INFLUENCE OF FAMILY SOCIO-ECONOMIC BACKGROUND ON ACADEMIC PERFORMANCE OF PUBLIC MIXED DAY SECONDARY SCHOOL STUDENTS: A CASE OF KURESOI DISTRICT NAKURU COUNTY, KENYA.

BY

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DECLARATIONS

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To my wife Eve Chepchumba Koskei and our son Churchill Kipkirui Koskei

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LIST OF ACRONYMS

DEO	District Education Officer
DF	Degree of Freedom
DDP	District Development Plan
ILO	International Labour Organization
ITBS	Iowa Test of Basic Skills
JAB	Joint Admission Board
KCPE	Kenya certificate of primary education
KCSE	Kenya Certificate of Secondary Education
KIE	Kenya Institute of Education
KNEC	Kenya National Examination Council
NCLB	No Child Left Behind
NLSY	National Longitudinal Survey of Youth
PIAT	Peabody Individual Achievement Test
PISA	Programme International Students Assessment
PPVT-R	Peabody Picture Vocabulary Test-Revised
SES	Socio-Economic Status
SEB	Socio-Economic Background
SPSS	Statistical Package for Social Sciences
UNESCO	United Nation Educational Scientific and Cultural Organization.
UNRISD	United Nations Research Institute for Social Development

ABSTRACT

The question of socio-economic background affecting students' academic performance has been the subject of public discourse and academic research in the past two decades. At the centre of the debate is the understanding that socio-economic background in education is a travesty that developing countries cannot countenance. It is against this background that the need for this study was envisaged. This study sought to investigate the influence of socio-economic background on academic performance of public mixed day secondary school students. The study employed *ex-post facto* design. The researcher used stratified random sampling technique. The study involved 6 secondary schools. A sample of 180 form four students was selected out of an accessible population of 900 students. The research instruments used to collect data were questionnaires and docu me analysis. A pilot study was carried out and a split-half method was used to determine the reliability of the research instrument. Expert judgment was employed to determine the validity of the research instrument. The research was based on ecological systems theory which was advanced by Bronfenbrenner (1977) and the theory of overlapping spheres of influence proposed by Epstein (1987). The researcher carried out analytical review of relevant literature. The data collected in the field was analyzed using descriptive and inferential statistics, and null hypotheses tested at $\alpha = 0.05$. The finding of this study revealed that parental educational attainment, parental occupation, family income, and parental involvement in education did not significantly influence students' academic performance. Place of residence, learning facilities at home, and family size significantly and positively influenced students' academic performance in Kuresoi district. It is hoped that the study will help to develop greater insights into above factors influencing the academic performance of students in public mixed day secondary schools for the purpose of improving the quality of education in Kenya. Knowledge of such factors is very important to government, parents and teachers because it will help in formulating strategies that will improve academic performance. The researcher recommends that schools should compensate for family background deficiencies by establishing quality learning facilities (equipped rural/urban libraries) in the district to compensate for lack of facilities at home. The researcher also recommends conversion of day schools in the district into boarding schools to reduce uneven distribution of learning facilities at homes of students and also boarding schools will provide maximum security to compensate for insecurity at place of residence.

Key words: Relationship, academic performance, socio-economic background, students,

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CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 Overview

The critical role of students' education in the socio-economic development of Africa, particularly Kenya, cannot be overemphasized. It is therefore, necessary to see various efforts being made by scholars, policymakers and the public in general to uplift the education of a student. It is out of such concern that this study sought to establish how socio-economic background influence students' academic performance in public mixed day secondary schools. When the effects of such factors are established and addressed, then having an educated nation can be achieved. There are various factors that affect students' academic performance. Socio-economic background was the only factor that was investigated in the study. Socio-economic background was measured by parental educational attainment, parental occupation, family income, parental involvement in education, learning facilities at home, family size, and place of residence.

In the remaining part of this chapter background of the study, statement of the problem, Objectives of the study, research questions, research hypotheses, research variables, justification of the study, significance of the study, scope of the study, limitations of the study, assumptions of the study, theoretical framework, conceptual framework, and operational definition of terms have been presented.

1.1 Background to the Study

Education is the development of the endowed capacities in the individual which will enable him to control his environment and fulfill his responsibilities to a major extent. Education is also a social process and implies a social framework for social individual development. The individual participates in the social activities of the community and this moulds him and fits him to play his role as a citizen. In a society, various levels of the educational structure, from nursery to university, have their own special aspects that need to be carefully examined. Most of the students of secondary schools are within an age group of 13-18 years. In its preparatory role secondary education is vitally important for a country's present and future development. Those who terminate their education after this level also need sound preparation to join a trade and occupation. The common feature of the education system in Kenya is academic performance. High academic performers in the society are considered successful in life while low academic performers are failures.

Examinations and certifications are actually central to education and training processes as a means of evaluating the level of achievement for purposes of further education, training and employment. This has led schools to concentrate largely on preparing students to pass examinations for the purpose of acquiring good academic certificates which are considered essential for securing employment in both public and private sectors of the economy. It is for this reason that academic excellence is of paramount importance in the Kenyan education system.

In the world, socio-economic status of a family is usually linked with the family income, parental educational attainment, parental occupation and social status. Ford and Harris (1997) followed this logic while examining parental influence on African-American students' school achievement by focusing on specific socio-demographic factors, including parental educational attainment, family income and marital status. Researchers generally agree that a constellation of familial factors exert significant influence on the educational aspiration and academic achievement of adolescents (Garg, Kauppi, Lewko & Urajnik, 2002; Garg, Melanson & Levin, 2007; Sanchez, Reyes, & Singh, 2006; Teachman, & Paasch, 1998). Among those salient factors are parental occupation, parental educational attainment, parental involvement, family income, family size, place of residence, and learning facilities at home. In the literature, each of these factors has been examined in relation to one another with some emerging as having greater direct effect.

Sanchez, Reyes, and Singh, (2006) identified negative domains within the family such as low parental school involvement, parental educational attainment, parental occupation, and family income to explain Latino Youth's educational failure. Behnke, Piercy and Diversi, (2004) found a connection between Latino Youth's education and occupational expectations and their parental educational attainment. A person's education is closely linked to their life chances, income, and well being (Battle and Lewis 2002). Therefore, it is important to have a clear understanding of what benefits or hinders one's educational attainment.

In the year 2002, Federal legislation in US aimed at increasing student test score through accountability was passed (Arce, Luna, Borjian, and Conrad, 2005). Termed the No Child Left Behind (NCLB), this legislation reward schools that increase their students test federal funding (Acre et al., 2005). Because this legislation is specifically focused on test scores and directly affect students it has become important to examine what factors influence students test scores. About 20% of children entering American kindergartens have experienced substandard housing, food insecurity, health problems and lack learning facilities (Carmichael, 2005). According to Maslow's hierarchy of needs, children cannot learn new information until their fundamental requirements have been met (Huitt, 2004).

The United States Department of Education (2004) has identified academic achievement gaps in low socio-economic background. Starting from a young age, low SEB children have the odds stacked against them. They have slower language acquisition, literacy development and success in academic (Barton, 2003). After children entered elementary school, the differences in achievement widened (Borman, 2002). A family's income impacted academic achievement, with a wide achievement gap among various socio-economic backgrounds. Beginning with pre-school, low income children are more likely to attend early childhood programs of lower quality. Classroom comprised of 60% of children from low-income homes had significantly lower quality indicators of teaching, teacher-child interaction, and material for learning than classroom with fewer low-income children (Klein & Knitzer, 2007).

One of the Eight Millennium Development Goal is that by 2015 all children in developing countries should complete primary school even though learners who completed primary school often perform poorly on academic tests (Glewwe and Kremer, 2006). In this study, socio-economic background which entails parental education attainment, parental occupation, family income, parental involvement in education and home atmosphere was considered as variables influencing academic performance.

The socio-economic background consists of numerous social and economic elements. The social element included home atmosphere (learning facilities at home, place of residence, family size). Each of these can affect academic performance in a myriad ways. For instance, the environment in a student's place of residence may or may not be conducive to additional study, while the nature of his family (whether nuclear, extended, single parent) and the quality of the relationships between the student and his family members may also affect his concentration levels and ultimately, his performance. The economic elements in the socio-economic background include parental occupation, income, parental education attainment and parental involvement in education.

The parental educational attainment influences parental occupation, which may affect the level of parental income, which in turn may determine the degree to which parents can support students in terms of fees, school inputs, food, clothing and shelter. For the above reasons, it is important to be aware of all the possible factors that influence the performance of secondary school students. The socio-economic background of a secondary school student can either assist his/her progress or retard it; therefore there was

need to inquire into how a student's socio-economic background affects him or her. An inquiry of this nature was particularly relevant in a Kenyan context, because a student's performance in secondary school, as determined by the Kenya Certificate of Secondary Education examination, has significant ramifications on his or her future career and livelihood. Taking the above into consideration, it is clear that there exists inequality as far as student socio-economic background is concerned. Hence, how does this influence students' academic performance in Kenya?.

1.2 Statement of the Problem

For many years in Kenya, examinations have been accepted as an important aspect of the educational system. Examinations have always been used as the main basis for gauging students' ability and also as a means of selection for education advancement and employment. Every year, thousands of Kenyan students sit for the Kenya Certificate of Secondary Education and this exam is done at the end of every fourth year of secondary education. Over the years discrepancies have been observed in the performance of students in KCSE examination. Although students may learn in the same environment, follow the same syllabus, their academic performance still varies. Bright students who fail to excel due to other factors miss the opportunity to advance in education and to get employment. At the same time, there are students who may be bright but perform poorly despite the good learning facilities at home and in their schools. Among the factors that are blamed for students' poor academic performance, socio-economic background is hardly mentioned. The poor performance has raised concern and efforts have been made to find out the reasons behind it.

Due to stiff competition, the institution of higher learning in collaboration with the concerned government ministries stipulated the grades or the number of points which a student must attain to enable him or her get admission into a higher institution of learning. For example, to be admitted as a government sponsored student through JAB to a degree course in any of the public universities in Kenya, a student must have attained a minimum grade of a B Plain and above in the examinable subjects in K.C.S.E.

The performance of students in public mixed day secondary schools in Kuresoi district in the national examination has not been encouraging over the last three years (Table 1.1 and 1.2 below). Only 2 (0.1%) students were considered for JAB admission. A total of 33 out of 1646 students attained a minimum grade of C+ and above which is only 2.0%, those who got D + and above were only 54.9 %, while D plain and below were 43.0 %. This poor result has attracted the attention of the public and the researcher. As much as other variables may have caused poor performance it was fair to also look at how socio-economic background influence students' academic performance in public mixed day secondary schools in Kuresoi district.

Table 1.1 Kuresoi District 2007-2010 K.C.S.E Examination Analysis.

GRADE	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
NO. OF STUDENTS	5	50	105	188	254	486	493	627	843	723	414	30

Table 1.2 Kuresoi District Public Mixed Day 2007-2010 K.C.S.E Examination Analysis.

GRADE	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
NO. OF STUDENTS		1	2	10	24	51	112	363	644	540	297	26

Table 1.3 Gender distribution of Kuresoi District Public Mixed Day 2007-2010 K.C.S.E Examination Analysis.

GRADE	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
NO. OF STUDENTS	0	1	2	10	24	51	112	363	644	540	297	26
BOYS	0	1	2	7	18	35	84	252	401	398	179	9
GIRLS	0	0	0	3	6	16	28	111	243	142	118	17

(SOURCE: D.E.O. KURESOI).

1.3 Objectives of the Study

The main objective of this study was to investigate the influence of socio-economic background on academic performance of public mixed day secondary school students in Kuresoi district. The specific objectives of the study were:

i. To investigate the influence of parental educational attainment on students' academi performance.

ii. To establish whether parental occupation has an effect on students' academ performance.

iii. To investigate the influence of family income on students' academic performance.

iv. To find out whether parental involvement in education have an effect on studen academic performance.

v. To investigate the influence of home atmosphere on the students' academic performance.

vi. To investigate the influence of socio-economic background on academic performance of boys and girls in public mixed secondary schools.

1.4 Research Questions

The study sought to answer the following questions.

i. Is there any relationship between parental educational attainment and students' academic performance?

ii. Does parental occupation affect students' academic performance?

iii. Is there any relationship between family income and students' academic performance?

iv. Is there any relationship between parental involvement in education and students' academic performance?

v. To what extend does home atmosphere affect students' academic performance?

vi. Does the influence of socio-economic background on academic performance differ due to gender?

1.5 Research Hypotheses

The following hypotheses were tested:

H_o1: Parental educational attainment has no significant influence on the students' academic performance.

H_o2: There is no significant relationship between parental occupation and students' academic performance.

H_o3: Family income has no significant influence on the students' academic performance.

H_o4: Parental involvement in education has no significant influence on the students' academic performance.

H_o5: There is no significant relationship between home atmosphere and students' academic performance.

H_o6: There is no significant relationship in the influence of socio-economic background on academic performance due to gender.

1.6 Research Variables

The variables were categorized into two namely the independent variables (presumed cause) and the dependent variable (presumed effect). The independent variables included parental educational attainment, parental occupation, family income, parental involvement in education and home atmosphere, which were not directly controlled by the researcher because their manifestation had already occurred and therefore could not be manipulated (Mugenda & Mugenda, 2003, Kerlinger, 2000). The academic performance of secondary school students was taken as dependent variable. Thus the researcher was able to relate an-after-the-fact analysis to an outcome of the dependent variable (Kathuri & Pals, 1993).

1.7 Justification of the Study

Most studies and literature on influence of socio-economic background in academic performance have been done from outside Kenya and therefore there is need to look more at the issue from Kenyan perspective. Also the studies that have been done on socio-economic background centered mostly on early childhood but few studies have been done in secondary level. In Kenya, performance in national examinations determines type of work, training and further education which one acquires by using the certificates and the University degrees. In view of this therefore, there was need to search for the factors which may significantly retard academic excellence of people especially now that there is scarcity of jobs.

A research finding as reported by Rouse and Barrow (2006), which was conducted in the industrialized societies, revealed that socio-economic variables (parental education attainment, family income, and parental occupation) correlate closely with children's advanced schooling and achieved learning. Studies conducted in Kenya for example Chepchieng (1995) and Muola (2010) had conflicting findings. Muola (2010) in a survey conducted in Machakos found that children from low socio-economic background tended to perform almost as well as children from rich homes whereas Chepchieng (1995) in a study conducted in Kabartonjo found home atmosphere to have a significant prediction on performance of secondary learners. So there is need to conduct more research to establish relationship that exists between socio-economic background and academic performance of students in public mixed day secondary schools.

1.8 Significance of the Study

It is hoped that the study will help to develop greater insights into factors influencing the academic performance of students in public mixed day secondary schools for the purpose of improving the quality of education in Kenya. Knowledge of such factors is very important to government, parents and teachers because it will help in formulating strategies that will improve academic performance. It will help identify some of the major problems hindering academic performance of secondary school students and help find solutions to these problems. This study will provide information that would lead to the improvement of academic performance and consequently the quality of education in Kenyan secondary schools.

1.9 Scope of the Study

The study was conducted in Kuresoi District and focused on socio-economic background and students' academic performance of public mixed day secondary schools. The research variables included students' academic performance, parental educational attainment, parental occupation, family income, parental involvement in education and home atmosphere. The study dealt with 180 Form four students because of their level of maturity and experience that can enable them to think abstractly. It involved six schools within the study area that presented candidates for the national examinations under the 8-4-4 curriculum. The study was limited to Kuresoi District due to the fact that academic performance is below average. Owing to the expansive nature of the district, a representative sample was used in the study rather than the study of all schools in the district.

1.10 Limitations of the Study

The use of the questionnaire as an important instrument of data collection has some limitations. For instance, the responses have to be accepted as final. There is no opportunity to probe beyond the given response, to clarify ambiguous responses. The other limitation was that the participants had to see all the items before responding to any one of them thus the various responses cannot be regarded as independent. The researcher overcame this by coming up with concrete research objectives. Nachmias and Nachmias (1996) pointed out that if these limitations are of little significance to concrete research objective, questionnaire might be used instead of the personal interview.

Secondly, administration of questionnaire might have evoked anxiety related to examination. However, in carrying out the study, the researcher assured the students that the questionnaire was not testing them in any way. They simply required to give their opinion, which was not necessary to be similar, that is, there were no right and/or wrong responses.

1.11 Assumptions of the Study

The researcher while carrying out the study made the following assumptions.

1. The marks of students, when standardized were an acceptable measure of academic performance and constituted a true reflection of students' abilities.
2. The records and report forms in the sampled schools were accepted as accurate.
3. In the case where the researcher was not allowed to get to the students, the class teachers were able to administer the instrument as instructed by the researcher.

1.12. Theoretical Framework

Different theoretical approaches have been used to analyze the role of the family in the educational activities of their children. In conducting this study, the theories that were used were the ecological systems theory and the overlapping spheres of influence. These two theories were considered for the study due to the fact that they provide a sound foundation for the study of the family in their children's development. According to the ecological systems theory, if the relationships in the immediate microsystem break down, the child will not have the necessary tools that are needed to explore other parts of their environment. This makes them to look for the attention that is supposed to be present in the parent-child relationship in improper places. These deficiencies are manifested especially in adolescence as anti-social behaviors, lack of self-discipline, and inability to provide self-direction. Again, as a result of their overarching influence and impact on the study of the development of children, most researchers have used them as the theoretical framework of their studies (e.g., Gary, Sondra, & Eric, 1999; Grolnick, Benjet, Kurowski, & Apostoleris, 1997; Scott-Jones, 1995).

1.12.1. Bronfenbrenner's Ecological Systems Theory

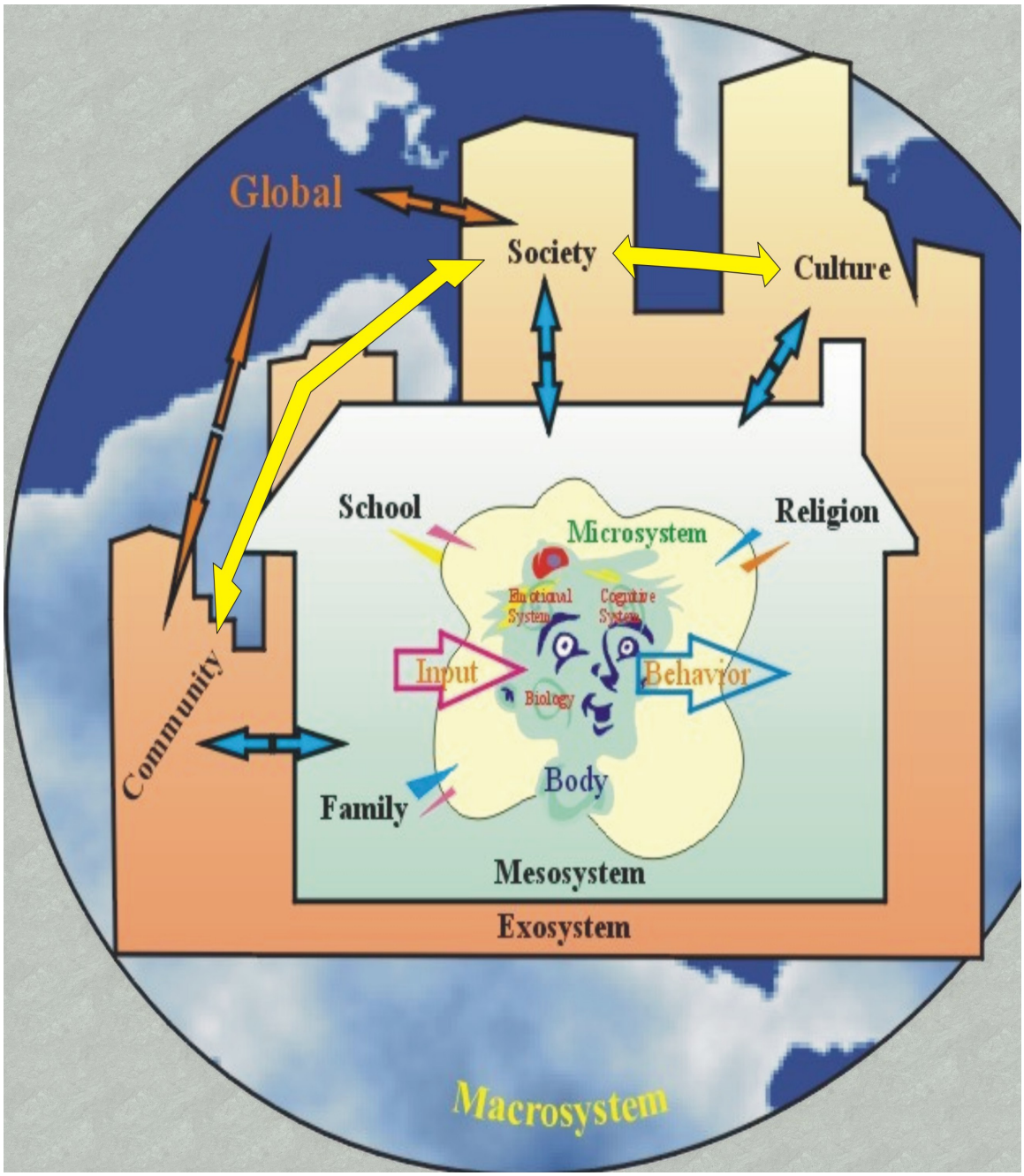
This theory looks at the development of a child within the context of a system of relationships that make up their environment. Bronfenbrenner's theory defines complex "layers" of environment, each having an effect on the development of the child. This theory has recently been renamed "bioecological systems theory" to buttress the fact that a child's own biology is a primary environment promoting her development. The interaction between factors in the child's maturing biology, his immediate family/ community environment, and the societal landscape enhances and promotes his

development. Variations or dissension in any one layer will ripple throughout other layers (Paquette & Ryan, 2001). To study the development of the child, and human development it demands going beyond the direct observation of behavior on the part of one or two persons at the same place; it demands the examination of multiple systems of interaction not restricted to only a setting and must take into account aspects of the environment beyond the immediate environment containing the subject.

1.12.1.1. Structure of the Environment

Bronfenbrenner (1977) classified the environment into four distinct categories namely: the microsystem, mesosystem, exosystem, and macrosystem. The various terms in this diagram 1.2 below are links that lead to pages explaining their implications in this theory.

Fig 1.1. Structure of the Environment According to Bronfenbrenners' Ecological Systems Theory.



The microsystem: This is the layer that is the nearest to the child and accommodates the structures with which the child has direct contact. The microsystem comprises the relationships and interactions a child has with their immediate environment (Berk, 2000). Structures that could be found in the microsystem consist of family, school, workplace, neighborhood, or childcare environments. The impact of the relationship at this level could be seen as bi-directional both away from the child and toward the child. For instance, the parents of a child may influence their beliefs and actions; nonetheless, the child also may influence the actions and beliefs of the parents. The reciprocal action of structures within a setting or layer and that of structures between layers is pivotal to this theory. Bi-directional influences at this level are the strongest and have the greatest effect or impact on the child. This notwithstanding, interactions at outer levels still have the potential and capability of affecting the inner structures.

Despite the educational reform movements that have taken place in Kenya since the second half of the 20th century, schools have not been successful in educating the children in the country. Bronfenbrenner holds the opinion that even though it is essential for schools and teachers to provide stable, long term relationships; the primary relationship has to be with someone who can provide a sense of care that is meant to last for a long time. This relationship needs to be enhanced by people within the immediate sphere of the child's influence. Schools and teachers perform an important second function, but cannot provide the completedness of interaction that can be provided by primary adults (Paquette & Ryan, 2001) Other researchers in an attempt to comprehend children's educational success have focused on the home, although families cannot compensate for

poor schools and the experiences of families alone will not be able to provide a thorough explication for children's educational success and drawbacks. Both families and schools are major contexts for the development of children. The effects of these two institutions become connected as children grow and develop in their families and then proceed through the formal educational system (Scott-Jones, 1995). Thus, in order to ensure the academic success of children, the family and school should be able to work hand in hand. Their partnership and collaboration are crucial in the academic advancement of the children.

The mesosystem: This layer includes the interactions among major settings that house the developing individual at a particular point in their life. This layer provides the connection between the structures of the child's Microsystems (Berk, 2000). Thus, the mesosystem consists of interactions among the school, family, peer group, etc. An example is the interaction between the child's teacher and their parents, between the child's church and their neighborhood, among others.

The exosystem: This layer defines the larger social system in which the child does not function directly. It is an extension of the mesosystem including other specific social structures, both formal and informal that does not themselves contain the developing individual, but influence the immediate settings in which individual is located, and thus affect, delimit, or even determine what goes on there. The child may not be directly involved at this level, but they feel the positive or negative impact involved with the interaction with their own system. These structures consist of the important institutions of

the society, which are both intentionally structured and spontaneously evolving, as they function at a concrete local level. They include the world of work, agencies of government (local, state, and national), the distribution of goods and services, communication, transportation of facilities, inter alia.

The macrosystem: This layer may be considered as the outermost layer in the child's development. It refers to the overarching institutional patterns of the culture or subculture, such as the educational, economic, legal, social, and political systems, of which microsystem, mesosystem, and exosystem are the tangible manifestations. Macrosystems are understood and analyzed not only in terms of structure, but as carriers of information and ideology that, both explicitly and implicitly, add meaning and motivation to specific agencies, social networks, activities, roles, and their interrelationships.

1.12.2. The Theory of Overlapping Spheres of Influence

Another theory that is worthy of consideration in helping to figure out the role of the environment in promoting the academic success of children is the overlapping spheres of influence proposed by Epstein (1987). This theory looks at the interrelationship between the school, family, and the community. Even though the present study focuses mainly on the family and the community, the significance of this theory in relation to the study cannot be simply overlooked.

This theory is a coordination of sociological, educational, and psychological views on social organizations, and also studies about how educational outcomes are impacted by the environments of the family, school, and community (Epstein, 1987, 1992). Recognizing the interdependency of the key environments or agents that socialize and educate children, one cardinal axiom of this theory is that certain objectives of which students' academic achievement is no exception, have the mutual interest of each of these agents or environments and are best attained via their concerted partnership and prop. This perspective is represented by three spheres-schools, family, and community and their connection is determined by the attitudes and practices of the people who are located within each environment (Epstein, 1992). There is substantial evidence in the literature that supports the need for strengthening the link between home and school. Fostering a strong connection between the school, home and the community has a positive impact on the academic outcomes of students. "Families, schools and communities are most effective if they have overlapping or shared goals, missions, and responsibilities for children" (Epstein & Hollifield, 1996).

When the school, family and community have similar goals and aspirations for their children, there is intersection between the various domains, and students' outcomes.

Following her extensive years of research, Epstein (1995) discovered six types of school-family-community engagements which are very essential and pivotal to students' learning and development. They are: Parenting: assisting all families to establish home environments that support children as students. Schools must assist parents to establish home environments that support learning by furnishing them with the information about

issues such as the health of the children, nutrition, discipline, adolescents' needs, parenting practices, among others. At the same time, schools must endeavor to fathom and imbibe aspects of their students' family life into what is taught in the classroom. Schools are challenged to make sure that any family member who needs this kind of information receives it in befitting ways.

Communicating: Designing and conducting effective means of communication about the programs of the school and children's advancement. That is teachers are obligated to make information about students available to their parents, and these information or feedback must be clear, unambiguous, and unequivocal. When parents receive frequent and positive messages from teachers, the more involved and engaged they are likely to become in their children's education (U.S. Department of Education, 1994). Schools must employ a variety of techniques for communicating with parents about their children's progress, decisions affecting their children, and school programs in general. These include parent-teacher association meetings, phone contacts, report cards, newsletters, parent centers.

Learning at Home: Making information and ideas available to families about how best to assist students at home with school work and other school connected activities. Most parental participation in children's education occurs in the home. Schools must capitalize upon what parents are already doing by helping them to assist and interact with their children on home learning activities that reinforce what is being taught in school. Schools should aim to increase parents' understanding of the curriculum and the skills their

children need to develop at each stage in their schooling. Schools must also inform parents about their systems of tracking students and other practices so that parents can help make decisions that are in their children's best interests. Successful parent involvement programs must recognize the parent-child relationship as distinct from the teacher-child relationship. Parents should be relied upon as supporters and monitors of the learning process so that their children can become effective independent learners. Schools should encourage open discussions among all partners about the school curriculum and homework. Parent surveys show that parents talk more with their children about schoolwork and help their children develop skills when homework is designed to involve families (Epstein & Sanders, 2000; Epstein, 1992). Schools are thus challenged to design a menu of interactive work that taps parents' support skills and involves them in the learning processes. Schools must also work with parents to ensure that upper-level students set academic goals, prepare for career transitions, and make appropriate course selections.

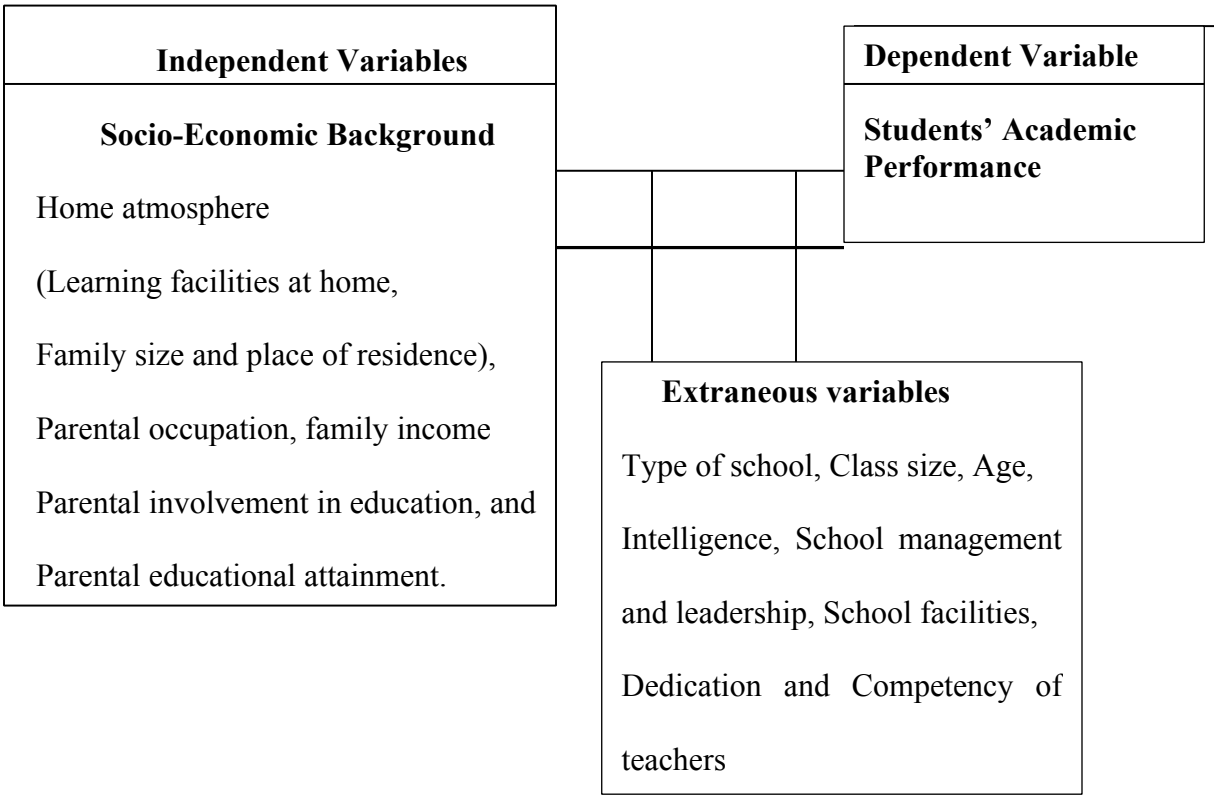
In line with the above discussed theory-the overlapping spheres of influence (Epstein, 1987) about the influence of the environment in shaping the life of the individual, it is assumed that socio-economic background information will lead to tremendous dividends in the educational achievements of their children. It should be noted that although the theory talk about the development of the child, it also provide a more specific approach to a child’s educational development.

1.13 Conceptual Framework

A conceptual Framework is defined as relationship between variables in the study and shows the relationship graphically or diagrammatically. It is a hypothesized model identifying the concepts under study and their relationship (Mugenda and Mugenda, 2003). A conceptual Framework is a research tool intended to assist a researcher to develop awareness and understanding of the situation under scrutiny and to communicate this. When clearly articulated, a conceptual framework has potential usefulness as tool to assist a researcher to make meaning of subsequent findings.

It forms part of the *agenda for negotiation* to be scrutinized and tested, reviewed and reformed as a result of investigation (Mutai, 2000). The conceptual framework illustrated in diagram (1.2) shows how the various concepts are related in the study. This study adopted a conceptual framework where socio-economic factors are independent variables whereas students' academic performance is itemized as a dependent variable. The factors include home atmosphere (learning facilities at home, family size and place of residence), parental occupation, family income, parental educational attainment and parental involvement in education. The extraneous variables include type of school, class size, age, intelligence, school management, student leadership, school facilities and dedication and competency of teachers which were controlled during the study.

Fig 1.2. Socio-Economic Background and Academic Performance of Public Mixed Day Secondary School Students.



Source: Koskei, (2012).

1.14. Operational Definition of Terms

The following were operational definitions of key terms in the study.

Academic Performance: It is defined as the educational achievement of the adolescents. It was measured in terms of their school grades in three core subject areas- Mathematics, English, Kiswahili, through student's end of the term examinations for three consecutive terms. The mean score of these subjects represents their educational achievement. The marks were standardized using T-scores formulae. The following synonyms- educational achievement, academic success, educational success, academic achievement in this study, were used interchangeably to mean the same thing-academic performance.

Family Income: It referred to estimate amount of money a family earns per month.

Home Atmosphere: In this study, it referred to the approximate physical objects, circumstances and conditions within the home that support the learning of a student and this can be learning facilities at home, family size and place of residence.

Parental Educational Attainment: In this study, it referred to the level of education of a parent.

Parental Involvement in Education: It referred to time spend by a parent discussing academic issues and encouraging the student. It is also refers to the activities that parents do which are considered worthwhile in the educational achievements of their children.

Parental Occupation: It is the type of job a parent is doing to earn a living. It ranges from professional (high), skilled (medium), unskilled workers (low).

Socio-Economic Background: This referred to the well-being of the students' family which is as a result of combination of both social and economic factors which included home atmosphere, parental educational attainment, parental occupation, family income, and parental involvement in education.

1.15 Summary

In this chapter, the background of the study, the statement of the study, research objectives, research questions, research hypotheses, justification, and significance of the study have been addressed. In the background of the study, it was noted that academic performance of public mixed day secondary continues to be below average. But a close scrutiny of these research studies reveals the socio-economic background missing in the crucial equation of establishing a panacea of the problem. It is against this background that this study was undertaken. The study is a departure from all common survey type of research. This study had the benefit of investigating the relationship between the two variables, namely; socio-economic background and students' academic performance. In addition, an attempt was to be made to find out which levels were statistically significant in case there was significant relationship in students' academic performance in the independent variables.

Research on socio-economic factors need to concentrate more on areas that pertain to the relationship of these factors on students' academic performance. Parents are expected to provide the learning facilities for their children and conducive learning environment. Therefore, to improve the students' academic performance of public mixed day secondary school, the relationship of socio-economic factors should be investigated. The chapter has outlined the research questions concerning socio-economic background. Studies have shown that there are still gaps to be filled. This continues to raise a lot of concern. Notwithstanding the limitations, the chapter has explained how the study offered a real opportunity for investigating issues in students' academic performance.

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

This chapter has reviewed literature that is general in nature and some; which are more specific to academic performance. It has reviewed literature on influence of socio-economic background on academic performance and studies that have been done in a similar manner. These studies give a description overview of socio-economic background and academic performance. The purpose of this literature review was to form a basis for the present study. This chapter reviews a number of publications (articles, seminar papers, government policy papers, conference proceedings, training manuals, legislative documents, research reports, journals, textbooks, theses, newspapers, and periodicals). To shed light on socio-economic background on students' academic performance in public mixed day secondary schools this literature review discusses the findings of various authors on the study.

2.1 Socio-Economic Significance of Education

Education is the best legacy a nation can give to her citizens especially the youth. This is because the development of any nation or community depends largely on its quality of education. It is generally believed that the basis for any true development must commence with the development of human resources. Therefore it is evident that formal education remains the vehicle for socio-economic development and social mobilization in any society. Education is generally regarded as a major indicator of a community's social well-being, and standard of living.

Social class is an indicator of an individual or a family relative standing in society. It is determined by such factors as annual income, occupation, educational level, place of residence, family, manner of dress, and material possessions. The first three factors are used by the federal government in US to determine the closely related concept of socio-economic status (SES). Many low SES students are what might be called educationally disadvantaged or educationally at risk (Natriello, Mc Dill & Pallas, 1990) because they are continually exposed to various adverse factors that inhibit physical, social, emotional and intellectual development. Low SES adolescence typically has low career choice aspirations.

The impact of social class on career choice was revealed by a comprehensive study (Little, 1967) as cited by Biehler (1997) that of all graduating seniors in Wisconsin's Public and Private Schools at the time of graduation, the students were asked to note the occupation they hoped to enter. Their choices were later compared with the jobs they actually attained. Students in their lower third of their graduating class in SES had significantly lower aspirations than those in the middle and upper thirds. In addition, the latter actual job attainment of the low SES students was closer to their expectations.

Education is therefore, important for acquiring social well-being because of its close association with other factors. The above authors have indicated that education is closely connected with factors of social well being. Therefore, there is need to investigate the influence of socio-economic background on students' academic performance in public mixed day secondary schools.

2.2 Socio-Economic Factors Affecting Academic Achievement

Rouse and Barrow (2006) stated that socio-economic status show effect on educational outcome that includes test scores, and continue to affect the child through their adulthood. Nye, Hedges & Konstantopoulos, (2002) found that socio-economic status is more of a predicator at early stages of education, and much less of a predicator as the students progress into the later stages of education, where other variables become more of a factor in students achievement scores. The socio-economic status (SES) of a child is most commonly determined by combining parental educational level, occupational status, and income level (Jeynes, 2002). Studies have repeatedly found that SES affects students' outcomes (Baharudin and Luster 1998, Jeynes, 2002, Eamon 2005, Majoribanks 1996, Hochschild, 2003, McNeal, 2001, Seyfried 1998).

Students who have a low SES earn lower test scores and are more likely to drop out of school Eamon, 2005, Hochschild, 2003. Low SES students have been founded to score about 10% lower on the National Assessment of Educational Programs than higher SES students. SES has also been shown to override other educational influences such as parental involvement (Mc Neal 2001). It is believed that low SES negatively affects academic achievement because low SES prevents access to vital resources and creates additional stress at home (Eamon 2005, Majoribanks 1996, Jeynes 2002). The economic hardship that are caused by low SES lead to disruption in parenting, an increasing amount of family conflicts, and an increases likelihood of depression in parents (Eamon, 2005). For these reasons SES is closely tied to home environment and one could argue that SES dictates the quality of home life for children.

According to Rumberger (1995), students' family background is widely recognized as the most significant important contributor to success in school. Rumberger's position supports the finding of earlier scholars who argue that the home has a major influence on students' school success. Jacobs & Harvey (2005) established that many variables in the family background have strong (direct and indirect) associations with students' success throughout school and in young adult's eventually educational and occupational attainment such variables include parental educational level, parental involvement, and family income. School environment factors, such as school size, neighborhood and relationship between teachers and students also influence test scores (Crosnoe, Johnson, and Elder 2004).

Research has found that parental level of education, parental occupation, family income, parental involvement and family size are particularly important family factors that influence students test scores (Majoribanks, 1996). Family background continued as the single strongest predictor of educational outcomes (Fransoo, Ward, Wilson, Brownell & Roos, 2005). A child might be unsuccessful in school because of the conditions such as parental level of education, family income, lack of books and educational toys (Brooks – Gunn, Duncan, & Maritato, 1999). Differences in a low SES first grader were clearly observed in the classroom. Teachers described low SES students as more likely to be inattentive to the instruction; unable to sit still, and unable to complete their own work. Middle and high SES kindergarten and first-grade children were more successful in reading skills than low-SES children (McCargar, 2004).

Shannon & Bylsma, (2002) stated that the strongest factor affecting ITBS and WASL (Washington State Assessment of Student Learning Achievement) scores was family socio-economic status and low socio-economic status made up 12% to 29% of the variance in academic achievement. Family SES in early childhood was found to be far more important in shaping achievement than later in childhood (Duncan & Brooks – Gunn, 2001). Student from low SES constituency demonstrated difficulty in development of their receptive language, which led to difficulties with reading and, thus low academic performance (Parrish, 2004).

Lee and Burkam (2002), studied children 5 years and under for their academic abilities. The researchers found out that children in the low SES groups scored 60% lower in Mathematics and 56% lower in reading than children in the high SES groups. High SES students achieved 0.69% standard deviation higher than middle SES students in Mathematics of 0.70 Standard Deviations in reading. Low-SES students scored 0.55 standard deviation below middle-SES students in Mathematics and 0.47 standard deviations in reading. The average cognitive scores of pre-school children in the top 20% (highest - SES) were 60% above the average scores of the children in the bottom 20% SES group (Klein & Knitzer, 2007.) Thomas and Stockman (2003) examined the scores of more than 100,000 fourth-grade students. Students in low-SES classrooms had significantly lower gains on the Texas assessment than students in higher SES classrooms.

Research conducted on the 1998 Early Childhood Longitudinal Study in U.S. showed that African-American and Hispanic Kindergarteners scored two- thirds of standard deviations below whites in reading (Duncan & Magnuson, 2005). The same gaps in academics related to the SES of the family. The SES levels of minority students averaged lower than white students' SES. The SES of African – American Kindergarteners was more than two-thirds the standard deviation below whites (Duncan & Magnuson, 2005).

Rothman, (2001/2002) revealed that even in wealthy suburbs, African-American students were less successful than their white peers. Sirin, (2003) believed that the past research was skewed because SES has shown to be a better predictor of achievement in white students than in minority students. His research from 1990-2000 showed minority students did not benefit from their family background (which includes parent's education, family income, and occupation) as much as white students. From white student samples, the mean effect size was 0.241, whereas for the minority samples, the mean was 0.157. An increase in the number of minorities in the sample decreases the correlation between SES and achievement. The culture of the family caused low achievement (Sirin, 2003). Similarly, White, Reynolds, Thomas and Gitzlaff (1993) claimed the previous studies concerning socio-economic status (SES) were not accurate. Low SES did not predict low achievement on standardized testing (white et al.1993). Differences among students from similar family backgrounds are clearly emphasized by Mann (1992) who stated that:

> ...If all schools in an area that deal only with children from low income circumstances are considered as a group, then variations in family background will have been held constant. If the school achievement of otherwise similar children varies, the presumption is that variation is coming from within school practices (p. 6).

The U.S department report (2004) indicates that the impact of socio-economic differences in provision of learning opportunities remain some of the major concerns in education development in many developing countries. Kenya, like any other developing nations, has effected major changes in education in an effort to make its education relevant to the ever-changing society and also enhance its development. This process has been largely determined by social and economic factors. Socio-economic factors of individual learners significantly contribute to the learner's academic performance. For instance, Nzomo (2001) established a positive correlation between the socio-economic background of standard 6 pupils and the level of their learning achievement in Kenya. The results showed that as the socio-economic background of the learners improved, the mean scores in the learning achievement also tend to increase. Families with higher socio-economic background were found to have the ability to provide the children with necessary facilities and materials pertinent in improving performance. Pupils in urban setting obtained higher mean scores in narrative, expository and documentary dimension as compared to their counterparts in rural schools.

Over a 20 year period, Jimerson, Egeland, and Teo (1999), conducted a study on the academic achievement of 174 children who were part of the University of Minnesota Mother-Child Project. The study revealed the SES level of students in Grade 1 through 3 greatly affected the grade 6 Mathematics achievement, and SES in Grade 1 through 6 significantly affected achievement for 16 year-olds. Also, lower SES showed downward deflections in Mathematics achievement and conversely, higher SES showed upward deflections in achievement (Jimerson et al.1999).

Frequent changes in education policy by successive governments in Kenya, including the introduction of the 8-4-4 system and more recently, the re-introduction of free primary and secondary education, in tandem with the increased enrollment and increased government spending on education, have brought about hardships and disparity in educational practices. Johnson (1996) lamented that parents become poor due to harsh economic measures, such that they can no longer provide adequately for good education of their children. Also, they can no longer provide shelter, clothing and special needs of their children in school (such as provision of text books, school uniforms and good medical care and so on). Although it is true that harsh economic conditions affect parents and consequently, their children adversely. Therefore, it was necessary investigating the influence of socio-economic background on academic performance of secondary school students.

2.2.1 Parental Educational Attainment

Muola, (2010) reported that parental educational attainment correlated significantly with academic achievement. An educated parent become more involved in education of a child and can assist in school work. A study of socio-economic status of students by Eshiwani (1983) pointed out that the ratio of students whose fathers were teachers took a'lion'share of the university admission 'cake'due to motivation and encouragement from their parents to provide furthers studies. In a study conducted by Knight and Sabaot (1990) it was found that in contrast to Tanzania, in Kenya there is positive relationship between the parental educational attainment and the Childs' Form four examinations performance. These findings tailed with Maundu (1986) findings that parental education has a

significant influence on student's performance in both primary and secondary examinations. It has been observed in many countries that children from educated background are at an advantage in academic competition. In Kenya and Tanzania the children of more educated homes also have better opportunities to acquire cognitive skills and appropriate attitudes in the home (Knight and Sabaot 1990). Therefore, it was necessary investigate the influence of parental educational level on academic performance of secondary school students.

Chepchieng, (1995) found in his study in Kabartonjo division a negative correlation between parental educational attainment and students' academic performance of boarding secondary school. Low-SES students may not be strongly motivated to do well in school, and they may not be knowledgeable about techniques for becoming successful in school. Middle class parents who have benefited in a variety from education serve as effective and enthusiastic advocates of schooling. Because doing well in school paid off for them, they are eager to persuade their children to do well academically in order to achieve similar or greater benefits. They also serve as positive role models.

The literature on achievement consistently has shown that parental education is important in predicting children's achievement. The Mechanisms for understanding this influence however, have not been well studied in general, family process models (Linver, Brooks-Gunn, & Kohen, 2002; Yeung, Linver, & Brooks-Gunn, 2002) have examined how parenting behavior, such as the structure of the home environment, influence children's' achievement outcomes. Klebanov, Brooks-Gunn, & Duncan, (1994) found that mothers'

education was important predictor of physical environment and learning experience at home. Smith, Brooks-Gunn, & Klebanor, (1999) found association between parent's education with children's' academic achievement was mediated by the home environment. Thus, these authors posited that education might be linked to specific achievement behavior in the home for example reading and playing.

Corwyn and Bradley (2002) also found that maternal education had the most consistent direct influence on children's cognitive outcomes. Maternal characteristics are a key factor that affects academic achievement. Mothers who are more educated and have higher self-esteem have children who receive higher test scores (Baharudin and Luster 1998, Eamon 2005). Kao and Tienda (1998) concluded that eight grader aspirations to attend college derive primary from parents' education. Other researchers found substantial support for positive relationship between mothers' and fathers' supportive behavior, educational level, language spoken in the home and adolescent's aspirations (Plunkett & Bamaca-Gomez, 2003).

Suitor, Plikuhn, Gilligan and Powers (2008) study isolated the variable of mothers' education and its impact on her children. Thirty-five women in this sample were followed for a decade to determine the longitudinal effect of their return to school and the consequence their academic achievement had on children's' educational goals and orientations. The researchers found that return to school were consequential on children's' aspirations only when mothers' completed their degrees (Suitor et. al. 2008).

Chiu and Khoo (2005) reported 15 year old students' test scores related significantly with mothers' mean year of schooling. In a study among black and white men born from 1907-1946. Kuo and Hauser (1995) found that at least half the variance in educational attainment was attributed to family background, including parental schooling. Educated parents also purchase books and other learning materials/resources for their children who create school conditions to successful performance but these learning conditions are absent in the poor uneducated and rural family. Children whose parents' educational attainment is low are unprepared for school. They often lack readiness to learn, physical strength, and mental mindset (Pellino, 2006).

In 2005, a family member read to 60% of children ages 3-5 daily. However, children living in families with low income were less likely to be read to daily than their peers in high-come household (Pellino, 2006). Glewwe, Jacoby and King (2001) used panel data from the Philippines to show that well nourished children perform better in school because they enroll earlier and learn more per year of school. Gale (2002) stated that parent's who have educational training, are involved in their adolescent school programs and have high aspirations for them. In such a case, adolescents are likely to have high educational aspirations, which influence their academic performance. Socio-economic status of adolescents has an effect on college enrolment, therefore having an indirect effect on educational success. According to her, the higher the socio-economic status, the higher the academic performance and the better the students' academic performance is, the more prestigious the occupation to which they aspire.

In contrast, low SES parents who did not do well may describe school in negative terms and perhaps blame teachers for their failure in classrooms as well as for their difficulties later in life (Levine & Havighurst, 1992 as cited by Biehler (1997). Geberselassie and Gebry (2000) carried out in Ethiopia established that educated parents that were government employees favored the enrollment of their children. It also revealed that parental education influenced school enrollment positively and significantly for instance additional years of further schooling was seen to raise the school enrollment of boys and girls by 2.00% whereas an additional year in mother schooling raised the probability of enrollment of boys by 2.00% and girls by 3.00% and this indirectly enhance academic performance.

2.2.2 Parental Occupation

Muola (2010) found a significant correlation between parental occupation and academic achievement of pupils. Children raised by parents who hold professional jobs grow up to be more inquisitive and active in their learning when compared to children of parents who are not working. In another study, Ndege (1992), which covered only primary schools, found that parental occupation, parental education and family income have significant influence on pupil's academic performance in the primary school level. Chege (1983) in a study for education of Maasai girls found that occupation of parents and of the older family members are important factors that influence school performance rates. In Kenya, Maundu (1986) found that maternal occupation was a good predictor of pupils' mathematics scores at Kenya Certificate of Education. This study suggested that parental occupation is an important determinant of pupil's academic achievement in Kenya.

Therefore, it was necessary investigate the influence of parental occupation on academic performance of secondary school students.

The effect of parental occupation on students' performance may not be as strong as conventional wisdom would suggest. Children from different socio-economic backgrounds do not generally achieve the same degree of academic success. However the studies lay more emphasis on the socio-economic background of the student without considering the other factors influencing students in the school. Focusing on 14 year olds in 1989, Ainley & Long (1995) found correlations of 0.23 and 0.21 for father's occupation with achievement in Math and reading. According Lokan, Ford, & Greenwood, **(**1996) the correlations of father's occupation with word knowledge and Mathematics among 13 and 14 year olds were 0.19 and 0.29 respectively. Among Victorian year 9 students in 1988 the correlations with father's occupation were 0.25 and 0.22 for mathematics and reading respectively. By age 3, children from low occupational families demonstrated a significantly lower vocabulary than children from middle and high occupational families (Shannon & Bylsma, 2002). Professional parents spoke more than 2000 words per hour to their children, while skilled parents spoke about 1,300 words. The vocabulary of 4 years olds from professional families was almost 50% larger than those of skilled families and twice as large as those of unskilled families. A lower vocabulary leads to slower language development (Rothstein, 2004).

Taylor, Haris & Taylor, (2004) found out that without parental approval or support, students and young adults are often reluctant to pursue or even explore diverse career

possibilities and thus affecting their academic performance. They reported parental occupation and family size to be the main family variables that influences the adolescents' career aspirations. Therefore, parental occupation as the study revealed has an influence on the student's performance on school. Since this study was done outside Kenya, it is worthwhile doing it in Kenya to find out the extent to which such a socio economic variable influence student's academic performance. The higher the socio-economic status or the more privileged the class grouping the higher the level of achievement. However, the relationships cannot be described as strong.

2.2.3 Family Income

Chepchieng (1995), found family income to be one of the factors which influence academic performance. He noted that parents with low incomes have been known to experience stress, unable to frequently encourage their children and monitor their schoolwork. The reason for, as they explained is that such parent's time is spent in thinking and looking for ways of generating income for the sustenance of the family. Therefore, it was necessary investigate the influence of family income on academic performance of secondary school students.

Studies show that independent variables that school cannot control, including low income, are good for predicting achievement scores (Sutton and Soderstrom, 2001). Parents who are low income earners are less able to provide for further education after high school, so students may not be working for their fullest potential that would be required to enter into higher education (Rouse and Barrow, 2006).

Drummond & Stipek (2004) while discussing their " low income parent's benefit about their role in children's academic learning" mentioned that a few of these parents indicated that there responsibilities were limited to meeting children's basic and social-emotional needs, such as providing clothing, emotional support and socializing manners (p198). Parents' shortsightedness towards their responsibilities in the educational process of their children and scarcity of fund to intensify such processes could be a challenge to their children's success.

According to Evans (2004), lower income children have less stable families, greater exposure to environmental toxins and violence, and more limited extra-familial social support networks. There is no doubt that parents in such setting would report lower educational expectations, less monitoring of children's school work and less overall supervision of social activities compared to students from high income families. Evans repeatedly discovered that low SES children are less cognitively stimulated than high SES children, as a result of reading less and being read to less, and experience less complex communications with parents involving more limited vocabulary. Unfortunately, intelligent and talented low SES students have no control over their family's income. Even though public school is free, a family must still afford school cloths and basic school supplies. Thus, a poor student who cannot afford the essentials drop out of school due to their families' financial situation, and often talented low-income children do not complete high school, get a diploma or enter college. Ultimately, they are viewed as unsuccessful and low achieving (Schiller, 2004). Thus, the poor are not academically unsuccessful because their lack of capabilities but rather their family's financial status

does not permit them to continue their education (Schiller, 2004).

Outside of school, the opportunities for a student who lives in low income families do not compare to those of more affluent peers. Unfortunately, low SES children cannot afford extracurricular activities or summer school programs. Without the continuous mental stimulation, a child cannot sustain achievement gain throughout the summer and lag further behind the SES child academically (Borman, 2002). The achievement gap starts small but then grows to be quite wide. Data from the Sustaining Effects Study showed compensatory education was generally effective in accelerating growth of reading and mathematics achievement and narrowing the gap between those of high and low SES but compensatory education was not enough to close the gap and equalize the achievement levels of children from different SES levels (Borman, Stringfield, & Slavin, 2001).

Looking specifically at language and reading, Canadian Student's literacy achievement results from a gradient analysis in 2003 showed that starting in kindergarten, word-reading achievement was related to SES. For students with English as their first language, the analysis showed that word - reading score increased with SES. After examination of the scores over time from English language learners, the same relationship was found; as SES increased, word-reading achievement increased as well D'Angiulli, Siegel & Maggi, 2004). Duncan and Brooks-Gunn (2001) found family income significantly affected children's ability and achievement measures. In 1999, 58% of low income fourth-grade students in the United States could not read. Similar, 68 % of low income inner-city eight-grade students could not meet basic mathematics standard for their grade level

(Cater, 1999). Analysis of fourth and eighth grade Iowa Test of Basic Skills (ITBS) results in 1996-97 showed students with low income scored poorly on that test. In 2004, almost 42% of the children in the United States lived in low income families and could not meet the most basic needs thus could not afford learning materials at home (Douglas Hall, Chau, & Koball 2006). Between 2000-2004, 45% of children under age 6 in the South of United States lived in low-income families and 9% increase occurred in the number of children living in low income families in the South due to the increase in immigrants with low education levels (Douglas-Hall, et al.,).

Early childhood programs have proved critical to the future learning of young children, especially those in low income families. In 2005, 16% of low income families placed their children in center-based care and 10% with other relatives. In contrast, 25% of families at or above the poverty line placed their children in centre-based care and 6% asked relatives to watch their children (Federal Interagency Forum on Child and Family Statistics, 2006).

The majority of preschool-aged children stayed at home during the day with one of their parents. Children from families with a higher income experience a more stimulating learning environment, including better access to books, newspapers, and learning opportunities (Duncan & Magnuson, 2005). With the additional exposure to literature and activities, children were better prepared for school and more familiar with language and literacy. Likewise warmth, responsive and involved parents provided a better household climate for higher achievement. Parents were more inclined to be more warm and

responsive if they did not have economic hardship, income loss or unemployment (Hanson, McLanaham & Thomson, 1999).

Lee and Burkham (2002) determined that children from low income families started school behind their peers from high-income families due to differences in background and experiences. According to Seccombe (2007), low income families were 5 times more likely to have high lead blood vessels than higher income children. About 16% of low income families children compared to 4% of all other children lived in older housing which still contained lead paint and caused lead poisoning. Lead exposure, even in small doses, causes learning disabilities, developmental decays and behavioral problems.

If a low income family has an increase in income the impact on academic ability and achievement is much greater than that of families from high SES (Duncan & Brooks-Gunn, 2001). For pre-school and elementary school aged children when family income was increased roughly $ 1,000 a year, then achievement increased by approximately 0.07 standard deviations (Duncan& Magnuson, 2005). A 30-point variance in test scores existed for every $10,000 change in household income (Darden, 2003).

Just increasing the incomes of low-income families alone could positively affect child development, especially at the younger ages (Knitzer, 2007). The relationship between achievement and socio-economic status could be compared to a socio-economic ladder, where each step up increased achievement (Fransoo, Ward, Wilson, Brownell, and Roos 2005). In a study by Fransoo et al. (2005) students were categorized, based on their family income, into four: high, middle, low-middle and low. Conclusions were not as dramatic when simply reviewing the passing rate, but when looking at the failures, a

larger discrepancy was found. Ninety two percent of high SES Grade 12 students passed the 2001-2002 Standards Tests in language Arts as compared to 83% of the middle-SES students, 83% of the low-middle-SES students and only 75% of the low SES students. Each SES level showed approximately 5% fewer students passing. However, when looking at the families, 25% of the low SES students failed while only 8% of the high SES students failed the exam (Fransoo et al., 2005).

Smith, Brooks-Gunn, Klebanov, (1999) examined the changes in the income-to-needs ratio from the children of the National longitudinal Survey of Youth (NLSY) study. The income-to-needs ratio was calculated by dividing the family's total for each year of a child's life by the U.S Child's family based on the number of people in the household for each year of the child's life up to and including the income data for the year of the assessment (Smith et al,.1999) used students' scores on the Peabody Picture Vocabulary Test-Revised (PPVT-R) or the Peabody Individual Achievement Test (PIAT) to track groups of children: 3-4 years old, 5-6 year olds and 7-8 year olds. All tests were normed with means of 100 and standard deviations of 15. The study controlled for family structure, mother's education, child's age and birth weight. If the average family income increased from 1 point to 2 point on the income-to-needs ratio, then there was a 3.0 to 3.7 point increase in the child's score on the PPVT-R or PIAT (Smith et al). Results of the study showed an increase in income for a child in low income families had a much greater effect on achievement than for a child in high SES (wealthy families) Duncan & Brooks-Gunn, 2001). Boudu (2000) observed that boys from wealthier house holds in Ghana had enrolment rated 34% higher than boys from poor households; the gap in

favour of girls from rich background compared to girls from low-income background was 55.4 percent higher. Boudu further observed that the allocation of scarce households' resource affected girls more than boys. Early domestic responsibilities especially among young girls conflicted with the pursuit of education. Richard and Gooneratne (1980) as cited by Saina (2005) discussed the relation between education and household income. The study showed that increasing income was associated with increasing use of educational resources, and that increasing income was also associated with better performance in school.

2.2.4 Parental Involvement in Education

Muola, (2010) found low correlation between parental involvement or encouragement and academic achievement. The researcher explained that the nature of encouragement given to the child by his parents is important as far as the academic achievement is concerned. Parents who through encouragement pressurize their children by making too high demands may create in them anxiety and fear of failure instead of providing effective morale to do well in academic work (Muola, 2010). According to Ayodo, (2009), research findings shows that children guided in doing homework by parents must be involved in their children, especially in lower primary for better academic foundation. Parents hold expectations for their children's schooling and may communicate their expectations to their children. There are many reason that parents may seem uninterested or don't hold high expectations for their children's performance.

Kenya's education system puts a lot of emphasis on academic performances. In national

examination, schools are ranked according to how well they excel in the examinations. Parents are willing to sacrifice and spend more on their children to get quality relevant education (Ongeti, 2005). Parents put a lot of pressure on their children to get high grades without taking into consideration their ability. Children are affected academically if they lack parental support especially with regard to education even though they live with their biological parents. Parents who are uninvolved in their children education present such a case. Wandabwa (1996) noted that factors enhancing children's academic performance include parents setting high goals for their children, encouragement of self reliance, autonomy and achievement motivation. Uninvolved parents less often do so.

A study by Mwiria (1987) noted that economically well parents are concerned about their children's academic performance and not their creative potential. He noted that well to do parents are likely to encourage their children to worry about passing exams because of the importance they attach to education. He also emphasizes the importance of the amount of time that the parent and the child spend interacting. He argues that the parent and the child interaction are important to the child's social and cognitive development. Children find it satisfying to receive positive regard from parents so as to view themselves positively by having high self-esteem

Parents of a higher socio-economic status expect their children to advance further in their education career and these higher expectations results in a significant effect on student achievement and their own perceptions of academic success (Benner and Mistry, 2007). The lower expectations expressed by parents will take its toll on student's perceptions of their own academic abilities. When there is no support to be successful, and no push from

those who are the most influential in a students' education, lower expectations should be expected from students (Vanlaar and Sidanius, 2001). It is thought that the type of involvement may make a difference and that in some cases parents become involved after their child has already had academic difficulties Domina 2005, McNeal 2001). Mothers who provide supportive environments at home have a positive effect on school performance (Eamon, 2005).

A study on the effects of parental involvement as a form of social capital found a greater likelihood of the youth enrolling in a 2-year and 4-year college (Perna & Titus, 2005). The data used for the analysis in Lippman, Guzman, Dombrowski, Kelth, Kinukawa, Schwalb, and Tice's (2008) report originated from the 2003 National House Surveys Program (NHES), Parent and Family Involvement in Education Survey (PFI). They found 88% of students whose parents had earned at least a bachelors degree had parents who expected them to finish college compared to 44% of students whose parents had graduated from diploma (Lippman et al., 2008). Teachman and Paasch (1998) reported it was mother's expectations and the student's grades in school that had a positive correlation to educational aspiration. According to Majoribanks (1996) in independence training parents insist on the child's self reliance and autonomy in decision making situations. While in achievement training they insist on high achievement through imposing high standards of excellence in tasks, setting high goals for the child and expecting the child to show competence in doing tasks well.

Parental encouragement reflects attempts to develop mature behavior in their adolescence when parents spell out a definable set of expected behavior in a demanding but non conflictual manner, adolescents know what is expected of them in school and attempt to perform at this level, particularly when they have rewarding parents who are actively involved in their education. For example, Connell, Spencer, and Abel (1994) reported that for African-American adolescents, family support and involvement in schooling was a substantial predictor of involvement in school over and above economic level. Parental involvement is likely to decrease from childhood to adolescence.

Sanders and Epstein (2000) have revealed that even though adolescents need more freedoms as compared to younger children, the need for guidance and support of the elderly in the home, school, and community during this period in their lives is very essential. Unfortunately, despite its significant contributions to the educational achievement of students, it has been observed that parental/family involvement in education tends to decrease across middle and secondary school, due to adolescents' increasing desire for autonomy (Jessor, 1993).

A parent may be having difficulty in making ends meet or simply overwhelmed by parenting responsibilities. In addition, many parents do not understand their role in the education of their children, seeing their children's education as solely the schools responsibility. If parents don't seem to care about learning, their children will pick this attitude. Parents who are uneducated or feel uncomfortable in the school environment may not know how to join with teachers in partnership. They may feel intimidated.

However, parents are not only important reinforcers for their children but also models for them. Anything the teacher can do to create a healthy parent- teacher partnership can help student performance. Fredericks 1984 as cited by Biehler (1997), parents of middle class children in the United States frequently function as teachers and every time they talk to their children, answer questions, take them to trips, and buy books or educational toys, they provide knowledge and experience that accumulate to make school learning familiar and easy. A child who does not receive such continual tutoring in the home is clearly disadvantaged when placed in competitive academic situation. (Levine & Havighurst, 1992 as cited by Biehler (1997). Thompson (1998) as cited by Hetherington (1999) states that parental involvement in students academic work play a crucial role in the development of both social and cognitive competence in children, he also observes that infants who lack parental involvement are associated with aggressive behaviors and low self-esteem. Hetherington (1999) reported that the family support and involvement to their children was an important predictor of high scores in schools. Research shows that supportive and attentive parenting practices affect academically achievement (Eamon, 2005**).** In addition, high parent aspirations have been associated with increasing student's interest in education (Majoribanks, 2005). Also parental involvement in school has been linked to both positive and negative influences on academic performance (Domina 2005, McNeal 2001). It is thought that the type of involvement may make a difference and that in some cases parents become involved after their children has already had academic difficulties. Parental involvement may not help academic scores; it does help prevent behavioral problems (Domina, 2005). Therefore, it was necessary investigate the influence of parental involvement in education on students' academic performance.

2.2.5 Home Atmosphere

Muola, (2010) stated that a more favorable home environment motivates a child to excel in school. It also provides the necessary learning facilities and to assist the child with school work. A parent with a small family will find it easy to provide for the physical needs of the child, but will also be in a position to give him attention, encouragement, stimulation and support with his schoolwork. This could have a motivating effect on a child from the small family in comparison with a child from a large family whereby the parents are always busy trying to find ways of meeting the basic needs of the family (Muola, 2010). Chepchieng, (1995) remarked that a home with abundance of material possessions must also have a good educative environment in terms of their interests in the education. The researcher argued that parents coming from low socio- economic background homes are not keen in sending their children to schools. They do not encourage their children to learn and also do not show any interest in their learning. Sometimes they may discourage their children from going to school. Children from such home usually lose the competitive morale with their counterparts from high socio-economic background homes in academic performance.

Ndege, (1992) noted that the number of siblings on academic performance had a positive correlation with academic performance of students in primary schools. Achoka, Odebero, Maiyo, Ndiku, (2007) noted that many parents are incapable of acquisition of proper dietary needs, medical care and clean habitats. Children born to such parents are predisposed to disadvantage access to education right from conception to primary age; they suffer improper growth due to financing impoverishment of their parents.

Henrich, Schwab-Stone, Fanti, Jones, and Ruchkin (2004) found that students who were within safe environments and did not witness violence have twice as likely to meet standards set by the state on achievement tests. Students normally dealt with environmental stressors within their neighborhood such as feelings of insecurity about their safety, housing status and violence within their community. Contrasting studies state that the type of neighborhood that students live does not greatly impact academic achievement, but urges that the relationship found cannot be ignored (Thompson, 2002; Buckner, Bassuk, and Weinreb, 2001). Resources include goods and services that would enhance academic success; good including educational videos, games, and toys; services including tutoring and other academic support. When parents are part of subordinate social groups they are less able to provide supplemental resources to aid in learning that begins in the classroom (Van laar and Sidanius, 2001).

Okpala, Okpala and Smith (2001), stated that instructional expenditures per pupil do not provide a statistically significant examination for changes in student's scores. The relative social class of a student affects academic achievement. Student from low socio-economic backgrounds do not perform as well as those from higher social class (Eamon, 2005). Smaller family size has been linked with higher academic achievement (Eamon 2005, Majoribanks 1996). Students with fewer siblings are likely to receive more parental attention and have more access to resource than children from large families. The additional attention and support leads to better school performance (Eamon 2005, Majoribanks 1996). Adolescents who live in higher quality neighborhoods typically

perform better in school than those who live in poor neighborhoods often lack positive role models, adults' supervision and connections to good schools (Eamon, 2005). That kind of environment often prevents students from creating healthy social networks and leads to a lack of motivation which negatively affects academic performance (Eamon, 2005).

Rothstein, (2004) stated that children from higher SES had an advantage because their parents could afford extra-curricular activities, which gave their children self-confidence and allowed exposure to the world outside of their homes and communities. Children developed inquisitiveness, creativity, self-discipline and organizational skills from programs such as drama, athletics, museum visits, recreational reading and other educational activities. Pellino, (2006) stated that low-SES children lived in environments with circumstances over which they had little control. They did not choose where they lived. They did not choose for their parents to be unemployed. Even if they wished to escape this environment and do better; they did not have control over the nature and quality of their lives. Though educators have always hoped for success for all their students, achievement gaps have been found among some large categories of students. Educational Research Service, (2001) found lack of educational resources in the home, low educational attainment of parents and unstable family structure, low expectations for students and unqualified teachers to caused achievement gaps. A lack of reading exposure lowered readiness and resulted in decayed abilities for low income families (Federal Interagency Forum on Child and Family Statistics, 2006). Literacy development, knowledge of the alphabet and print, slower language acquisition and characteristics of

written language remained foreign to children who seldom looked at books (Barton, 2003). The home atmosphere has a strong influence on the achievement of a child. Mathias (2005) believes,

> "The six hours of instruction a day for 180 days a year cannot overcome the effects of a deprived and impoverished home atmosphere for 18 hours a day 365 a year" (p. 592).

The home itself might have factors that caused a child to struggle academically.

Bansal, Thind and Jaswal, (2006) based on 100 eleventh grade students drawn from 10 senior secondary school in Ludhiana city of India showed that good quality of home atmosphere had significant positive correlation with high level of achievement among high achievers. It was found that as the quality of home environment deteriorates the level of achievement also deteriorates. In a study by Gottfried, Fleming and Gottfried (1998), home atmosphere was found to have a statistically positive and significantly effect on academic intrinsic motivation. Children whose homes had greater emphasis on learning opportunities and activities were more academically intrinsically motivated.

According to Barton (2003), 41% of children who moved frequently performed below grade level in reading and 33% below grade level in mathematics of students that did below grade level in reading and 17% below in mathematics (Barton 2003). Students who moved frequently felt separated and less engaged in the school (Vail, 2003). Home background according to PISA (Programme International Student Assessment) influences academic and educational success of students and schoolwork, while socio – economic background reinforces the activities and functioning of the teachers and students. From the above, it is revealed that the quality of parents and home background of a student goes along way to predict the quality and regularity of the satisfaction and provision of a

child's functional survival and academic needs. Poor parental care with gross deprivation of social and economic needs of child, usually yield poor academic performance of the child. On the other hand, whereas child suffers parental and materials deprivation and care due to divorce or death, or absconding of one of the parents, the child's schooling may be affected as the mother alone may not be financially buoyant to pay school fees, purchase books and uniforms, such child may play truant, thus his performances in school may be adversely affected (Shittu, 2004). The care that the children receive is greatly determined by the size of the family they are brought up in. Children who are from small families tend to perform better academically as compared to children from homes with big families. The larger the family, the poorer the child's self-concept. Academic competence was clearly related to the child's self- concept. Children with high self-concept tend to perform better than those children with low self-concept. Parenting therefore does not encourage the child to be independent. This makes the child to be less innovative resulting in incompetence in schoolwork.

Parent's attitudes towards learning and the need for education create an atmosphere at home and an attitude that carries over to school (Fredericks 1984 as cited by Biehler, (1997). The environment at home is a primary socialization agent and influences a child's interest in school and aspirations for the future. Smaller family size has been linked with higher academic performance. Students with fewer siblings are likely to receive more parental attention and have access to resources than children from large families. The additional attention and support leads to better school performance **(**Eamon 2005, Majoribanks 1996**).** Adolescents who live in higher quality neighborhoods typically

perform better in school than those who live in poor neighborhoods **(**Eamon, 2005); poorer neighborhoods often lack positive role model, adult supervision and connections to good schools. The kind of environment often prevents students from creating healthy social networks and leads to lack of motivation which negatively affects academic performance. SES is likely to confound the effects of family size on intellectual development. Therefore, it was necessary investigating the influence of home atmosphere on academic performance of secondary school students.

2.3 Summary

All literature reviews support that student performance depends on different socio-economic background. Environmental and personal factors have influenced the educational outcomes of school children in various ways. Cultural environment in high socio-economic home backgrounds is more favorable for intellectual development than that of low socio-economic home backgrounds, but does not rule out the possibility of intellectual development in low socio-economic backgrounds. Muola, (2010) opines that students from low socio-economic homes have little or no intellectual support at home. This fact reflects itself on their poor academic performance. This could be erroneous, as it is also likely that students from homes of low socio-economic status have intellectual support at home, but distractions from the surrounding environment make it difficult for them to progress. The author reports that the following five variables (education of parents, occupation of parents, parental involvement in education, place of residence and sibling size) are significant individual predictors of the students' performance in science. Ndege, (1992) in a study which covered only primary schools found that parental

occupations, parental education and family income have significant influence on pupil's academic performance in the primary school level.

The reviewed studies have established the fact that children from different socio-economic backgrounds do not generally achieve the same degree of academic success. However the studies lay more emphasis on the socio-economic background of the student without considering the other factors influencing students in the school. Empirical studies show that there is a relationship between socio-economic background measured by father's occupation and performance in achievement tests. The higher the socio-economic status or the more privileged the class grouping the higher the level of achievement. However, the relationships cannot be described as strong. Parental involvement in the early stages of a child's development may not provide effective socialization needed for holistic character formation. In addition the parental occupation, income may affect the availability of resources to support the child and also they can offer academic stimulation to their children which gives them the desire to do well in school. According to many studies, it revealed clearly that in the developed countries socio-economic background is more important in explaining a student's academic performance than school characteristic and experiences (Fransoo, Ward, Wilson, Brownell, and Roos, (2005).

In the developing countries of Africa, Kenya included, the reverse is true because the socio-economic status of the learner in an African setting does not seem to be much important in determining student's academic success. Therefore in both developed and

developing countries as the literature reveals that many variables from within and without school contribute greatly to student's academic performance and it includes the socio-economic background of the student, gender and birth order, school facilities, class size, school administration, teacher qualification, and learning resources. In the present study the researcher was investigating the influence of socio-economic background on academic performance of secondary school students. The findings of the current study would show if these finding are verifiable, and it would add to the existing knowledge by explaining how the socio-economic background influences academic performance.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Overview

The chapter outlined the methodology, procedures and modalities in data collection. It also covered study area, research design, and identification of the sampling technique, sample size, the instruments of data collection, validity and reliability of instruments, data collection procedures, and methods of analyzing the data.

3.1 Study Area

This study was undertaken in public mixed day secondary schools in Kuresoi district which is situated in Nakuru County, Kenya. It is geographically located between latitude O^0 25.3' North and O^0 53.2' North and longitude 35^0 24·4' East and 36^0 04' East. Altitude is 3600 M above sea level. The mean annual rainfall is 2000mm and the average temperature range from 15^0C to 20^0C. It has an area of 1596 sq km (appendices v and vi).

There are 24 secondary schools in the district, where only one is pure girl's school, 14 public mixed day, 8 mixed boarding, and 1 boy's school. The study focused only on six public mixed day secondary schools which present candidates for the national examinations under the 8-4-4 syllabuses. Kuresoi district whose headquarters' is in Keringet town boarders the following districts: Molo, Narok North, Bomet, Njoro, Kericho, Kipkelion, and Konoin as shown in appendix vi. The district extends from Kamara in the North position to Olenguruone in the South-West of Keringet. The area is cosmopolitan and has been ravaged by ethnic violence.

3.2 Research Design

A research design is regarded as an arrangement of conditions for collecting and analyzing of data in a manner that aims to combine relevance with the research purpose (Kothari, 2004). This study employed *ex-post facto* design. The main purpose of this design was to determine causes and effects for the current status of the phenomena under study. Socio-economic background which served as the independent variable could not be directly manipulated (Nachmias & Nachmias, 1996; Kerlinger, 2000, Mugenda and Mugenda 2003). This design was also found appropriate because it allowed the investigation of subsequent relationships between variables. The academic performances of secondary school students are taken as the dependent variable. Thus, the researcher was able to relate an after-the-fact analysis to an outcome or the dependent variable (Kathuri & Pals, 1993). The researcher used the design to investigate the relationship between socio-economic background and students' academic performance in public secondary school in Kuresoi district.

3.3 Study Population

The population refers to the group of people or study participants who are similar in one or more ways and which forms the subject of the study in a particular survey (Sproul, 1995). The study populations are members of a real or hypothetical set of people to which a researcher wishes to generalize the results of the study (Gall, Borg, & Gall, (2003). The study population were 3,913 students enrolled in public mixed day secondary schools in Kuresoi District. The accessible population were the Form four students who were used as respondents because they were assumed to be mature enough in terms of age and

education thus having an idea about their family socio-economic background. Form four students enrolled in the secondary schools within Kuresoi district of Kenya, which was a total accessible population of 900 students (where 411 were girls and 489 were boys) were considered.

3.4 Sampling Technique & Sample Size

Sampling may be defined as the selection of some part of an aggregate or totality on the basis of which a judgment or inference about aggregate or totality is made. In other words, it is the process of obtaining information about an entire population be examining only apart of it (Kothari, 2004). Frankel and Wallen, (2000) defined sampling as a procedure of selecting members of a research sample from accessible population which ensures that conclusion from the study can be generalized to study population. A sample is a smaller group obtained from accessible population and each member has equal chance of being selected to be a sample. It is also a finite part of a statistical population whose properties are studied to gain information about the whole (Mugenda and Mugenda 2003).

The technique used in selecting the sample was probability sampling. Probability sampling is the type of sampling in which every member of the accessible population had equal chances of participating (non-zero chances of being selected in the study) thus each student/ school had equal chances of being selected. Stratified random sampling was adopted. The technique placed the respondents into two strata on the basis of gender (boys and girls). Simple random sampling was adopted because it necessitated selecting

of schools in such a way that the schools had an equal probability of being equal. The main factor to consider in determining the sample size was the need to keep it manageable. Kuresoi District has 14 public mixed day secondary schools; The fourteen schools were each assigned numbers from 1 to 14, then by the use of the table of random numbers, starting at some number, the researcher closed his eyes and pointed at any number as the starting number. This was done until the six schools were sampled.

One hundred and eighty form four students were selected from the six schools and used for the study. The researcher used simple random sampling and therefore all boys and girls in form four class in each school were assigned numbers according to their stratus, then by the use of the table of random numbers, starting at some number, the researcher closed his eyes and pointed at any number as the starting number. This was done until the 17 boys and 13 girls were sampled from each school.

3.5 Data Collection Instruments

Data collection refers to gathering specific information aimed at proving or refuting some facts (Kombo and Tromp, 2006). Data was collected from students in the selected secondary schools. The researcher used questionnaire for students (appendix 1) as the data collection instruments. Both closed and open-ended items were used in the questionnaire. A closed-ended questionnaire is one which the respondent is offered the choice of alternative responses. Open-ended questionnaire is not followed by any kind of choice and the answers have to be recorded in full in order to support and check the alternative choice responses given by the respondent.

Data concerning the academic performance of the students was obtained from school records. Through the principals of the selected schools, the researcher requested for the last one year marks (2009) of the respondents from the teacher in charge of academics. It was assumed that each subject was graded in percentages. An average mark was based on teachers rating the end of term test marks. The marks were standardized using T-score formula. The standardized scores provided a common basis for academic comparison of students' performance. In order to achieve this scale, raw scores were transformed using the raw-score mean and standard deviation. The transformation yields a scale of Z- scores and this is used in transforming raw-scores into T-scores formulae.

$Z = (X- M)/\delta$

$T = 10 (Z) + 50$

$T = 10 (X – M)/ \delta + 50$

Where T = T-score.

X = a score in the original distribution.

M = mean of scores in the original distribution.

δ = Standard deviation.

3.5.1. Reliability of the Instruments

This refers to the measure of the degree to which research instrument (appendix 1) yields consistent results or data after repeated trials (Mugenda and Mugenda, 2003). It is the precision or consistency of the test or it is the extent to which the test measures whatever it does consistently. The test scores of students must be reproduceble and dependable (Kithuka, 2003). Split-half technique was used to test reliability where it required only

one testing session. In this approach, an instrument was designed in such away that there were two parts. Respondents' scores from odd numbers were correlated with scores from even numbers. The major advantage of this approach was that it eliminates chance error due to differing test conditions as in the test–retest or the equivalent-form techniques. Data with high split-half reliability will have a high correlation coefficient. Since it is a comparison of two halves of the test scores, the coefficient so computed does not reflect the reliability of the whole instrument. A correction is therefore applied on the computed coefficient. The adjusted coefficient represents the reliability of the whole test.

The correction was done using the Spearman-Brown prophecy formula (Mugenda & Mugenda 2003). Split half procedure in this procedure, classifying the odd number as one test and even number items as the other test artificially splits the test. The two sets of scores (odd & even) are correlated. Splitting the test into two implies that the calculated reliability is based on half-length tests. To correct or step up the half- length reliability correlation to full length reliability correlation, the following formula is applied:

$r_2 = 2(r)/ (r+1)$

r = is the reliability of the half test

r_2 = is the reliability of the stepped up test.

The correlation between two 10-item half-tests was 0.74. The reliability of a total test of 20 items is 0.85. The general Spearman-Brown Prophecy formula was used to measure the new reliability of the items in the questionnaire. Computation using the formula yielded a reliability coefficient of 0.93. This value was considered to be reliable for the study at hand.

3.5.2 Validity of the Instruments

This is refers to the degree to which the empirical measures or several measures of the concept, accurately measure the concept (Orodho, 2005) (appendix 1). It is also the extent to which a research performs what it was designed to do and how accurate the data obtained in the study represents the variables of the study (Mugenda, and Mugenda, 1999). Piloting was done to establish the clarity of meaning and comprehensibility of each item in the research instruments. The content validity of the instrument was determined by the researcher discussing the items in the instrument with the supervisors, colleagues and other lecturers in the Department of Educational Psychology (Mutai, 2000).

3.6 Administration of the Research Instrument

The researcher and research assistants ensured the sampled respondents were the ones providing appropriate responses in the questionnaire. The research assistants were trained in administering of the instrument and participated in piloting and correcting of the instrument before the final use. Before the questionnaire was administered to students in each school, either the school head or the deputy head introduced the researcher to the respondents in their respective classrooms. The questionnaire was self administered type where it was presented to the students. The researcher read the items to the students one after another without offering any interpretation to the items. The researcher collected the questionnaire immediately. A researcher asked the students to use permanent ink pens.

3.7 Scoring of the Instrument.

Items in the questionnaire (appendix i) were concerned with the background of the respondents were used. To obtain the true measure of socio-economic background the scores for parental educational attainment, parental occupation, family income, parental involvement in education and home atmosphere were used. The instrument (questionnaire) had both closed and open-ended items. For the close-ended items frequency distribution tables were generated. This made statistical techniques such as percentages and chi-square to be used to analyze and test the hypotheses if any. For open-ended items with more than one response per respondent, each response was treated independently and frequency counted and this was because the frequency distribution of the first response may well be very different from that of second and the third answers.

In the study, the parental education attainment, family income, parental occupation, parental involvement in education, and home atmosphere which include place of residence, learning facilities at home and family size constitutes the measures of the socio-economic background. The parental education attainment measured using items number 1 & 2 were grouped into three categories: High, medium, and low. High educational attainment included formal education, training after secondary education to the university level. Medium included formal education in primary up to the secondary level. Low included no schooling level of education.

Parental occupation rated using items number 3 & 4 in the questionnaire were grouped into three categories: High, medium and low. High referred to professional- Engineer,

medical doctor, lawyer, manager, lecturer, accountant, government official; medium were skilled who included: Primary and secondary school teacher, clerk, bursar, librarian, nurse, businessman, large scale farmer, technician; and low occupation were unskilled-Cook in schools, small scale farmer, carpenter, watchman, ground-man, Shoemaker, butcher.

Family income was grouped into two categories: High and low. High income referred to estimate family earning in form of money per month which was over Ksh. 20,000, and low income under Ksh. 20,000. This is item number 5 in questionnaire.

Parental involvement in education using items number 6, 7, 8, 9, 10, 11, 12, and 13, in the questionnaire and the responses were rated on an involved-uninvolved continuum. Involved parents were the ones who provided time for their children to do school work at home in the evening and during weekends, make sure that children do homework, give advice about education, encourage their children, discuss school progress with their children, and motivate them to try harder when they make poor grades. Uninvolved parents were those who did not provided the above mention conditions.

Home atmosphere includes learning facilities at home which was measured using items number 14, 15, and 16 in the questionnaire and the responses rated on a favorable-unfavorable. Favorable meant availabilities of facilities like study room, computer, home library, radio, television, reading materials, electricity, solar energy, pressure lamp, and hurricane lamp at home. Unfavorable referred to a home without the above mention

facilities and home with tin lamp, candle, and wood fuel. Family size in items number 17 & 18 in the questionnaire, the responses were rated on large-small continum. Large families referred to five and above children in a family while small meant less than five children in each home. Place of residence was indentified using items number 19 & 20 in the questionnaire. The responses were rated on a secure-insecure continum. Secure referred to safe environment in terms of ethnic violence while insecure meant constant ethnic clashes.

Students' academic performances were grouped into three categories: Above average (65-100%), Average (50-64%), and below average (0-49%).

3.8 Data Collection Procedures

Permission to conduct research was obtained from the National Council of Science and Technology (appendices ii, iii, & iv). The researcher then reported to the District Commissioner and District Education Office in Kuresoi District. The researcher carried out reconnaissance trip of selected schools to seek consent of the head of schools, and to familiarize himself with what goes on in the selected schools. A pilot study was thus undertaken to ascertain the reliability of research instrument. Thereafter the necessary corrections were done. Data obtained during this phase were used to determine the reliability of the research instrument. The researcher and research assistants visited sampled schools to administer the questionnaire. The researcher was available to explain the purpose of the study.

3.9. Data Analysis Procedures

Data analysis is the process of systematically searching and arranging data obtained from the field with the aimed of understanding of them and enabling you to present them to others (Orodho, 2005). The data collected for the purpose of the study were adopted and coded for completeness and accuracy of information. Data capturing was done using Excel software. The data from the completed questionnaire were coded and entered into the computer using the statistical package for social sciences (SPSS).

Descriptive statistics and inferential statistics were calculated and summarized for presenting and analyzing the data; the researcher then summarized patterns in the responses from the sample by use of descriptive statistics; frequency, and percentages. Inferential statistics used were Chi-square and contingency coefficient. The Chi-square is a non-parametric technique used to analyze categorical information. It is a technique used to test relationship that may exist between two or more variables (Mutai, 2000). A Chi-square with a 0.05 level of significance was calculated to determine if a significant relationship in the dependent variable, (academic performance) occurred in public mixed day secondary school students from socio-economic background (independent variable). The formula is

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

Where χ^2 = Chi-square

$\sum$ = the summation

O= observed frequencies

E= Expected frequencies

Contingency coefficient was used to calculate the magnitude of the relation or the degree of association between two attributes as shown below:

$$C = \sqrt{X^2/ (X^2 + N)}$$

While finding out the value of C the assumption of null hypothesis was that the two attributes exhibit no association. Contingency of coefficient is also known as coefficient of mean square contingency (Kothari, 2004).

The degree of freedom was obtained by using the formula:

$$d.f = (r-1)\ (c-1)$$

Where r = Number of rows

c =Number of columns

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, AND INTERPRETATION

4.0 Overview

This chapter presents the findings of the study on influence of socio-economic background on academic performance of secondary school students in Kuresoi District, Kenya. The data analyzed, presented and interpreted was based on the responses of students to the items in the research instrument; the questionnaire and also on students schools progress records. The data includes information on parental education, family income, parental occupation, parental involvement and home atmosphere which include place of residence, learning facilities at home, and family size.

4.1. Parental Educational Attainment and Students' Academic Performance

To determine the contribution of parental educational attainment to student's academic performance, chi-square test analysis were done with the father's and mother's educational attainment as the independent variable and the student's average end of term score for one year as the dependent variable. The data for the parental educational attainment was obtained by asking the students to check by putting a tick (√) on the alternatives given by items (1 and 2) in the questionnaire. Parental education attainment were grouped into three categories high, medium, and low as described earlier. Such a categorization was done because from the information given by the students on the parental education, most of the parents either did not attain any levels of schooling or attained only the primary levels of education. There were only six students who indicated their parental educational attainment to be of university.

The information shown in the Table 4.1 and 4.2 presents the findings of the chi-square (X^2) computation on parental educational attainment and students' academic performance.

Table 4.1

Chi-square computation of frequencies of students' scores by fathers' educational attainment categories.

Fathers' Educational Attainment	Students' Scores			
	Above Average (N=6)	Average (N=63)	Below Average (N=111)	Total
High	1 (1.8)	20 (19.3)	34 (33.9)	55
Medium	2 (1.5)	14 (15.7)	29 (27.8)	45
Low	3 (2.7)	29 (28)	48 (49.3)	80
Total	6	63	111	180

N = Number of Students in the respective category.

Figure in brackets are the Expected frequencies.

Chi-square $X^2_{(ob)} = 0.90$

d.f = 4

Chi-square X^2 crit $_{(0.05, 4)}$ = 9.49

Since $X^2_{(ob)} \leq X^2$ crit $(_{0.05, 4})$, Ho was accepted.

Contingency coefficient = 0.07

Table 4.2

Chi-square computation of frequencies of students' scores by mothers' educational attainment categories.

Mothers' Educational Attainment	Students' Scores			
	Above Average (N=6)	Average (N=63)	Below Average (N=111)	Total
High	1 (2)	23 (21)	36 (37)	60
Medium	2 (1.4)	15 (14.7)	25 (25.9)	42
Low	3 (2.6)	25 (27.3)	50 (48.1)	78
Total	6	63	111	180

N = Numbers of students in the respective category.

Figures in the brackets are the Expected frequencies

Chi-square $X^2_{(ob)} = 1.34$

df = 4

Chi-square X^2 crit $_{(0.05, 4)} = 9.49$

Since $X^2_{(ob)} \leq X^2$ crit $(_{0.05, 4})$, Ho was accepted.

Contingency coefficient = 0.09

The X^2 values of the father and the mother educational attainment of 0.90 and 1.34 respectively shows that there was no significant relationship in the performance of students whose parental educational attainment was high, medium and low. This was also confirmed by very low contingency coefficients of father 0.07 and 0.09 for the mothers' educational level. The contingency coefficient revealed that a very low degree of association exists between parental educational attainment and the students' academic performance. Contingency coefficient is used in statistics to show the strength or magnitude of an association or relation between the two variables considered, though very low, implies that some differences in performance between the students existed but was not significant at 0.05 levels. The above statistics suggest that a parent appear to have no influence on the children's academic performance. Therefore, from the finding, the null hypothesis (Ho_1) which stated that parental educational attainment has no significant influence on academic performance of secondary school students was accepted.

4.2 Parental Occupation and Students' Academic Performance

Parental occupation was another variable whose influence on students' academic

performance was also investigated. The parental occupation of the students studied was of various kinds as described earlier in the introduction of this chapter. The data for parental occupation was obtained by asking the students to name the occupation of the father in item (3) and occupation of the mother in item (4) in the questionnaire.

The information in Table 4.3 and 4.4 presents the Chi-square (X^2) computations on parental occupation and students' academic performance.

Table 4.3

Chi-square computation of frequencies of students scores by fathers' occupation categories.

Father's Occupation	Students' Scores			
	Above Average (N=6)	Average (N=63)	Below Average (N=111)	Total
High	0 (1.33)	15 (14)	25 (24.67)	40
Medium	2 (1.67)	18 (17.5)	30 (30.83)	50
Low	4 (3)	30 (31.5)	56 (55.5)	90
Total	6	63	111	180

N = Numbers of students in the respective category.

Figures in the brackets are the Expected frequencies

Chi-square $X^2_{(ob)} = 1.92$

df = 4

Chi-square X^2 crit $_{(0.05, 4)} = 9.49$

Since $X^2_{(ob)} \leq X^2$ crit $_{(0.05, 4)}$, Ho was accepted.

Contingency coefficient = 0.10

Table 4.4

Chi-square computation of frequencies of students scores by mothers' occupation categories.

Mothers' Occupation	Students' Scores			
	Above Average (N=6)	Average (N=63)	Below Average (N=111)	Total
High	0 (0.83)	9 (8.75)	16 (15.42)	25
Medium	3 (2.5)	24 (26.25)	48 (46.25)	75
Low	3	30	47	80

	(2.67)	(28)	(49.33)	
Total	6	63	111	180

N = Numbers of students in the respective category.

Figures in the bracket are the Expected frequencies

Chi-square $X^2_{(ob)} = 1.51$

df = 4

Chi-square X^2 crit $_{(0.05, 4)} = 9.49$

Since $X^2_{(ob)} \leq X^2$ crit $_{(0.05, 4),}$ Ho was accepted.

Contingency coefficient = 0.09

The Chi-square values which were insignificant indicate that the various father's and mother's occupations did not cause any statistical relationship in the performance of students at the secondary school level. The X^2 values of 1.92 and 1.51 for father's occupation and mother's respectively did not make any differences. This was confirmed by low contingency coefficients 0.10 and 0.09 which revealed that a very low degree of association exist between parental occupation and students' academic performance. The null hypothesis (Ho_3) which states that there is no significant relationship between parental occupation and academic performance of secondary school students was accepted.

4.3 Family Income and Student's Academic Performance

To determine the influence of family income on performance of students' chi-square test analysis were done with the family income as the independent variable and students'

academic performance as the dependent variable. The chi-square values were compared with X^2 table values so as to show whether or not significant differences in performance existed between students whose family income were high or low. The information in Table 4.5 summarizes the findings. The data for family has obtained by asking the students to check by putting a tick (√) the alternatives given (item 5) in the questionnaire.

Table 4.5

Chi-square computation of frequencies of students' scores by family income categories

Family Income	Students' Scores			
	Above Average (N=6)	Average (N=63)	Below Average (N=111)	Total
High	4 (3.5)	38 (36.8)	66 (64.7)	105
Low	2	25	45	75

	(2.5)	(26.2)	(46.3)	
Total	6	63	111	180

N = Numbers of students in the respective category.

Figures in the brackets are the Expected frequencies

Chi-square $X^2_{(ob)} = 0.33$

df = 2

Chi-square X^2 crit $_{(0.05, 2)} = 5.99$

Since $X^2_{(ob)} \leq X^2$ crit $_{(0.05, 2),}$ Ho was accepted.

Contingency coefficient = 0.04

The Chi-square (X^2) value of 0.33 was highly insignificant which indicates that the scores had no statistically relationship for students from high and low income families. The contingency coefficient of 0.04 suggested a very low degree of association between students' academic performance and the family income. However, the chi-square value suggests that such an association was highly insignificant. This implies that family income has no significant direct influence on the performance of secondary school students in Kuresoi District. Therefore, from the finding, the null hypothesis (Ho_2) which states that there is no significant relationship between family income and academic performance of secondary school students was accepted.

4.4 Parental Involvement and Students' Academic Performance.

Parental involvement in education was measured using items number 6, 7, 8, 9, 10, 11, 12, and 13, in the questionnaire. The responses were rated on an involved-uninvolved continum. Involved parents were the ones who provided time for their children to do school work at home in the evening and during weekends, make sure that children do homework, give advice about education, encourage their children, discuss school progress with their children, and motivate them to try harder when they make poor grades. Uninvolved parents were those who did not provided the above mention conditions. The data for parental involvement in education were obtained by asking the students to check by putting a tick (√) and briefly explaining the alternatives.

Table 4.6

Chi-square computation of frequencies of students scores by parental involvement in education categories.

Parental Involvement In Education	Students' Scores			
	Above Average (N=6)	Average (N=63)	Below Average (N=111)	Total

Involved	5 (5.33)	54 (56)	101 (98.67)	160
Uninvolved	1 (0.67)	9 (7)	10 (12.33)	20
Total	6	63	111	180

N = Numbers of students in the respective category.

Figures in the brackets are the Expected frequencies

Chi-square $X^2_{(ob)} = 1.32$

df = 2

Chi-square $X^2_{(crit\ 0.05,\ 2),} = 5.99$

Since $X^2_{(ob)} \leq X^2_{(crit\ 0.05,\ 2),}$ Ho was accepted.

Contingency coefficient = 0.09

The Chi-squares (X^2) computations showed that the value 1.32 was insignificant at 0.05 level and it indicates that the level of involvement did not cause any statistical difference in the performance of the students at the secondary school level in Kuresoi District. This was supported by a low contingency coefficient of 0.09 which revealed that there existed a low degree of association between parental involvement and students' academic performance. From the finding, therefore, the null hypothesis (H_{O4}) which stated that parental involvement in education has no significant influence on students' academic

performance was accepted.

4.5 Home Atmosphere and Students' Academic Performance

Home atmosphere in the study referred to the circumstance and the conditions in the home that support learning of a student and this constituted learning facilities at home, place of residence, and family size. Learning facilities at home were mentioned in the questionnaire, 14, 15, and 16 gave information on the circumstances and conditions at home of the student. Information obtained from such items made it possible to group conditions into two categories: Favorable and unfavorable. Favorable which meant a home which had the following facilities; adequate lighting facilities (solar energy, electricity, pressure lamp kerosene lamp); a study room, availability of time to study, availability of reading materials, (textbooks, newspapers and magazines), electronic gadget includes radio and television. A home was termed unfavorable if it had candle, tin lamp, wood fuel and none of the above facilities mentioned above.

Family size was measured using items 17 and 18 in the questionnaire. The responses were rated on a large-small continum. Large family referred to five and above children in a family while small meant less than five children at each home.

Place of residence was indentified using items number 19 & 20 in the questionnaire. The responses were rated on a secure–insecure continum. Secure referred to safe environment in terms of ethnic violence while insecure meant constant ethnic clashes.

Table 4.7

Chi-square computation of frequencies of students scores by learning facilities categories

Learning Facilities at Home	Students' Scores

	Above Average (N=6)	Average (N=63)	Below Average (N=111)	Total
Favorable	6 2)	44 (38.5)	50 (61.67)	100
Unfavorable	0 (4)	19 (24.5)	61 (49.33)	80
Total	6	63	111	180

N = Numbers of students in the respective category.

Figures in the bracket are the expected frequencies

Chi-square $X^2_{(ob)} = 18.99$

df = 2

Chi-square $X^2_{\text{crit (0.05, 2),}} = 5.99$

Since $X^2_{(ob)} \geq X^2_{\text{crit (0.05, 2)}}$, Ho was rejected.

Contingency coefficient = 0.31

Table 4.8

Chi-square computation of frequencies of students' scores by place of residence

	Students' Scores

Place of Residence				
	Above Average (N=6)	Average (N=63)	Below Average (N=111)	Total
Secure	6 (2)	28 (21)	26 (37)	60
Insecure	0 (4)	35 (42)	85 (74)	120
Total	6	63	111	180

N = Numbers of students in the respective category.

Figures in the brackets are the Expected frequencies

Chi-square $X^2_{(ob)} = 20.41$

df = 2

Chi-square $X^2_{crit\ (0.05,\ 2)} = 5.99$

Since $X^2_{(ob)} \geq X^2_{crit\ (0.05,\ 2)}$ Ho was rejected.

Contingency coefficient = 0.32

Table 4.9

Chi-square computation of frequencies of students' scores by family size.

Family Size	Students' Scores			
	Above Average (N=6)	Average (N=63)	Below Average (N=111)	Total
Large	0 (2.5)	32 (36.75)	80 (64.75)	112
Small	6 (3.5)	31 (26.25)	31 (26.25)	68
Total	6	63	111	180

N = Numbers of students in the respective category.

Figures in the brackets are the Expected frequencies

Chi-square $X^2_{(ob)} = 14.38$

df = 2

Chi-square $X^2_{crit\ (0.05,\ 2)} = 5.99$

Since $X^2_{(ob)} \geq X^2_{crit\ (0.05,\ 2)}$ Ho was rejected.

Contingency coefficient = 0.27.

The highly significant Chi-square values of 18.99, 20.41, and 14.38 for learning facilities at home, place of residence, and family size respectively shows that there was significant relationship in the performance of the students. This was also confirm and supported by the contingencies coefficients 0.31, 0.32 and 0.27 for learning facilities at home, place of residence, and family size which show that there existed a strong association between the variables under study. In the Table 4.6 all the students who were above average came from favorable environment with learning facilities at home. A total of 44 out of 63 students got average scores in the exams. This implies that the learning facilities have to a great extent an influence on students' work in school. In Table 4.7, all the students who were above average came from secure places and 85 students out of 111 got below average scores. This means that place of residence influence students' work in school in Kuresoi district. In Table 4.8, all 6 students from small families were above average and no student from large families was above average. A total of 80 students from large families out of 111 students scored below average. This implies that the family size has to a great extent, an influence on children's work in school in the district. Therefore, from the finding, the null hypothesis (Ho_5) which stated that there is no significant relationship between home atmosphere and students' academic performance was rejected at 0.05 level of significance.

4.6 Academic Performance of Boys and Girls against Socio-economic Variables

Chi-square analysis was done to find out whether or not parental education attainment, occupation of the parent, family income, parental involvement and home atmosphere influences the academic performance of secondary school boys and girls. Earlier, influences of these independent variables on students' academic performance in general were done. The relationship between gender and students' academic performance in general was determined by computing the chi-square against socio-economic background. A total of 49 boys which is 27.2 % out of 180 students scored average and above compare to 20 girls which is 11.1%. Also a total of 53 boys which is 29.4 scored below average compare to 58 girls which is 32.2%, thus the academic performance of boys in mixed day secondary schools are better than that of girls.

Fathers' educational attainment and performance of boys is summarized in Table 4.10 by computing the chi-square.

Table 4.10

Chi-square computation of the performance of boys by fathers' educational attainment categories.

Fathers' education Attainment	Boys' Scores			
	Above average (N = 5)	Average (N=44)	Below average (N= 53)	Total
High	1 (1.5)	14 (12.9)	15 (15.6)	30
Medium	2 (1.6)	11 (13.8)	19 (16.6)	32
Low	2 (1.9)	19 (17.3)	19 (20.8)	40
Total	5	44	53	102

N = Number of students (Boys) in the respective category.

Figures in the brackets are the Expected frequencies.

Chi- square $X^2_{(ob)} = 1.38$

df = 4

Chi – square $X^2_{crit\ (0.\ 05,\ 4)} = 9.49$

Since $X^2_{(ob)} \leq X^2_{crit\ (0.05,\ 4)}$, Ho was accepted.

Contingency Coefficient = 0.12

The Chi- square (X^2) value of 1.38 of fathers' educational attainment on boys' performance shows no significant relationship from all the three categories: High, Medium, and low. The contingency coefficient of 0.12 reveals a fair degree of association between the variables measured. This implies that fathers' level of education appears to have little or some direct influence on their son's school work at the secondary level. A possible reason for this is that most boys in the secondary school education see their fathers as their role models. But since the X^2(ob) is less than the $X^2_{crit\ (0.05,4)}$ from the table, it means that there is no significance difference between fathers' education and boys' performance in Kuresoi district.

Table 4.11 present information and computation of fathers' education attainment on girls' performance.

Table 4.11

Chi-square computation of frequencies of performance of girls' by fathers' educational attainment.

Fathers' Education Attainment	Girls' Scores			
	Above average (N = 1)	Average (N=19)	Below average (N= 58)	Total
High	0 (0.3)	6 (6.1)	19 (18.6)	25
Medium	0 (0.2)	3 (3.2)	10 (9.7)	13
Low	1 (0.5)	10 (3.2)	29 (29.7)	40
Total	1	19	58	78

N = Number of students (Girls) in the respective category.

Figures in brackets are the Expected frequencies.

Chi- square $X^2_{(ob)} = 1.06$

df= 4

Chi-square $X^2_{crit\ (0.05,\ 4)} = 9.49$

Since $X^2_{(ob)} \leq X^2_{crit\ (0.05,\ 4)}$, Ho was accepted.

Contingency coefficient = 0.12.

The X^2 value of 1.06 was insignificant at 0.05 level and the contingency coefficient of 0.12 shows fair degree of association between the fathers' level of education and girls' performance in secondary school. Just like boys performance, father's level of education has no significant influence on girls' performance but the degree of association can be attributed to Electra complex phenomena of Sigmund Freud theory.

Table 4.12 shows summaries of mothers' education attainment on boys' performance.

Table 4.12

Chi-square computation of frequencies of performance of boys by mothers' educational attainment.

Mother's Education Attainment	Boys' Scores			
	Above average (N = 5)	Average (N=44)	Below average (N= 53)	Total
High	1 (1.9)	16 (16.4)	21 (19.7)	38
Medium	2 (1.3)	10 (11.2)	14 (13.5)	26
Low	2 (1.8)	18 (16.4)	18 (19.7)	38
Total	5	19	53	102

N = Number of students (Boys) in the respective category.

Figures in the brackets are the Expected frequencies.

Chi- square $X^2_{(ob)} = 1.37$

df= 4

Chi-square $X^2_{crit\ (0.05,\ 4)} = 9.49$

Since $X^2_{(ob)} \leq X^2_{crit\ (0.05,\ 4)}$, Ho was accepted.

Contingency coefficient = 0.12

The Chi-square value of 1.37 which was insignificant at 0.05 level and contingency coefficient of 0.12 which indicates a fair degree of association between mothers' education attainment and boys' academic performance implies that mothers' level of education have little or some direct influence on boys' schoolwork. A possible reason for this is that boys tend to have a strong attachment to their mothers according to Freudian theory of Oedipus complex.

Table 4.13 summarizes the Chi-square computation of performance of girls by mothers' educational attainment.

Table 4.13

Chi-square computation of frequencies of performance of girls by mothers' education attainment.

Mothers' Education Attainment	Girls' Scores			
	Above Average (N=1)	Average (N=19)	Below Average (N=58)	Total
High	0 (0.3)	7 (5.4)	15 (16.4)	22
Medium	0 (0.2)	5 (3.9)	11 (11.9)	16

Low	1 (0.5)	7 (9.7)	32 (29.7)	40
Total	1	19	58	78

N = Numbers of students (Girls) in the respective category.

Figures in the brackets are the Expected frequencies

Chi-square $X^2_{(ob)} = 2.90$

df = 4

Chi-square $X^2_{crit\ (0.05,\ 4)} = 9.49$

Since $X^2_{(ob)} \leq X^2_{crit\ (0.05,\ 4),}$ Ho was accepted.

Contingency coefficient = 0.19

The X^2 value of 2.90 was insignificant at 0.05 level. The contingency coefficient of 0.19 was a fairly strong degree of association between mothers' educational attainment and girls' performance in secondary school level. This implies that the level of mothers' education appears to have a little influence on daughters' school work. A possible reason for this is that most girls share many responsibilities and roles together with their mothers thus influencing the girl to perform better. Computation of the chi-square shows no significance in relationship between the variables measured.

Table 4.14 shows Chi-square computation of frequencies of family income and performance of boys.

Table 4.14

Chi-square computation of frequencies of family income and performance of boys.

Family Income	Boys' Scores			
	Above Average (N=5)	Average (N=44)	Below Average (N=53)	Total
High	3 (2.8)	25 (25.1)	30 (30.1)	58

Low	2 (2.2)	19 (18.9)	23 (22.9)	44
Total	5	44	53	102

N = Numbers of students (Boys) in the respective category.

Figures in the brackets are the Expected frequencies.

Chi-square $X^2_{(ob)} = 0.04$

df = 2

Chi-square $X^2_{crit\ (0.05,\ 2)} = 5.99$

Since $X^2_{(ob)} \leq X^2_{crit\ (0.05,\ 2)}$, Ho was accepted

Contingency coefficient = 0.02

The Chi-square value of 0.04 which was highly insignificant at 0.05 level and the contingency coefficient of 0.04 which indicates a very low degree of relationship between the family income and secondary school boys' academic performance implies that the family income appears to have no direct influence on the boys' school work at the secondary school level.

Table 4.15 gives information on the influence of the family income on performance of girls.

Table 4.15

Chi-square computation of frequencies of family income and performance of girls.

Family Income	Girls' Scores			
	Above Average (N=1)	Average (N=19)	Below Average (N=58)	Total

High	1 (0.6)	13 (12.2)	36 (37.2)	50
Low	0 (0.4)	6 (6.8)	22 (20.8)	28
Total	1	19	58	78

N = Numbers of students (Girls) in the respective category.

Figures in the brackets are the Expected frequencies

Chi-square $X^2_{(ob)} = 0.92$

df = 2

Chi-square $X^2_{\text{crit (0.05, 2)}} = 5.99$

Since $X^2_{(ob)} \leq X^2_{\text{crit (0.05, 2)}}$, Ho was accepted.

Contingency coefficient = 0.11

The chi-square value of 0.92 was insignificant at 0.05 level. The contingency coefficient of 0.11 indicates a low degree of association exists between the family income and the girls' performance at the secondary school level. This implies that the family income does not influence the performance of girls at the secondary school level.

Table 17 summarizes the chi-square computation of fathers' occupation and performance of boys.

Table 4.16

Chi-square computation of frequencies of father's occupation and performance of boys.

Fathers' Occupation	Boys' Scores			
	Above Average	Average	Below Average	Total

	(N=5)	(N=44)	(N=53)	
High	0 (1.3)	10 (11.2)	16 (13.5)	26
Medium	2 (1.6)	12 (13.8)	18 (16.6)	32
Low	3 (2.1)	22 (19.0)	19 (22.9)	44
Total	5	44	53	102

N = Numbers of students (boys) in the respective category.

Figures in the brackets are the Expected frequencies

Chi-square $X^2_{(ob)} = 3.87$

df = 4

Chi-square $X^2_{crit\ (0.05,\ 4)} = 9.49$

Since $X^2_{(ob)} \leq X^2_{crit\ (0.05,\ 4),}$ Ho was accepted.

Contingency coefficient = 0.19.

The contingency coefficient of 0.19 indicates some degree of association between performance of boys and their fathers' occupations. However, as the chi-square (X^2) value of 3.87 shows, this association was not significant at 0.05 level. This, therefore, implies that father's occupation does not have any significant influence on the performance of the boys at the secondary school level.

The Table 4.17 gives computation of frequencies of fathers' occupation and girls' performance.

Table 4.17

Chi-square computation of frequencies of fathers' occupation and performance of girls.

Fathers' Occupation	Girls' Scores

	Above Average (N=1)	Average (N=19)	Below Average (N=58)	Total
High	0 (0.2)	5 (3.4)	9 (10.4)	14
Medium	0 (0.2)	6 (4.4)	12 (13.4)	18
Low	1 (0.6)	8 (11.2)	37 (34.2)	46
Total	1	19	58	78

N = Numbers of students (Girls) in the respective category.

Figures in the brackets are the Expected frequencies.

Chi-square $X^2_{(ob)} = 3.48$

df = 4

Chi-square $X^2_{crit\ (0.05,\ 4)} = 9.49$

Since $X^2_{(ob)} \leq X^2_{crit\ (0.05,\ 4),}$ Ho was accepted.

Contingency coefficient = 0.21.

The chi-square value of 3.48 indicates no significant influence between fathers' occupation and girls' performance in the secondary school level. However, as the contingency coefficient of 0.21 shows some degree of association, the association was

not significant at 0.05.

Table 4.18 shows chi-square computation of mothers' occupation and performance of boys.

Table 4.18

Chi-square computation of frequencies of mothers' occupation and performance of boys.

	Boys' Scores

Mothers' Occupation				
	Above Average (N=5)	Average (N=44)	Below Average (N=53)	Total
High	0 (0.6)	7 (5.6)	6 (6.8)	13
Medium	2 (2.3)	18 (19.8)	26 (23.9)	46
Low	3 (2.1)	19 (18.6)	21 (22.3)	43
Total	5	44	53	102

N = Numbers of students (Boys) in the respective category.

Figures in the brackets are the Expected frequencies.

Chi-square $X^2_{(ob)} = 1.90$

df = 4

Chi-square $X^2_{crit\ (0.05,\ 4)} = 9.49$

Since $X^2_{(ob)} \leq X^2_{crit\ (0.05,4),}$ Ho was accepted.

Contingency coefficient = 0.14.

The X^2 value of 1.90 shows no significant influence between the performance of boys and occupation of their mothers. This was supported by a low contingency coefficient of

0.14 which shows low degree of association between the two variables measured. This implies that there exists no significant influence between mothers' occupation and the performance of the boys in secondary school level in Kuresoi District.

Table 4.19 shows chi-square computations of girls' performance and mothers' occupation.

Table 4.19

Chi-square computation of frequencies of mothers' occupation and performance of

girls.

Fathers' Occupation	Girls' Scores			
	Above Average (N=1)	Average (N=19)	Below Average (N=58)	Total
High	0 (0.2)	2 (2.9)	10 (8.9)	12
Medium	1 (0.4)	6 (7.1)	22 (21.6)	29
Low	1 (0.4)	11 (9.0)	26 (27.5)	37
Total	1	19	58	78

N = Numbers of students (boys) in the respective category.

Figures in the brackets are the Expected frequencies

Chi-square $X^2_{(ob)} = 2.62$

df = 4

Chi-square $X^2_{crit\ (0.05,\ 4)} = 9.49$

Since $X^2_{(ob)} \leq X^2_{crit\ (0.05,\ 4),}$ Ho was accepted.

Contingency coefficient = 0.18.

The contingency coefficient of 0.18 indicates some degree of association between performance of girls and occupation of the mothers. However, as the chi-square (X^2) value shows 2.62, the association was not significant at 0.05 level. This, therefore, implies that the mothers' occupation does not have any significant influence on the performance of girls at the secondary school level in Kuresoi District.

Table 4.20 shows computation of frequencies of parental involvement in education and performance of boys.

Table 4.20

Chi-square computation of parental involvement in education and performance of boys

Parental Involvement in Education	Boys' Scores			
	Above Average (N=5)	Average (N=44)	Below Average (N=53)	Total
Involved	4 (4.6)	40 (40.5)	50 (48.8)	94
Uninvolved	1 (0.4)	4 (3.5)	3 (4.2)	8
Total	5	44	53	102

N = Numbers of students (boys) in the respective category.

Figures in the brackets are the Expected frequencies

Chi-square $X^2_{(ob)} = 1.43$

df = 2

Chi-square $X^2_{crit\ (0.05,\ 4)} = 5.49$

Since $X^2_{(ob)} \leq X^2_{crit\ (0.05,\ 2),}$ Ho was accepted.

Contingency coefficient = 0.12.

The Chi-square value of 1.43 indicates no significant influence of parental involvement in education on boys' performance in secondary school level. This was supported by a low contingency coefficient of 0.12 which shows low degree of association existed between the two variables. This implies that the performance of boys is not influenced significantly by the parental involvement in secondary schools in Kuresoi District.

Table 4.21 gives information of chi-square computation of parental involvement in education and girls' performance.

Table 4.21

Chi-square computation of parental involvement in education and performance of girls.

Parental Involvement in Education	Girls' scores			
	Above Average (N=1)	Average (N=19)	Below Average (N=58)	Total
Involved	1 (0.8)	14 (16.1)	51 (49.1)	66
Uninvolved	0 (0.2)	5 (2.9)	7 (8.9)	12
Total	1	19	58	78

N = Numbers of students (boys) in the respective category.

Figures in the brackets are the Expected frequencies

Chi-square $X^2_{(ob)} = 2.52$

df = 2

Chi-square $X^2_{crit\ (0.05,\ 2)} = 5.49$

Since $X^2_{(ob)} \leq X^2_{crit\ (0.05,\ 2),}$ Ho was accepted.

Contingency coefficient = 0.18.

The X^2 value 2.52 indicates insignificancy between the variables measured. However, the contingency coefficient of 0.18 shows some degree of association, nevertheless, the association was not significant at 0.05 level. This implies, therefore, that parental involvement in education does not have a significant influence on the performance of girls at the secondary school level in Kuresoi District.

Table 4.22 shows computation of frequencies of learning facilities at home and performance of boys.

Table 4.22

Chi-square computation of learning facilities and performance of boys

Learning Facilities at Home	Boys' Scores			
	Above average N=5	Average N=44	Below average N=53	Total
Favourable	5 (2.8)	29 (25)	24 (30.1)	58
Unfavourable	0 (2.2)	15 (19)	29 (22.9)	44
Total	5	44	53	101

N = Number of students (Boys) in the respective category.

Figures in the brackets are the Expected frequencies.

Chi – square $X^2_{(ob)}$ =11.38

df =2

Chi –square $X^2_{crit\ (0.05,\ 2)}$ =5.99

Since $X^2_{(ob)} \geq X^2_{crit\ (0.05,\ 2),}$ Ho was rejected.

Contingency coefficient =O.32.

The Chi-square (X^2) value of 11.38 indicates significant influence between learning facilities at home and boys' performance. This was supported by the contingency coefficient of 0.3169 which shows a significant degree of association existed between the two variables. The association was therefore significant at 0.05 level. This implies that learning facilities have a significant influence on the performance of boys at the secondary school level in Kuresoi district.

Table 4.23 gives information of computation of frequencies of learning facilities at home and performance of girls.

Table 4.23

Chi-square computation of learning facilities at home and performance of girls

Learning Facilities at Home	Girls' Scores			
	Above average N=1	Average N=19	Below average N=58	Total
Favorable	1 (0.5)	15 (10.2)	26 (31.2)	42
Unfavorable	0 (0.5)	4 (8.8)	32 (26.8)	36
Total	1	19	58	78

N = Number of students (Girls) in the respective category

Figures in the brackets are the Expected frequencies

Chi – square $x^2_{(ob)}$ =7.75

df =2

Chi –square $X^2_{crit\ (0.05,\ 2)}$ =5.99

Since $X^2_{(0b)} \geq X^2_{crit\ (0.05,\ 2)}$ H_0 was rejected.

Contingency coefficient =O.30

The (X^2) value of 7.75 indicates significant influence between the two variables. This was supported by contingency coefficient of 0.30 which shows that a degree of association existed between learning facilities at home and performance of girls. The association was significant at 0.05 level. This implies that the learning facilities have a significant influence on the performance of girls at the secondary school level in Kuresoi district.

Table 4.24 shows computation of frequencies of place of residence and performance of boys.

Table 4.24

Chi-square computation of place of residence and performance of boys

Place of Residence	Boys' scores			
	Above average N=5	Average N=44	Below average N=53	Total
Secure	5 (1.6)	16 (14.2)	12 (17.1)	33
Insecure	0 (3.4)	28 (29.8)	41 (35.9)	69
Total	5	44	53	102

N = Number of students (Boys) in the respective category

Figures in the brackets are the Expected frequencies

Chi – square $X^2_{(ob)}$ =13.21

df =2

Chi –square $X^2_{crit\ (0.05,2)}$=5.99

Since $X^2_{(ob)} \geq X^2_{crit\ (0.05,\ 2)}$ H_o was rejected.

Contingency coefficient =0.34.

The contingency coefficient of 0.34 indicates that there is a strong degree of association between performance of boys and place of residence. The contingency coefficient supported the Chi-square value 13.21 which shows high significant influence of the place of residence on the performance boys. This implies, therefore, that the place of residence does influence the boys' performance in secondary school level in Kuresoi district. A possible reason for this is that there has been constant ethnic violence since 1991 in the district thus affecting the performance of boys.

Table 4.25 shows chi-square computation of place of residence and performance of girls.

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Table 4.25

Chi-square computation of place of residence and performance of girls

Place of Residence	Girls' Scores			
	Above average N=1	Average N=19	Below average N=58	Total
Secure	1 (0.3)	12 (6.6)	14 (20.1)	27
Insecure	0 (0.7)	7 (12.4)	44 (37.9)	51
Total	1	19	58	78

N = Number of students in the respective category.

Figures in the brackets are the Expected frequencies.

Chi – square $X^2_{(ob)}$ =11.94

df =2

Chi –square $X^2_{crit\ (0.05,\ 2)}$ =5.99

Since $X^2_{(ob)} \geq X^2_{crit\ (0.05,\ 2)}$ H_o was rejected.

Contingency coefficient =0.36.

The Chi-square (X^2) value of 11.94 indicates significant influence of place of residence on girls' performance. This was enhanced by contingency coefficient of 0.36 which shows a high degree of relationship between the two variables measured. This therefore implies that place of residence was significant at 0.05 level, thus influence the performance of girls in secondary school level in Kuresoi district. A possible reason is that since the district has been ravaged by frequent ethnic tension girls tend not to do well in class because of disturbances and given that schools studied were day schools.

Table 4.26 shows chi-square computation of family size and performance of boys.

Table 4.26

Chi-square computation of family size and performance of boys.

Family Size	Boys' Scores			
	Above average N=5	Average N=44	Below Average N=53	TOTAL
Large	0 (2.8)	23 (25.1)	35 (30.1)	53
Small	5	21	18	44

	(2.2)	(18.9)	(22.9)	
Total	5	44	53	102

N= number of students in the respective category

Figure in the brackets are the Expected frequencies

Chi-square $X^2_{(ob)} = 8.62$

df = 2

Chi-square $X^2_{crit\ (0.05,\ 2)} = 5.99$

Since $X^2_{(ob)} \geq X^2_{crit\ (0.05,\ 2)}$ H_o was rejected.

Contingency coefficient= 0.28.

The X^2 value of 8.62 shows significant influence of the family size on boys' performance. This was supported by contingency coefficient of 0.28 which shows the degree of association that exists between the two variables. The association was significant at 0.05 level. This implies that family size does significantly influence the performance of boys in secondary school in Kuresoi District.

Table 4.27 shows chi-square computation of family size and performance of girls.

Table 4.27

Chi-square computation of family size and performance of girls.

Family size	Girls scores			
	Above average N=1	Average N=19	Below average N=58	Total
Large	0	9	45	54

	(0.7)	(13.2)	(40.2)	
Small	1 (0.3)	10 (5.8)	13 (17.8)	24
Total	1	19	58	78

N=Number of students in the respective category.

Figure in the brackets are the Expected frequencies.

Chi-square $X^2_{(0b)}$ = 8.58

df = 2

Chi- square $X^2_{crit\ (0.05,\ 2)}$ =5.99

Since $X^2_{(ob)} \geq X^2_{crit\ (0.05,\ 2)}$, Ho was rejected.

Contingency coefficient = 0.31.

The contingency coefficient of 0.31 indicates that there is a degree of association between performance of girls and family size. Contingency coefficient supported the X^2 value of 8.58 which shows significant influence of the family size on girls' performance. This implies that the family size at 0.05 level significantly influence the performance of girls in secondary school in Kuresoi district.

4.7 Summary

The analysis revealed that there is a significant gender difference in overall performance. Boys performed better than girls in all categories in the study. The results of Chi-square (X^2) computation of parental educational attainment, parental occupation, family income, parental involvement in education shows that these variables do not significantly influence academic performance of secondary school students in Kuresoi District. Home atmosphere which constituted learning facilities at home, place of residence, and family

size significantly influences academic performance of secondary school students in the district. In this study, as stated earlier, parental level of education, parental occupation, family income, parental involvement in education, and home atmosphere constituted the socio-economic background. Therefore, from the findings, the null hypotheses (H_{01}), (Ho_2), (H_{03}), Ho_4) and (Ho_6) which stated that there was no significant relationship in academic performance between secondary school students from different parental educational attainment, parental occupation, family income, gender, and parental involvement in education were accepted.

The null hypothesis (H_{05}) which stated that there would be no significant relationship between home atmosphere and students' academic performance was rejected at 0.05 level of significance. This was evident from the chi-square computations. In Kuresoi District, the parental education attainment, encouragement, the amount of money parents earn and the occupation did not seem to be important in determining, to a great extent, the performance of a student in school.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATION

5.0 Overview

This chapter revisit the research questions mentioned in chapter one, discuss each one of them and draw conclusions. The research questions of this study were: is there any relationship between parental educational attainment and students' academic performance of secondary students? Does parents' occupation affect academic performance of

secondary students? Does family income affect academic performance of secondary students? Is there any relationship between parental involvement in education and academic performance of secondary students? And to what extend does home atmosphere affect academic performance of secondary students. Therefore, the study was guided by the assumption that academic performance is attributed to socio–economic background of secondary students. The objective of the study was to determine the contribution socio–economic background to the academic performance of secondary school students. The level of significance was tested at 0.05 level of significance.

5.1 Parental Educational Attainment and Academic Performance

The first research question was about parental education attainment and academic performance. As noted earlier, parental education attainment constituted one of the socio-economic factors which was investigated in the study. The main reason for this study was to determine whether relationship existed in academic performance of secondary school students from different categories of parental education attainment. The results obtained from analysis showed that the level of education appear to have no direct influence on secondary students performance. The Chi-square of the fathers level of education $X^2_{(ob)}$ = 0.90 and $X^2_{crit\ (0.05,\ 4)}$ = 9.49 with df = 4 showed that $X^2_{(ob)} \leq X^2_{crit\ (0.05,\ 4)}$ then the H_O was accepted. The Chi-square of the mothers level of education $X^2_{crit\ (0.05,\ 4)}$ = 9.49 with df = 4 showed that $X^2_{(ob)}$ = 1.34 and $X^2_{crit\ (0.05,\ 4)}$ showed that $X^2_{(ob)} \leq X^2_{crit\ (0.05,\ 4)}$ the H_O was accepted. Therefore, the hypothesis (H_O1) Parental education attainment has no significant influence on academic performance of secondary students was accepted. When contingency coefficient was calculated, there was a very low degree of association

of 0.09 between the two variables.

The results therefore, confirm the finding of Sirin (2003); Chepchieng (1995); White, Reynolds, Thomas and Gitzlaff (1993). They all, in their separate studies, concluded that there was no correlation between parental education attainment and students' academic performance. The current study was done in secondary school level just like the above researchers. This implies, therefore, that parental educational attainment has no effect on academic performance of secondary students. Most of the researchers who found a strong correlation between the two variables did their research in the lower level (primary schools) where parents' level of education could influence students' academic performance. Muola, (2010) did the same research in Machakos among standard eight pupils and found a correlation between parents' level of education and pupils' academic performance. Chiu and Khoo (2005) also found the same result in America among 15 years-old students test scores. Nzomo (2001) also established a correlation among standard 6 pupils. Therefore, the level of parental education may not contribute to the children's school work in secondary level, probably only at primary level.

5.2 Parental Occupation and Academic Performance

The findings on these two variables contradicted what Muola (2010), Ndege (1992), Rothstein (2004), Shannon & Bylsma, (2002), Ainley et.al., (1995), Lokan et.al., **(**1996) found in their studies in Kenya and America. Focusing on 14 year olds in 1989, Ainley et.al. (1995) found correlations of 0.23 and 0.21 for father's occupation with achievement in Math and reading. Lokan et.al., **(**1996) found a correlations of father's occupation with word knowledge and mathematics among 13 and 14 year olds were 0.19 and 0.29

respectively. Among Victorian year 9 students in 1988 the correlations with father's occupation were 0.25 and 0.22 for mathematics and reading respectively. In another study, Ndege (1992), found that parental occupation have significant influence on pupil's academic performance in the primary school level. All studies found parental occupation to have a significant influence on children's school work.

The result obtained from analysis showed that the type of occupation appear to have no direct influence on secondary students performance. The Chi-square of the fathers' occupation $X^2_{(ob)} = 3.89$, $X^2_{crit\ (0.05,\ 4)} = 9.49$ with df = 4. This showed that $X^2_{(ob)} \leq X^2_{crit\ (0.05,\ 4),}$ then the null hypothesis was accepted. The mother's occupation also was computed using Chi- square. $X^2_{(ob)} = 1.90$, $X^2_{crit\ (4,\ 0.05)} = 9.49$ thus $X^2_{(ob)} \leq X^2_{crit\ (4,\ 0.05)}$ then the null hypothesis was accepted. Therefore, the (H_O2) which stated that parental occupation has no significant relationship on academic performance of secondary students was accepted even though there was some degree of association when contingency coefficient was calculated. Therefore, parental occupation may not contribute to the children's school work in secondary level.

5.3 Family Income and Academic Performance

The third research question was about family income and academic performance. Family income as noted earlier constituted one of the socio-economic background being investigated in the study. The reason for discussing responses on family income was to determine whether relationship existed in academic performance of secondary students from different levels of family income.

The result obtained from analysis showed that $X^2_{(ob)}$ =0.33, $X^2_{Crit\ (0.05,\ 2)}$ = 5.99 with degree of freedom being 2, hence $X^2_{(ob)} \leq X^2_{crit\ (0.05,\ 2)}$ then the null hypothesis (H_O3) was accepted. Therefore, the H_O3 which stated that family income has no significant relationship on students' academic performance was accepted. This was supported by a very low degree of association with a contingency coefficient 0.04.

This finding contradicted the findings of Evans (2004), Rouse and Barrow (2006), Duncan and Brooks-Gunn (2001), Schiller (2004), Secombe (2007), Cater, 1999), Lee and Burkham (2002), Knitzer (2007), Ndege (1992), and Darden (2003) in their various studies found a correlation between the two variables. This was not the case in this study because 59.5% of students from high-income families scored below average and 40.5% of students from low-income families scored below average. Ndege (1992), found family income to have significant influence on pupil's academic performance in the primary school level. Duncan and Brooks-Gunn (2001) found family income significantly affected children's ability and achievement measures.

Similar, 68 % of low income inner-city eight-grade students could not meet basic mathematics standard for their grade level (Cater, 1999). Evans (2004), found lower income children to have less stable families, greater exposure to environmental toxins and violence, and more limited extra-familial social support networks. This study supported the finding of Chepchieng (1995) who did the same in boarding secondary school level in Kabartonjo division.

A possible reason why this study differed with other researchers may be because of the level in which the study was carried out. Many researchers above did their research in primary level or lower grades. The present study was carried out in secondary level. This may have brought out the variation of the result. This shows that family income did not significantly influence students' academic performance of secondary school students in Kuresoi district.

5.4 Parental Involvement in Education and Academic Performance.

This was the fourth research question. This question constituted one of socio-economic background being investigated in the study. This was to determine whether the relationship existed in academic performance of secondary students from different categories of parental involvement in education.

The result obtained from analysis showed $X^2_{(ob)} = 1.32$, $X^2_{crit\ (0.05,\ 2)} = 5.99$ with degree of freedom being 2, hence $X^2_{(ob)} \leq X^2_{crit\ (0.05,2)}$ then the null hypothesis was accepted. Therefore, the (H_O4) which stated that parental involvement has no significant relationship on academic performance of secondary students was accepted. This was supported by a very low contingency coefficient of 0.09 which showed a low degree of association between the two variables.

In the present study, 90.9% of students whose parents were involved in education scored below average in the standardized scores. This showed that involvement of parents did not significantly influence children's school work. This possibly may be pressure exerted

by parents to get high grades without taking into consideration their ability according to (Ongeti, 2005). This finding supported the finding of Ongeti (2005), and Muola (2010). The nature of encouragement given to the child by his parents is important. Parents who through encouragement pressure their children by making too high demands may create in them anxiety and fear of failure instead of providing effective motivation to do well in their academic work. Parents should understand that it is not the amount of encouragement and pressure that matters but the way it is given.

5.5 Home atmosphere and academic performance.

The fifth research question was about home atmosphere and academic performance. Learning facilities at home, place of residence and family size constituted home atmosphere which was one of the variables in socio-economic background.

In analysis learning facilities at home $X^2_{(ob)} = 18.99$, $X^2_{crit\ (0.05,\ 2)} = 5.99$, with degree of freedom being 2 hence $X^2_{(ob)} \geq X^2_{crit\ (2,\ 0.05)}$ then the null hypothesis (H_O5) was rejected. This was supported by a strong degree of association with a contingency coefficient of 0.31. In analysis place of residence $X^2_{(ob)} = 20.41$, $X^2_{crit\ (0.05,\ 2)} = 5.99$ with df being 2, hence $X^2_{(ob)} \geq X^2_{crit\ (0.05,\ 2),}$ then the null hypothesis (H_O5 was rejected. A contingency coefficient 0.32 supported the result. In analysis family size $X^2_{(ob)} = 14.38$, $X^2_{crit\ (0.05,\ 2)} = 5.99$, df = 2 hence $X^2_{(ob)} \geq X^2_{crit\ (0.05,\ 2)}$, then the null hypothesis (HO_5) was rejected. Therefore, the three variables which constituted home atmosphere significantly influence academic performance of secondary students.

This result supported the findings of Muola (2010), Eamon (2005), Rothstein (2004),

Pellino (2006), Mathias (2005), Barton (2003), Bansal, Thind and Jaswal (2006) and Shittu (2004). They all in their various studies found home atmosphere to have a correlate on academic performance. This finding support observation made by Muola (2010) that children from favorable environments tend to have a high need for achievements as opposed to those from unfavorable environment. This finding supported other researchers, that favorable home environment is likely to enhance the child's motivation to achieve academic success which in turn will contribute to good performance in school.

A parent with a small family will find it easy to provide for the physical needs of the child, but will also be in a position to give him attention, encouragement, stimulation and support with his school work. This could have a demotivating effect on a child from a large family where the parents are always busy trying to find ways of meeting the basic needs of the family. This study supported the finding of the researchers Henrich, Schwab-Stone, Fanti, Jones and Ruchkin (2004) who found that students who were within safe environments and did not witness violence were twice as likely to meet standard set on achievement tests. This shows that home atmosphere significantly influence students' academic performance of secondary school in Kuresoi district.

5.6 Gender Differences in the Influence of Socio-Economic Background on Academic Performance.

The last objective was to investigate the influence of socio-economic background on academic performance of boys and girls in public mixed secondary schools. The finding revealed that there is a significant gender difference in overall performance. Boys performed better than girls in all categories in the study. The finding contradicted the finding of Chepchieng (1995) who found girls to have higher English achievements than

boys but this finding confirms Chepchiengs' results that boys are superior in mathematics than girls. The standardized scores used in this study indicate that boys performed better than girls in all the three subjects. Therefore, there is significant relationship in the influence of socio-economic background on academic performance due to gender.

5.7 Conclusions

It was revealed from the above findings that parental education attainment, family income, parental occupation and parental involvement in education had no significant influence on academic performance of secondary students. Home atmosphere which had three independent variables namely: learning facilities at home, place of residence and family size significantly influence students' academic performance. In view of the finding of this study, the following conclusions have been drawn. The parental educational attainment did not influence students' academic performance. Parental involvement in education also did not influence students' academic performance. Further, due to parents' high expectations for their children to excel in academic examinations, students feel frustrated, anxious and fear to fail.

The effect of home atmosphere on academic performance established in this study should inspire the stake holders in government and educational policymakers and parents to enhance the provision of learning facilities at home. Government should provide enough security in Kuresoi district in order to reduce anxiety of insecurity and inter-community violence which appeared to influence academic performance in Kuresoi district. The findings of the study have supported previous findings which have indicated a positive relationship between academic performance and home atmosphere. Therefore, home

atmosphere is one of the determinants of academic performance. An academically favorable home atmosphere is likely to enhance the child motivation to achieve academic success which in turn will contribute to better performance in school.

5.8 Recommendations

The literature review indicated clearly that the relationship between socio-economic background and academic performance is stronger in developed countries than in developing ones. The relationship between the two variables is strong in primary school level in developing countries and the reverse is true in secondary level. From the findings and foregoing conclusions, the following recommendations were made:

First, many parents may not be aware of the influence of various socio-economic factors on the academic performance of their children. It is recommended that, teachers, educationists, Government policymakers and Non-governmental organizations should try to create awareness in parents on the importance of socio-economic factors on academic performance which can improve the children's performance. Parents need to be informed that they can contribute to the education of their children through provision of learning facilities at home, encouragement, appreciate children's ability and active assistance among other strategies.

Secondly, schools should compensate for family background deficiencies by establishing quality learning facilities (equipped libraries) which should loan students books and provide effective follow up. The researcher recommends the establishment of well equipped rural/urban libraries in the district to compensate for lack of facilities at home.

Thirdly, parents are encouraged to provide learning facilities at home in form of relevant textbooks, revision books, conducive and spacious study room, checking school report forms and allowing time for their children to study at home.

Fourthly, parents need to know their role in the education of their children so that they do not put the blame entirely on the teachers when their children do not perform well in school. However, precaution should be taken when it comes to parental involvement since unreasonably high demand and too much pressure for good performance made by some parents on their children may cause anxiety and fear of failure which may affect the child's academic performance negatively. For the various family variables to have a significant effect in children's academic achievement, parents should set achievable targets. Lastly, Government should provide enough security in the district so as to curb insecurity in the area which in the study strongly influences students' academic performance. The researcher recommends conversion of day schools in the district into boarding schools to reduce uneven distribution of learning facilities at homes of students and will provide maximum security to compensate for insecurity at place of residence.

5.9 Suggestions for Further Research.

There are important issues that this study was unable to address due to its scope. From the research findings and conclusions drawn, there are certain variables that the researcher felt needed some further investigations. In view of this, it is suggested that the following be considered for further research.

1. There is need for a similar designed study covering a larger area (county) in Kenya to check whether or not the finding documented in this study can hold for a larger area in Kenyan day secondary schools.
2. There is a need for a study on the influence of socio-economic background on academic performance per subject focusing on single-sex secondary schools.
3. A similar study should be replicated in tertiary levels in order to provide a complete picture of how socio-economic background affects academic performance of students.
4. A study focusing on each of the independent variables of the present study as determinants of academic performance should be done. This will provide more information on students' education based on wider scope.

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APPENDIX I

STUDENT QUESTIONNAIRE ON INFLUENCE OF SOCIO-ECONOMIC BACKGROUND ON STUDENTS' ACADEMIC PERFORMANCE.

MATTERS TO NOTE

Please read the instructions of each item carefully before giving the responses. The researcher would like to assure you that the information given will be strictly confidential and used only for research purposes

SECTION A: PERSONAL INFORMATION

Your Admission No _____

Your Gender _____

SECTION B: SOCIO-ECONOMIC BACKGROUND

Please tick (√) the blank space where applicable to you.

1. **What is your father's highest completed level of education?**

a) No formal education _____

b) Primary _____

c) Secondary _____

d) Training College _____

e) University _____

f) I don't know _____

2. **What is your mother's highest completed level of education?**

a) No formal education _____

b) Primary _____

c) Secondary _____

d) Training college _____

e) University _____

f) I don't know _____

3. **What is your fathers' main occupation?**

Low income	Cook in school, small scale farmer, carpenter, watchman, ground- man, Shoemaker, butcher	
Middle income	Primary and secondary sch. teacher, clerk, bursar, librarian, nurse, businessman, large scale farmer, technician	
High income	Engineer, medical doctor, lawyer, manager, lecturer, accountant, government official	

4. **What is your mother's main occupation?**

Low income	Cook in school, small scale farmer, carpenter, watchman, ground- man, Shoemaker, butcher	
Middle income	Primary and secondary sch. teacher, clerk, bursar, librarian, nurse, businessman, large scale farmer, technician	
High income	Engineer, medical doctor, lawyer, manager, lecturer, accountant, government official	

5. **What is the estimate of your family income per month (Kshs).**

   a) Under 20,000 _____

   b) Over 20,000 _____

6. **Do you get time to do your school work at home in the evening and during weekends?**

i) Yes _____

ii) No _____

Briefly explain_____

_____

7. Do your parents make sure that you do your homework?

i) Yes _____

ii) No _____

Briefly explain_____

_____

8. Do your parents(s) give you advice about education?

i) Yes _____

ii) No _____

Briefly explain_____

_____

9. Do your parents assist/help you in doing your homework?

i) Yes _____

ii) No _____

Briefly explain_____

10. Do your parents discuss your school progress with you?

i) Yes _____

ii) No _____

Briefly explain_____

11. Do your parents motivate you to try harder when you make a poor grade?

i) Yes _____

ii) No _____

Briefly explain_____

12. My parents motivate me to try harder when I make a poor grade

i) Yes _____

ii) No _____

Briefly explain_____

13. My parents offer to help me when I make a poor grade.

i) Yes _____

ii) No _____

Briefly explain_____

14. Here is a list of things which people have at home. Please tick the ones you have at home.

i) Computer _____

ii) Home library _____

iii) Radio _____

iv) Television _____

v) Reading materials (daily newspapers, magazine etc)_____

vi) None of the above _____

15. What do you use as a source of light at home?

i) Tin lamp _____

ii) Hurricane lamp_____

iii) Candle _____

iv) Wood Fuel _____

v) Solar Energy_____

vi) Pressure lamp_____

vii) Electricity _____

16. Do you have a study room of your own at home?

i) Yes_____

ii) No _____

If no, then where do you do your homework?

_____

17. How many siblings do you have?

i) 1 ( )

ii) 2 ( )

iii) 3 ( )

iv) 4 ( )

v) 5 and above ( )

vi) None ( )

18. Do you think the number of sibling at your home is affecting your performance?

i) Yes _____

ii) No _____

Briefly explain_____

_____

19. Do you like your place of residence?

Yes _____

No _____

Briefly explain_____

_____

_____

20. Is your place of residence conducive enough for academic success as a day scholar?

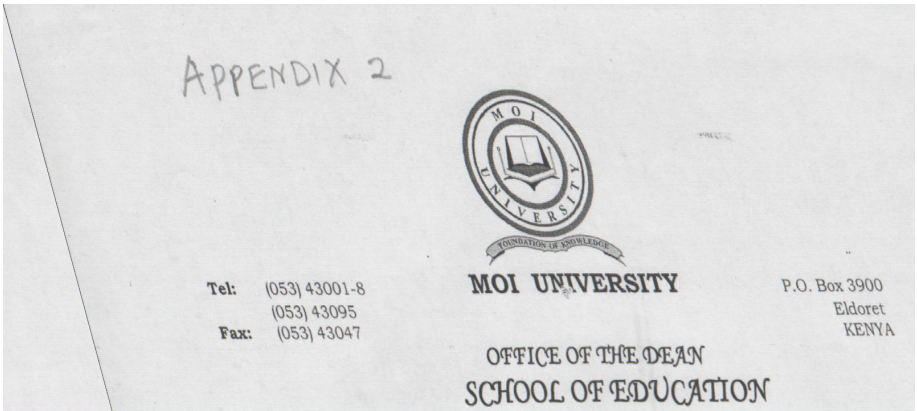
Yes _____

No _____

Briefly explain_____

_____

APPENDIX II


APPENDIX 2

MOI UNIVERSITY

Tel: (053) 43001-8
(053) 43095
Fax: (053) 43047

P.O. Box 3900
Eldoret
KENYA

OFFICE OF THE DEAN
SCHOOL OF EDUCATION

APPENDIX III

APPENDIX 3

REPUBLIC OF KENYA

NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telegrams: "SCIENCETECH", Nairobi
Telephone: 254-020-241349, 2213102
254-020-310571, 2213123,
Fax: 254-020-2213215, 318245, 318249
When replying please quote

P.O. Box 30623-00100
NAIROBI-KENYA
Website: www.ncst.go.ke

Our Ref: NCST/RR1/12/1/SS/311/4

Date: 30th April 2010

Mr. Benjamin Kipkoech Koskei
Moi University
P. O. B ox 3900
ELDORET

Dear Sir,

RE: RESEARCH AUTHORIZATION

Following your application for extension of authority to carry out research on ***"Influence of socio-economic background on academic performance of secondary school students: A case Kuresoi District"*** I am pleased to inform you that you have been authorized to undertake research in **Kuresoi District** for a period ending ***30th June, 2010.***

You are advised to report the **District Commissioner and the District Education Officer Kuresoi District** before embarking on the research project.

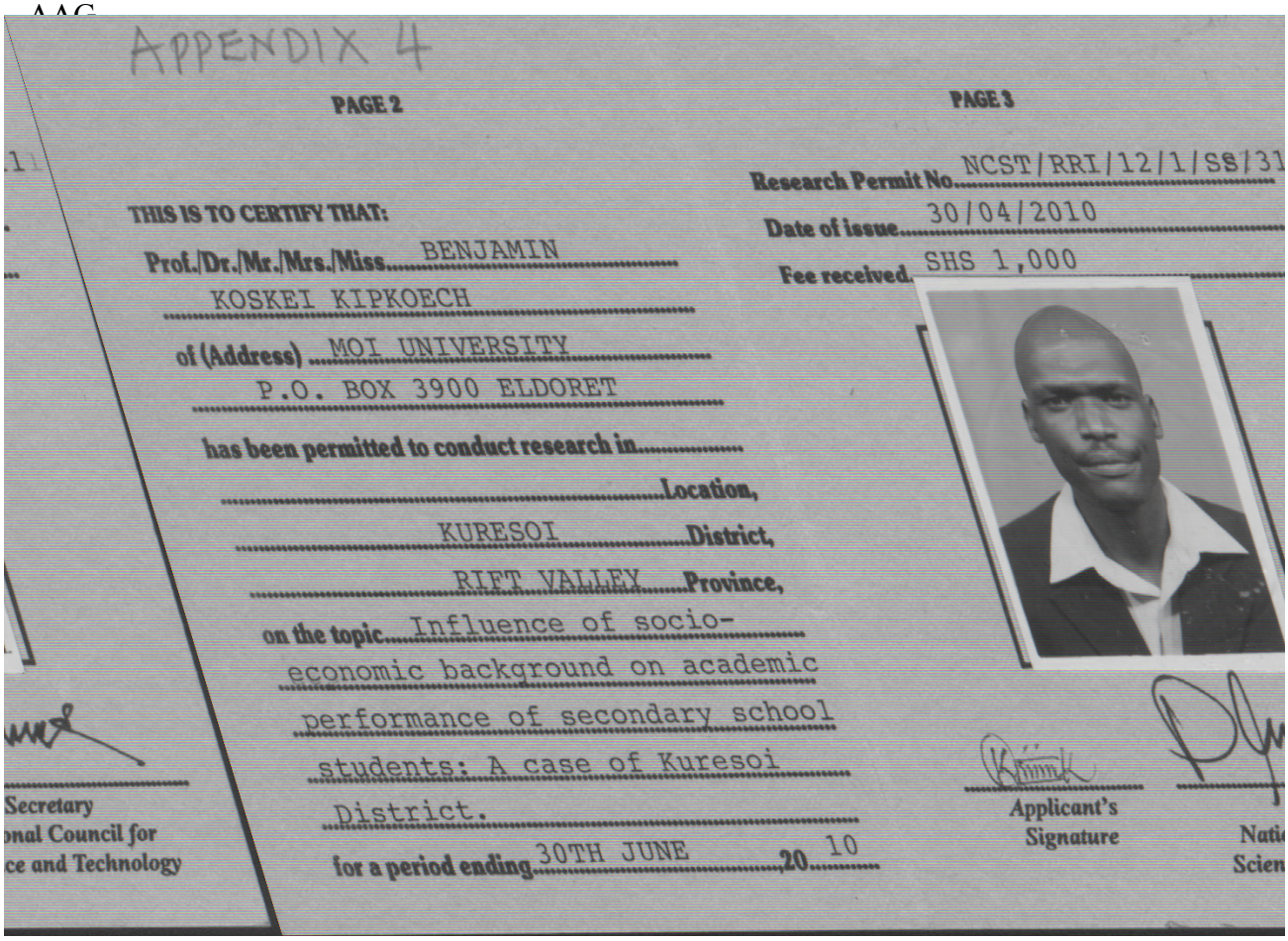
On completion of the research, you are expected to submit two copies of the research report/thesis to our office.

P. N. NYAKUNDI
FOR: SECRETARY/CEO

Copy to:

The District Commissioner
Kuresoi District

APPENDIX IV



APPENDIX 4

PAGE 2

THIS IS TO CERTIFY THAT:

Prof./Dr./Mr./Mrs./Miss BENJAMIN KOSKEI KIPKOECH

of (Address) MOI UNIVERSITY P.O. BOX 3900 ELDORET

has been permitted to conduct research in

Location, KURESOI District, RIFT VALLEY Province,

on the topic Influence of socio-economic background on academic performance of secondary school students: A case of Kuresoi District.

for a period ending 30TH JUNE ,20 10

Secretary
nal Council for
ce and Technology

PAGE 3

Research Permit No NCST/RRI/12/1/SS/31

Date of issue 30/04/2010

Fee received SHS 1,000

Applicant's Signature

APPENDIX V

KEY: The arrow points at Nakuru County where Kuresoi District is situated.

APPENDIX VI


NAKURU DISTRICT
KURESOI CONSTITUENCY (197)
POPULATION 177,332
AREA (SQ KMS) 1,596
KOIBATEK DISTRICT
KAMARA
KERICHO
DISTRICT
LOCATION
POPULATION
KURESOI
KIPTORORO
TEMOYETA
NYOTA
KERINGET
TINET
CHEBARA
KAPLAMAI
EMITIK
NAROK DISTRICT
CONSTITUENCY