INTRODUCTION AND REVIEW OF LITERATURE

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1.1 The context of the Study

Education has become highly competitive and commercial in many countries. It is on the basis of high academic performance that students get selected to good secondary schools, better courses of study, and eventually better jobs. Academic achievement has become a yardstick of self worth and success. The outcome of education determines the quality of life, progress and status of people living anywhere in the world (Mayuri & Devi, 2003).

Academic performance is a complex behavior. Research has consistently shown that academic achievement is not an outcome of any single factor; rather it is the result of the interplay of a large number of factors (Gupta, 1993). Many reasons have been advanced as the cause of high rates of failure, including bad study habits, low IQ, faulty teaching methods, erroneous examination systems, social and economic disparities etc.

The present researcher, being a Kenyan National working in the education sector, felt that it may be appropriate to explore the psycho-social factors related to academic performance of Kenyan adolescents. The outcome of the study is expected to be helpful in developing effective intervention strategies aimed at improving student’s performance and also in suggesting suitable changes in the governmental policies of education in Kenya. However, before going to the details regarding the theoretical and empirical context of the present investigation, it may be appropriate to give a brief outline of the system of primary education in Kenya.

1.1.1. Education in Modern Kenya.

(i) Philosophy of education in Kenya.

The focus of education in Kenya has been acquisition of life skills and life long learning. Emphasis has been on the provision of holistic quality education and training that promotes both cognitive and affective domains.

Kenya’s education has been geared towards addressing emerging challenges such as respect for human rights, drugs and substance abuse, corruption, violence and social exclusion. Handling of globalization issues like
environmental concerns, technology and terrorism have also been included in the objectives of education. In order to achieve these objectives, various commissions of education have been set up.

The government’s vision regarding education is contained in the motto expressed in the national language, Kiswahili, as “Elimu bora kwa Maendeleo”. Translated to English, this means “quality education and training for development”. This implies that education and training in Kenya should focus on the development of an individual’s personality to enable him or her to fit into the society as a productive and civil individual. Education and training therefore seeks to offer equal opportunity to all learners.

(ii) Structure and Programs of education in Kenya

The national educational system has evolved over a time, with major changes having been instituted in 1990’s. In 1984 the 7-4-2-3 structure and system was replaced with 8-4-4 structure and system. This structure introduced broad based curriculum at all levels.

The system was intended to make education more relevant to the world of work and thus produce skilled and high level man power to meet the demands of the economy. Delegates at the national conference on education and training held between 27th and 29th November 2003, noted that both 7-4-2-3 system and 8-4-4 structure provide sixteen years of schooling and emphasized that the content of the curriculum combined with quality and relevance of education and training are more important than structure.

The scope of the 8-4-4 structure and system was expanded to incorporate technical skills and pre- primary education (for 4-5 years old children). The primary education cycle cater to learners between 6-13 years and secondary education targets learners of 14-17 years, while university education targets learners of 18 years and above.

The current structure of education and training in Kenya comprises of the following.
Early childhood education, which covers early childhood care for 0-3 year old children, and pre-primary, for the 4-5 year olds.

Primary education, which lasts eight years and caters to the 6-13 year old children, leading to Kenya Certificate of Primary Education (K.C.P.E.).

Secondary education, which lasts for 4 years and caters to the 14-17 year olds, leading to Kenya certificate of Secondary Education (K.C.S.E.).

TIVET, which includes trade test courses in youth polytechnics, artisans and crafts, and diploma courses in technical training institutes of technologies. There are also crafts and diploma courses in national polytechnics leading to trade tests, certificates, and diploma in various disciplines and business related courses.

Business professional studies in middle level colleges are also available leading to certificates and diplomas.

University education, lasting a minimum of four years, depending on the degrees pursued, which leads to bachelors degree, and post graduate training programs leading to masters and doctorate degrees.

(iii) **Primary School Education in Kenya**

The primary school education in Kenya is free and compulsory. There is a government policy on primary education which is meant to achieve universal primary education by the year 2005. It is a key strategy towards attaining the overall education goal by 2015.

The government introduced free primary education in January 2003, which resulted in an increased enrolment of children from 5.9 million in 2002 to 7.2 million in 2004. This was an increase of 18 percent. Another 300,000 primary school age children are also enrolled in non-formal learning centers (Ministry of Education, Kenya 2005, Sessional paper No.1 Policy Frame work for education, training and research).
Since the introduction of free primary education, there has been a steady rise in the number of low cost private schools. In 2006, there were 20,229 primary schools, of which 2,283 were low cost private primary schools (Bureau of Statistic Document, 2006). At present, there are over 6,000 private low cost institutions, some of which are not registered (Kigotho, the Standard, 27th May 2009).

The rapid growth of low cost private primary schools has been attributed to poor performance of public schools in Kenya.

For several years now, private schools, albeit the high cost ones, have attained high scores in Kenya certificate of primary education and contributed to nearly 80 percent of form one students in national secondary schools (African Path Village, April, 11th, 2007).

Private schools generally cater to middle and upper class people in the Kenyan society. Many of these schools are affiliated to distinct religious organizations like Christians and Muslims. Other private primary schools are owned by individuals who run them as business ventures.

Public schools have been associated with many challenges like over stretched facilities and over crowding, especially in urban slums. The teacher-pupil ratio is high in densely populated areas, and the cost of special equipments for children with special needs is unaffordable for many schools. This creates a performance gap between the public schools and private primary schools. There are two categories of primary schools in Kenya. The day primary schools which makes up the majority, and the boarding (residential) primary schools.

At the conclusion of primary school, pupils go through a national examination called the Kenya certificate of primary education, abbreviated as (KCPE). The examination is supervised by the Kenya national examination council, which is a body under the ministry of education. The general curriculums for the eight years of schooling include, English, Mathematics, Kiswahili, Science and G.H.C. (Geography, History and Civics). The five subjects are examined
giving a maximum of five hundred marks. Graduates of this program either proceed to secondary schools, or join tertiary institutions and job market.

1.2 Theoretical and Empirical Background of the Study.

In the Section that follows, an attempt has been made to highlight the theoretical background of the study and to summarize and evaluate the research findings relevant to the topic under investigation. Most of the available literature reviewed comprise of studies done in western countries and a small proportion from India. Studies in Kenyan setting are fewer in comparison to efforts made abroad.

1.2.1 An Overview of the Models of Academic Achievement.

Different models have been put forward by theorists to represent the complex interrelationships that exist among the predictors of academic achievement. Noticeable among them are the following.

(a) Structural Model (Glassman & Binaminov, 1981).

Glassman and Binaminov (1981) advanced a model which comprises of six clusters of variables. They are:

- Students background characteristics, which are related to the family background of the learner.
- School related student characteristics, under which come the socio-demography of the student population, student attendance, etc.,
- Students attitudes, e.g., self concept, academic aspiration, locus control, etc.
- School conditions such as services, expenditures, staff, etc.
- Instructional personnel and background characteristics, such as teacher assignment, teacher attitudes, and teacher characteristics.
- School outputs, viz., cognitive and non cognitive achievement on the part of the students.

The model consisting of the above six classes of variables is represented in figure 1.

The model suggests that the outputs, both cognitive and non-cognitive, are affected by students’ attitudes and teachers school conditions and background characteristics of the students. In turn, the output influences the students’ attitudes, which are affected by all the factors in the model, viz, school related
students background characteristics school conditions the teacher characteristics, and students family background characteristics

The school related student characteristics and the school conditions affect each other and at the sometime are affected by the family background of the students. The instructional personnel characteristics undergo change under the influence of school conditions, which in turn affect the output of the students and also the student attitudes.

Figure 1. Structural Model of students achievement put forward by Glassman and Biniaminov (1981)
(b) Hypothesized structural Model of Academic Performance

(Ahmed & Bruinsma, 2006)

Ahmend and Bruinsma (2006) put forward a model of academic performance which they labeled as a hypothesized structural model of self concepts, autonomous motivation and academic performance in a cross cultural perspective. The fit of the model on the data obtained from a sample has been estimated using path analysis, and the model along with the path coefficients is presented in figure 2.

A close look at the path coefficients in the diagram suggests that the model reflects the hypothesized structural relations. All the path coefficients depicted in fig. 2 are found to be significant. Students self esteem had a significant positive effect ($\beta=0.49$, $t=.49$, $P<0.05$) on their academic self concept, suggesting that students who feel positive about themselves in general life situations are more likely to evaluate themselves positively in the academic domain. The effect of academic self concept on both autonomous motivation ($\beta=0.52$, $t=8.24$, $p<0.05$) and self reported academic performance ($\beta=0.29$, $t=4.21$, $P<0.05$) was also

Figure 2. An Integrated Motivational model of academic performance put forward by Ahmed and Bruinsma (2006)

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significant. Autonomous motivation in turn had positive significant effect ($\beta=0.40$ $t=72, P<0.05$) on academic performance. Participants who reported higher autonomous motivation also reported higher grades.

(c) Model of predictors of academic performance put forward by Chamorro-Premuzic and Furnham (2008)

Chamorro-Premuzic and Furnham (2008) put forward a model of academic performance which incorporated personality, intelligence and approaches to learning as predictors of academic performance. Their study used path analytical approach based on recent theoretical development to account for the empirical relationships among these constructs.

Hierarchical regression was performed to test the degrees to which personality predicts academic performance over and above intelligence, as well as the incremental validity of learning approaches over personality and intelligence.

In addition, two path analyses were conducted to examine the mediational effects of personality and learning approaches in the relationship between ability and academic performance, as well as whether learning approaches mediated the effects of personality on academic performance. Figure 3 shows the path model where openness and deep learning fully mediate the effects of IQ on academic performance, while conscientiousness partly mediates the link between Fluid Intelligence and Academic Performance. This model fitted the data well. Figure 4 depicts the second model, where IQ was tested as mediator rather than exogenous variable (thus openness and IQ swapped places in the model). As seen in fig.4, fluid intelligence and openness affected IQ, which had an effect on deep learning, which in turn affected Academic performance. Again, conscientiousness partly mediated the effects and the model had a good fit with the data.
Figure 3. Personality and deep learning mediating the effects of ability on Exams.
As predicted, both ability measures (viz., 1Q and fluid intelligence), openness, conscientiousness, and deep learning were all positively related to academic performance. Particularly, conscientiousness accounted for a substantial amount of additional variance in academic performance. On the other hand, deep learning approach contributed to the prediction of academic performance beyond personality and intelligence.

Results were supportive of initial hypothesis and highlight the importance of including different ability and non ability factors when predicting performance. Although conscientiousness was the strongest predictor of exam grades, a combination of fluid intelligence, conscientiousness, openness, and deep learning approach explained the highest percentage of variance.

In the first model, openness was found to mediate the links between the IQ and academic performance, suggesting that individuals with higher IQ obtain
higher grades only because they are more open to new experiences. Like wise, deep learning mediated the effects of IQ on academic performance, suggesting that IQ led to higher academic performance because individuals with higher IQ employed deep learning approach.

The second model appears to be theoretically more interesting as it highlighted the important role of openness to experience as a determinant of higher IQ. Thus IQ was separately affected by fluid intelligence and openness (which were not inter-correlated) and affected deep learning, which in turn led to higher exam grades.

### 1.2.2 Antecedents and Correlates of Academic Performance

Empirical studies have shown that academic achievement of adolescents is significantly related to a variety of factors/variables. These include ability/aptitude, interests, study habits, parental attitudes, school environment, etc. A review of the studies in this area has been conducted by the present researcher and the details of the relevant studies are reported in the following sections. These studies have been organized into five sections for convenience, viz., home environment, socio-economic status, classroom climate, achievement motivation, and cognitive abilities.

#### 1.2.2.1. Home environment and Academic Performance

An individual’s genetic make up equip him or her with potentialities, but it is the environment in which he or she develops which is crucial in determining behavior. Important among these environmental variables are familial variables, which include parental attitudes and involvement, and the facilities available at home. Parental attitudes play a crucial role in determining the physical and mental health of a child. This has been confirmed by both theoretical and empirical research. Every interaction of a child with his or her parent has some effect on both his or her present behavior and the potentialities for future action (Sears, 1957).

The society today is witnessing fast changes in terms of increase in divorce, maternal employment, and accelerating geographical mobility. These
changes, in turn, bring in major changes in the world in which children and adolescents grow up. However, not withstanding these changes, the family continues to be the most important factor in the development of identity, autonomy, and achievements of the adolescents. It has been noted that regardless of the structure or composition, positive and warm relationship among family members standout as the most powerful predictor of health and psychosocial growth during the adolescent years (Sternberg, 1985).

The impact of parental involvement in child’s growth and development has generally been accepted by many researchers (Sheldon, 2003). However the issue of whether or not parental involvement has a beneficial effect on the academic achievement of the children is far from settled among experts (Epstein, 2001). The cause of these debates may be traced back to how the term “parental involvement” is defined by various researchers (Epstein, Sanders, Simons, Salinas, Jansons & Voorhis, 2002).

Much of the research that examined the relationship between parental involvement and children’s academic performance relied on parental participation in parent – teacher conferences (Baker & Sodden, 1997) or a few closed ended questions that focus on the number of times parents participate in particular events (Goldring & Shapira, 1993; Griffith, 1996; Grolnick & Slowwiaicz, 1994). Needless to say, this type of approach does not allow for assessing the details of parental involvement in depth or help generate new ideas (Baker & Sodden, 1997).

Parental involvement is a multi-dimensional concept that involve a wide range of activities like encouraging the child in his/her education, working with children on their home work, talking to children about school related topics and taking kids on field trips (Deutscher, 2000). Research evidence show that parental involvement has positive impact on different aspects of children’s education such as daily attendance (Cotton & Wikeland, 2001) achievement (Brooks, Brune & Burns, 1997; Cotton & Wikeland, 2001; Hunderson, 1987) and motivation (Brooks, Bruno & Burns, 1997).

Home environment has many aspects that would affect the child’s academic achievement, viz., parenting style, parental expectations, parental
involvement in the child’s school work, and the way in which the child spends time after school. Extant research literature on each of the above aspects have been reviewed and reported below.

(i) Parenting Style

Several studies have been conducted on the relationship between parenting style and academic achievement. In general parenting styles have been categorized into three classes viz., authoritarian, permissive, and authoritative (Baumrid, 1978). Christenson et al. (1992) observes that the authoritarian and permissive styles have little relationship with academic achievement, whereas the authoritative style has a relatively strong positive relationship with it. Marzano (2003) has noted that the parenting patterns at home are basically used to communicate the parental expectations to their children.

Sternberg (1995) outlines the characteristics of each parenting style as follows:

Authoritative style of parenting is characterized by warm but firm relationships where standards are set for children’s future conduct which are consistent with the child’s developing needs and capabilities. High value is placed on developing autonomy and self direction. At the same time, parents assume the ultimate responsibility for their children’s behavior. They deal with their children in a rational way and frequently engage in discussions and explanations with the children. Transgressions are met with consequences but are not punitive in nature and executed with little or no negative emotion. Finally, parents with an authoritative style communicate interests in the day to day lives of their children.

Authoritarian style refers to the behavior of parents who try to establish and implement all household rules with little or no discussion with the children. Rules are absolute and their transgression is dealt with swift punishment, often accompanied by negative emotions from parents. Parents make the majority of the decisions for their children across a wide spectrum of activities such as sports, choice of friends and the type of entertainment they are allowed to engage in. High value is placed on obedience and conformity. The parent tends to favor more punitive and forceful disciplinary measures. Verbal exchanges are not
common in authoritarian households. The authoritarian belief is that the child should accept without question the rules and standards established by parents. They tend to discourage independent behavior, and instead, place a good deal of importance on restricting the child’s autonomy.

Permissive style is the antithesis of authoritarian style. It establishes few, if any, household rules and rarely punish inappropriate behavior. Children are left to develop their own rules for conduct, and for most part, are left to their own devices, when it comes to day to day decisions. There are few, if any, restrictions regarding sports, friends or entertainment. Although it might seem that this approach fosters independence and autonomy, which are beneficial for better academic performance, empirical evidence for the same has not been obtained. In fact, the available evidence suggests that permissive parenting style can be detrimental to academic achievement (Christenson, 1992).

Sternberg (1985) has observed that the three patterns of parenting result in the moulding of three different types of adolescents. To be more specific, the authoritative home will raise adolescents who are more responsible, self assured, adaptive, creative, curious and socially skilled. At the same time, authoritarian homes will raise adolescents who are more dependent, less socially adaptable, less intellectually curious, etc. The permissive household, on the other hand, will raise adolescents who are less mature, more irresponsible, more conforming to their peers, and less able to assume positions of leadership. Of the three parenting styles, the authoritative parenting style has been linked to healthy adolescent development in many researches.

Research has consistently shown that adolescents from authoritative households are self directed, autonomous, self assured and that they remain so even in the face of strong peer pressure (Baumrid, 1978). The self directedness, autonomy, and self assuredness are good qualities for achievement of any type in life, academic inclusive.

It has been found that students reared in families characterized by parental warmth, fairness and monitoring have higher academic achievement than students who come from highly controlled families or unsupervised ones (Sternberg, 1996). Authoritarian and permissive parenting styles have been associated with
poor academic grade, poor college adjustment, and low self esteem (Lamborn et al. 1991). Hussein (2003), designed a study to investigate the effects of parent child relationships on adjustment and aggression. His study revealed that children of democratic parents compared to those of authoritarian parents are adjusted in all dimensions of adjustment, viz., home, health, school, emotional and social. This has been known to work well towards their academic performance too.

Sternberg, Elmen and Mounts (1989) report a study where they examined authoritative parenting, psychosocial maturity and academic performance. They looked at the relation between three aspects of authoritative parenting (viz., acceptance, psychological autonomy and behavior control) and school achievement in a sample of 10-16 years olds. The results indicated that authoritative parenting facilitates adolescents’ academic success. Each component of authoritativeness studied made an independent contribution to achievement. The positive impact of authoritative parenting on achievement was mediated in part through the effect of authoritativeness on the development of health, semi autonomy, and more specifically, on a healthy psychological orientation towards work. Adolescents who described their parents as treating them warmly, democratically, and firmly, were more likely than peers to develop positive attitudes towards their achievement, and as a consequence, they did better in school.

In a similar study, Chaudhary and Basu (1988) investigated the relationship between school achievement and adjustment among a sample of 105 adolescent boys in the age range of 14-15 years. The study revealed that the pattern of mothering and fathering styles were associated with academic success. Particularly, rejection and neglect from parents were found to be highly detrimental. Bensal and Joswal (2006) notes that a controlling and punitive home environment is essentially detrimental for cognitive development and thus academic achievement.

Furguson (1987) noted that positive and effective parent-child relationship is likely to get hampered when control and punishment exist beyond limits. Estrada et al. (1994) reported that positive, effective relationship between parents and children increases the likelihood that the child will initiate and persist
in challenging intellectual tasks. The study by Furguson further revealed that parental behavior is an essential component of home environment and is related to cognitive development through the amount of interaction, provision of support in problem solving activities and allowing children to explore.

Some relatively specific types of family interactions and child rearing practices have been noted to function as predictors of academic performance. In some instances, the likelihood of having low grades and failing courses were up to five times higher among those students who had experienced systematic ways of interacting with their parents (especially fathers) during childhood than those who did not (Sosa, Cabrera, Manuel and Laura 2000).

Language and cognitive development are inextricably linked to quality of parenting the child receives (White, 1993). Harts and Risley (1995) compiled years of research on every day experiences of young American children. They came up with the finding that there existed differences in the amount of interaction between parents and children. They found that advantaged children in America enter school after getting exposed to about 26 million words. At the same time, some children who are identified as “at-risk” are exposed only to an average of 13 million words. These differences in early family experiences translate into striking disparities in children’s later vocabulary growth, rate of vocabulary use, intelligence, and achievement test scores.

Survey of earlier studies indicate that the achievement and adjustment in school are determined to some extent by environmental facilitation, particularly by parenting pattern, although the extent and mechanism of this influence is not clearly understood (Ryan, et al. 1994). Basu and Chaudhary observes that the extent of relationship in various studies have been found to vary between low to moderately high. A Meta analysis of 47 such studies by Rothbaum and Weiz (1994) attempted to account for this discrepancy. They concluded that the parental impact on school behavior is not homogenous affair, but closely intertwined with a number of demographic and cognitive factors. Lack of awareness and control of these variables have lead to misleading findings in many of these studies conducted in this respect. Conducive home environment, parental
support and positive parent child relationship have been noted as important factors in academic achievement (Sunetha & Mayuri, 1999).

Parents who were perceived as being more acceptant, and using less restrictive and hostile psychological controls, tended to have adolescents with high academic success and competence (Lakshmi & Arora, 2006). Using adolescents reports Lamborn et al., (1991) suggested that adolescents who described their parents as either neglectful or indulgent had lower grades than adolescents from authoritative homes. They also scored lower than those from authoritarian families on self perceived academic competence.

Several aspects of parental behaviors like love, discipline, and dominance have also been associated with positive effects on the pupil’s academic achievement (Srivastava, 1995). Although a lot has been reported on parenting style being positively related to academic achievement, some studies still report that parenting styles were unrelated to college G.P.A. (Josh et al, 2003). Some previous research as well as longitudinal studies on the impact of parenting on academic success and competence also produced inconclusive findings (Wagnor & Philip, 1992).

(ii) Parental expectations

Some studies indicate that parental involvement achieves its positive effect on children by way of communicating parental aspirations to them. It has been found that expectations communicated to students are associated with enhanced achievement (Cohen 1987; Majoribanks, 1998).

Michigan educational association and coalition (2004) undertook a longitudinal study for two years called “Your child”. The findings of the study revealed that parental expectation and involvement correlates with a child’s success in schools. Students who are more likely to succeed have parents who expect them to obtain an advanced degree. They are more likely to agree that everyone should have a college education and define success in terms of self support and educational level.

Fan and Chen (2001) conducted a meta analysis of ten studies involving 24,826 families. They found that the average correlation of parental expectations,
parenting style and school achievement was as high as 0.39. Student’s perceptions of parental expectations also correlated with achievement.

Mayuri (2003) designed a study to find out the school factors that affect academic achievement of the school children studying in class IX and X. The sample consisted of 120 children (60 each from class IX and class X) and 40 teachers from a residential school of Hyderabad city. One of the key findings of this study was that family factors like parental aspirations and socio-economic factors had an effect on the academic achievement of the school children.

Farmer (1990) observed that expectations by significant others in the environment, viz., teachers, parents and peers, enhanced academic achievement and career motivation of learners.

Bandura (1997) notes that parents contribute to their children’s intellectual growth in a variety of ways, including preparing children for the school, placing value on education, conveying beliefs in their children’s scholastic ability, setting standards for them, establishing regular work habits for them, encouraging language development and comprehension through reading, keeping track of academic progress, rewarding their efforts, and supporting teacher related functions.

(iii) Parental involvement

It has been found that when parents are actively involved in the academic activities of their children through class visits or helping with class activities, the children’s behavior and basic skills improve (Maroon 1988). Dautscher and Ibe (2003) carried out a study to examine the role of parental involvement on child’s academic performance. They assessed various types of parental involvement, viz., volunteering, home involvement, attending parental classes, school political involvement, talking to staff and talking to teachers. Approximately 400 students of 7th through 11th grade were included. The overall results indicated that those who went to the parent seminars (classes) or were more involved in the academic activities of children (such as checking children’s planner, talking to child at home about school related topics, or engaged in educational activities outside of school), had children who performed better in various subjects or had better grades.
Parental participation in school work may range from classroom visits to more active participation in tutoring, textbook evaluation and staff evaluation (Irvine, 1988). Taylor, Ivora and Wilson (1995) investigated the relationship between parental influences and academic outcomes for African American students. Their results indicated that parental involvement significantly predicted academic performance.

Dhingira and Manhas (2009) explored the relationship that exists between parental interaction and attitudes of teachers with academic performance of school going children. The sample comprised of 200 underachievers studying in class 4-6 grade, failing to perform satisfactorily for no apparent reason. Besides the students, their parents (n = 200) and teachers (n = 189) were also included in the study. The results revealed that parent child interaction and teacher attitudes significantly influenced academic performance.

In a similar study, Sidhu and Gill (1988) found that classroom scores were low where there were low parental motivation and sharing of parental work with the children. At the same time, high achievement has been noted among children whose parents took active interest in the academic activities of their children. It has also been reported that children performed better in schools where teachers rated parents as actively involved in school activities (Baker & Soden, 1997).

Parental involvement and encouragement are important influences on academic success which increases the likelihood of young children ultimately graduating from high schools (Howel & Frese, 1982). It has also been observed that parental involvement results in better relationship between school and families (Epstein, 1984). Dornbush (1994) observes that parental guidance and encouragement of academic activities increase the likelihood that children will be moving in the right direction in academics.

Estrons et al. (1986) have found that high school dropout, low parental monitoring of children’s social activities, and low discussions with parents are associated with low academic achievements.

Although several studies in U.S.A indicate that there is a substantial positive relationship between parents involvement and their children’s academic
success, there are also studies which found a negative relationship or no significant differences between experimental and control groups (e.g., Ryan, 1964; Morrow, 1982).

Inconsistencies in the research findings can be explained on the basis of differences in methods of data collection and research designs used. Some researchers have studied the relationship between parental involvement and child’s school success using direct observation (Arbuckle & Mackinnon, 1988), surveys and questionnaires, or both (Edward & Waring, 1999). Other investigations have been known to make use of traditional experimental design to compare students’ performance across randomly allocated groups (Woods, Bernard & Tesselle, 1974). Differences in the outcome measured also may have been another source of discrepancy. For example, a variety of dependent variables have been reported in studies on parental involvement (e.g., reading achievement : Epstein, 1987; 1991; maths achievement: Davis, 1993; and perceptual skills training : Garrison, 1977). However discussions of the findings and conclusions do not always take into consideration certain important factors that can affect the validity of research findings such as the reliability of scales and tests.

In a more recent analysis of this issue, Mattingly et al. (2002) reviewed a total of 41 studies described as “evaluations” of parental involvement programs. They concluded that there was little evidence to support the efficacy of parental involvement to improve students achievement.

(iv) Child’s time use after School

Children spend their time in different ways after coming home from school. These include play, television viewing, etc. Most children, especially in urban centers, spend a great deal of time in television viewing. Too much of television viewing has been associated with low academic achievement. For example, Singer and Singer (1990) observed that excessive watching of television leads to reduced mental effort and shallow information processing among children. Also, excessive viewing of television among pre-scholars’ has been correlated with less elaborate make believe play. In older pre schoolers, it is found to be associated with lower creativity scores. The findings of this study
lead to the conclusion that television viewing, which is one way in which children spend their time after school, is associated with lower school achievement.

Television viewing has been observed to have a displacement effect. That is, T.V. viewing displaces other activities of children such as reading, sports, hobbies, and even interacting with others (Malhi, 1999). Adolescents, who watch television everyday, tend to spend less time with friends, get less sleep and less likely to pursue other creative hobbies (Sternberg, 1986).

Malhi (1999) notes that too much of television viewing impairs language development, formation of good study habits, and mastery of reading skills. It was also found that children from low socio-economic status homes, who were exposed to less stimulating environments, benefited more from television viewing than children from high socio-economic status homes. However, in all cases, viewing of four or more hours of television was found to be associated with low school achievement.

1.2.2.2 Socio-economic Status and Academic Performance

For decades, especially in western countries, researchers, both theoretical and empirical ones, have asserted that socio-economic status is one of the best predictors of academic performance (Karl & White, 1982).

Home background has been observed to influence academic and educational success of students and school work, while socio-economic status reinforces the activities and functioning of teachers and students (Program for international student assessment, 2002). Marzano (2002) notes that the family characteristic that is the most powerful predictor of school performance is socio-economic status (SES). He observes that the higher the socio-economic status of the students family, the higher the academic performance.

Socio-economic status has been found to predict a variety of outcomes, including grades, achievement, intelligence test scores, high school dropouts, plans for college attendance and total amount of formal schooling (Harters, 1963). Studies have repeatedly found that socio-economic status affect students outcome (Jeynes, 2002; Emmon, 2005; Majoribanks, 1996; Hoch child, 2003; Mcneal,
2002; Seyfried, 1998). Socio-economic status has also been shown to override other educational influences such as parental involvement (Mcneal, 2001).

United States Department of education (2000), in their study, observed that the relationship between poverty and students performance is not simple and direct. The study indicated that poverty is an important factor accounting for differences in performance across in sub-urban and urban districts, but it is not the only variable that account for all differences in performances of students.

Low self efficacy of children has been linked with low socio-economic status of parents (Brissie, 1992). Parents with high efficacy have been known to assist their children’s learning and participate actively in the school life of children (Hoover, Dempsey, 1992). In contrast, parents who doubt their efficacy turn over the children’s education entirely to teachers.

Socio-economic status is a wide area of study. The proxies used for socio-economic status include parental income, education level of the parent, parental occupation, and family structure of the learner. A brief discussion of each of these variables is presented below.

(i) **Parental income**

Parental income has been identified as a cogent factor having an impact on the academic and vocational success of students (Mba, 1991). When parental income cannot support the students’ needs, it is found to affect them psychologically by way of low concentration, feeling of frustration, sickness and emotional disability. Fordman and Ogbu (1986) reports that in America, unemployment rates are high among black Americans and that they face widespread discrimination in hiring and promotions. This makes black Americans pessimistic about the future prospects of higher education and hence loose motivation to study.

It is believed that low socio-economic status (SES) negatively affects academic achievement because it prevents access to vital resources and creates additional stress at home (Emmon, 2005; Majoribank, 1996; Jeynes, 2002). These economic hardships, in turn, lead to disruption in parenting, an increasing amount of family conflict and an increased likehood of depression in parents, especially
among single parent house holds (Emmon, 2005). This indicates that socio-economic status is closely tied to home environment and thus it dictates the quality of life for children.

Kuppuswamy (1980) has also noted that income of the parents along with education and occupation are important factors of socio-economic status of the family. Families belonging to high and middle socio-economic status provide better facilities such as good library, news papers, periodicals, better residential areas, etc. to their children, which lead to high achievement motivation. On the other hand, families belonging to the low socio-economic status are unable to provide such type of facilities and thus fail to facilitate high levels of achievement motivation. Hassan (2008), in a longitudinal study, found that there was a positive association between children’s grades and their parent’s labour market.

Stress and lack of social support to parents in poor families may negatively affect parental support for school success and intellectual development of their children. Bandura (1997) asserts that disadvantaged families lack means to provide their children with developmentally enriching experiences, unless the parents make considerable self sacrifice by dedicating a great deal of their time and effort and meager resources for such purposes. The quality of home background of students goes a long way to predict the quality and regularity of satisfaction of a child’s survival and academic needs (Basil, 2007). Poor parental care combined with gross neglect of the socio-economic needs of a child usually lead to poor academic performance of the child. Basil (2007) designed a study to examine the socio-economic factors influencing academic performance in Oyo state in Nigeria. His respondents consisted of 120 students. The results revealed that insufficient parental income, family type, and lack of funding by the government were the factors influencing academic performance in Oyo State.

Low income of parents has been found to hinder the children from getting good education, and thereby, improving the future prospects of their life (McDonald & Jessel, 1992). Parents of low socio-economic status have low involvement with school, provide little educational guidance for their children, and they also do not know how to help the children. Such parents are also intimidated by the school, which rarely initiates contacts with them (Laura, 1987).
Children from poor families are likely to attend poor schools with fewer resources to offer to their students. Emmon (2005) observes that poor neighbourhoods often lack positive role models, adult supervision, and connections to good schools. This kind of environment often prevents students from creating healthy social networks, which in turn leads to lack of motivation and low academic performance. National commission on children in U.S. (1999) observes that adolescents from poor families are more likely to work after school hours and this may be harmful to school achievement if work hours are extremely long.

Students from disadvantaged families are more likely to prematurely reduce their level participation within higher education by dropping out of courses or by foregoing the opportunity to progress to more advanced courses. They are also more likely to follow complicated path within higher education including differed environments, gap years, and switching, repeating or restarting their courses for non academic reasons (Fursynth & Fulong, 2003). A number of reasons seem to lie behind these factors, viz., lack of familiarity with higher education, which often result in young people enrolling to inappropriate courses or at unsuitable institutions, feeling of cultural isolation, particularly at the more prestigious institutions which could compromise the disadvantaged student's identity, lower the morale, and lessen their continued study (Fulong & Forsyth, 2005). Students who have low socio-economic status earn low test scores and are more likely to drop out of school (Emmon, 2005, Hoch child 2003). They have also been found to score about 10% lower on the national assessment of education programs than students belonging to high socio-economic status (Seyfried, 2006).

Floods and Anders (2005), in study in a America, established that not only do children fail more frequently in high poverty schools, but poor students perform better than children from richer background, when they attend middle-class and when they attend effective schools in poor neighborhood.

Adolescents from poor families are likely to lack academic skills and to have repeated a grade as children (Seyfrid, 2006). They are also at a risk for poor health and nutrition, a factor that could affect their ability to concentrate in the
In another study, Dryfous (2005) found that children in social welfare systems in America were much more likely to develop learning mental and health problems when compared to those who had well to do parents taking care of them.

Floods and Anders (2005) asserts that poverty status has been significantly related to problems in the areas of physical health, adjustment and behavior, as well as learning disabilities, all of which are known to have negative impact on academic achievement. Psychological and behavioral barriers in academic achievement have been found to be linked to socio-economic status of children. Mental health experts estimate that 7-8% of all school age children have emotional or behavioral difficulties disorders (EBD) that requires some special intervention in school or in mental health systems and 3% of these have severe emotional disturbances (Warren and Schofield, 1994). Children with the above difficulties are likely to come from low-income single parent families. Children with EBD, in comparison with those having other difficulties, are more frequently left back in studies than other students with disabilities, and are less likely to go on to college (Food & Anders, 2005).

Good parenting, supported by strong economic home background, has been observed to enhance strong academic performance in children. Teachers have reported that it is easier to produce high test scores in schools located in more prosperous suburbs (Teese, 2000). School achievement has been reported to be strongly related to social class even amongst learners from schools serving disadvantaged communities (Fulong & Forsynth, 2005). Henry (2000) reported higher levels of academic performance among Canadian immigrants whose parents were of higher socio-economic status. In another study, Dach and Maia (2006) found that students from higher income families more often end up in the most competitive careers like medicine and engineering which are associated with higher professional status and salaries. Lee and Burkam (2002) in their longitudinal study, found that before even entering the kindergarten, the higher socio-economic status children had cognitive scores that were on the average 60% above the scores of low socio-economic status children.
(ii) Educational Level of Parents

It has been noted that children of educated and affluent parents generally have more opportunities for achievements. Educated parents encourage their children to have relationship with peers who share their values, especially values of achievement (Wentzel & Feldman, 1993; William & Rudin, 1993). Parents who are better educated, tend to communicate better with their children when compared to parents who are less educated. Educated parents interact with the children at home by way of reading with them, conversing with them and directly teaching them required social skills. All these help to improve the knowledge base of the children and also their performance at school (Flood & Anders, 2006).

Devi and Kiran (2002) designed a study to find out the family factors associated with scholastic backwardness among secondary school children. Their sample consisted of 100 low achieving students (50 boys and 50 girls) of 9th and 10th grade, drawn from ten private schools selected from all the five zones of Hyderabad city in India. Their study revealed that low educational status of parents, large family size, and low parental involvement and encouragement were the major family factors associated with scholastic backwardness.

Mayuri and Biliquis (1999) conducted a study on 467 rural children in the age range of 6-12 years to investigate the correlates of intellectual abilities in them. The findings of the study revealed that socio-economic variables, viz., parental education and occupation, were the significant predictors. Sunita and Mayuri (1999), in another study, examined the role of socio-economic status, interests and adjustment in the academic achievement of children. The study revealed that educational and occupational status of the family, small and nuclear family, as well as support and encouragement from parents and siblings, significantly enhanced the academic achievement of school children.

It has been noted that there is a positive association between assistance with home work and children’s academic achievement, regardless of the source of assistance in the family. But this assistance was found more often among parents who were of high educational levels. (Hassan, 2003).
The national centre for education statistics (NCES) in U.S.A. conducted a study in 1998 to find out the health status of kindergarten children in relation to the risk status of the child’s family. The four risk indicators were: low maternal education, family on welfare, one parent in the home, and a parent speaking a language other than English at home. The results of the study indicated that the children in families with no risk factors were more likely to be in excellent health (59%) when compared to those with one (44%) or two or more risk factors (37%). Twenty nine percent of the children from high risk families were in fair or poor health compared to 10% of those in no risk families. They also noted that children from lower risk families were more likely to engage in positive social behaviors such as making friendship and helping their class mates. Children from higher risk families were less likely to have positive attitudes towards class room activities, pay attention or show eagerness to learn, and were more likely to display anti-social behaviors such as arguing and fighting, which are associated with poor performance in school (Flood & Anders, 2005).

There are several research reports which indicate that maternal characteristics are important determinants of academic achievement (Emmon, 2005; Majuribanks, 1996). Mothers who are educated have higher self esteem and have children who received high test scores (Emmon, 2005). Also, mothers who delay child bearing have been shown to provide more cognitively stimulating and supportive environment at home, which has a positive effect on school performance (Emmon, 2005; Majuribank, 1996). Mothers educational attainment has also been reported as a significant predictor of high school completion (Ekstron et al, 1986).

Khan and Jembero (2002) conducted a study to investigate the influence of socio-economic status (SES) on educational and occupational aspirations of adolescents. Their sample consisted of 80 students selected from two schools in Aligar city, in India, obtained using stratified random sampling. The results of the study indicated that while the impact of socio-economic status on educational aspirations was minimal, its influence on occupational aspirations was significant. Socio-economic status was also found to affect the adolescents aspirations indirectly through family salience.
Dach and Maia (2006) carried out a longitudinal study to find out if the socio-economic background of the students, especially, schooling from either public or private secondary schools, relate to their academic performance as undergraduate. The results of the study indicated that students coming from socio-economically disadvantaged environment perform relatively better than those coming from higher socio-economic status and educational strata. Also, students who come from public schools had a better relative performance than those who studied in private schools. Dach and Maia further discovered that youngsters who came from a general disadvantaged background and were admitted to the university had a higher untapped academic potential when compared to those belonging to higher socio-economic status and educational strata.

(iii) Parental Occupation

The extent to which children's academic performance is affected by the parental job or employment is especially important because education attainment has profound impact on future career of the children.

Employment for majority of the people means economic security through earning and access to financial resources (Hassan, 2009). Parental employment is expected to have significant effect on the welfare of their children. As far as academic performance of children is concerned, parental occupation might have both positive and negative impact. Firstly the source of income is essential for meeting the child's educational needs as well as participating on social activities. On the other hand, possessing a job also reduces the time available for parents to spend with their children and to involve themselves in their life at school. Each household needs to strike a balance that optimizes their time use, (Bakken, 2003).

Research studies available indicate that there is a relationship between occupational status and academic performance. Lal (1967) undertook a study to investigate the relationship of parental occupation with academic achievement. This sample of the study consisted of 1359 randomly selected high school students (age range 14-17 yrs.) studying in 22 urban and six rural secondary schools in Lucknow district. The study showed that there was a positive relationship between the level of parental occupation and mean high school marks. It was also seen that the differences in the mean achievement scores of the
students belonging to different occupational groups were statistically significant (F=32.50, p<.01). Analysis of covariance showed that this relationship held good even when intelligence (measured by progressive matrices test) was held constant (F=24.34, p < .01)

High occupational status people have more resources to meet the needs of their homes, while the low occupational status people have limited resources for the same. Unstable or insufficient funds limits families ability to purchase the resources and goods (school, housing, food and cognitively enriched learning environment) that are critical for successful development and academic performance (Kalil, 2005).

Research has also established that parents of low occupational status may not feel free with or capable of assisting their children in school work (Conger, Ge, Elder, Lorenz, & Simons, 1984; Elder & Caspi, 1988). The researchers further report that these parents may not become involved in their children's schooling in ways that enhance performance. Hill et al. (2004) notes that parents of low occupational status have been known to distrust schools and even go to an extent of monitoring rather than collaborating with school due to perceived or actual discrimination of their children by the school. Jordan and Plank (2000) found out that lack of guidance and support from parents of low occupational status was the primary reason that low income, middle school students were less likely to attend college despite the parents aspirations and involvements. Lower academic performances, completion of fewer years of schooling, and lower career aspirations were associated with adolescents from lower socio-economic status backgrounds and ethnic minorities in America (Hill et al., 2004).

Trusty (1999) reports that children from homes with low income due to low parental occupations may model their parents lower levels of educational attainment and thus not work hard to attain high grades in school. He further observes that the link between academic performance and future occupational success may be less clear for children from low socio-economic status homes. Increased reliance on public assistance and greater receipt of welfare income has been associated with children's lower academic achievement, perhaps due to stigma (Kalil, 2005).
Unstable work and unemployment is psychologically stressful for parents, which in turn inhibits parents' emotional warmth and increases their erratic or disengaged behaviors. Ineffective parenting can lead to poorer adjustment in the children at school (Kalil, 2005). Barling et al. (1999) hypothesized that watching one's parent experiencing job insecurity would be experienced as stressful and elicit feeling of uncertainty and powerlessness in children. Their results showed that undergraduates who perceive their parent to be insecure about their jobs are distracted cognitively and have worse academic performance. Kalil (2005) showed that fathers job losses predict the probability that teenage children will be held back in grade or suspended from school.

Young people have been reported to indirectly get influenced by parental academic achievement and occupation and this results in them modeling both positive and negative attributes in their parents, whether in occupation or achievement (Hill et al., 2004)

Earlier research has established that there is an association between scholarly culture in the home as indicated by home library size, and educational attainment in a very wide range of societies and under considerable variety of institutional arrangements and political regimes. For scholarly culture to be available in a home, there must be enough money to buy books and other study resources. The money can only be there due to good occupational status (Hill et al., 2004). High socio-economic status families, which are also an indication of high occupational status homes, have been reported to be more efficacious in their interaction with schools and more effective advocates for their children's academic needs (Lareau, 2003; Yonezawa, 2000). Children from parents with high occupational status have been known to model their parents’ positive educational experiences and higher prestige occupations and thus may serve as role models for the child's own occupational aspirations (Trusty, 1999).

(iv) Family structure

Single parent households have been reported not to perform as well in school as children from two parent households (Majoribanks, 1996). Several reasons or explanations have been given for this achievement gap. Single parent households have less income and there is lack of support for the single parent
which increases stress and conflict (Majoribanks, 1996). Single parents often struggle with time management issues due to the necessity of attending to the many different chores of life on their own. Some researchers have also observed that single parents are less involved with their children and therefore give less encouragement and have lower expectations of their children when compared to two parent households (Majoribanks, 1996).

Single parent family has been noted to be stressful for both the child and the parent. Such families are also known to be faced with challenges of diminished financial resources (Children’s Defense Fund, 1994). The condition is not conducive for effective parenting due to the fact that a single parent is over burdened by responsibilities, which can bring in a lot of emotional reactions to the parent, like irritability, impatience, and insecurity to the children’s needs (Emmon, 2006).

Children from single parent families are reported to have greater number of emotional problems such as lack of warmth, love and disciplinary problems, which may hinder their academic performance. On the other hand, children raised in two parent family structure suffer less emotional problems, thus making them more competent in their academic pursuit (Uwaifo, 2008). Single parenthood and low socio-economic status are highly related. Floods and Anders (2005), in their study on single parent headed homes in America, discovered that only 10% of the parents were in the highest income quartile. The rest of the single parent homes fell in the low socio-economic status category, which was not conducive to good academic performance in children.

Parental education and family size have been related to increase in academic performance (Grissmer et al, 1998). When parents are poor, they tend to send their children to poor schools with less facilities and crowded classes. In such schools, the teacher student ratio is high, which restricts individual attention for the learners from the teacher's side. Jeynes (2002) observed that divorce has negative effects on academic performance. Students whose parents were divorced were among those who scored lowest on standardized tests. Divorces can also
cause decrease in family socio-economic status, and social connections of the parents (Jeynes, 2002; Majoribanks, 1996). Students from poor families or single parents are likely to have less education and they usually attend low quality schools, all of which are risk factors for school success. Such students may also face discrimination and prejudice at school (Forman, 1988).

Although a large majority of research point towards a significant positive relation between social class of the parents and academic performance of children, there are also research findings which fail to support their view. For example, White (1974) observed that the correlation between socio-economic status and the students achievements were as low as 0.10. White conducted a Meta analysis of one hundred reports that yielded 638 correlations. He found that depending on how socio-economic status was defined, the correlation between socio-economic status and students achievement could vary widely. He also came up with four elements commonly associated with socio-economic status and students achievements, viz., income, education, occupation, and home atmosphere.

Hassan (2008) observed that living with a single parent, or step parent had no significant effect on pupil’s academic performance. Research has also revealed that children in a single parent family structure can perform better academically than children from two parents family structure. This situation may be brought about by other factors inherent in the child’s personality.

1.2.2.3. Classroom Climate and Academic Performance

Characteristics of school, such as the physical facilities available at school and the psychological environment prevailing, are two important factors that define the broad concept of school climate.

School climate has been researched on for many years and continue to be examined and redefined because of its importance in determining educational outcomes. Marshalls (2005) observes that the elements that comprise the school climate are diverse and complex. Different researchers emphasize different dimensions in measuring school climate. In the present study, the investigator recognizes the varied aspects involved in the school climate, but restricts herself
to the study of the most immediate educational environment to the learner, viz., the classroom climate.

The expression 'classroom climate' was first used in late sixties by Walberg and colleagues when they developed a learning environment inventory to assess students' perceptions of their educational experience (Walberg & Anderson, 1968). However, the first researcher to popularize the concept was Moos who was a psychiatrist interested in the climate of psychiatric hospital wards (Tricket & Moos, 1973). Harvey, Burkley and Yan (2009), in their study on classroom climate, academic management and emotional environment, suggested three differentiable components of a classroom climate, viz., (1) Academic, that has to do with pedagogical and curricular elements of learning environment; (2) Management, referring to discipline styles for maintaining order; and (3) Emotional, referring to the effective interactions within the classroom.

Why is classroom climate important?

Classroom climate has been found to be related to important educational outcomes such as academic achievement, constructive learning process, and reduced emotional problems (Walberg, 1976; Hartel, 1992; Fraser, 1986, 1989).

Extensive research has been conducted on school factors affecting academic achievement and most researchers seem to agree that the type of school (Wango, 1992; Panda, 1995), classroom environment (Singh, 1987; Guyani, 1998), teacher role (Singh & Saxena, 1987), and teaching experience (Mathula, 1996) were effective factors in academic performance.

Research by earlier scholars indicate that classroom climate cover a variety of components, including academic management and emotional environment. In the present study, the emotional environment of the classroom in relation to academic achievement is emphasized and the available studies in this area has been reviewed under the following sub headings.

(i) Teacher – Student relationship
(ii) Student – Student relationship
(iii) Classroom – environment

(i) Teacher – Student relationship

Teacher student relationship has been reported as a key component of classroom climate. High quality teacher student relationship facilities academic motivation, school engagement, academic success, self esteem, and more general social emotional well being (Deci & Ryan 1985; Midgley & Urdan, 1996). Teachers who trust, care about, and are respectful of students have been reported to provide the social emotional well being which rises academic performance (Deci & Ryan, 1985; Roeser, Midgley & Urdan, 1996).

Teacher support has been found to predict adherence of students to classroom norms (Wentzel, 1998). Numerous studies have revealed that a strong relationship produces students who have greater sense of belonging, feel more secure and more likely to ask questions (Beck & Malley, 1998). A caring relationship from the teachers and support for students’ autonomy increases motivation and self regulation in students. This, in turn, improves learning and success among students (Deci & Ryan, 1985, 2002). Steven (2005) has found that supportive teacher student relationship promotes social and emotional health of early adolescents with disabilities. Achievement of students also improve when students are intrinsically motivated and when teachers are supportive of autonomy (Pintrich & Degroot, 1990).

Good teacher student relationship has been noted to establish and maintain not only secure foundations, but also the emotional space necessary for students to explore the relevance of academic information and it’s application within their own lives, ultimately enhancing their academic achievement, learning, and success (Blowby, 1969). A growing body of research suggests that strong student-teacher relationship, characterized by caring and high expectations for students’ success, may be promotive of universal benefits, such as academic achievement and progress in students. (Weiss et al., 2005).

Klem and Connel (2004) carried out a longitudinal study to investigate teacher support to students’ engagement and achievement. Their results revealed that students who perceived their teachers as creating well structured learning
environment, in which expectations were high, clear and fair, were likely to report engagement in school. In turn, high levels of engagement were associated with higher attendance and test scores. Good teacher-student communication has also been known to promote effective learning (Fredericksen, Pickett, & Shen, 2000).

Kate (2008), in a study on the role of psychosocial factors as a predictor of educational outcome among adolescents, found that teacher support was associated with improvement of academic performance among white students. Skinner and Belmont (1993), in their study, also found that interactions of teachers with students predicted students’ behavior and emotional engagement in the classroom.

Certain aspects of observed teacher behavior, viz., high expectations regarding students and proper management of time and resource, correlate highly with good classroom climate, which in turn facilitates high achievement among students (Oconor & Bethel, 2000). Sternberg (1985) observes that a good teacher bears a striking resemblance to a good parent and that schools in which teachers are supportive, and at same time, remained firm and maintained well defined standards for behavior, had fewer problems, higher rate of attendance, lower rates of delinquency, and higher scores on tests and achievements. This pattern is remarkably similar to that observed by Koleman, Hoffer and Kilgore (1982), in their comparative study of public and private schools.

Manning and Saddlemire (1996) asserts that trust, respect, mutual obligation and concern for others welfare can have a powerful effect on the interpersonal relationship and academic achievement of learners as well as overall progress of the school. Adolescents who characterized their teachers as caring and respectful, and peers as helpful were more likely to participate in class and complete their home work (Murdock, 1999). Weiss, Cunningham, Lewis and Clarkson (2005), in their National longitudinal study on adolescent health, found that initiation of many adolescents risk behaviors, including emotional stress, suicide ideation, violence and early sexual activity, was linked to poor connections to schools, specifically poor relationships with the teachers.

Bandura (1997) observes that teachers who regard their students as capable of high scholastic attainment set challenging academic standards for them
and reward behaviors conducive to intellectual development. It may be worthwhile to note here that high standards in itself will not accomplish much and can actually be demoralizing, unless learning activities are structured and conducted in ways that ensure they will be mastered. Ingersoll (1989) had noted that effective teachers are also good classroom managers. Their classroom runs smoothly and disruptions are minimal. Good teachers seem to know when to allow some minor off-task behavior to go without interventions and also when to intervene before minor disruptions develop into major ones. In this way, effective teachers maintain good control of their classes.

Effective teachers establish responsible limits which are seen as necessary for the classroom to function (Ingersoll, 1989). Such teachers tend to emphasize compliance with the rules and reinforce those positive behaviors verbally and nonverbally. Ingersoll and Cross (1991) reports that effective teachers monitor students for signs of potential disruption.

Effective teaching and mentoring helps students to explore their world with a sense of trust and autonomy towards the ultimate goal of fully intrinsic self-regulation and improved academic achievement and success (Steven, 2005). Metz (1978), who studied junior high school students, found that class disruptions were likely when there was a mismatch in teacher behavior and students expectations of teacher behavior. In lower classes, the disruptions were related to the teacher ability to keep order in the class, while in higher classes, students’ challenges to teacher authority were focused on teacher’s mastery or lack of mastery of the content matter. Also, when students see teachers as not in charge, or as not possessing authority, they feel justified in disrupting the class (Ingersoll, 1989).

Teachers need to provide guidance and assistance when social emotional or academic problems arise. This role is especially important for promoting developmental competence, when conditions in the family or neighborhood cannot or do not provide such support (Roeser, Eccless & Lord, 1996).

Rutter (1983) observes that being an effective teacher entails two distinct processes, viz., gaining and maintaining students’ attention and instructing students in the subject matter. He further notes that students perform better when their teachers spend a high proportion of time on lesson (rather than on setting up
equipment or dealing with disciplinary problems), begin and end their lessons on time, communicate to the students what is expected of them, and give ample praise to them when they perform well.

Brophy (1986) observed that when teacher questioning and information giving in the classroom are balanced, students are involved more actively in the process of learning. Rutter (1983) notes that a teacher who is a good lecturer will not be an effective teacher if he/she lacks classroom management skills. Managing a classroom effectively entails more than merely knowing how to discipline students once they become unruly.

Sternberg (1985) observes that maintaining students’ attention depends on having well organized lesson plans, teaching in a way that involves and engages the whole class, and using creative and innovative approaches to instruction. Brook and Burns (1989) notes that with supportive guidance, all students can achieve high mastery. Some simply take longer and require more help than others. Extensive interactional instruction saves slower learners from falling further and further behind and becoming demoralized.

Numerous studies have indicated that positive teacher student relationship lead to increased academic performance of the students, whereas negative teacher student relationship result in decreased motivation, self regulation, autonomy and ultimately lower performance (Barch, 2004).

Lack of friendliness or interest in students’ performance is often cited as a major weakness of poor instructors. Some individuals consciously or unconsciously adopt a condescending or stay away attitude towards students. Teacher-student conflict has been observed to decrease student attachment to school while closeness positively relates to school bonding and academic achievement (Feiner et al., 1993). Birds and Ladd (1997) also report that teacher-student conflict can increase students’ school avoidance among students and decrease students liking of school and levels of cooperation in the classroom.

Marshalls (2008) observes that teaching is more than making information available; interacting with the material and with an expert in the discipline is more likely to encourage students learning. Students and teachers have been known to be more satisfied in innovative, rather than control oriented classes and the classes
that combine a moderate degree of structure with high student involvement and high teacher support (Sternberg, 1995).

Teachers who are demanding, challenging, and somehow critical of inferior work, are more successful with higher ability students, whereas teachers who are relatively more supportive, warmer and more encouraging are more successful with students of low academic ability (Brophy, 1979). It has also been observed that teachers who spend too much time disciplining a few students who misbehave run the risk of loosing the interest of the rest of the class, especially in junior high school classrooms, where young adolescents may not yet have developed a high level of self control in the absence of guidelines from adults. Tyson (1990) points out that an excessively autocratic and controlling orientation leads to students alienation and resentment among students, which in turn may result in lack of cooperation between students and teachers.

Kafui (2005) report that teacher absenteeism and lateness may result in failure to complete the syllabus, which in turn, may affect the motivation, enthusiasm, and commitment to learn among the students. In the absence of encouraging atmosphere, students generally loose interest in their studies, and in such a situation, their courses of study become difficult for them (Sidiqqui, 2003). Cusik, Martin and Palonsky (1976), in their study, found that ineffective teachers are inordinately inefficient along the dimensions of smooth procedures and transition.

Personality of the teachers have been observed to hinder pupils opportunities to learn mathematics in primary schools (Okurat, 2007). Eccles et al. (1998) observes that there is a decline in the perception of emotional support from teachers and in the sense of belonging in their classroom, as adolescents move from elementary school to secondary school.

(ii) Student-student relationship

In addition to teacher-student relationship, student to student relationship is also very important in a classroom setting. Homana et al. (2006) reports a study by Search Institute (2000) that discovered that the bonding the students feel towards each other in a school community is one of the several internal development assets that encourage positive development.
Studies have revealed that school connectedness is reliably linked to higher academic performance (test scores and grades) and school behavior (Klem & Connell, 2004). A sense of “belongingness” has also been closely linked to engagement within the school setting (Osternman, 2000).

Cohen’s work (2000) in the field of social and emotional education suggests that improved classroom and social climate can create an environment where learning optimally takes place. Motivation of students is also influenced by attitudes of other students and the absence or presence of bullying (Bethel & Oconor, 2000).

True collaborative environment at school has been observed to create powerful learning environment that promote cooperative learning group cohesion, respect, and mutual trust, which are important for the development of a sense of belonging (Finnan et al., 2003; Kerr, 2004) Hardison (2005) observed that when students created a lasting personal relationship with one another, they were less inclined to harm each other through gossip or bullying and hence their academic achievement tended to improve.

The aim of the schools should be to encourage growth of competent, caring, loving and lovable persons, who would nourish a sense of belonging and foster intrinsic motivation to learn (Roesser et al., 1996; Wentzel, 1998). Interactions such as those achieved through classroom discussions have been observed to promote higher order thinking (Palinscar, 1998). Ryan and Patrick (2001) noted that social environment of the classroom was very important for student motivation and engagement. Collaborative discussions have been found to facilitate reasoned argumentations among children (Kim et al., 2003).

There has been many studies which point out that there is a significant relationship between relationships among pupils and cognitive learning in schools (Idenumah, 1987; Ojwoowo, 1989; Fabunmi, 2000). Weiss, Cunningham, Lewis and Clark (2005) reported that connectedness among younger students was affected more by their relationship with teachers, whereas, in the case of older children, peer interactions were paramount. Also, students who reported higher connectedness were less likely to drop out, be absent, or exhibit behavior problems in schools.
Maguin and Loeber (1996), in their meta-analysis of studies on academic performance and delinquency, found that higher academic achievers were much less likely to engage in delinquent acts than low achieving peers. Data from a longitudinal study of adolescent health revealed that being at risk for academic failure was associated with every risk behavior studied (Blum, Bauhring & Rinehard, 2000). A consistent and direct relationship between the amount of time in which students are “academically engaged” and their subsequent levels of achievement have been reported by Rosenshine and Berliner (1978).

The research findings reviewed so far indicate that good interaction among students is helpful in fostering academic performance. The pedagogical and curricular elements of learning are core reasons why learners are in a school. So it is only reasonable to expect that the class environment must be conducive to learning and self-fulfillment.

(iii) Classroom Environment

There has been strong indication from research that classroom and school environment play a facilitative role among students by providing conducive contexts (Suleiman, 2006). Numerous studies have shown that the quality, stability and efficacy of personal and social interactions among elementary school children (often measured by school and classroom climate inventories) influence their academic and social development (Barker et al., 2003; Frasser, 1991).

Results of several studies have tried to identify the factors which help to bring out the best in students, i.e., factors which promote psychosocial development in the home, achieving high academic standards, and maintaining warmth and positive behavior in the class room. In a review of 19 studies on the impact of support in school, the Search Institute (2004) discovered that a caring school climate is associated with the following characteristics: (i) higher grades, engagement, attendance, expectations and aspirations, a sense of scholastic competence, fewer school suspensions and on time progression through grades; (2) higher self esteem and self concept (reported in five studies); (3) lower anxiety, depression and loneliness (reported in three studies); and (4) lower substance abuse (reported in four studies).
Johnson and Johnson (1993) in their study, found that positive school climate yield positive educational and psychological outcomes for students and school personnel. Positive school climate has also been noted to provide an enriching environment both for personal growth and academic success (Marshall, 2005).

Dillala and Mullineax (2008), in their study, found that there is a relationship between positive classroom climate and the social behavior of pupils, viz., reduced bullying and conflict, together with greater cooperation and social competence. At the same time, Bishop and Glynn (2003) have noted that teachers become more effective with a diverse range of students who differ in their ability, learning style and culture when classroom environment is positive. Needless to say, this finding is particularly relevant to multi cultural societies.

Occonor and Bethel (2000), in their study on teacher behaviors’ and academic outcomes, discovered that there was a significant link between classroom climate and academic progress of students. Similarly, Lizzo et al., (2000), in their study involving University students of different faculties also observed that positive perceptions of the teaching environment predicted both academic achievement and qualitative learning outcomes.

A study conducted on Hong Kong University students by Phan (2008) revealed that perceptions of an enjoyable classroom led to better mathematic achievement by students. The study also found that students engage in self reflective thinking and learning when their classroom environment was active and enjoyable. Mastery goals of students were linked to perceptions of an enjoyable class room climate.

A caring school climate has been identified as one of the several external development assets or characteristics of student’s environment that encourages positive development, both academically and socially (Search Institute, 2000). Homana and Torney-Purta (2006) have reported positive school climate as being crucial for the development of a competitive, responsible, and capable citizen.

Moos (1979) observes that classroom climate is a process which is influenced by the orientation and the quality and quantity of interactions among
the class mates. These interactions, in turn, affect the satisfaction and self concept of students, and finally, the learning processes and learning outcomes.

Greemer and Reezigit (1999), in their study of classroom climate in Netherlands, identified four main climate factors that increase the academic outcomes of students. These were: (i) well functioning relationships in the classroom between teachers and students and among the students; (2) expectations of teachers regarding the performance of students; (3) orderly classroom environments; and (4) the physical environment of the classroom. At the same time, Bethel and Occonor (2000), in their study, identified three latent climate variables, viz., (1) expectations, (2) lack of disruptions, and (3) engagement that improved academic outcomes.

Rutter et al. (1979), in an extensive program of research on young adolescents in London schools, found that after controlling for differences in backgrounds and ability, school climate was significantly associated with academic performance, attendance and delinquency. Correlates of positive classroom climate revealed by other researchers include: Lower dropout rates, higher attendance records, increased engagement, deep rather than surface learning, improved grades and motivation to learn, (Heartes, et al., 1991; Patrick, et al., 2007; Lau & Lee, 2008; Tapola & Niemvirta, 2008).

Positive school climate has been found to be helpful for preventing anti social behaviors among high risk students (Hayness, 1998; Kupermine et al., 1997).

Classroom climate has been linked to a variety of outcomes including decreased behavioral and emotional problems, improved school performance, improved personal relationships, increased job satisfaction for school personnel, enhanced parental and family involvement in the school, and decreased students engagement in risky behaviors such as cigarette smoking, drug use, sexual intercourse and violence (Weiss et al., 2005). Tableman and Herrone (2004), in their review of related studies, report that students with better school climate tend to have higher achievement and better social emotional health. An American national study of more than 12000 seventh to twelfth graders found that
connectedness to school and family significantly protected youth from seven to eight behavioral risk factors to their health (Tableman & Herrone, 2004).

Increased school connectedness have been found to be related to high academic achievement, participation in extra-curricular activities, good school attendance and relationship with multiple social groups (Cunningham, Lewis & Clark, 2005). Rema and Akbari (2007) observed that various aspects of the classroom learning environment, viz., instructional effectiveness, teacher-student interaction, and students collaboration, all predicted effective learning. Likewise, a study reported by Phan (2008), involving university students, revealed that an environment filled with supportive feedback and clear set goals increased students use of self regulated strategies. These strategies included organization, elaboration and critical thinking. At the same time, students who felt that they were more related to schools were found to be more likely having positive expectancies for success and appreciation of schools (Roeser, Midgley & Urdan, 1996). School environment has been noted to play a pivotal role in developing health and positive attitude towards education. It has also been known to generate interests, motivation and enthusiasm among learners in the classroom (Nelson, 2004).

Schools with positive climate have been known to make students experience greater attachment and commitment to their work. Bowlby (1969) proposed that secure attachment provides for the development of trust and autonomy. Attuning to the experiences of another provides for the development of trust and autonomy from which autonomous exploration of one's environment begins.

Hayness, Emmons, and Ben - Avie (1977) have noted that a positive school climate fosters meaningful relationships within the school, which in turn, creates opportunities for academic success. At the same time, Homana et al. (2006) have found that positive classroom climate is linked to the sense of freedom to express one’s ideas and respect for other students’ ideas. It was also noted that schools with positive climate provide opportunities for deliberations and dialogue that cultivate the ability to listen to others views and build on them, when expressing one’s own ideas.
There has been research findings which show that positive classroom environment coupled with interventions aimed at increasing the social-emotional skills are helpful in improving academic performance and sense of connectivity of students to schools (Sink & Spenser, 2007; Adelman & Taylor, 2005). Stone and Rotter (1997) had also noted that promotion of safe classroom environment help adolescents develop a positive self concept and achieve more academically.

Bandura (1997) notes that the strategy of managing classroom behaviour by promoting, recognizing and praising productive activities is more helpful in promoting academic achievement, when compared to the strategy of punishing disrupting behaviour. However, when troublesome behavior threatens to go out of hand, it should be dealt with firmly. Phan (2008), in his study of classroom environment, observed that students cohesiveness, classroom involvement, task orientation and satisfaction exerted direct and indirect influences on achievement goals, reflective thinking and academic performance in mathematics.

Left et al. (2003) and Gazette (2006) observes that classroom climate can be negative and toxic and can lead to undesirable outcomes such as increased bullying and aggression as well as social and emotional maladjustment. There have also been numerous studies which show that negative class climate can prevent optimal learning and development (Johnson & Johnson, 1993; Kuperminc et al., 1997; Leadbealer & Blatt, 2001; Manning & Saddlemire, 1996).

Unfavorable school environment characterized by irresponsible behaviour of teachers have been observed to contribute to incidences of school dropout among adolescents (Siddiqui, 2003). Bad school and home environment has also been known to cause developmental psychopathology among adolescents (Das & Basu, 2006). Sternberg (1985) notes that students vary in the extent to which they flourish under different degrees of support structure and control. He argues that it may be more helpful to think of authoritative school climate as a general category within which good teachers vary their methods from time to time to suit the needs of particular students. Classes that are too task oriented, particularly when they also emphasize teacher control, tend to make students feel anxious, disinterested and unhappy. Blumenfield and Paris (2000) found that a challenging and structured work environment affected the behavior and cognition of students. At
the same time, classes that are organized co-operatively are reported to increase the efficacy and the goal orientation of students (Turner, Meryes & Logan, 1981). It has also been observed that students felt more efficacious about their ability to learn and to complete activities successfully when they had greater array of resources on which to draw than if they were only working individually (Ryan & Patrick, 2001).

Classroom climate has also been related to how teaching was conducted in the classroom setting (Kubow & Kinney, 2000). Felner et al. (1993) reported a school and classroom intervention that increased students bonding to school by rating smaller learning environments, increasing classroom stability during school transition, and restructuring teacher roles to be more supportive. This resulted in higher attendance rates, lower dropout rates and better grades among middle and high school students. Findings from a longitudinal study of adolescent health suggest that students feel greater attachment to school when their schools are small and when they get along well with each other and with teachers (Blum, Meneely & Renenart, 2002).

Idienumah (1987) found that students from schools having small classroom and lower teacher pupil ratio showed better academic performance when compared to those from larger schools and higher teacher-pupil ratio. Similarly, Broom (1973) found that availability and use of teaching and learning materials affect effectiveness of teaching. Creative use of a variety of media increases the probability that students would learn more and retain better what they learn.

Ausubel (1973) observed that young children are capable of understanding abstract ideas if they are provided with sufficient materials and concrete experiences with the phenomena that they are to understand. Good teaching is also done in classes with smaller numbers that allow for individual attention, since students differ in motivation, interests, abilities, health, personal, and social adjustment (Krofl, 1978).

Botton (1988) observed that small classes are preferable to large ones. Roe (1987) found that students from the smallest classes performed significantly
higher and those from the largest classes significantly lower on a reading test. A meta analysis conducted by Smith and Gross (1980) on studies which compared large and small classes, lead to the conclusion that small classes lead to higher pupil achievement, teachers effects (e.g., moral attitudes towards students), greater attempts in individual instructions, a better class climate, and more favorable students effects (e.g., self concept and participation).

Kraft (1994), in his study on ideal class size and it’s effects on effective teaching and learning in Ghana, concluded that class size above 40 had negative effects on student’s achievement. Several other researchers have also noted a significant relationship between class factors (class size, students’ classroom space, and class utilization rates) and academic performance of secondary students (e.g., Bozzomo, 1978; Bourice 1986; Fabumi, Abu & Adenji, 2003).

Nakubugo et al. (2007) asserts that class control, management difficulties, and indiscipline has been associated with large classes in primary schools and that in crowded classrooms, teachers provide fewer exercises and practice so as to reduce the amount of marking to do. There is also limited spare time to conduct group work that would enhance effective coverage of content.

In spite of a large number of research findings which support the view that small size of a class is beneficial for academic achievement of students, there has also been some studies which contradict this proposition. For example, Daniel (1963) based on his research findings, observed that class size, whether large or small, was not related to academic achievement of pupils in standardized achievement tests in mathematics, reading, and language. Johnson (2000) also reported from his study that being in a small class does not affect reading achievement in any significant way.

1.2.2.4 Achievement Motivation and Academic Performance

(i) Conceptualisation of Achievement Motivation

The term motivation has been defined variously by psychologists as the phenomena involved in a person’s drive and goal seeking behavior; the tendency to commence an activity in response to a persistent stimulus (drive) and end with an appropriate adjustive response; the arousal, regulation and sustaining a pattern
of behavior; and the internal state or condition that results in behavior directed towards a specific goal (Curzon, 1990). Rabideau (2005) define motivation as a driving force behind all the actions of an individual. The needs and desires of an individual have a strong impact on the direction of his/her behavior. Motivation is based on emotions and achievement related goals. The term is also used in a general sense to refer to a person’s aroused desire for participation in the learning process (Ardord, 2006).

Okoye (1985) has noted that motivation holds the key to understanding human behavior. According to him, motivation explains why while one person dodges work, another works normally to achieve the goals and yet another resort to illegal and unconventional methods of achieving social, academic, economic and political recognition.

Psychologists have attempted to formulate categories of motivation over a time, viz., instrumental motivation, social motivation, achievement motivation, intrinsic motivation and amotivation (Ardord, 2006). More than one category may dominate a learner at a given time (Bigg & Teller, 1987).

**Instrumental motivation:—** This is purely extrinsic. It is the tendency to engage in tasks because of task unrelated factors such as promises of rewards and punishments, dictates from superiors, surveillance, and competition with peers (Deci & Ryan, 1985). Although extrinsic motivation was considered to be a behavior that could be prompted by external contingencies (Harter, 1978), self determination theory posits it along a continuum of self regulation. Three types of extrinsic motivation have been proposed, viz., external regulation, introjections, and identification. External regulation occurs when behavior is regulated through external rewards (Deci & Ryan, 1985). For example, a student who reads journal articles because he/she is forced by her thesis supervisor. Introjected regulation is an internalized external regulation which is not fully accepted as one’s own (Ryan & Deci, 2000). For example a student who goes to a graduate school to prove that he /she can do a higher degree. Identification is when an individual comes to value a behavioral goal or regulation and accepts the action as personally valuable (Deci & Ryan, 1985). An example is a student attending a graduate school because he/she feels that it will help him or her better prepare for future career.
Social Motivation: Students influenced by social motivation tend to perform tasks so as to please those they respect and admire, or whose opinion are of some importance to them. Rewards are of limited significance here.

Intrinsic Motivation: This refers to doing a task for the sake of doing it, i.e., for the pleasure and satisfaction derived from the task itself (Deci et al., 1991; Deci & Ryan, 1985; Ryan & Deci, 2000). If a student is intrinsically motivated, he or she will perform the behavior without any external constraints or rewards.

Amotivation (also called learned helplessness): This occurs when an individual do not perceive contingencies between their action and their outcome. Amotivated person experiences feelings of incompetence and lack of personal control over outcome, which are thought to motivate human behavior. Amotivated behaviour is least self determined (Ryan & Deci, 2000). For example, a student who doesn’t see the relationship between his/her effort at school and his or her results.

Achievement Motivation: Achievement motivation has been defined as self determination to succeed in whatever activities one engages in, be it academic work, professional work, or sporting event, among others (Tella, 2007). Gasinde (2000) observes that the urge to achieve varies from one person to the other, the urge being very high in some individuals and very low in others.

The basic physiological motivational drives affect our natural behavior in different environments. Most of our goals are based on incentives and can vary from basic hunger to the need for love and the establishment of mature sexual relationship (Rabideau, 2005). Motives for achievement can range from biological needs to satisfying creative desire or realizing success in competitive ventures. Motivation affects people’s lives every day. The beliefs, actions and thoughts are affected by the inner drive to succeed. Rabideau (2005) asserts that achievement behavior results from an interaction between situational variables and the individual’s motivation to achieve. He further identifies two motives that are directly involved in the prediction of behavior, viz., implicit motives and explicit motives. Implicit motives are spontaneous impulses to act and are also known as task performance. They are aroused through incentives inherent to the task. Explicit motives are expressed through deliberate choices and are more often aroused by extrinsic stimulus. Individuals with strong implicit need to
achieve goals set higher internal standards, whereas, others tend to adhere to the societal norms. Brunstein and Macer (2005) suggests that the two motives work together to determine the direction and passion involved in the behavior of the individual. Explicit and implicit motivation have a compelling impact on behavior. A person with strong implicit drive feels pleasure from achieving a goal in the most efficient way. The increase in effort and overcoming the challenge by mastering the task satisfies the individual (Rabideau, 2005).

Explicit motives are built around a person’s self image. This type of motivation shapes a person’s behavior based on their own self view and can influence their choices and responses from outside cues. The primary agent for this type of motivation is perception or perceived ability. Brunstein and Macer (2005) observes that many theorists still cannot agree whether achievement is based on mastering one’s skill or striving to promote a better self image.

Achievement motives are seen as direct predictors of achievement relevant circumstances. Thus achievement motives are said to have an indirect or distal influence and achievement goal are said to have a direct or proximal influence on achievement relevant outcomes (Elliot & McGregor, 1999). These motives and goals are seen to work together to regulate achievement behavior.

In achievement goals, we have achievement related attitudes and ego-involvement attitudes. Achievement related attitudes has to do with task involvement, which is a motivational state in which a person’s main goal is to acquire skills and understanding, whereas, ego-involvement has to do with demonstrating superior qualities in the task (Butter, 1999). Research has confirmed that task involvement more often result in challenging attributions and increasing effort to learn and develop more competence when compared to ego-involvement (Rabideau, 2005). Intrinsic motivation, wherein a person engage in an activity for self satisfaction, is more prevalent in task involved activities. Ego driven persons strive to outperform others because their feeling of success depends on maintaining self worth and avoiding failure. On the other hand, task driven persons tend to develop and maintain their self image regarding ability on the basis of the mastery of performance achieved through applied effort (Butter,
Ego-invoking conditions tend to produce less favorable responses to failure and difficulty.

Task and ego involving settings bring about different goals, conceptions of ability, and responses. They also promote different patterns of information seeking. For example, people of task involvement orientation seek information about social comparisons and assessing their ability, relative to others.

Achievement goal orientation theorists discuss two broad classes of goals, viz., mastery goals and performance goals (Noah et al, 2004). According to them, when students adopt mastery goals, the primary purpose of engaging in an academic task is to ‘Master’ the task at hand. The student is not generally concerned with social comparisons or how others perform the task. Rather, the student is focused on mastering the task. Research indicates that when students adopt a mastery goal, they tend to engage in more effective cognitive processing strategies (Ames & Ames, 1990; Dweck & Legget, 1988; Midgley et al., 1998).

Researchers also seem to distinguish between two types of performance goals, viz., performance approach and performance avoidance goals. A student who is performance approach oriented wants to demonstrate that he/she knows more than his/her other classmates about a particular subject. In contrast, when students adopt a performance avoidance goal, they are motivated to avoid situations that may make them incompetent, or “dumb” (Elliot, Harackiewcz, 1996; Midgley, Kaplan & Middleton, 2001).

There is a general consensus that the adoption of performance avoidance goals is maladaptive for student learning. At the same time, there is much debate concerning the role of performance approach goals. Some researchers observe that performance approach goals relate positively to some adaptive educational outcomes (Elliot & Church, 1997). At the same time, the researchers suggest that such goals are either unrelated (Elliot & Gable, 1999) or even related positively to maladaptive outcomes (Elliot & Harackiewicz, 1996).

(ii) Empirical research on Achievement motivation and performance

It has been proposed that many factors promote or hinder the success of students in educational institutions (Lampart, 1993). Among them are...
achievement motivation and satisfaction with school experiences. College experiences have also been linked to students’ attrition and performance (Klein, 1990; Lampost, 1993). Some students seem naturally enthusiastic about learning, but many need and expect their instructors to inspire, challenge and stimulate them (Davis, 1999). Effective learning in the classroom depends on the teachers ability to maintain the interest that brought the student to the course in the first place (Ericksen, 1978). The initial level of motivation of the student may be charged for better or worse depending on the experiences received (Davis, 1999). Spanard (1990) observed that persisting students have more motivation than non-persisting students, and that non-persisting students, are less involved in school life and activities. Davis (1999) suggests that there is no single magical formula for motivating students because not all students are motivated by the same values, needs, desires and wants. Some might be motivated by the approval of their peers and some by overcoming challenges.

Research suggests that there are many factors that affect students motivation to work and learn, including interests in subject matter, perception of it’s usefulness, general desire to achieve, self confidence and self esteem, as well as patience and persistence (Bligh, 1971; Sass, 1989).

Some aspects of teaching situations have been identified by researchers to enhance students self motivation (Lowman, 1984; Lacas, 1990; Bligh, 1971). Important among them are the following: (1) Giving frequent, early positive feedback that support students beliefs that they can do well; (2) Ensuring opportunities for students success by assigning tasks that are neither too easy nor too difficult; (3) Helping students to find personal meaning and value in the material; and (4) creating an atmosphere that is open and positive. These positive practices help students to feel that they are valued members of a learning community.

Research has also established that good everyday teaching practices can do more to encounter students apathy than special efforts aimed directly at improving motivation (Ericksen, 1978). Most students have been noted to respond positively to a well organized course taught by enthusiastic teachers who have genuine interest in the student and what they learn. Thus, the activities undertaken to
promote learning can also enhance students’ motivation (Davis, 1999). Active participation in learning has been observed to increase motivation among students. Students are found to learn more by doing, writing, designing, creating and solving. On the other hand, passivity dampens student’s motivation and curiosity (Lucas, 1990).

Davis (1999) asserts that students learn best when incentives for learning in the classroom satisfy their own motives for enrolling in the course. He further observes that students come to classroom with a variety of needs which may include a need to learn something to complete a task or activity, to seek new experiences, to perfect skills, to overcome challenges, to do well, or feel involved and interact with other people. Satisfying these needs by the instructor is rewarding in itself, and such rewards sustain learning more effectively than grades (Mcmillan & Forsyth, 1991).

Asking students to analyze what makes their classes more or less motivating has been employed as a method to identify the characteristics of an effective class. In such a study, Sass (1989) asked the students to recall two recent class periods. One in which they were highly motivated, and one in which their motivation was low. Each student made a list of specific aspects of two classes that influenced his or her level of motivation. The students then met in small groups to reach consensus on characteristics that contribute to high or low motivation. This procedure was repeated in over twenty courses. Sass reports that eight characteristics emerged as major contributors to students’ motivation, which remained unchanged in all the 20 different courses. These were: (i) instructors enthusiasm; (2) relevance of the material; (3) organization of the course; (4) appropriate difficulty level of the materials; (5) active involvement of the students; (6) rapport between teacher and students; (7) use of appropriate, concrete and understandable examples; and (8) holding high and realistic expectations for students by the teacher.

Research has revealed that teachers' expectations have powerful effects on students’ performance. When teachers act in a manner to show that they believe students are hard working, motivated, and interested in the course, they are more likely to be so. Realistic expectations shall be set in giving assignments,
presentations, conducting discussions and grade examinations (Davis, 1999). The realistic expectations are standards high enough to motivate students to do their best but not so high that students will inevitably be frustrated in trying to meet them (Davis, 1999). Students need to believe that achievement is possible, which means that teachers need to provide them with early opportunities for success (Bligh, 1971; Forsyth & McMillan, 1991; Lowman, 1984). Encouraging students to focus on continued improvement, and not just on their grades on any one test or assignment, brings about motivation (Davis, 1999).

Studies by Cashin (1979) and Forsyth and McMillan (1991) indicate that helping students to evaluate their progress by encouraging them to analyze their strength and work on their weaknesses stimulate motivation. Telling students what is expected of them to pass a course and reassuring them that they can do well has been linked with motivation in class (Cashin, 1979; Tiberius, 1990). Lowman (1990) observes that students self motivation can be strengthened by instructors who avoid messages that reinforce their power as instructors or emphasize extrinsic rewards.

Bligh (1971) reports that students are more attentive, display better comprehension, produce more work, and even more favourable to teaching method, when they work cooperatively in groups rather than as individuals.

Instructor’s enthusiasm has been noted to be a crucial factor in students’ motivation in class. A bored apathetic instructor has been noted to make students bored too (Davis, 1999). Davis further advised that an instructor’s enthusiasm should come from confidence, excitement about the content, and genuine pleasure in teaching.

There have been several studies which brought out positive practices by instructors which promoted motivation in the learners. These include: Explaining how the content and objectives of the course would help students achieve their educational, professional or personal goals (Brook, 1976; Cashin, 1976; Lucas, 1990) and letting students have some say in choosing what will be studied (Ames & Ames 1990; Cashin, 1979; Forsyth & Mcmillan, 1991; Lowman, 1984). It has also been noted that increasing the difficulty of the materials as the semester
progress gives every student a chance to experience success as well as challenges, and at the same time, make the class unit more balanced (Cashin, 1979).

Varying teaching methods reawakens students’ involvement in the course and their motivation too (Forsyth & McMilan, 1991) emphasizing mastery and learning, rather than grades, has been linked to motivation. For example, Ames and Ames (1990) reports on the impact of two different methods of teaching math’s to secondary school students. In one method, the teacher graded every home work assignment and counted home work as contributing 30% of the marks which determine the students’ final grade. In the second method the teacher told students to spend a fixed amount of time on their homework. This teacher graded homework as satisfactory or unsatisfactory and gave students the opportunity to redo their assignment. This home work was considered for 10% of the marks which determined the final grade. Although homework was a smaller part of the course grade, the second teacher was more successful in motivating students to turn in their homework. In the first class, some students gave up rather than risk low evaluations of their abilities. In the second class, students were not risking their self worth each time they did their homework, but rather were viewed as acceptable and as something to learn from.

Researchers have recommended de-emphasizing grading by eliminating complex systems of credit points and not to use grades as a motivating factor in class (Forsyth & McMillan, 1991; Lowman, 1990). Assigning ungraded written work and stressing on the personal satisfaction of doing assignment has been noted to help students evaluate their own progress, and thus enhancing their motivation (Davis, 1999).

Designing tests that encourage the kind of learning teachers want students to achieve has been linked with motivation (Mckeachie, 1986). Giving students feedback as quickly as possible, i.e, rewarding success publicly and immediately, motivates them to learn (Cashin, 1979). Both positive and negative comments influence motivation. Research has consistently indicated that students are more affected by positive feedback and success. Praise builds students self esteem (Cashin, 1979; Lucas, 1990). Introducing students to the good work done by their peers also help create motivation through sharing the ideas, knowledge, and
accomplishment of individual students with the class as a whole (Davis, 1999). Assigning reading in a language class at least two sessions before discussion time has been linked to motivation in class (Lowman, 1984).

Getting to know the students by name and the personal details of the students by the instructor was observed to stop disengagement in class (Whitney, 2007). High motivation has been reported among students who consider teachers as caring, checking on them regularly, supporting their individual learning, informing them of their progress and assigning them a variety of tasks that are designed to meet their level of learning (Lice, 1990). Becker and Schneider (2004) observes that holding students to a high standard will make the most highly motivated students to devote time and effort necessary to learn, and this can produce a feeling of accomplishment in them when the standards are met.

According to Weller (2005), teachers who create warm and accepting, yet business like atmosphere, is also able to promote persistent effort and favorable attitudes towards learning. This strategy has been noted to succeed in children and in adults. Bringing interesting visual aids such as booklets, posters or practice equipment motivates learners by capturing their attention and curiosity.

Berry and Michelle (1999) conducted a study to examine the relationship between academic performance, students’ ability and motivation among community college students. The first phase of the study analyzed the association between motivation and academic performance. It was found that academic performance of an individual reflected two variables, viz., ability (cognitive skills and knowledge) and motivation. There was no high correlation between achievement motivation and academic performance. The relationship was observed to fluctuate throughout the semester in the community college. In the second phase of the study, they explored the relationship between students’ attribution of success (achievement beliefs) and academic performance. The findings showed that students who believed in the importance of their own ability and hard work were more likely to earn higher grades than students who believed in the importance of teacher skill and luck. The third phase of the study examined the idea that affective state is an indirect measure of motivation and also the two dimensional model of emotions. The research indicated that students who
reported feeling confident and enthusiastic before a test performed better than students who were anxious and worried.

Broom (2006) observes that a child who doesn’t feel competent in school at an activity is not likely to want to continue involvement in it. Research on the development of children’s competence and autonomy shows that elementary students tend to have high perceptions of their competence and ability to master many tasks. With age, children become more realistic regarding their capabilities, and as they enter high schools, they become vulnerable to social comparisons, especially on academic performance. Classroom contexts that utilizes competitive and norm referenced evaluations are particularly harmful to low achievers (Ecless, Wigfield, & Schiefield, 1998; Pintrich & Schunk, 1996). Broom (2006) notes that students’ competence will influence their judgment about the reasons for their success or failure in academic related activities. If a student believe that he/she is competent in a particular subject, he/she is more likely to attribute his success to ability and effort.

Bempechart (1999) examined student’s beliefs about causes of success and failure. He found that higher and lower achieving students held remarkably different perceptions about their performance in school. Higher achievers believed that success in maths was due to their ability, and failure was not the result of lack of ability. This is important because, we know that when children believe that they have some ability, it makes sense to them to invest effort in their learning. In contrast, lower achievers believed that failure was due to lack of ability. This is problematic because beliefs such as this leave children with the sense that they have little or no control over their learning and that it makes little sense to try hard.

Children with high expectations for success on the task were noted to persist at a task longer and perform better than children with low expectations (Eccles, 1983; Eccles et al., 1998). Carr et al. (1999) reported that children with high intelligence and high expectations of success in school did get the highest grades while children with low IQ’s and low expectations received lower grades than children with low IQ’s and high expectations.
Davis (1999), in his study, observed that setting unrealistic goals runs the risk of failure and consequent disappointment, frustration, and low motivation among students. Similarly, intense competition among students produces anxiety, which can interfere with learning. Public criticism of performance and comments or activities that put students against each other brings demotivation in class (Ebble, 1998; Forsyth & Mcmillan, 1991). Since negative feedback has been linked to a negative class atmosphere, Cashin (1979) suggests that instructors should try to cushion negative comments with complements about aspects of the task in which the student succeeded. In the same study, it was also shown that demeaning comments make students anxious about their performance and abilities and that they also create feelings of inadequacy among students.

Aremu (1998) noted that when pupils express lack of interest in the subject, it will affect the way they react or listen to the teacher. Students who experience repeated failures often use self-handicapping strategies such as procrastination, putting less effort, etc., so as to convey the idea that these problems, rather than lack of ability, are the reason for low performance.

Intrinsic motivation assumes that the activities to be pursued are optimally challenging. Children will seek out for tasks they view as one level beyond their perceived competence level (Harter, 1978). Both Bandura (1986) and Dec., and Ryan (1985) specify the importance of providing tasks that are difficult and challenging, but not beyond students’ range of competence. Although the implementation of this principle creates problems because of the heterogeneity of levels of competence in classroom, it is not practicable to have individual curriculum for every individual. However, teachers can think of assigning tasks of differing difficulty levels to students which match their ability level. Pintrich and Schun (1989) recommend activities that are at moderate level of difficulty, slightly beyond their current skill level.

Dweck (2000) describes how repeated experiences of failure can lead to a sense of learned helplessness among students. He found that continued poor academic outcomes make students feel powerless over their capacity to learn, and often result in students’ disengagement from school.
Intrinsic motivation facilitates creativity and academic performance, whereas, extrinsic motivation hinders creativity but has no effect on academic performance (Moneta & Siu, 2000). In their study to examine the effect of intrinsic and extrinsic motivation in Hong Kong college students, Moneta and Siu (2000) found that Hong Kong college environment constrains and penalizes the expression of intrinsic motivation and thus creativity, and that it facilitates or rewards the expression of extrinsic motivation and thus means end opportunism. When given task or assignment without being promised rewards or punishment upon completion of the task, persons with higher intrinsic motivation continue working on the task, whereas persons low in intrinsic motivation stop working (Moneta & Siu, 2000). Persons of high intrinsic motivation, in the absence of incentives, proactively explore the environment, seeking interesting stimuli and opportunities for action, whereas persons of low intrinsic motivation come to a halt and remain passive until the environment provides them with incentives (Deci & Ryan, 1985).

Moneta and Siu (2000) observes that people with high extrinsic motivation do not enjoy what they do while they are doing it, that is, enjoyment does not energize their work. Their mind looks ahead and anticipates the rewards or punishments that will be received upon completion of the task or failure to complete the task. They enjoy work only after completion, when they can get a reward or celebrate avoidance of punishment.

Introduction of extrinsic incentives such as money and praise in interesting tasks has been found to reduce intrinsic motivation (Deci & Ryan, 1985). Trait intrinsic motivation was found to correlate positively with course performance and SAT verbal and mathematical scores representing measures of academic ability and intelligence (Amabile, 1996). It has also been observed that students who scored higher in intrinsic motivation also tended to produce more original thinking in their work (Moneta & Siu, 2000). It has also been noted that intrinsic motivation predicted higher G.P.A. in high challenging courses. This finding supported the view that intrinsic motivation facilitates performance when facing complex learning tasks, whereas, extrinsic motivation facilitates performance when facing simple learning tasks (Moneta & Siu, 2000).
McCuller and Martin (1971) assert that temporarily induced states of extrinsic motivation results in poorer concept attainment and impaired problem solving. Moneta and Siu (2000) observes that learning is more efficient, deeper and enjoyable, when students are intrinsically motivated than when they are extrinsically motivated. It also encourages higher order learning. According to Atkinson (1974), all students are influenced by the need to achieve, and that causes them to want to be successful at what they attempt. But each student is affected to different degrees. For some students, the desire to achieve overwhelms other factors that cause failure, such as lack of skills, experience, ability or lack of time. The individual does whatever it takes to work through or eliminate these setbacks.

Moneta and Siu (2000) have noted that whether or not motivation influence performance depends on three things, namely, (i) Whether the person finds a suitable context or opportunity for the expression of the motivation; (2) The extent to which the environment provides suitable context; and (3) The extent to which the environment recognizes and rewards the visible product of that motivation.

According to the works of Eccless (1993), and Wigfield and Eccless (1992), people are motivated to engage in academic tasks if they value the task and if they expect to succeed at the task. Studies indicate that there are four components that make up the value dimensions. They are: (1) The perceived importance of the task (values); (2) The intrinsic value i.e., how interesting the task is to the learner); (3) Utility value (i.e., the perceived usefulness of the task for the learner); and (4) The cost (Perception of any negative aspect of engaging in the task).

The expectancy component represents the learner’s expectations for future performance on the task. The expectancy belief tend to be more predictive of academic outcomes such as knowledge acquisition and achieving high grades, while value belief tend to be predictive of behaviors such as voluntary enrolling in future courses on a topic (Eccless, 1986; Wigfield & Eccless, 1992).
Research has shown that when students adopt a mastery goal, they tend to engage in more effective cognitive processing strategies (Ames, 1992; Dweck & Legget, 1988).

Atkinson (1974) observes that some students have a need to achieve in all that they do. Their desire for success drives them to accomplish every task, no matter what the task is or the difficulties involved in completing it. Other students feel the need for success but they don’t value or see the worth of the task even though they are capable of accomplishing it.

Atkinson and Feather (1966) propose a theory that states that a person’s achievement orientation has three different aspects, viz., the individual’s predisposition to achievement; the probability of success; and the person’s perception of value of task. They further assert that the strength of motivation to perform some act is a multiplicative function of the strength of the expectancy (subjective probability) that the act will have a consequence on the attainment of an incentive, and the value of the incentive.

Zen-Zen (2000) notes that individuals will find a task easy, if they have a high probability of successfully completing it, and hard, if they have a low probability of completing it. Studies done by Atkinson (1999) revealed that a high percentage of students will work hard to achieve tasks they do not enjoy, solely to maintain a high grade point average or high class rank. Students who value success very highly work hard to achieve success, regardless of the task difficulty (Zen-Zen, 2000). Feather et al. (2000) reports that high achievement motivation and high achievement may be associated with normal perfectionism. At the same time, Keefe and Jenkins (1993) suggest that motivation does not guarantee achievement and also that achievement does not reflect motivation.

Anderman (1999) observes that students often believe that ability is the primary element for achieving success and lack of ability is the primary reason for failure. Their motive then becomes avoiding failure and protecting their self worth from the perception that they have low ability. If students attribute achievement to ability, effort may be seen as of less importance and the students may actually decrease effort to protect their self worth.
For some students, achieving success is only a way to avoid failure. The goal is not to gain the rewards or benefits of the outcome, but to avoid failing at all costs (Simon et al., 1999). Zen-Zen (2000) observes that people are normally motivated to act in ways that help them achieve their goals. The strength of the motivation to act depends on the perceived achievability of the task, as well as the importance of the task. Many students feel that if they make the effort and work hard, they will be successful.

Harsen and Shen (1979) suggest that intrinsic motivation implies that there is a powerful potential for self actualization within each student, and that the potential is based on the intensity of the need to achieve, as well the enjoyment of achieving. Students who are intrinsically motivated have been reported to participate in learning activities for their own sake. They desire the outcome and are not much concerned about rewards or praise. They find satisfaction in knowing that what they are learning will be beneficial later. They want to master the task and they believe it is under their control to achieve mastery.

Research has consistently demonstrated that intrinsic sense of motivation and belief in hard work are the factors which determine whether or not a student will succeed in achieving his or her goal. High quality learning has been associated with intrinsic motivation (Deci & Ryan, 1992). Ayayi (1998), in a study on achievement motivation among 276 students, found that there is an association between academic performance and motivation. A number of other researchers have also reported significant relationship between academic performance and motivation (Johnson, 1996; Broussard & Garison, 2004; Skaalvik & Skaalvik, 2004; Sandra, 2002).

Recent studies have focused on goal orientation and the idea that motivation is determined jointly by the expectation that effort will lead to the goal (self efficacy) and the belief that the goal is worth attaining (Csikzentmihaly & Nakanurra, 1989).

Covington (1999) explored the coexistence of intrinsic motivation and extrinsic rewards. He found that students’ interests in learning was connected to task orientation rather than failure avoidance. He then concluded that one individual carries the same balance of motivations.
Bandura (1977) discovered that different aspects of human behaviour are regulated by different combinations and levels of incentives. Johnson (1999) reports that extrinsic rewards do not have positive long term effects. Students in a variety of schools have been known to demonstrate decreased motivation after attaining rewards (Simon et al., 2000). Studies have also revealed that students with high extrinsic motivation and peer recognition needs rarely completed the alternative program, while those with intrinsic motivation finished the program and believed that they could return to school and be successful (Hurdley, 1996).

Several studies have suggested that in addition to cognitive factors, non-cognitive factors are also important predictors of academic success for students (Gaston 2003). Personality characteristics like motivational orientations, self-esteem, and learning approaches are also found to be important factors influencing academic performance (Tella, 2007).

According to Turkman (1999), cognitive engagement, which represents the amount of effort spent in either studying or completing assignment, results from one's motivation. A review of a large body of research by Pintrich and Schrauben (1992) suggests that the value of an outcome to the student affects the student's motivation and that motivation leads to cognitive engagement. Such an engagement will also manifest in use of various learning strategies.

Commitment to athletics has been observed to be negatively correlated with grade point average. That is, individuals with high commitment to athletics had low college grade point averages (Simons et al., 1999) on the other hand, Gaston (2003) observed that high levels of athletics motivation and career athletic motivation do not necessarily detract students from academic performance. Rather, academic motivation, regardless of athletic motivation, was meaningful in predicting grade point average for the college athletics.

Turkman (1999) has reported a relationship between self efficacy beliefs and academic productivity. In his collaborative work (Turkman & Sexton, 1990) which compared the task performance of students at high, intermediate, and low levels of self efficacy with regard to task performance, the high self efficacy group was found to be twice as productive as the middle group and ten times as productive as low group. Moreover, the high group outperformed their own
expectations by 22%, the intermediate group equaled their own expectations and the low group fell below their own expectations by 77%.

Schunk and Rice (1993) in their study also found that efficacy beliefs played a mediational role in academic attainment, especially between instructional or induced strategy treatment and academic outcomes. Providing children with strategy, instruction and training in self monitoring and self-correcting increased performance both directly and through the enhancement of self efficacy. Schunk and Rice further note that training in verbal self guidance increased both self-efficacy and reading comprehension skills.

1.2.2.5. Cognitive Abilities and Academic Performance

(i) Theoretical issues

Marlin (1999) defines cognition as a general term which refers to mental activities involved in acquiring, retaining and using knowledge. Psychologists have identified a broad range of cognitive abilities, which include the use of mental images and concepts, problem solving and decision making, the use of language, etc. Cognitive abilities are widely regarded as a key component of intelligence, which is a concept that is difficult to define (Huckenburry & Huckenburry, 1997).

In recent years, the concept of IQ has been viewed with great caution, if not outright cynicism. Alternative concepts like multiple intelligence (Sternberg, 1985) and emotional intelligence (Goleman, 1996) have been put forward as the predictors of success in life. Imbrosciano and Berlach (2003) observes that despite the continued defense of the concept of IQ by staunch advocates such as Herrstein and Murray (1994), the very notion, together with its primary cognitive orientation, has been subjected to very strict scrutiny in recent years. Indeed, the post modern mind set has attempted to deconstruct the distinction between “cognitive” and “affective” domains arguing that more holistic approaches have greater conceptual as well as practical potency (Gardner, 1993; Sternberg et al., 1995)

Over the years several groups of people have tried to define the term intelligence. For example, a task force convened by American Psychological
Association (2005) defined intelligence as “the ability to understand complex ideas, to adapt effectively to the environment, to learn from experience, to engage in various forms of reasoning, and to overcome obstacles by taking thoughts”. They additionally note that there can be substantial individual differences in the above activities and that they are never entirely consistent over time. A given person’s intellectual performance will vary on different occasions as judged by different criteria.

A second definition was given by a group of 52 prominent researchers on intelligence Gottfredson (1997). According to them, intelligence is “the general mental capability that among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly, and learn from experience”. It is not merely book learning, a narrow academic skill, or smartness in test taking, rather, it reflects a broader and deeper capability for comprehending the surroundings, “catching on”, “making sense of things”, or figuring out what to do.

The most influential definition of intelligence and the one that has generated a lot of systematic research have been based on psychometric testing. The IQ tests have been used to measure intelligence and have been shown to be reliable and valid. The commonest of these tests are Stanford Binet, Raven’s Progressive Matrices, and Wechsler Adult Intelligence Scale.

Several theorists have put forward their views of what intelligence means to them. For example, Cattel (1905) differentiated between fluid and crystallized intelligence. Fluid intelligence is related to the ability to perceive relationship without previous specific experience. On the other hand, crystallized intelligence referred to the mental ability derived from previous experience, e.g., word meaning, use of tools, and culture.

Sternberg (1985) put forward the triarchic approach, which viewed intelligence as having three dimensions, viz., componential intelligence (cognitive or academic performance), experiential intelligence (experience or automatic creatively) and contextual intelligence (cultural) Gardner (1983) proposed a multiple intelligence theory which broke intelligence into eight different components, viz., Logical, Linguistic, Spatial, Musical, Kinesthetic, Naturalistic,
Intrapersonal, and Interpersonal intelligence. Galton (1884) believed that intelligence was largely a matter of superior perceptual and physical attributes. According to him, intelligence is inherited. He laid the foundation for the ‘eugenic movement’, which held the view that only bright people should be allowed to procreate children.

Das (1975, 2002) and Das et al. (2002), based on the description of neuropsychological process, came up with the PASS model which covered four kinds of competencies, which were associated with the different areas of the brain. These were: Planning process (decision making and problem solving, performance of activities that require goal setting and self monitoring); Attention or arousal components (which involves selecting, attending to a particular stimulus, ignoring distractions and maintaining vigilance); simultaneous processing (which involves integration of stimuli into a group and requires observations of relationships) and successive processing (which involves integration of stimuli into a serial order).

The earliest of the intelligence tests, viz., Binet and Wechsler scales, predicted performance in schools better than anything else. These two tests could not detect neurological problems, mental retardation and emotional distress in children as well as adults. The core belief of the psychologists, as they use test scores, is that individual differences in human cognition can be adequately measured by performance on intelligence tests, and that the intelligence itself can be defined by variations in test scores across people (Hunt, 1995). The intelligence of subjects are inferred from test scores as people are asked to perform different cognitive tasks.

Some of the situation that warrants the measurement of intelligence includes prediction of academic performance, prediction of performance on job, and assessment of general adjustment and health (Jack, 2009). Predicting academic performance was the original aim of intelligence research undertaken by Binet and Simon (Haggins et al., 2007). The fact that cognitive ability test predicts academic performance is well documented (Chamorro-premuzic, 2007). Indeed, academic performance has been the criterion for validating IQ tests for over a century now and one would hardly refer to any tests as “intelligence”
measures if they didn’t correlate with academic performance. However, IQ tests rarely account for more than 50% of the variance in academic performance (Chamorro-Premuzic, 2004; OConnor & Paunonen, 2007).

At the same time, it may also be noted here that Grade point average (G.P.A.) has not proven itself as a particularly useful predictor of real world performance (Schinidt & hunter, 1998).

Racial studies indicate that intellectual maturation is partly the result of environmental influences and cultural opportunity (Bhogle & Prakash, 1992) Piaget (1955) observed that intellectual level of an individual reflects both one’s genetical potentials as well as experiential inputs. However, genetical and environmental variables always work together in such a manner that it is impossible to isolate their relative contribution.

According to Brown et al. (1983), academic cognition differs from the cognition that children use in everyday life in three ways. Firstly, academic cognition is effortful, requiring children to make deliberate, often painful attempts to learn, while cognition in everyday life is spontaneous and natural. Secondly academic cognition is compartmental, which progresses through successive stages, and is measured in terms of independent competence. Finally, academic cognition is decontextualised knowledge, where the students learn facts, stripped from their context. Motivation and practical use of information acquired is not given much importance. In the case of cognition in everyday life, these factors assume the greatest importance.

(ii) Empirical works on Intelligence and Academic Performance

Numerous researches have been done in Western countries on the relationship between intelligence and academic performance. Vygotsky (1978) was among the first psychologists to study systematically the links between cognitive development and education. As a result of his influential work, and also work by other scientists, many developmentalists have adopted a view of reciprocal causality between cognitive development and education. Higher cognitive indices have been associated with more educational achievement. At the same time, higher educational achievement is found to be predictive higher intellectual outcomes (Brody, 1997; Ceci & Williams, 1997). Cronbach and
Snow (1977) conducted a survey of research addressing interactions between education and individual differences in abilities and aptitudes. Their survey led to the conclusion that general cognitive abilities, as captured by IQ, are strongly linked with achievement indices in humanities, science and social sciences. The IQ was found to be the best single predictor of decision to obtain post secondary education (Rebberg & Rosenthal, 1978).

It has also been observed that high IQ predisposes an individual to seek more schooling, and the schooling in turn, raises individual's IQ (William & Ceci, 1997; Sternberg, 1997). At the same time, research carried out among University students show that the relationship between psychometric intelligence and academic performance may be weaker than expected and is often not significant (Mehta & Kumar, 1995; Sanders, Osborn & Greena, 1955; Thomson, 1934). Tsien (2000) observes that intelligence is related to learning. Intelligence also affects how one communicates, thinks, solves problems, etc. (Huma, 2000). Gayton (2005) reports of a study where 1500 children of IQ of 135 and above were followed up to age forty. The research findings revealed that they were superior in health, physique, athletic ability and achievement.

Intelligence has also been found to be the single best predictor of successful job performance (Ree & Earles, 1992). Large working memory has been observed in people who do well on tests of fluid intelligence (Carpenter & Shell, 1990). Hunt (1995) asserts that intelligence is more closely linked to acquiring the skills than exercising them once they are acquired.

Disorders like ADD and dyslexia have been noted to have very negative impact on IQ score, so can depression, anxiety, and other mood disorders (Luba et al., 1995). Monteil et al. (1996), in their study, found that students who have the ability to focus their attention on a particular task are more apt to accomplish that task in ample time and with more accuracy than those with ADHD. The performance of a person with ADHD was found to be similar to that of a person with a loss of focused attention due to injury.

Ahmand and Abu-Kassim (2006) conducted a study to identify the nature of multiple intelligences among dental students and investigated the relationship between multiple intelligences and performance in various skills of dentistry.
Their study revealed that no significant correlations exist between composite scores and intra personal and body kinesthetic intelligence. Generally, there were no significant differences among high and low performers in multiple intelligence.

Vaquero and Rojas (1996) reports that the use of models for information processing predicted better overall academic performance in University level students. Intelligence tests have been observed to correlate well with school achievement (Vygotsky, 1996). Faustein (1979) argues that to measure learning potential, subjects must be placed in situations which they must learn, rather than in situations where past learning is tapped. IQ tests have been known not to tap qualities like interpersonal skills, creativity, and athletic ability and many of the tests are biased against social and ethnic minorities (Solomon et al., 1991). McClelland (1973) argues that IQ tests bear little relationship to success in life. But Burrett and Depinet (1991) conclude that IQ is positively related to job performance.

Though intelligence is related to job performance, personality and social factors are more relevant in creativity (Gatzels & Jackson, 1962). Creative students are not necessarily those with the highest IQ or the best liked by teachers. Gallagher (1960) observes that teachers miss 20% of the most highly creative students and that the proportion of school dropout among gifted adolescents is higher than that among the general population (Macmann & dive, 1988). Even though it is a mistake to think that creativity is to be found only among those with high IQ’s, a high correlation have been observed between measured creativity and IQ scores (Mcleod & Cropley, 1989). Reliable correlations have been reported between IQ and various elementary cognitive tasks. For example, IQ has been correlated with simple reaction time, choice reaction time, and with inspection time (Deary, 2000). The heritability of general intelligence is reported to be between 0.50 and 0.80 (Promin, 2000).

Students' mindset, emotional state and subconscious beliefs have been noted to affect cognitive abilities. For example, as long as a student holds the belief that he or she is not good at math’s, the mind will try to keep the belief true (Luba et al., 1995). In a study by Dweck (2007), it was revealed that beliefs about intelligence had more of an impact on intelligence than anyone had previously
assumed. Dweck separated hundred 7th grade students who were poor in math’s into two equal groups. One group was taught good studying habits and the other was taught about the plasticity of the brain, formation of new neural connections, and possible improvement in intelligence. At the end of the semester, the children who were taught about the nature of intelligence actually ended up performing better than those who were taught improved study skills.

Limiting beliefs, self esteem and lack of motivation can also have negative impact on performance (Russel, 1997). These problems bog one down, and in some cases, even cause the brain to work less when one needs it most, out of frustration and emotion (Luba et al., 1995).

Praising the children for their intelligence has been noted to leave them ill equipped to cope with failure. Muller and Dweck (1998), in their study on 412 fifth grade students, compared the goal and achievement behavior of children praised for intelligence, with those praised for effort/hard work under conditions of failure as well as success. The outcome of the study demonstrated that commending children for their intelligence after good performance might backfire by making them highly performance oriented and thus extremely vulnerable to the effects of subsequent set backs. On the other hand, children who were commended for their effort concentrated on learning goals and strategies for achievement. The researchers also observed that children who were commended for their ability when they were successful learned to believe that intelligence is a fixed trait which cannot be developed or improved. The children who were explicitly commended after their success were the ones who blamed poor performance on their own lack of intelligence. However when children praised for their hard work performed poorly, they blamed their lack of success on poor effort and demonstrated a clear determination to learn strategies that would enhance subsequent performances. Dweck (1996) further argues that some of our basic beliefs on how we increase children’s self esteem and achievement are misguided. Praising children’s intelligence is far from boosting their self esteem. It encourages them to embrace self defeating behaviors such as worrying about failure and avoiding risks. He also suggests that children should be taught the value of concentration, strategizing and working hard when dealing with academic
challenges. This encourages them to sustain their motivation, performance, and self esteem.

Openness to experience, a trait that assess individual differences in aesthetic interests, creativity and intellectual curiosity, is positively linked to academic performance (Occonnor & Paunonem, 2007). Open individuals are more likely to invest in activities that stimulate the acquisition of knowledge (Chemorro-Premuzic & Furnham, 2004; 2006). Chemorro-Premuzic and Furnham (2006), in their study, tried to explore the relationship among personality, ability, learning approaches, and academic performance. They discovered that the effects of ability on academic performance were mediated by personality and learning approaches.

Some studies have brought out that teacher expectancies are related to pupils IQ gains. For example, Rosenthal and Jacobson (1966) carried out an experiment where the teachers were asked to administer intelligence tests that would determine which children would be academic bloomers. These very children were assumed to stand a great chance of becoming academically bright in future. A test of general ability (Flanagan, 1960) was administered to all the children. Twenty percent of children in each of the 18 classes were chosen at random and labeled as bloomers. Their classroom teachers were told that these children were bloomers and therefore stood a good chance of becoming quite academic, when infant, on average the children would have been no different in academic ability than the rest of their classmates. After eight months, the test was administered again to all the children and the IQ gains were calculated. To check for experimenter bias a blind judge or independent researcher without knowledge of which children had been labeled as bloomers, tested some of the children for a third time. It was found out that children who had been labeled as bloomers had significantly higher gains in IQ (P = .02, one tailed). The greatest gains were seen in the youngest children (grades one and two).

Conceptualizing intelligence as a changeable characteristic, rather than as a fixed one, results in greater academic achievement, especially among those who bear the burden of negative stereotypes about their intellectual capacity (Steele et al., 2002). Steele et al., have also noted that many people believe that intelligence
is fixed and that some racial and social groups are inherently smarter than others. Evoking such stereotypes, which is sometimes labelled as stereotype threat is damaging to the academic performance of members of these groups. Aronson, Fred, and Good (2001) taught their students to think that intelligence is changeable rather than fixed. Students in the control group did not receive this message. The students who were taught that intelligence is changeable improved their grades more than did students who were not taught like that.

Intelligence, academic performance and low birth weight of children have been found to be interrelated. Chaudhari et al. (2003) reported a study where they assessed the intelligence, visual-motor perception, motor competence and school performance of children with birth weight less than 2000 gms. Their results revealed that intelligence and academic performance of the children weighing less than 2000 gms is significantly lower than that of controls, though within normal limits. They were also observed to have poor visual motor perception, motor incompetence, reading and mathematic learning disability. Their academic performance was poor compared to controls and 24.4% of the children had borderline intelligence.

Studies of adopted children have repeatedly shown that IQ of the biological parent is a better predictor of the child’s IQ than the IQ of adopting parent, even when adoption is virtually at birth (Hurts, 1995). Intelligence has been noted as a substantially inherited characteristic by genetic scientists. They have reported that 40 to 80% of variation in intelligence across individuals can be accounted for by genetic variation. Huma (2000) observes that genetics account for about 50% of intelligence and that there are regions of the brain that are under tight genetic control. At the same time, Rebecca (2002) asserts that persons with mediocre natural ability might eventually excel after being exposed to more enriched environments. Evidence suggests that family environmental factors may have an effect upon childhood IQ, accounting for up to a quarter of the variance. On the other hand, by late adolescence, this correlation disappears, such that the adoptive siblings are no more similar in IQ than strangers (Plomin, et al., 2001). Another relevant finding in this context is that of Virtanen et al. (2009), who
reported that in the middle age, intelligence is influenced by life style choices (e.g., long working hours) to a great extent.

Some studies indicate that there is a significant correlation between intelligence and conduct problems in children (e.g., Furgussion, Kynskey & Horwood, 1993). This may be explained as due to the fact that major portion of child’s behavior is learnt, maintained, and regulated by their effects upon the social environment and the feedback it receives with regard to the consequence (Radhika, 2001).

The relationship between IQ and socio-economic status has been studied by several researchers. For example, Herrestein and Murray (1994), in their studies found that people who are below poverty line are likely to have low IQ’s (on average) and less than average health and that they are more likely to come from parental families of low socio-economic status. They further argue that social problems have multiple causes, like low intelligence, lack of education and limited familial support. Hurts (1995) reports that intelligence is an important predictor of social problems and that persons of low IQ almost always has a substantial risk of encountering problems in the society.

Limited family support or limited educational opportunity may restrict a person’s intellectual potential even when a person is highly motivated to succeed. Herrestein and Murray (1994) found that people who received aid for dependent children tended to have low IQ scores. The study also found that many social and economic problems were disproportionately higher among people with low education. Geary and David (2004) in their study also found that general intelligence is highly correlated with many important social outcomes. For example, individuals with low IQ were found to be more likely divorced, have a child out of marriage, be incarcerated, and need long term welfare support, while individuals with more years in education were more likely to have higher job status and higher income.

There are plenty of research indicating a close connection between intelligence and school performance (Gage & Berliner, 1992). However, there are also significant researches that indicate that school/college grades, IQ or exam scores fail to predict unerringly who will succeed in life (Goleman, 1996). Goleman also points out that IQ accounts for only 20% of the factors that
determine life success, leaving 80% to other forces. Woolfolk (2001) also found that when the number of years of education is held constant, IQ scores and school achievement are not highly correlated with income and success in later life.

1.3 Conceptualisation of the present Study

Review of the vast literature on the antecedents and correlates of academic achievement, reported in the previous pages, has helped the present researcher to identify the important variables and the major issues involved in the area. This, in turn, was invaluable in formulating her own study in the area, which involved specification of a model of interconnected variables which could account for variation in academic achievement. A brief account of the need and significance of the study, the proposed model of the predictors of achievement, and the hypothesis formulated for the study are given below under suitable titles.

1.3.1 Need and Significance of the Study

Over 70 percent of Kenya’s budgetary allocation is given to education. This is the tax payer’s money. If students fail or are unable to achieve good grades, it means that the meager resources of the country have been wasted. Therefore, an effort to unravel and understand the factors that underlie the academic performance of students is not simply an academic exercise, but it can have a practical bearing in identifying the problems and suggesting suitable remedies.

An exhaustive review of the related literature (summarized and presented in previous pages) have revealed that a multitude of variables belonging to both cognitive and non-cognitive (e.g., personality and socio-demographic variables) domains may have an impact on the academic performance of adolescents. However, Kenyan studies on the subject were found to be very rare. A few studies that related to the determinants of academic achievement of Kenyan adolescents were based on only one or two variables at a time (e.g., Orodho, 1986, which related to academic achievement in Mathematics and Science in secondary schools), and hence failed to take into consideration the multivariate and complex interactions that may exist among the independent variables. This pointed towards the need for multivariate studies involving several antecedent (independent) variables at the same time. The present study was undertaken in this context.
From among a large number of variables that could be hypothesized as the antecedents/correlates of academic achievement among Kenyan adolescents, the present researcher chose to limit her study to a selected list of psychosocial variables, viz., home environment, socio-economic status, perceived class room climate, achievement motivation, and cognitive abilities. It is sincerely hoped that the knowledge regarding the relative contribution of each of these selected variables to academic performance and motivation may provide sufficient information which will serve as the basis for reorganizing and developing meaningful school curriculum that is geared towards the personnel needs of the country.

In addition to the above, the study is expected to provide teachers and parents with information on the manner in which academic performance and motivation at primary school level is influenced by home environment, education program and personality factors. It is also hoped that the findings of the study can be used to highlight the role and relevance of professionally trained counselors in primary schools in Kenya.

1.3.2 Proposed Model of Academic Performance.

From the review of related literature presented above, it is clear that a lot of factors play a contributory role in predicting academic performance. On the basis of this information, the present researcher would like to put forward a new model of academic performance, as depicted in figure 5.

It may be seen from figure 5 that the model considers three groups of inter-related variables as antecedents of academic performance. These are school environment variables, home environment variables, and personality variables. It is possible that each of these groups of variables may, in turn, involve a large number of specific variables. It may not be feasible to include all these variables in a single study. Therefore, the researcher decided to limit her study to a few representative variables belonging to each of these groups of variables. These specific variables are: Perceived class room climate (to represent school environment variables), socio-economic status and perceived parental involvement in school work (to represent home environment variables), and cognitive abilities (IQ) and achievement motivation (to represent personality variables). The academic performance of the students is indexed by the percentage of marks obtained.
The goal of the current study is to assess the validity of the proposed model. To be more specific, the study attempts to find out whether and to what extent, socio-economic status, parental involvement in school work, perceived classroom climate, cognitive abilities, and achievement motivation, jointly and separately, help in predicting academic performance of standard eight students in Kenya.

### 1.3.3 Statement of the problem and Definition of terms

The topic for the present study is stated as follows:

**PREDICTORS OF ACADEMIC PERFORMANCE AND MOTIVATION AMONG KENYAN ADOLESCENTS**

The key terms used in the present investigation are defined below for the purpose of clarity and precision.
(a) **Predictors**: Information that supports a probabilistic estimate of future events. In the present study, the word is used to mean a determinant or cause. Some predictors taken up for the investigation in this context are: Classroom climate, Home environment, socio-economic status and intelligence.

(b) **Academic Performance**: As used in the context of the present study, the expression 'Academic performance' refers to the percentage of marks obtained by the pupils on each of the five compulsory subjects after two terms of study in standard eight class. The overall percentage on the five subjects was calculated from this information. Information blanks containing columns to enter total marks obtained by the student and the maximum marks on each of the five compulsory subjects were used for the purpose. This information was provided by the school authorities.

(c) **Motivation**: The expression 'Motivation' in the present study refers to the persons' aroused desire for participation in the learning process and to perform at a high level of competence. This construct was operationalized using an achievement motivation inventory constructed by the present investigator (Muthee & Thomas, 2009) in connection with the present study. The tool measured four different aspects related to academic motivation, viz., (1) motivation for achievement, (2) inner resources of the learner (3) interpersonal strengths in learners and (4) work habits.

(d) **Kenyan Adolescents** : These are pupils in the age range of between 11-14½ years. They are supposed to be in the eighth standard in primary schools in Kenya.

(e) **Classroom Climate**: As used in the present study the expression 'classroom climate' refers to students’ perceptions of psychological processes going on in the classroom. The construct was operationalized using a classroom climate scale constructed by Muthee (2009) in connection with the present study. The tool measured the following aspects of classroom climate: (1) Physical environment that is welcoming and conducive to learning, (2) Social environment that promotes communication and interaction, (3) An affective environment that promotes a sense of belonging and self esteem, and (4) An academic environment that promotes learning and self fulfillment.
(f) **Home environment**: As used in the present study, the expression 'Home environment' refers to parental involvement in the child's school work at home with an aim of enhancing academic performance. This construct was operationalised using a home environment scale constructed by Muthee, (2009) in connection with the present study. The instrument measured the following dimensions of home environment: (1) Values (goals) (2) parental involvement, (3) school communication, and (4) school involvement.

(g) **Socio-economic status**: The expression 'socio-economic status' as used in the context of the present study refers to the overall socio-economic status of the pupil's home. It is computed on the basis of three components that are generally considered as important indicators of socio-economic status of the parents, viz., educational status, occupational status and economic status. Operational definitions of these indicators were achieved using a general information schedule which was constructed by the investigator (Muthee, 2009) in connection to the present study. In addition to these information, the schedule also yielded some additional information like gender, age, and family structure of the respondents.

(h) **Intelligence**: The term 'intelligence' as used in the context of the present study refers to cognitive abilities. This construct was operationalized using standard progressive matrices, which was developed by Ravens, (1938) to test people's ability for observation and clear thinking. It measures a person’s ability to form perceptual relations and to reason by analogy. The test can be administered to any individual in the age range of 6 years and above irrespective of language and schooling. The total score indicates an individual’s intellectual capacity regardless of his level of education.

### 1.3.4 Objectives

In the light of the extensive review of literature carried out, many research questions could be formulated which could form the basis of the study. Accordingly, the main objectives of the study were formulated as follows:

1. Determine the level of academic performance in the study sample and assess variations in it.
2. Assess whether there is a significant difference in academic performance and motivation between pupils belonging to private and public schools in the selected area.

3. Find out to what extent academic performance and motivation of Kenyan adolescents are related to variables like school environment, home environment, level of intelligence, etc.

1.3.5 Hypotheses

In order to achieve the objectives of the study, various hypotheses, as listed below, were formulated. These hypotheses were formulated in such a way that their tenability could be tested using appropriate statistical procedures.

1. There is a significant difference between pupils belonging to private and public schools in: (a) academic performance; and (b) motivation.

2. There is a significant difference among pupils belonging to different socio-economic strata in: (a) academic performance; and (b) motivation.

3. The predictors of academic performance include: (a) achievement motivation; (b) school environment; (c) home environment; (d) level of intelligence; and (e) socio-economic status.

4. The predictors of achievement motivation include: (a) school environment (b) home environment; (c) level of intelligence; and (d) socio economic status.

The details of the methodology employed to collect empirical data that will enable testing the tenability of the above hypotheses are presented in the following chapter.