Akan	Low	14	14	29	29	Female
Control	Akan	High	15	17	18	17	Female
Control	Non-Akan	High	15	16	11	12	Male