THE RELATIONSHIP BETWEEN ATTITUDES TOWARDS EXAMINATIONS AND ACADEMIC PERFORMANCE AMONG SECONDARY SCHOOL GIRLS. A CASE OF KISII MUNICIPALITY, KENYA

BY

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This thesis is my original work and has not been presented for a degree in any other university.

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Dedicated with love and gratitude to my sons
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ABSTRACT

This study investigated the attitudes that secondary school girls held towards examinations and the effects of the attitudes on their academic performance in Kisii Municipality, Kenya. In the study, attitudes towards examinations were the independent variable while the academic performance was the dependent variable. This was a correlational study whereby data collected using questionnaires and document analysis was used to determine the relationship between the research variables. The study was based on the rational - emotive behaviour theory of Albert Ellis (1989). Selection of 240 participants was done by stratified random sampling technique. A fifty-one-statement questionnaire, which was piloted to evaluate its validity and reliability, was the instrument used to collect data. The obtained data was analyzed using descriptive and inferential statistics at 0.05 level of significance. The Statistical Package for Social Sciences (SPSS) computer programme was also used in the analysis. The results of the study indicated that there is a significant relationship between attitudes and academic performance of girls in secondary schools. The researcher recommended to the educational administrators, curriculum developers and implementers, school counsellors, Kenya National Examinations Council (KNEC), the schools, parents and the students that in order to improve the performance of girls in secondary schools, efforts should be made to inculcate and develop positive attitudes towards examinations among the girls. They should be

exposed to challenging examinations in various examinable subjects that can help them have positive attitudes towards examinations.

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CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 Overview

In this chapter the researcher presents the background of the study, statement of the problem, purpose and objectives of the study, the research questions and the hypotheses on which this study was based. It also contains the research variables, the assumptions and justification of the study, the theoretical framework, the scope of the study and the operational definition of terms.

1.1 Background of the Study

Examinations are both academically and vocationally important for both men and women (Bogonko, 1992; Eshiwani, 1993). But according to the Basic Resource Centre for Eastern and Southern Africa on Gender and Education (1995) there is unsatisfactory performance of girls in national examinations across the education system. The centre, cited by Abidha (1988) noted that girls perform poorly in almost all subjects compared to boys. In Kenya the poor performance of girls in the secondary school level is evident in the Kenya Certificate of Secondary Education examinations (KNEC). According to KNEC 2001, 2002 and 2004 girls' performance was poor as compared to that of boys. In the 2001 Kenya Certificate of Secondary Education (KCSE) examination results, girls performed better than boys only in three out of the 32 examinable subjects, in the 2002 results girls performed better than boys in five out of the

32 examinable subjects (See Table 1.0) while in the 2004 results they excelled in nine out of the 32 examinable subjects.

According to Hilgard, Atkinson and Atkinson (1975), attitudes have profound effect on learning. Rao (2003), also noted that attitude is one of the factors that influence academic achievement. According to Njuguna (1998) the academic achievement of learners is influenced by various factors which include psychological aspects such as self-esteem, attitudes and anxiety. These observations show that there is a significant relationship between attitudes and academic performance, which is important in the education system in Kenya.

In educational institutions, examinations are considered important in measuring students' progress throughout their school career. Examinations are therefore considered as an integral part of the teaching system in Kenya (Ministry of Education, 1979). The report of the Presidential Party on Education and Manpower Training for the Next Decade and Beyond (1988) noted that examinations and certification are important in the education system because they are used in evaluating the level of achievement for the purposes of further education, training and employment. According to Eshiwani (1993) one of the roles of education system is the selection and placement of candidates in various institutions and stations in society depending on their performance in national examinations. A

lot of importance is also attached to performance of national examinations as shown by the ranking of students and schools according to their performance in the examinations (“KCSE examination results”, 1995). This means that the Kenyan education system is examinations oriented.

Table 1.0 National Performance of Candidates in (KCSE) Examination in 2001 and 2002

Subject	2001				2002			
	Females		Males		Females		Males	
	No. Sat	Mean %	No. Sat	Mean %	No. Sat	Mean	No. Sat	Mean %
101 English	89,484	34.71	104,339	34.44	91,662	29.65	105,478	29.57
102 Kiswahili	89,486	44.72	104,339	43.34	91,649	45.45	105,473	44.38
121 Mathematics	89,481	15.83	104,334	21.19	91,647	16.44	105,471	22.53
231 Biology	85,499	29.52	91,525	33.59	87,141	24.58	90,241	28.34
232 Physics	16,225	22.22	38,425	26.84	15,312	26.61	38,868	30.89
233 Chemistry	84,534	21.45	96,862	25.31	87,725	22.05	99,536	26.62
235 Biological Sc.	10	25.20	18	23.81	20	14.89	17	19.49
311 Hist. & Gvt.	34,989	47.86	46,961	53.07	37,041	48.68	47,807	55.12
312 Geography	48,116	31.66	61,354	37.30	46,727	31.21	60,165	37.71
313 C. R. E.	38,339	49.17	26,961	49.43	41,651	58.44	29,173	59.27
314 I. R. E.	1,494	42.15	2,810	46.59	1,466	51.04	2,699	52.15
315 H. R. E.	9	35.22	8	36.06	15	49.20	13	53.46
316 S. E. E.	23,618	53.00	25,725	55.92	23,384	43.73	24,452	46.40
441 Home Science	10,365	58.26	526	51.65	9,400	53.50	434	43.58
442 Art & Design	418	53.64	775	54.91	369	67.42	654	64.40
443 Agriculture	44,309	45.54	53,181	48.67	40,515	42.19	48,158	45.71
444 Woodwork	24	51.33	1,277	50.62	28	54.14	1,247	54.78
445 Metalwork	3	56.00	365	57.05	4	46.00	360	48.46
446 Bldng	46	39.8	821	49.3	30	43.4	847	49.2

Const.		9		1		6		5
447 Power Mech.	9	30.55	313	52.02	5	48.20	274	58.70
448 Electricity	16	52.31	481	54.85	12	48.33	496	56.82
449 Draw & Dsg.	93	25.52	1,774	42.17	45	37.13	1,522	51.61
450 Aviation Tech	-	-	43	60.88	1	52.00	26	63.69
451 Computer St.	543	54.44	570	57.64	1,143	53.31	1,033	57.02
501 French	1,141	41.16	716	43.90	1,165	42.83	663	43.80
502 German	241	56.88	93	60.27	253	57.08	128	53.83
503 Arabic	131	61.22	393	61.18	140	61.82	324	67.75
511 Music	1,236	49.97	818	49.49	893	51.03	687	51.08
561 Accounting	3,404	49.22	6,704	50.88	3,253	55.26	9,929	55.88
562 Commerce	43,441	36.57	50,553	39.45	43,684	43.98	49,360	47.55
563 Economics	303	38.84	868	38.81	119	42.37	506	43.74
564 Typ. With Off. Practice	970	54.15	42	55.96	732	53.60	48	57.58

Source: Kenya National Examinations Council (KNEC) Analysis Report, 2003

According to Kipruto (1997) when students pass the national examinations in a particular school, the school is deemed to have significantly performed its work. At Cohismo High School, high academic performance in KCSE and Kenya Advanced Certificate of Education (KACE), is consistently sought by teachers and students because passing national examinations is the prized goal of education and that every school worth its salt strives for academic excellence (Orora, 1988 quoting Cohismo High School Principal). Bogonko (1992) stated that examinations are designed to determine the level of knowledge, skill or qualifications of a student attained in a prescribed course of study either privately or in public institutions. Examinations therefore are used in the assessment of pupils' attainment of learning which is an integral part of any educational process.

The foregoing statements show the importance of examinations in Kenya as a system of assessing students' performance after a given school cycle. Notwithstanding the importance of examinations in Kenya, one of the major concerns of the gender researchers in education is unsatisfactory academic performance of girls across the education system in national examinations (Basic Education Resource Centre on Gender and Education, 1995). The performance of girls in KCSE was not satisfactory as that of boys although a small percentage of girls perform better than boys ("Girls Lag Behind", 2002). Although the gap in the enrolment of girls and boys in

secondary schools has narrowed and eventually more girls completing the cycle and sitting the examinations, their performance has not yet improved (“Precious Blood Goes Top”, 2003).

The Gender Policy in Education (2007) reported that there is poor participation and performance in Science, Mathematics and Technology (SMT) subjects and courses by both males and females. However, it indicates that females’ participation and performance is worse than that of males at all educational levels.

Abidha (1988), observed that girls perform poorly in almost all subjects compared to boys. Eshiwani (1985) stated that the performance of girls in national examinations is hampered by stereotyped attitudes on gender roles among teachers, parents and students about the ability of girls.

United Nations Children’s fund (UNICEF, 1992) stated that the poor performance of girls is a great concern among parents, schools and the general public. This has given impetus to the need to improve girls’ performance by improving facilities, school environment, training of teachers, providing more female teachers role models, removing gender bias in textbooks and emphasizing the importance of girls’ education (Eshiwani, 1985; UNICEF, 1992; un, 1985). Despite these efforts, there has been no significant academic

improvement among girls (Basic Resource Centre on Gender and Education, 1995).

For instance in the 2001 KCSE examination results, boys took the top 100 positions in every province where candidates were ranked according to performance indices (Kenya National Examinations Council Analysis Report), 2003). In releasing the 2001 KCSE examination results, the Minister for Education, Science and Technology, Honourable Prof. George Saitoti observed that girls' general performance was lower than that of boys. He further noted that on average girls had performed worse than boys for the previous two years. The low performance of girls was repeated in the 2002 KCSE examination results (See Table 1.0).

As Table 1.0 shows, out of the 32 examinable subjects done in the year 2001 KCSE examination, girls had better mean grades in five subjects which included English, Kiswahili, Home Science, German and Arts and Design. Where the girls excelled the difference in mean grade was smaller than where the boys did better than the girls. For instance in English the difference was 0.08 and in Kiswahili it was 1.07. In Mathematics, Biology and in Chemistry where the boys did better than the girls, the differences in mean scores were 6.09, 3.76 and 4.57 respectively.

These differences in performance in the Kenya Certificate of Secondary Education (KCSE) examinations is an indication of the continued low performance of girls as compared to that of boys hence the need to investigate whether girls' attitudes towards various subject examinations had significant effect on their academic performance. This study therefore attempted to investigate the attitudes that secondary school girls held towards examinations and the influence that these attitudes had towards their academic performance.

1.2 Statement of the Problem

At the end of secondary school cycle, students are expected to sit for the KCSE examinations in order to measure their performance in various subjects. The examinations are designed not only to assess the candidates' performance by ascertaining how much they know in a particular subject but also their ability to apply knowledge to some skills (Bogonko, 1992). Examinations measure recognition or the ability to recall, synthesis of the contents of the subjects, organization, analysis and evaluation. According to Eshiwani (1993) the ultimate purpose of examinations is to gain admission to colleges and universities if the candidates meet the required grades in the KCSE examination.

Studies conducted on students' attitudes and academic performance focused on attitudes towards science in general

(Wasonga, 1997; Akibuiro & Joshua, 2004), gender and academic performance (Eshiwani, 1985; Wanyonyi, 2003) and attitudes towards Mathematics (Prewatt, 1983; Ndonga, 1999; Bassey, 2002). Studies on attitudes of girls towards examinations which have to be done at a given school cycle have not been done by the researchers.

Therefore this study was designed to investigate attitudes that girls held towards examinations and the extent to which the attitudes affected their academic performance in secondary school level as measured by various subject examinations that they sit at the end of various learning processes. This is important because as shown in Table 1.0 girls have not excelled in most subjects compared to the performance of boys inspite of the increase in their enrolment in secondary schools (KCSE examination results, 2003).

1.3 Purpose of the Study

The purpose of this study was to investigate the attitudes that girls held towards examinations and the extent to which these attitudes affected their academic performance. This was because examining students is the measure of their performance (Bogonko, 1992). Furthermore there is little research on girls' attitudes towards examinations in the course of their preparations and when sitting for the examinations.

1.4 Objectives of the Study

The general objective of the study was to investigate the relationship between attitudes towards examinations offered in various subjects and academic performance among secondary school girls in Kisii Municipality. The specific objectives of the study were:

1. To investigate the relationship between the attitudes of girls towards examinations and their academic performance.
2. To investigate the relationship between the attitudes of girls towards Mathematics examinations and their performance in Mathematics.
3. To investigate the relationship between girls attitudes towards English examinations and their academic performance in English.
4. To investigate the relationship between girls' attitudes towards Kiswahili examinations and their academic performance in Kiswahili.
5. To investigate the relationship of girls' attitudes towards physical science subjects examinations and their performance in the subjects.
6. To investigate the relationship between girls' attitudes towards technical subjects examinations and their academic performance in the subjects.

7. To investigate the relationship between girls' attitudes towards humanity subjects examinations and their academic performance in the subjects.

1.5 Research Questions

Study sought to answer the following research questions:

1. What is the relationship between girls' attitudes towards examinations and their academic performance?
2. What is the relationship between girls' attitudes towards Mathematics examinations and their academic performance in Mathematics?
3. What is the relationship between girls' attitudes towards English examinations and their academic performance in English?
4. What is the relationship between girls' attitudes towards Kiswahili examinations and their academic performance in Kiswahili?
5. What is the relationship between girls' attitudes towards physical science examinations and their academic performance in the subjects?
6. What is the relationship between girls' attitudes towards technical subjects examinations and their academic performance in the subjects?

7. What is the relationship between girls' attitudes towards humanity subjects examinations and their academic performance in the subjects?

1.6 Hypotheses

The study investigated the following null hypotheses:

HO_1: There is no relationship between girls attitudes towards examinations and their academic performance.

HO_2: There is no relationship between girls' attitudes towards Mathematics examinations and their academic performance in Mathematics.

HO_3: There is no relationship between girls' attitudes towards English examinations and their academic performance in English.

HO_4: There is no relationship between girls' attitudes towards Kiswahili examinations and their academic performance in Kiswahili.

HO_5: There is no relationship between girls' attitudes towards physical science examinations and their academic performance in the subjects.

HO_6: There is no relationship between girls' attitudes towards technical subjects examinations and their academic performance in the subjects.

HO_7: There is no relationship between girls' attitudes towards humanity subjects examinations and their academic performance in the subjects.

1.7 Research Variables

The study had two variables. These included secondary school girls' attitudes towards examinations which was the independent variable and the academic performance variable which was the dependent

variable. The study sought to find out the relationship between the attitude variable and the academic performance variable.

1.8 Assumptions of the Study

The study was based on the assumptions that teaching and learning are effective in the secondary schools and does not create any difference between boys and girls in academic performance. The value of the data that was obtained depended on the truthfulness of the research participants' responses to the attitude scale statements that were administered by the researcher.

1.9 Justification of the Study

In Kenya, examinations are an integral part of the education system. In learning institutions examinations are views as significant measures of the progress of students throughout their school career (Ministry of Education, 1979). Examinations are also used to assess the achievements students have made at the end of their education cycle. Examinations are also used for placement and selection for further studies (Ndege, 1997). Furthermore, examinations measure how much a student has learnt. They are also considered as a good measure among methods of selection and determination of the qualities for various jobs and promotions (Musira, 1993).

Inspite of the importance attached to examinations, girls perform poorly as compared to boys (Abidha, 1988). This poor performance

has raised questions as to why girls do not perform better in examinations. Various studies conducted the past have not addressed attitudes of girls as a homogeneous group but on general attitudes towards specific subjects such as Mathematics (Prawatt, 1983; Ogoma, 1987; Ndonga, 1999; Bassey, 2002) and science subjects (Wasonga, 1997, Akubuiro & Joshua, 2004) and gender and academic performance (Eshiwani, 1985; Wanyonyi, 2003). Therefore, attitudes towards examinations, which all students sit at the end of an educational cycle, and in all examinable subjects, have not been addressed in these studies.

This study was therefore designed to investigate the extent to which attitudes towards examinations affected girls' academic performance. This study was significant in that its findings and recommendations were considered helpful to educators in understanding the attitudes that girls held towards examinations and how these attitudes affected their academic performance. This was considered helpful in nurturing positive attitudes towards examinations among girls and therefore improve their academic performance.

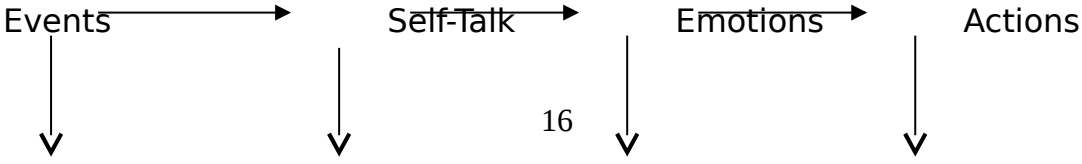
1.10 Theoretical Framework

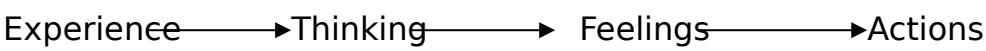
The study was based on the rational-emotive behaviour theory of Albert Ellis (1989). Rational-emotive behaviour therapy (REBT) states that our emotions stem mainly from our beliefs, evaluations,

interpretations and reactions to life situations. According to Dryden and Ellis (1988) people are not disturbed by things but by their view of things. According to Ellis, it is people's own repetition of early indoctrinated irrational thoughts that keeps dysfunctional attitudes alive and operative within them.

Rational-emotive behaviour therapy is based on the assumption that human beings are born with a potential for both rational or straight thinking, and irrational or crooked thinking. Because of this assumption, Ellis posited a variety of therapeutic approaches that are used to modify foul patterns of clients' thoughts, premises, assumptions and attitudes underlying these cognitions. The therapists familiarize themselves with clients' thinking, feeling and behaviour to understand their relationship hence seeing the clients through their own world. The assumption is that the clients distort reality, which affect their feelings about the world and leads to dysfunctional emotions and behavioural difficulties. The therapists therefore are supposed to encourage clients to change the way they evaluate themselves and the world (Corey, 1991). According to Ellis, psychological problems are caused by irrational or distorted modes of thought, which influence people's feelings and actions as depicted in Fig.1.0.

Figure 1.0 The sequence of Reaction to Experience





As illustrated in Figure 1.0, reasons for reactions to events depends on what one was thinking prior to the experience. People are born with the capacity to think irrationally or rationally. It is these irrational thoughts that cause psychological problems. In this theory, a counselor can assist a client to differentiate between rational and irrational thoughts as illustrated in Figure 1.1.

In Ellis' view, people with irrational beliefs cause their own problems through worries about their inability to solve their own problems. Counselling is therefore expected to break these thoughts. Through the Rational-emotive behaviour therapeutic process, clients learn skills that give them the tools to identify and dispute irrational beliefs that have been acquired and are maintained by self-indoctrination. The clients are assisted to learn how to replace such ineffective ways of thinking with effective and rational cognitions, and as a result change their emotional reactions to situations. In this study, the researcher classified the research variables that were: girls' attitudes towards examinations and academic performance in relation to the theory (See Figure 1.2).

Figure 1.1 Albert Ellis Model of Counselling

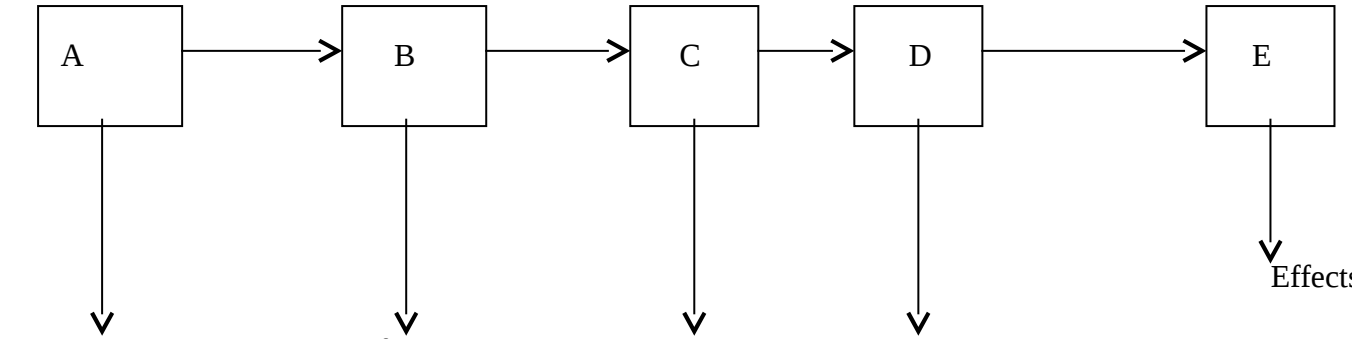
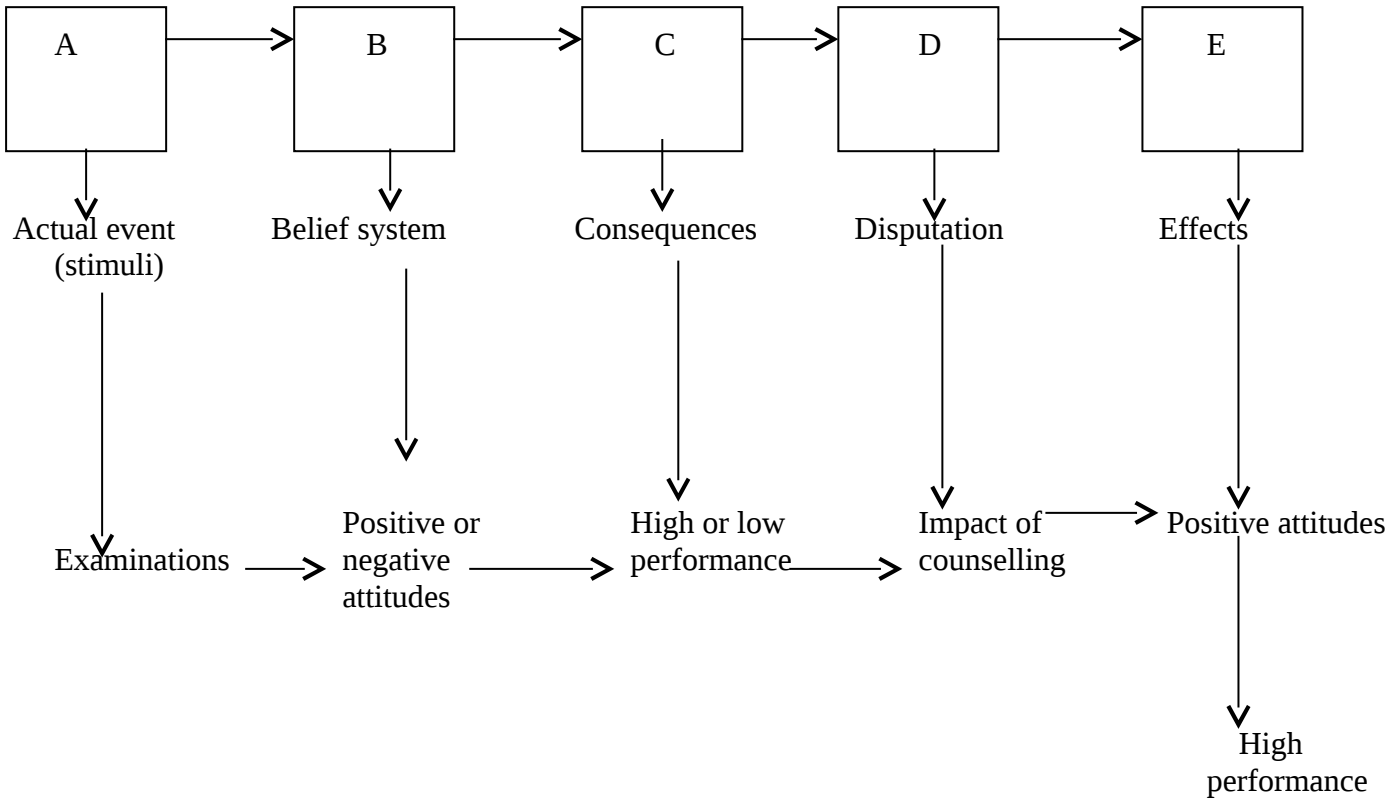


Figure 1.2 Application of Albert Ellis Counselling Model to Attitude towards Experience (Examinations)



As Figure 1.2 shows, an event which acts as a stimuli leads to various belief systems which motivate persons to act in particular ways which affect the results of their actions. These belief systems can be modified through disputation to yield desired behaviour.

In this study, the researcher based the research on the rational-emotive behaviour theory (REBT) to show that girls in secondary schools could be performing poorly in examinations because of negative attitudes that they might be holding towards examinations. They could be performing poorly in subjects like Mathematics and physical science subjects because they irrationally believe that they do not have the ability to perform well in these subjects. These beliefs however can be disputed using Albert Ellis counseling model to change these irrational beliefs, hence boosting positive attitudes towards examinations which may lead to improved academic performance of girls in secondary schools.

1.11 Scope and Limitations of the Study

The study selected 13 schools in Kisii Municipality. This made the research affordable and to be completed within the specified time frame. The research participants were from girls' and co-educational schools. Boys in the co-educational schools did not participate in the study, as the focus of the study was on girls. The study focused only on girls because of the continued poor academic performance among girls in secondary schools.

The study only made use of questionnaires to collect data because the use of observations and interviews, although effective in attitudinal measurement, take a lot of time. The researcher therefore was not able to observe and interview the subjects in each school before and during examinations due to differences in time schedule when the examinations were done and the time of study.

The research population comprised Form 4 girls who were expected to have sat several examinations and were being prepared for various internal examinations, district mock examinations and the KCSE examinations at the end of their secondary school course. The study did not have participants from district and private girls' schools because these types of schools were not represented within the geographical location of the study (Kisii Municipality).

1.12 Operational Definition of Terms

Academic performance. The mean scores that form four students attained in various subjects in their form three end year examinations.

Attitudes towards examinations. The positive or negative views that secondary school girls held towards examinations.

Attitudes. According to Collins English Dictionary and Thesaurus (1995), attitudes are ways persons view something or tend to behave towards it, often in an evaluative way. Attitudes are also habits of thought that involve an association of value with other objective properties of things; that is to say, a recognition of things as more or less good or bad and make or at least predispose one to act the way we do (Eiser, 1994). Eagly and Chaiken (1992), refer to attitudes as associations between acts or objects and evaluations. Attitudes are lasting general evaluation of people, objects or issues (Baron & Byrne, 1987). Therefore attitudes are positive or negative views people place on objects, issues or on other people. In this study, attitudes are the positive or negative views that girls place on examinations.

Co-educational schools. Schools for both girls and boys.

Examinations. According to Oxford Advanced Learners dictionary (1990) examination means the action of examining. It is testing of knowledge or ability by means of questions or practical exercises by an oral or written examination. These are written exercises set to test the students' knowledge and skill on what has been taught in a particular period of time in examinable subjects. In this study the examinations that were referred to were the end year form three examinations, which they did before being promoted to form four.

Humanity subjects. Social science subjects offered in Kenyan secondary school curriculum. They include: History and Government, Geography, Christian Religious Education and Social Education and Ethics.

Physical science subjects. Science subjects offered in Kenya secondary school curriculum. They include: Physics, Chemistry and Biology.

Technical subjects. Applied sciences offered in Kenyan secondary school curriculum. They include: Home science, Commerce, Economics, Accounting and Agriculture.

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

The literature review in this chapter is divided into six sections. The first section examines attitudes in general, the second section discusses attitude formation, the third section discusses counseling, behaviour and attitude change, the fourth section discusses attitudes and academic performance, the fifth section discusses examinations and academic performance while the sixth section discusses culture, gender specific roles and academic performance.

2.1 Attitudes

Eiser and Plight (1989) said that attitudes are both a social product and an intrinsic part of social action in that our attitudes influence how we live. Persons regard their attitudes as the truth at least until someone can introduce new facts or arguments to change the mind. According to Munn, Fernald and Fernald (1972), attitudes are learnt predispositions towards aspects of our environment. They tend to evaluate something either positively or negatively. An attitude is considered as consisting of three components. These include: thinking, feeling and reacting. The thinking component pertains to belief, for example a belief by a student that examinations are difficult. The feeling component involves issues related to value, that is, one may feel attracted, repelled or neutral regarding something for example a student may feel repulsive when told of

the imminence of an examination. Reacting involves a tendency to behave in a certain way for example a student may try to avoid examinations, that is, the attitude becomes manifest in overt behaviour. Petty and Caciopo (1981) as cited in Eiser and Plight (1989), state that attitudes guide behaviour. They are active processes for forming and changing behaviour by selectively activating thoughts of the attitude object. If persons already hold a positive attitude towards an object or concept then this will mean that they are likely to call to mind positive rather than negative thoughts or associations (Fazio, 1986). According to Fazio (1986), attitudes depend on the previous positive or negative experiences rather than the evaluative beliefs a person calls to mind when deciding on a course of action. Baron and Byrne (1987) state that babies do not enter the world with political inferences, racial hatred or religious views already formed. Such attitudes are acquired over a long period of time through learning and socialization. Regis, (2005) point to a broad consensus by researchers who agree that attitude is a learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object.

In Kenya, research has shown that it is girls' attitudes that influence their academic performance due to gender stereotypes (Eshiwani, 1985). Stereotypes of male and female characteristics and abilities have tended to prevail on the academic and economic spheres. For instance Obler (1975) cited in Wanyonyi (2003) observed that men

are believed to be more intelligent than women and that women are thought to be incapable of foresight and lack the ability to make and carry out realistic plans. This is a belief, which over the years has contributed to females considering themselves academically incompetent while viewing males as academically competent. These attitudes have fostered differential performance between males and females (Sommerset, 1973; Makila, 1986; Eshiwani, 1985).

2.2 Attitude Formation

According to Baron and Byrne (1987) attitudes are acquired over a long period of time. Attitude theorists agree that attitudes are learned. Petty and Cacioppo (1981) as cited in Eister and Plight (1989), noted that, as people learn more about a stimulus, their thoughts about it become increasingly more important determinants of their attitude towards it. Thus, beliefs about the relations between an attitude object and its attributes will result in attitude formation, to the extent that the perceive positively or negatively evaluates the attributes.

Baron and Byrne (1987) noted that learning attitudes is a large part of socialization, a process by which the wild helpless creature (a newborn baby) is transformed into a responsible and capable member of human society. Children get their attitudes from everywhere – parents, teachers, media, friends and acquaintances. Attitudes are learnt through classical conditions, modeling and

instructional conditioning. Classical conditioning is learning by association for example watching a mother's emotions (parental attitudes), which shape children's attitudes. In modeling children learn through observation of someone else's behaviour that is through examples set by parents and other people in the society and instrumental conditioning whereby children learn by acquiring and strengthening responses that yield positive outcomes and eliminate those with negative outcomes. Attitudes are also formed through information processing. Petty and Cacioppo (1981) note that although conditioning process may be involved in the formation of attitudes towards novel and neutral stimuli, it is likely that attitude formation is typically mediated by a greater degree of information processing.

Pizzini, Abell and Shepherdosn in McMillan (2000) noted that important attributes of attitude formation for girls, appear to be the perceived usefulness of the science being learned, confidence in learning and doing science, interest in people and a liking of science. Further, the learning situation can affect the attitudes students develop toward science. They conclude that learning situations that are perceived positively by girls contribute to their development of positive attitudes toward science.

Attitudes are also formed through people's own experiences. They actively draw conclusions or make generalizations based on what has happened to them. Attitudes as heuristics, that is, as cognitive

short cuts, help people make decisions by reducing information overload to help simplify human social life, which can be complicated and full of information. Studies carried out by Fazio, Lenn and Effrein (1984) show that people form attitudes when they expect to need them and sometimes escape from them on purpose for their value as heuristics. If people expect to have to make a decision some time in future, they start forming their attitudes now so that they will be in place ready to help when it is time to decide. According to Eiser (1994), people acquire attitudes through learning in their environment and that attitudes are about things that happen in the real world. He noted that attitudes have a great deal to do with how people choose to behave.

Studies on attitudes of teachers by O'Connor (2005) indicated that there is a strong, all-prevailing, traditional, conservative belief among parents, teachers and students that Mathematics and science are a male preserve. The attitude of teachers have by far the greatest impact on female students. Many teachers including female teachers, just do not believe that girls have the ability to study Mathematics and science and that girls are not capable of coping with "difficult" subjects (or these subjects). The result is that teachers generally have low expectations of girls' ability to perform well in SMT. This had to the development of negative attitudes towards these subjects among girls, hence leading to poor performance in the subjects.

2.3 Counselling, Behaviour and Attitude Change

According to Hilgard, Atkinson and Atkinson (1975), people's attitudes may be changed by engaging them in the behaviour that they do not really believe in. Compliance leads to attitude change to the extent that the behaviour can be induced with the minimum amount of inducement. Minimum rewards are more successful in getting individuals to believe in what they are induced to do hence changing their attitude.

Festinger's theory of cognitive dissonance (1957) stated that whenever persons engage in some behaviour that they do not believe in, they will uncomfortable because their behaviour is inconsistent with their beliefs. According to Festinger (1957), this feeling is called cognitive dissonance. He proposed that one way of changing this state is for individuals to persuade themselves that they really believe in the behaviour, that is, to change their behaviour, thus solving the dissonance. The cognitive dissonance theory predicts that the smaller the compensation received, the greater the attitude change observed and the greater or more severe threats of punishment the lesser the attitude change observed.

In a study on attitude change, Hovland and Janis (1959) in the Yale Communication and Attitude Change Programme (1950's) adopted a pragmatic approach that can be categorized as a message-learning

approach (Petty & Cacioppo, 1981). The basic idea is that in order for a persuasive communication in a counseling session to be effective and result in attitude change, the message contained in the communication must be learned such that it is remembered. This retention of the message is thought to depend upon prior mediating process such as comprehension of its content. Holvand and Janis (1959) cited in Eister and Plight (1989) put it that attention and comprehension determine what the recipients will learn concerning the content of the communicator's message, which the individual must accept and therefore change their attitude.

Westen (1996) suggests two ways of attitude change. These include persuasion and attitude change that result from discrepancy between an existing attitude and new information. Hilgard et al. (1975) said that a familiar technique to change attitude is simple persuasion that depends on many variables including the prestige and the credibility of the persuader. Persuasion, which refers to deliberate efforts to induce attitude change, takes two forms. These are: 1) to induce the recipient of a message to think carefully and weight the arguments. This can occur only if the receiver of the information has the motivation and time to think about the issues; and 2) by encouraging emotional and other less carefully considered responses that bypass the believe component of the attitudes (Petty & Cacioppo, 1981; Eagly & Chaiken, 1992).

According to Westen (1996), change of attitude depends on various variables. These include: 1) if the attitude really matters to the person, 2) if the recipient is knowledgeable about the subject and, 3) if the attitude was initially generated rationally by weighing the costs and the benefits. In the latter variable, the persuader should avoid distractions that may impede the conscious, rational processing and annoying receiver.

Long before modern psychology, Aristotle described rhetoric (the art of persuasive speaking) as a combination of ethos (characteristic of the speaker), pathos (the message) and logos (logic of argument). Modern psychologists have expounded this view to distinguish five components of persuasion, which include: the source, the message, the channel (the medium in which the message is delivered), the receiver and the target behaviour at which the persuasion is directed (Westen, 1996).

The *source* and the *message* include the speaker's credibility, attractiveness and power and the type of appeal and the way it is delivered also affect attitude change. When the message is subtle rather than obvious and when the appeal uses a low rather than a high level of fear attitude change is more likely to occur and persist (Westen, 1996).

Too much fear can lead people to stop attending to the message and instead focus on managing their anxiety. Fear may lead to defensive reactions. The *channel*, the means by which the message is sent visually or aurally, verbally or non-verbally, in person or through medial also affect attitude change. The *receiver*, the qualities of the person the communication is trying to persuade also affects the persuasiveness of the communication. People with weaker opinions are obviously easier to persuade. According to Hovland and Janis (1959) some persons are simply more resistant to attitude change in general.

2.4 Attitudes and Academic Performance

In a study on the relationship between attitude and academic achievement, Njuguna (1998) and Rao (2003) noted that learner's achievement may be influenced by various factors, which include patience, health, problems at home and psychological aspects such as self-esteem, attitudes and anxiety. To put emphasis on the effect of attitude, Hilgard et al. (1975) stated that the emotional attitudes can have profound effect on learning efficiency. Pizzini, Abell and Shephardson in McMillan (2000) proposed that the attitude of girls toward science is one factor that influences the decision of girls to participate in science, as well as their achievement in science. They further note that learning situations that are perceived positively by girls contribute to their development of positive attitudes toward science, as well as improving their achievement in the subject. This

implies that the kind of attitude a learner holds on learning is therefore important in determining the academic performance of the learner.

In his study, Njuguna (1998) gave the following recommendations: In the findings of his study there was a positive correlation between attitude toward science subjects and academic achievement in the subjects. He therefore recommended that studies be carried out to find out whether attempts to promote favourable attitudes towards science subjects may influence academic achievement level of students in the subjects. He also recommended that, since his research was limited to the relationship between attitude towards science and academic achievement, efforts should be made to find out the extent to which attitude influence academic achievement in general. He recommended that the implications of the study showed that other factors may influence academic achievement, but the specific contribution of attitude factor should addressed. He noted that the attitudes a learner holds, may have an impact on academic achievement since the predispositions of the learners are likely to have an impact on the learning process. He therefore recommended that there is need to find the prevailing attitudes and how those attitudes are related to the academic achievement.

In a study to find the relationship between achievement and attitudes towards Mathematics in Nairobi primary schools, Ogoma

(1987) found a positive correlation coefficient between attitudes and achievement in Mathematics. Attitudes and achievement for girls was higher than that of boys. He concluded that positive correlation indicates that attitudes have some impact on performance and this impact is higher for girls than it is for boys. In a similar research Kaikai (1992) investigated the relationship that exists between secondary school students' attitudes to school and their academic performance. In his findings, he reported some relationship but noted that more boys than girls had a negative attitude towards school and their performance. He established that this attitude did not have an impact on their performance.

In another study by Wasonga (1997) on the attitude towards science among primary and secondary school students in Kenya, it was noted that differences in schooling between boys and girls still exist in access and achievement, particularly in the areas of science and Mathematics. With this concern, the African Academy of Science (AAS) in collaboration with the Task Force of Donors to African Education (DAE) working group on female participation set up the first wide research grants programme, namely, Research Priorities for the Education of Girls and Women in Africa, to encourage researchers investigate various aspects of female education. In 1995, this programme commissioned research on attitudes of primary and secondary school students towards science and identifying factors leading to the attitudes held by female students.

In the research Wasonga (1997) gave the following recommendations:

1. Counsellors to begin counseling female students about their ability and importance of science as early as Form 1 to prevent further solidification of stereotypical attitudes.
2. To institute remedial classes for female students especially in topics which they find difficult.
3. To encourage single sex schools in secondary schools, and teachers to deliberately plan for involvement of girls and ensure that girls experienced a measure of success.
4. Design intervention programmes to change girls' attitudes by exposing girls, as early as possible to non-traditional careers.
5. Choose and use books that are gender positive, that is, those will illustrations that are not gender biased.

In a study on the factors causing under-achievement in Mathematics among secondary school girls in Zambia, Ndimbirwe (1995) found various reasons for this under-achievement. In the research, pupils indicated negative attitudes towards Mathematics, which interfered with their performance. He noted that negative attitudes did not allow girls to exert themselves. This led to lack of interest and confidence that made them view the subject as hard. He further noted that most girls believed that Mathematics was a subject for males and that teachers did not give adequate career guidance to encourage the girls to work had on the subject. The researcher therefore recommended that there is need for the promotion of

career education in secondary school, extra Mathematics lessons for females and on the job training for Mathematics teachers.

In investigating the influence of self-concept and attitude on academic performance in science among secondary school students in Southern Cross State of Nigeria, Akubuiro and Joshua (2004) found that the students' attitudes towards science subjects was a significant predictor of students' performance in these subjects. This implied that the more positive the attitude towards science subjects the more likely the student is to perform better in these subjects. The researchers also found that self-concept is not a significant predictor of students' achievement in science; its prediction was found to be minimal.

On the basis of the findings of this study, Akubuiro and Joshua (2004) concluded that students' attitude towards science subjects is a very important factor in the achievement in science, and therefore, it is a factor that tends to explain the poor and sometimes embarrassing performance in secondary school graduates in science subjects. The study recommended that students should be exposed continually to challenging life situations about the benefits of science in order to shape their attitude positively towards science subjects.

The findings of the study were in agreement with the findings of Prawatt (1983), Zeidner (1988) and Bassey (2002). These researchers found that students with positive attitudes towards any school subject perform better in such subject than those with negative attitudes to the subject. They therefore concluded that when individuals have interest or positive feelings towards any object they tend to behave favourably towards the object and when they do not have interest or negative feelings towards the object they tend to behave unfavourably towards the object.

2.5 Examinations and Academic Performance

School examinations are used to measuring pupils' progress throughout their school career. They are an essential part of the teaching system, but should not occupy a disproportionate amount of the teaching time (Ministry of Education, Kenya, 1979). Therefore examinations are important in the education process as evidenced by the importance attached to the national examinations. According to Kipruto (1997), when students pass the national examinations in a particular school, the school is seen to have achieved its goal. Eshiwani (1993) noted that one of the roles of examinations in education system is the selection and placement of candidates in various institutions and stations in society. Commenting on the role of examinations, the Gachathi Report (1976), observed that examinations have tended to exercise undue influence on the education system. They have been used to serve the highly

selective objectives, structure and content of the formal education system. This role of examinations has led to unnecessary nervousness and anxiety during examinations, which according to Musira (1993), should be avoided.

According to Bogonko (1992), among the many problems that face education planners, curriculum designers and developers in East Africa is the role of examinations in education. He said that, to examine is to test by questioning carefully so as to find out the level of knowledge, skills or qualifications of a student who has been undergoing a prescribed course of study either privately or in a public institution. They are a means of mobilizing forces in education and a means of testing its results. Therefore the assessment of pupils' attainment in learning is an integral part of any educational process. Examinations not only assess the candidates' performance to ascertain how much they know about certain subjects, but also to test their ability to apply knowledge to some practical task. They assess knowledge and comprehension and demand from candidates' demonstration of what they understand, can do and know about their subjects. They also test recognition, the ability to recall, to synthesize the contents of the subjects studied, organization, analysis and evaluation (Bogonko, 1992).

Bogonko (1992) said that examinations test the effectiveness of the teaching and the preparation of teachers. The examination results are used as an indicator of the teachers' efficiency. They serve as an incentive to students to study. The effort is more easily unleashed when benefits accrue progressively and continuously to the learner. According to Brereton (1944) cited in Bogonko (1992), the more immediately and directly the benefits from increased proficiency in learners' subject of study, the more interest is kept up and the more easily their determination calls for the effort required. Subsequent uses of examinations as incentives, however, depend to a large extent on the motivational effects of the previous examination results. If these re poor, a student might be discouraged and may give up, while if they are good they might be tempted to take it easy afterwards.

Examinations, according to Thyne (1974), cited in Bogonko (1992) are also used as a criterion for selecting students for various purposes; that is, to separate out groups of candidates who have been distinguished by being at or above and below, some specified standard. Candidates are selected for promotion to further education, some particular jobs or even for demotion or extra tuition. They serve as indicators of students' progress.

Academic performance is a key measure of school success because high performance opens doors to post-secondary education and to

well-paying jobs. For females to have opportunities as males in post-secondary education and in the labour market, it is important to be equally well prepared academically. Overall, females have done much better in reading and writing, but have generally, though not always, lagged behind in science and Mathematics.

In a study on the culture of a high performing school, Ndege (1997) observed that continuous assessment tests of students was done regularly in Ribo Secondary School. Teachers regularly checked, marked and commended on students' work. Marks for each assessment were recorded in the teachers' mark books, which enabled teachers to arrive at a term mark for each student. This enabled them to identify weak students for remedial teaching and counselling for improvement. According to the schools' examination master, assessment enabled teachers to judge the students' strengths and weaknesses, students to measure their own progress, established the relative abilities of students to perform at (KCSE) examinations and also encouraged consistent effort from students throughout the school years.

The researcher also observed that examinations in Ribo High School were used for measuring students' progress throughout their school career. They were an essential part of the teaching system in the school. Among other academic programmes, testing was done every end of the week; there were pre-mock examinations and then

marking and grading the students. The syllabus was covered at the end of second term to allow for ample time for students to revise for national examinations.

In his study on Kenyan exemplary schools, Wekesa (1993) found that Precious Blood High School – Riruta, has created a learning atmosphere that motivates students and teachers towards hard work. The school has a stable staff. Some teachers have been in the same school for over 14 years. There is teamwork and teachers collectively discuss how to improve academic performance after receiving feedback from continuous assessment tests taken after two to three weeks hence provide remedial teaching voluntarily.

In a study on the education of women in Kenya, 1975 to 1984 Eshiwani (1985) noted that KCSE is an important examination. It determines the number of girls (and boys) who can go on higher education and those who can take advantage of various training and employment opportunities. Eshiwani further notes that some of the reasons given for girls' poor performance was lack of good teachers and facilitates in the sciences in girls' schools, negative attitudes towards girls ability in Mathematics and sciences by teachers and the society in general and biases against in the examination question.

2.6 Culture, Gender Specific Roles and Academic Performance

A historical study of the historical development of education revealed that girls were encouraged to study humanities and subjects that would prepare them for their core roles in the family. Consequently little was done to provide girls' schools with SMT – related infrastructure such as laboratories and other equipments or facilities for learning science and technology subjects (Gender Policy in Education, 2007). This study indicated that this has led to the poor participation and performance of girls in SMT subjects and courses in all educational levels in Kenya.

In Uganda, women have lagged behind men in the area of formal education. This is due to the fact that the roles ascribed to women are met at home and therefore obviating formal education (Ministry of Education, 1986).

In a school census carried out in Entebbe Uganda on 'O' level results, the government noted gender disparities in academic performance (Republic of Uganda, 1995). It was established that at the national level boys perform better than girls in Ugandan secondary schools even after controlling the unequal sex ratios in enrolment and attendance. However, amongst schools that have established a tradition of academic excellence, girls' schools feature prominently. Also in some co-educational schools, girls' academic

performance does not significantly differ from that of boys. Contrary to this trend it noted that there are several girls and co-educational schools where girls' performance has repeatedly been dismal.

In a research carried out by Muranga (1997) on culture and its impact on girls' academic aspiration in Uganda, it was revealed that girls are disadvantaged in their education not only in terms of enrolment, but also in punctuality, perseverance and ultimate achievement. In the research it was found that the underlying cause of low academic achievement of girls were the restrictions imposed on females by societal structures that render them less keen to improve and determine their future. It was also found that cultural requirements and restrictions are found in every area of life ranging from greeting, working, feeding, self-expression and traveling to marriage, birth, kinship and succession. The research further revealed that there was undue emphasis on the need for conformity to a certain accepted code of practice that resulted in regimentation and suppression hence sap initiative and cause indifference. This conformity teaches girls that they have no control over events of their lives and that important aspects of their lives are controlled externally. Such persons, Muranga (1997) noted, do not stay in school and when in school do not make better use of the school experience, hence affecting their academic achievement.

In another investigation on the relationship between career aspirations, attitudes towards gender specific roles and academic performance Wanyonyi (2003) concluded that career aspirations had very limited relationships with attitudes to gender roles and academic performance. The researcher found that attitudes to gender roles had very little relationship with academic performance. From these findings, Wanyonyi (2003) recommended that although a lot had been done in relation to equality in education as evidenced by the increased number of girls' schools and female students in public and private universities, their attitudes still needed to be shaped. It was also recommended that there is need to expose more role models who have successfully and comfortably performed those roles thought to be of the opposite sex. This may discourage bias choice of careers and attitudes to roles and even improve the general performance of all students regardless of gender.

2.7 Conclusion

The preceding literature has indicated that attitudes are both social and intrinsic part of social actions that determine people's behaviour. They therefore tend to evaluate something either positively or negatively. The literature has also observed that these attitudes are acquired or learnt over a long period of time through the process of socialization. These attitudes can be changed through inducement, persuasion and learning. The literature has shown that there exists a relationship between attitudes and

academic performance. In the review, the studies carried out by various researchers address students' attitudes in relation to specific subjects, culture, gender specific roles and academic performance. These studies indicate that attitudes towards specific subjects and gender roles and culture have adverse effects on students' academic performance irrespective of their gender. These studies have not focused particularly on girls, as a homogeneous group, whose performance has been poor over the years in almost all subjects as compared to that of boys. The studies also did not investigate attitudes that girls have towards examinations that students have to do after a school cycle to test their overall academic performance in various examinable subjects. In the current study, the research was designed to focus on these crucial areas by investigating attitudes that girls hold towards examinations and the effects of these attitudes may have on their academic performance using the reviewed literature as the base of the study.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Overview

This chapter was mainly concerned with how the researcher obtained the data that was utilized in the research. It discusses the geographical location of the study, the research population, the sampling procedure and the sample, description of the research instruments, piloting, the validity and reliability of the research instruments, the administration of the research instruments, scoring of the items and the analytical techniques that were used in the analysis of the data that was obtained.

3.1 Geographical Location of the Study

The research was conducted in Kisii Municipaity in Kisii District, Nyanza Province. The district borders Nyamira District to the eastern side, Trans-Mara District to the south, Migori District to the southwest, Homa-Bay District to the west and Rachuonyo District to the north.

The district occupies an area of 1,302 square kilometers. It has 11 divisions. The high altitude of the district enables the inhabitants to grow several cash and food crops which include: tea, pyrethrum, coffee, sugar cane, bananas, maize, potatoes, groundnuts and beans. Animals like cattle, goats and sheep are reared.

The district has a high population. According to the 1989 population census it has a population of 747,042 people, which was projected to be 1,030,873 by the end of 2001. By the year 2001, there were 534,794 females and 496,079 males, a ratio of 108:100. In general females outnumber males from the age of 15 years to 74 years. By the year 2001, there were 95,117 boys and 106,786 girls eligible to join secondary schools. The high population is attributed to the high agricultural potential. The district has five local authorities that include: Kisii municipal council, Ogembo urban council, Nyamarambe urban council and Keroka town council. Tarmac and murram roads connect all these councils.

Kisii District has 655 pre-primary schools, 646 primary schools, 169 district secondary schools and 17 provincial secondary schools. Despite the high enrolment rate in schools, the academic performance in national examinations has persistently been very low especially for girls. Kisii Municipality has 14 schools, two girls' schools, one boys' school and 11 co-educational schools. This research that was carried out on the influence of attitudes towards examinations on academic performance among girls was aimed at assisting in the improvement of girls' academic performance in examinations because such research has not bee conducted in Kisii Municipality.

3.2 Research Design

The study was correlational. The researcher chose a correlational design because the study was designed to determine the relationship between two variables. This was necessary because in correlational design two or more variables are related with the use of one or more correlation coefficients. These relationships are indicated by obtained at least two scores from the variables (McMillan, 2000). The pairs of scores are used to calculate a correlation coefficient. In this research the research was meant to determine the relationship between attitudes towards examinations, which was an independent variable, and academic performance, which was a dependent variable. This design therefore made it possible for the researcher to make comparison between the means of two variables and to ascertain whether there was a significant correlation coefficient between them using inferential statistics.

3.3 The Population

The research population for the study was drawn from 13 schools in Kisii Municipality. These schools included two girls' schools and 11 co-educational schools, which were further categorized into two provincial girls' schools, two provincial co-educational schools, three district co-educational schools and six private co-educational schools as presented in Table 3.0. The research population was 803 Form 4 girls drawn from the two girls' schools and 11 co-educational schools (See Table 3.0).

Table 3.0 Distribution of Population and Sample by type of School

Type of School	No. of schools	Sampled Schools	Population	Sampled Subjects
Provincial Girls Schools	2	2	377	113
Provincial Co-educational Schools	2	2	78	24
District Co-educational Schools	3	3	102	30
Private Co-educational schools	6	6	246	73
Total	**13**	**13**	**803**	**240**

The Form 4 girls were involved in the research because at that level they were expected to have done several examinations and therefore experienced various examination situations. These students were also selected for the study because they were expected to be in a better position to understand and interpret questionnaires that were used to collect data. The researcher also expected to get their Form 3 end year examinations performance records. These records were expected to be comprehensive because they are usually used to assess the students' level of knowledge and achievement as they are prepared to join Form 4, the last year in the secondary school curriculum.

The study involved only girls as the participants of the study. This was purposely done because the objective of this research was to investigate the attitudes that girls, as a homogeneous group, held

towards examinations and how these attitudes affected their academic performance. This was because it is girls who have been academically performing poorly over the years as compared to the performance of boys as indicated in Section 1.1 in this thesis.

3.3.1 Sampling Procedure and the Sample

The main sampling technique that was employed in this study was stratified random sampling whereby the types of schools was the basis of stratification. This technique was used to ensure that the sample was representative of the research population, that it exhibited characteristics as those of the research population (Shaughnessy, Zechmeister & Zeichenester 2000; Mugenda & Mugenda, 1999) and to ensure that each subject in the population had an equal and independent chance of being selected into the sample. Stratified random sampling technique was used to select 240 participants from the 13 girls' and co-educational schools in Kisii Municipality. The population was stratified into six using the type of school as the basis of stratification. This stratification yielded two provincial girls schools, two provincial co-educational schools, three district co-educational schools and six private co-educational schools hence a total of 13 secondary schools. District and private girls' schools were not involved in this study because such schools were not found within Kisii Municipality. The sample was therefore drawn from the six types of schools that are shown in Table 3.0.

As mentioned earlier, the research population was 803 Form 4 girls from which the sample was drawn. To select the sample, the researcher sampled 30% of the research population to obtain 240 participants, which according to Kothari (1990) was representative enough of the research population. In order to obtain a representative sample from each stratum the researcher calculated the appropriate sample size in each stratum.

The participants in each of the six strata were randomly selected using simple random sampling by numbering the possible participants for each strata on slips of paper, which were then put into a box, mixed thoroughly and then the required number of paper slips that is, 113 from the provincial girls' secondary schools, 24 from provincial co-educational schools, 30 from the district co-educational secondary schools and 73 from private co-educational secondary schools were drawn. A total of 240 participants were selected to take part in this study and they formed the sample of this study (See Table 3.0).

The following restrictions were imposed on the research population from which the sample was selected: students in the Form 4 classes must have been in the school during the end year Form 3 examinations which enable the researcher to obtain their Form 3 grades from which an index of academic performance was

calculated. Students who were absent at the time of sampling and when the questionnaires were administered were also excluded from this study.

3.4 Research Instruments

The research instruments that were used for data collection consisted of a questionnaire that was developed by the researcher with the assistance of supervisors (Appendix A) and document analysis obtained from the participants' academic performance records (Appendix H). The questionnaire consisted of 51 statements scored on a five-point Likert Scale ranging from strongly agree to strongly disagree, and completely true to completely false. The five-point format included positively worded and negatively worded statements. It also included statements that needed the respondents to indicate the number of times they preferred to do various subjects examinations. The questionnaire was divided into seven areas of particular interest in attitudes towards various subject examinations. These were attitudes towards:

1. Examinations in general (statements 1 to 20 and 45)
2. Mathematics examinations (statements 21 to 24 and 46)
3. English examinations (statements 25 to 28 and 47)
4. Kiswahili examinations (statements 29 to 32 and 51)
5. Physical science examinations (statements 33 to 36 and 48)

6. Humanity subjects examinations (Statements 37 to 40 and 49) and
7. Technical subjects examinations (Statements 41 to 44 and 50)

The researcher used questionnaires for data collection because the respondents were assumed to be able to read and understand the statements and were therefore expected to give appropriate responses. The questionnaires are also recommended for attitude measurement as Baker (1992) stated that the most popular method of attitude measurement is to produce an attitude scale composed of statements for instance the Likert Scale. In agreement with Baker (1992), Eiser and Plight (1989) also argued that language is important in measuring attitudinal experience and expression. Therefore most techniques for measuring attitudes rely heavily on verbal material in the form of interviews or questionnaires. Shaughnessy et al. (2000) also support this position that questionnaires especially the Likert Scale and factor analysis types are powerful instruments for measuring variables.

The document analysis involved the analysis of the students' examinations performance records. The scores of each Form 3 student in each subject examination done at the end of their third year were recorded. These scores were converted to numerical codes to represent the measurements of their academic

performance in each subject and the overall examination for each student. The numerical codes ranged from (1) which was the lowest score to twelve (12), the highest score. The mean scores of all the subjects were computed from the total scores to arrive at the mean scores, which utilized in this study (see Appendix H).

3.5 Piloting

The researcher carried out a pilot study on the questionnaire in order to test its validity and reliability before it was used for the actual data collection. The pilot study was conducted in one girls' school and a co-educational school from Nyakoe location in Bosongo Division (Appendix I), a neighbouring division which was assumed to have had characteristics similar to those of Kisii Municipality. A total of 40 students were involved in the pilot study. Before the pilot study the instrument consisted of 80 Likert Scale attitude statements, which were reduced down to 51 after the pilot study. The reduction of items was as a result of omitting those that did not elicit the expected responses because they were either unclear or had errors.

The instrument was administered to students from two schools different from those that were used in the actual study, but had similar characteristics to those in the research population. This assisted the researcher in assessing the extent to which the instrument was to elicit the expected responses. This enabled the

researcher to make appropriate modifications and omissions of the items that did not elicit the expected responses. The participants for the pilot study were not involved in the actual study to avoid prior knowledge before the study, since such knowledge would have affected or influenced their responses in the actual study.

3.6 Validity of the Research Instrument

Validity is the extent to which a test measures the variables it is supposed to measure. Anastasi (1982) stated that the validity of an instrument enables examiners to ascertain whether the test instrument really measures what it purports to measure and how well it does so. According to Kothari (1990) before administering research instruments to participants, the items have to be evaluated to demonstrate their validity. Kothari argues that any sound measurement must meet the test of validity, which he defines as the degree to which an instrument that was used to collect data in this study was tested using four categories. These included: face validity, content validity and construct validity.

3.6.1 Face Validity

According to Ingule, Rono and Ndambuki (1996), face validity means that a test appears valid on the fact of it. It is established when, on the examination of a test, a person may conclude that it measures a relevant trait. The researcher evaluated the instruments' face validity using expert judgement. The instrument that was

developed by the researcher was presented to the supervisors and other experienced researchers who made judgement on its validity. They assisted to improve its visual clarity and made it easy for the respondents to indicate their responses to the attitude statements.

3.6.2 Content Validity

It refers to the extent to which a measuring instrument provides adequate coverage of the topic under study (Kothari, 1990). If the instrument contains a representative sample of the content, then the content validity is high. According to Ingule, Rono and Ndambuki (1996), content validity refers to the degree to which a test measures the characteristics it is supposed to measure as judged by the appropriateness of the content of the test. The test measures are considered valid when the behaviour they elicit reflects relevant traits that they are supposed to measure for example attitudes, intelligence and knowledge.

Content validity can be measured using two ways, namely: expert evaluation and representativeness of the statements. In expert evaluation, a panel of experts (or an expert) may examine a test and by virtue of their experience and expertise judge its content validity. The representativeness of the items that make an instrument covers all the aspects and the factors that are being measured. It also considers the extent to which each item of the measure is relevant to the trait of interest and the extent to which

the total set of items adequately represent all the aspects of the designated domain. To evaluate content validity, the relevance of the instrument items to the trait or traits being measured and coverage of the content are taken into consideration.

The content validity of the research instrument in this study was established through expert evaluation and representativeness of the statements. The instrument was evaluated by the supervisors and other research experts who ensured that it covered all the aspects and factors that were being measured in the study. The researcher also carried out an extensive literature review that assisted to ascertain the adequacy of coverage of all the aspects and factors that the research instrument was meant to measure.

3.6.3 Construct Validity

According to Ndurumo (1993) construct validity of an instrument deals with the extent to which the instrument measures given hypothetical constructs such as attitudes, intelligence, verbal fluency and anxiety. It is the degree to which an instrument measures the theoretical constructs or traits that it is designed to measure (Ingule, Rono & Ndambuki, 1996). It is based on a theory regarding the trait being measured.

Agreement on the meaning of the construct requires a review of literature and consultation with specific area experts in disciplines

such as psychology and psychometric testing (Ndurumo, 1993). This is to assist the constructor of the instrument to come up with a clear picture of the construct, the area it encompasses and the items to be included in the test. Construct validity can also be evaluated using statistical relationship approach. In this approach the statistical approach between an instrument and a number of other factors rationally expected to be related to the construct is determined. If the correlation is high then the instrument will be able to measure what it ought to measure, and if not, then it will not measure what it is expected to measure.

The researcher of this study carried out a extensive literature review and made consultations with his supervisors who came up with a clear picture of the construct of the research instrument, the area it encompassed and the items that were included in the instrument. These ensured that it measured all the aspects that were expected to be measured in the study. This ensured that the objectives of the study were represented and emphasized in the statements of the instrument that was used to collect data.

3.7 Reliability of the Research Instrument

Reliability refers to the extent a test provides consistently accurate and reliable information on the subjects examined. According to Kothari (1990), reliability is the accuracy and precision of a measurement procedure. Shaughnessy et al. (2000) defined

reliability as the consistency of a measurement that is frequently assessed using the test – retest reliability method. He notes that by including many similar items on a measure, testing a diverse sample of individuals and by using uniform testing procedures increases reliability.

Anastasi (1982) stated that reliability is the consistency of scores obtained by the same persons when re-examined by the same test on different occasions, or under other variable examining conditions. According to (Ndurumo, 1993) reliability is the degree of agreement between two independently obtained test scores, expressed in the form of correlation coefficients. According to McMillan (2000) reliability is the extent to which scores are free from error that is measured by how consistent a person's score will be from one occasion to the next. There are various types of reliability. These are: test-retest reliability. This study used test-retest method to test the reliability of the instrument that was used to collect data.

3.7.1 Test – Retest Reliability

This type of reliability is obtained by administering an instrument to one group of individuals, waiting a specified period of time, and then re-administering the same instrument to the same group (McMillian, 2000). The correlation of the two sets of scores is then calculated. When the results of the first and the second administration are correlated and the relationship is found to be high, the scale is said to be highly reliable (Ndurumo, 1993). However, it should be noted

that this type of reliability might be affected by various factors that may include: the length of time between administrations of the instruments, moods of respondents, hunger, fear, noise and over supervision.

The reliability of an instrument is important in research. Therefore it should be established before it can be used to collect data. Reliability is also a necessary condition for validity. This implies that an instrument cannot be valid unless it is reliable, however, a reliable instrument is not necessarily valid.

The reliability of the instrument used in this study was determined using test – retest method. A pilot sample of 40 students randomly selected from two schools – a girls' secondary school and a co-educational secondary school (Section 3.5) were involved. The researcher selected 20 students from each school for the purpose of equal representation of the two categories of schools.

The instrument was administered to the pilot sample and after an intervening period of two weeks, an interval, which according to Ndurumo (1993) is recommended by authorities for a test – retest reliability test, was again administered to the same subjects. The correlation coefficient of the two sets of scores that were obtained were computed using Pearson Product Correlation. This correlation yielded a positive correlation coefficient of .74 which according to

Gordon and Gordon (1994) is considered to be a strong positive correlation hence the instrument was considered to be reliable for data collection.

3.8 Administration of the Research Instruments

Prior to visiting the research schools for data collection, the researcher, formally through writing applied for a licence from the Ministry of Education, Science and Technology (Appendix E) and sought permission from the District Education Office (Appendix E) to be allowed to conduct research in the district and from the head teachers of the respective schools selected for the study (Appendix F). On the material days(s) the researcher with the assistance of class teachers, assembled the participants, re-stated the purpose of the research and then personally administered the instruments giving them equal opportunity and time to respond in writing. The questionnaires were then collected for analysis.

3.9 Scoring of Items

The participants' responses on the attitude scale were measured using a five-point Likert Scale. The participants were asked to indicate their agreement or disagreement and completely true or completely false to the attitude statements in the questionnaire as follows:

Responses	Strongly	Agree/	Undecided/	Disagree/	Strongly

	Agree/completely true	mostly true	partly false and partly true	mostly false	Disagree/ completely false
Scores	5	4	3	2	1

The participants were also required to indicate how often they liked to do examinations in general in specific subject examinations. Their responses ranged from everyday to once a month. Their responses were also scored using the five score Likert Scale.

In this scale the responses were assigned numerical scores that had scores of 1 to 5 as indicated in the Likert Scale responses and scores. Agreement with favourable statements and disagreement with unfavourable statements and the highest frequency of how often the respondents liked to do examinations represented the highest score (5) while disagreement with favourable statements and agreement with unfavourable statements and the lowest frequency of how often the respondents liked to do examinations resulted in the lowest score (1). An index of each subject's attitude was then derived by summing up the scores across all the statements, which measured the respondents' attitudes depending on the total score attained by each subject. The attitude mean scores (see Table 4.1) were computed from the total attitude scores (Appendix G) for the whole population in each subject examination for the purpose of analysis. The range of scores were as follows:

	No. of Items	**Range of scores**
1. Examinations in general (items 1 to 20 + 45)	= 21	21 - 105

2. Mathematics examinations (items 21 to 24+ 46) = 5 5 - 25
3. English examinations (items 25 to 28 + 47) = 5 5 - 25
4. Kiswahili examinations (items 29 to 32 + 51) = 5 5 - 25
5. Physical science examinations (items 33 to 36 + 48) = 5 5 - 25
6. humanity subjects examinations (items 37 to 40 + 49) = 5 5 - 25
7. technical subjects examinations (items 41 to 44 + 50) = 5 5 - 25

3.10 Data Analysis

The researcher employed various statistical techniques to interpret the data that was obtained in the study. These were: descriptive statistics which included means, percentages and standard deviation and inferential statistics which included Pearson product correlation test and t-test.

3.11 Conclusion

This research was conducted in Kisii Municipality, Kisii District. The researcher used strategic random sampling to select the participants of the study. This ensured that the sample was representative of the research population. A survey research was conducted to ensure adequate collection of data from a large population. This ensured that the data collected was representative of the research population. The research instrument was piloted to determine its validity and reliability. The researcher used descriptive and inferential techniques in analyzing and interpreting the data that was collected.

CHAPTER FOUR

DATA PRESENTATION, ANALYSES AND INTERPRETATION

4.0 Overview

This chapter presents the results of data analyses pertaining to the seven null hypotheses stated in Chapter One. The reporting of the results follows a fairly consistent pattern; a restatement of the null hypotheses after which particular descriptive statistics, inferential statistics, appropriate interpretations and conclusions are presented. The chapter opens with a description of the demographics of the participants in the study.

4.1 Demographics of the Participants

A total of 240 students' questionnaires were completed by the participants of the research. These questionnaires were used to collect the data from the 240 participants who were sampled from 13 secondary schools in Kisii Municipality. As discussed in the research design and methodology, these schools included two provincial girls secondary schools, two provincial co-educational secondary schools and six private co-educational secondary schools as presented in Table 4.0.

Table 4.0 Demographic Description of Participants by Type of School

	No. of schools	Participants
Provincial Girls Schools	2	113
Provincial co-educational schools	2	24
District co-educational schools	3	30
Private co-educational schools	6	73
Total	**13**	**240**

4.2 Data Analysis and Results

The researcher used seven null hypotheses, as reported in Chapter One, to test the data that was collected in reporting of the results.

4.2.1 Test of Null Hypotheses

Null hypotheses one

The first null hypothesis was derived from the first research question. It stated that there is no relationship between girls' attitudes towards examinations and their academic performance. To test this hypothesis the participants were asked to respond to 21 statements in the questionnaire that measure their attitudes towards examinations.

The researcher also obtained the participants' academic performance of their Form 3 end year examination results. The academic performance mean scores and the attitude scores were reported in Table 4.1.

Table 4.1 Academic Performance and Attitude Scores

Subject Examinations	Academic performance			Attitude Scores	
	n	Mean	SD	Mean	SD
Mathematics	240	3.49	3.12	9.77	2.75
English	240	6.37	2.34	14.59	1.08
Kiswahili	240	7.49	2.67	16.48	1.97
Physical Science	240	4.45	2.80	12.03	2.48
Humanities	240	7.85	2.63	18.40	1.89
Technical Subjects	240	6.45	2.54	15.83	1.32
Overall academic performance	240	5.92	2.73	62.94	1.74

The relationship between the attitude variable (independent variable) and the academic performance variable (dependent variable) was computed using the Pearson Product Moment correlation coefficient (r) test and the t-test to test the level of significance at 0.05 significance. The correlation test indicated that there was a correlation coefficient of 0.64 and a t-test value of 6.13 (see Table 4.2).

Table 4.2 Relationship between Attitudes Towards Examinations and Academic Performance

Variables	r-Coefficient	t-Value	Comment on Significance
ATEE & AP	0.65	5.98	Significant
ATKE & AP	0.79	5.54	Significant
ATME & AP	0.68	6.81	Significant
ATPSE & AP	0.66	5.50	Significant
ATHSE & AP	0.63	6.29	Significant
ATTSE & AP	0.72	5.06	Significant
ATE & AP	0.64	6.13	Significant

AP - Academic performance

ATEE - Attitudes Towards English Examinations

ATKE - Attitudes Towards Kiswahili Examinations

ATME - Attitudes Towards Mathematics Examinations

ATPSE - Attitudes Towards Physical Science Examinations

ATHSE - Attitudes Towards Humanity Subjects Examinations

ATTSE - Attitudes Towards Technical Subjects Examinations

ATE - Attitudes Towards Examinations in General

It was concluded that girls who had positive attitudes towards examinations performed better in examinations than those who had

negative attitudes. These results therefore resulted in the rejection of the null hypothesis.

Null hypotheses two

The second null hypotheses which was derived from the second research question stated that there is no relationship between girls' attitudes towards Mathematics examinations and their academic performance in Mathematics. To test this hypothesis the participants were asked to respond to five attitude statements measuring their attitude towards Mathematics examinations. The researcher also obtained their academic performance in Mathematics from their form 3 end year examination results. Their academic performance mean scores and the attitude scores were recorded (see Table 4.1). The descriptive statistics revealed that 60% of the secondary school girls preferred to do Mathematics examinations once every month while 6.7% preferred to do the same examinations every day. The attitude scale mean scores yielded a relatively low attitude mean score of 9.77 in the participants' attitude towards Mathematics examinations and Mathematics mean score of 3.49 (see Table 4.1). These scores were an indication that attitudes towards Mathematics examinations significantly affected girls' academic performance in the subject. The inferential statistics results recorded a correlation coefficient of 0.68 and a t-test value of 6.81 (see Table 4.2). These results therefore led the researcher to conclude that attitudes towards

Mathematics examinations had a significant influence on girls' academic performance in Mathematics. The results also showed that the independent variable, attitudes towards Mathematics examinations had a significant relationship with the dependent variable, academic performance in Mathematics examinations. The results led to the rejection of the null hypotheses.

Null hypotheses three

The third null hypothesis was derived from the third research question. It stated that there is no relationship between girls' attitudes towards English examinations and their academic performance in English. To test this hypothesis the participants were asked to respond to five attitude statements indicating their attitude towards English examinations. The researcher also obtained their academic performance of their Form 3 end year examination results. Their academic performance mean scores were obtained (see Table 4.1). Descriptive statistics revealed that 44.2% of the research participants preferred to do English examinations once a week. This was a fairly high percentage which was reflected in an attitude mean score of 14.59 and academic performance mean score of 6.37. The inferential statistics also revealed that attitudes towards English examinations had a correlation of 0.65 correlation coefficient with their academic performance in English. The t-test also confirmed this correlation

with a significant level of 5.98, which is a weak but a positive t-value. The null hypothesis was therefore rejected.

This was a positive attitude that the research participants had towards Kiswahili examinations. This was reflected in a high attitude mean score of 16.48 which was the second highest score after humanities mean score. This score was further reflected in the high academic performance mean score of 7.49 in Kiswahili. Inferential statistics indicated a 0.79 correlation coefficient between attitudes towards Kiswahili examinations and their academic performance. A t-test further indicated a significant relationship with a significant t-value of 5.54. This was a strong correlation between the two variables that led to the rejection of the null hypothesis.

Null hypothesis four

The null hypothesis which was derived from the fourth research question stated that there is no relationship between girls' attitudes towards Kiswahili examinations and their academic performance in Kiswahili. To test this null hypothesis the researcher asked the participants to respond to five attitude statements indicating their attitude towards Kiswahili examinations. The researcher obtained their academic performance of their Form 3 end year examination results. Their academic performance mean scores and attitude scores were recorded (see Table 4.1). Descriptive statistics revealed

that a relatively high percentage of 56.3% of the research participants preferred to do Kiswahili examinations twice a week and 43% once a week.

This was a positive attitude that the research participants had towards Kiswahili examinations. This was reflected in a high attitude mean score of 16.48 which was the second highest score after humanities mean score. This score was further reflected in the high academic performance mean score of 7.49 in Kiswahili. Inferential statistics indicated a 0.79 correlation coefficient between attitudes towards Kiswahili examinations and their academic performance. A t-test further indicated a significant relationship with a significant t-value of 5.54. This was a strong correlation between the two variables that led to the rejection of the null hypothesis.

Null hypothesis five

The fifth null hypothesis derived from the fifth research question stated that there is no relationship between girls' attitudes towards physical science subjects examinations and their performance in the subjects. To test this hypothesis the researcher asked the participants to respond to five attitude statements indicating their attitude towards physical science subjects examinations and their performance in the subjects. The researcher obtained their academic performance of their Form 3 end year examination results.

Their academic performance mean scores and attitude scores were recorded (see Table 4.1). Descriptive statistics revealed that 52.90% of the research participants preferred to do physical science examinations once a week.

The participants scored an attitude scale mean score of 12.03 and a 4.45 mean score in academic performance in physical science. Inferential statistics results indicated that girls' attitudes towards physical science examinations and their academic performance had a correlation coefficient of 0.66 and a t-value of 5.5 level of significance. This indicated a significant relationship between the two variables. These results confirmed that girls who had negative attitudes towards physical science subjects examinations scored lower grades as compared to those who had positive attitudes towards the subjects. These results led to the rejection of the null hypotheses.

Null hypothesis six

This sixth null hypothesis derived from the sixth research question stated there is no relationship between girls' attitudes towards technical subjects examinations and their academic performance in the subjects. The descriptive statistics indicated that 62.1% of the research participants preferred to do technical subjects examinations once every week. The attitude scale indicated a score of 15.83 and a mean score of 6.45 in academic performance in the subjects. Inferential statistics further indicated a positive correlation coefficient of 0.72 and a significance level of 5.06. This was an indication that girls' attitudes towards technical subjects examinations influenced their academic performance in the subjects as indicated in Table 4.2. This led to the rejection of the null hypothesis.

Null hypothesis seven

The seventh null hypothesis derived from the seventh research question stated that there is no relationship between girls' attitudes towards humanity subjects examinations and their academic performance in the subjects. The research results indicated that most girls preferred doing humanity subjects examinations. Forty percent preferred doing these examinations twice a week and 54% once every week. Attitude mean scores revealed a high attitude score of 18.40. This positive attitude was reflected in a high academic performance mean score of 7.85 in the subjects, which

was the highest score as compared to the attitude mean scores towards other subject examinations (see Table 4.1). Inferential statistics indicated a correlation coefficient of 0.63 between girls' attitudes towards humanity subjects examinations and their academic performance in the subjects and a 6.29 level of significance as indicated in the Table 4.2. This indicated that there was a significant relationship between their attitude towards the subjects examinations and their academic performance in the subjects. These results led to the rejection of the null hypothesis.

In conclusion, the preceding data analysis and results of the study, is evident that the independent variable, attitudes towards examinations had a significant relationship with all the other variables, that is secondary school girls' attitudes towards various subject examinations as follows:

1. English examinations at 0.65 correlation coefficient,
2. Kiswahili examinations at 0.79 correlation coefficient,
3. Mathematics examinations at 0.68 correlation coefficient,
4. Physical science examinations at 0.66 correlation coefficient,
5. Humanity subject examinations at 0.63 correlation coefficient,
6. Technical subject examinations at 0.72 correlation coefficient; and

7. Examinations in general at 0.64 correlation coefficient.

These positive correlation coefficients yielded using the Pearson Product Moment correlation coefficient (r) led this researcher to reject the hypotheses that there is no significant relationship between secondary school girls' attitudes towards examinable subjects examinations and their academic performance in the subjects. The significant relationship between attitudes and examinations also meant that the null hypothesis that there is no relationship between secondary school girls' attitudes towards examinations and their overall academic performance was rejected.

4.3 Interpretation of the Results

The results of this study demonstrated that students' attitudes towards examinations in general and specific examinations was significantly related to their academic performance in the specific subjects and to their overall academic performance.

These findings meant that students' attitudes towards specific subject examinations is a significant predictor of their performance in those subjects. The results further implied that the more positive a student's attitudes towards specific subject examinations, the more likely the student was to perform better in the subjects.

The findings of this study were consistent with the findings of Ndimbirwe (1995), Ogoma (1987), Eshiwani (1985) and Wasonga (1977). These researchers found that students' attitudes towards Mathematics was a significant predictor of their performance in Mathematics. Akubuiro & Joshua (2004), Bassey (2002), Zeidner (1998) and Prawatt (1983) also found in their different studies that students' attitudes towards science subjects influenced their performance in the subjects. These researchers concluded that students with positive attitudes towards any school subject perform better in this subject than students with negative attitudes towards the subject.

Njuguna (1998) and Rao (1990) noted that learners' achievement may be influenced by various factors which include attitudes. Hilgard, Atkinson and Atkinson (1975) state that emotional attitudes can have a profound effect on learning. This implies that learners' attitudes determine their academic performance.

Inspite of the fact that the findings of these researchers that students with positive attitudes towards any school subject perform better in such subjects than those with negative attitudes to the subjects, the current study had similar results but in relation to students' attitudes towards examinations in general and examinations offered in specific subjects because learning various subjects is completed with evaluation to determine the level of achievement in the subjects by means of examinations.

On the other hand, other researchers, for instance, Muranga (1997), Eshiwani (1985), Njuguna (1998), Rao (1990) O'Connor (2005) and Gutbezahl (2005) point out that there are other factors that contribute to the academic performance of girls other than attitudes. These include societal structures, lack of good teachers and facilities, patience, health, problems at home, psychological aspects such as self-esteem and anxiety and teachers' and parents' negative expectations for girls. While this researcher concurs with these views, it should be noted that these are some of the factors that contribute to the formation of attitudes (Baron and Byrne, 1987) that girls have towards various objects (examinations). These studies therefore justify the findings of this study.

Conclusion

This chapter presents the demographics of the research participants, an important part of the research which assisted the researcher to know and understand the background of the research participants of this study. The analysis and reporting of the study results followed the sequence of the research questions and hypotheses of the study. The answering of the research questions and the rejection of the null hypotheses that were advanced in this study were all achieved. The findings of this study were consistent with the findings of other researchers on similar studies which led the researcher to conclude that secondary schools girls' attitudes towards examinations significantly affected their academic performance, hence the worthiness of the study.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Overview

This chapter presents the summary of the findings of this study and the concluding remarks. It also provides suggestions important for nurturing and developing positive attitudes among secondary school girls and areas for further research.

5.2 Discussion

The study sought to determine the influence of girls' attitudes towards examinations and their academic performance. To analyse data that was obtained, various analytical methods were employed. These included means, standard deviations, percentage, Pearson Product Moment correlation coefficient (r) and statistical significance (t-test).

Seven major hypotheses were advanced in this study. In testing these hypotheses the study yielded significant relationships between the study variables and positive levels of significance. All the hypotheses that were tested in this study were therefore rejected. This therefore led this researcher to conclude that girls' attitudes towards examinations in general and towards various subject examinations had a significant relationship with their overall academic performance and performance in specific subjects. This finding was consistent with similar research findings that students

with positive attitudes towards school subjects perform better in such subjects than those with negative attitudes to the subjects and overall subject performance, hence agreeing that when individuals have positive feelings towards an object, they behave favourably towards the object while those with negative feelings behave unfavourably. It was therefore noted in this study that girls' attitudes towards examinations influenced their overall academic performance and in specific subjects.

5.2.1 Attitudes Towards Examinations

The study findings generally revealed that secondary school girls did not like to do examinations an indication that they had negative attitudes towards examinations. Although it is worthy noting that girls' attitudes towards various subject examinations varied from one subject examination to another.

The majority of the girls preferred doing humanity subject examinations, Kiswahili examinations and English examinations many times than they preferred doing physical science examinations, technical subject examinations and Mathematics examinations. This finding concurred with Gill (1994), who observed that middle class and high school girls had positive attitudes towards other subjects but negative attitudes towards Mathematics even when they were taught in all-girls schools. Though the current study focused on examinations in subjects offered in Kenyan

secondary school curriculum, the inference between the two findings cannot be avoided. The findings in this study therefore indicated that attitudes towards examinations cannot be generalized as they varied from subject examinations to another. It was also noted that attitudes held towards any subject examinations could be used to predict the academic performance in those subjects (Bassey, 2002; Zeidner, 1998; Prawarth, 1983).

These findings therefore pointed out the fact that, the problem of negative attitudes among secondary school girls still exist in spite of the massive researches that have been carried out on this topic. Because attitudes are a social product, Eiser and Plight (1989) suggest that society has to nurture positive attitudes among girls (in this study with regard to examinations and their ability to do better in examinations). To realize this positive change, the underlying causes of low academic performance of girls, that is, the societal structures which cultivate such attitudes among girls (Muran'ga, 1997) need to be addressed.

5.2.2 Attitudes Towards Examinations and Academic Performance

The findings of this study established that girls' attitudes towards examinations and specific subject examinations could be used to predict their academic performance in the subjects and their overall academic performance. The positive significant correlation coefficient (see Table 4.2) in various subjects relied heavily on the

attitudes that they held towards the various subject examinations. This result implied that girls' attitude towards examinations offered in all subjects was a significant factor that determined how they performed in these subjects. This view is supported by Shaughnessy (2000) who noted that most persons experience emotional reactions when taking examinations, ranging from exhilaration to terror, conditions which are caused by the attitudes that they hold towards examinations.

This study also established that there were positive correlations between attitudes and academic performance and various subject examinations, that is, English examinations, Kiswahili examinations, Mathematics examinations, physical science examinations, technical subject examinations and humanity subject examinations (Table 4.2). The t-test confirmed this correlation by recording positive significant relationship between the variables.

The findings of this study also established that when variable recorded a high mean grade the academic performance variable mean score was also high. This justified the conclusion of this study, that students' attitudes towards examinations were certainly a significant predictor of students' academic performance in various subjects and their overall academic performance.

5.3 Conclusion

On the basis of the findings of this study, it was concluded that girls' attitudes towards examinations and towards specific subject examinations was an important factor in determining their academic performance in those subjects and their overall academic performance. This is therefore a factor that tends to explain the unsatisfactory performance of girls in secondary schools especially in Mathematics and physical science subjects which scored the lowest attitude scale mean scores and lowest academic performance mean scores.

Because attitudes are social products, they are acquired from the social structures. The social structures therefore nurture girls in ways that impart in them negative attitudes (Muranga, 1977). These negative attitudes that are developed at home continue to negatively influence girls even when they go to school with feelings of inability not only in some subjects but also in the examinations offered in the subjects. The result of these negative attitudes is unsatisfactory performance in examinations as found in this study.

5.4 Recommendations

In the light of the findings of this study six recommendations were advanced. These are as follows:

1. It was recommended that the Ministry of Education, Science and Technology (MOEST), educational administrators, curriculum developers, school counselors, Kenya National Examinations Council (KNEC), the schools, parents and students should come together and forge structures that will positively influence and develop positive attitudes among secondary school girls towards all subjects and examinations offered in these subjects. This will enable the girls to develop high expectations and confidence that they have the ability to perform better academically.

2. Girls should also be sensitized on the importance of excellent academic performance especially in Mathematics and physical science examinations where they tend to be weak. They should be assisted to realize that better grades in these examinations will place them in better positions and enable them to compete in selection, promotion and employment.

3. Teachers and school counsellors should assist in shaping and developing positive attitudes towards examinations among girls. They should also be guided and counselled to understand that they have the ability to do well academically.

4. Since a lot of importance is attached to examinations and academic performance, examinations should be considered an

integral part of the whole education system. This could be achieved by giving tuition or remedial measures on examination techniques and requirements and administering continuous assessment tests on a regular basis and recording these scores for reference by students, teachers and parents. This will assist in identifying weak areas for remedial purposes. The continuous assessment scores should also contribute to the final scores of the students at the end of their education system.

5. It is also the recommendation of this study that, it is absolutely necessary to come up with specific roles of schools as guidance and counselling centres. This may assist students in nurturing and developing positive attitudes since they spend a good part of their lifetime in these schools. This may improve the academic performance of girls.

6. The parents', teachers' and society's negative expectations for girls' performance in examinations and especially in Mathematics and physical science examinations have to be addressed. There is need to change from such expectations if girls' academic performance has to be improved. This change of expectations may positively influence girls' attitudes and improve their academic performance.

5.5 Suggestions for Further Research

In the course of this study, various issues emerged. These issues that require further research were in the following areas:

1. A study should be carried out to establish the reasons by girls hold varying attitudes towards different subject examinations.

2. There is need to investigate the reasons why students do not like doing examinations.

3. An investigation should be carried out to establish the effects of the type of school on the attitudes students hold towards examinations.

4. An experimental research should be carried out to establish the factors that cause either positive or negative attitudes towards examinations in various subjects.

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APPENDICES

Appendix A

Questionnaire for students

Dear Student,

This is a questionnaire seeking some information from you regarding your attitudes towards examinations. It is NOT a test. Kindly respond to the statements as honestly and sincerely as possible. The information given will only be used for research purposes aimed at improving the academic standards in our secondary schools. The information given will be treated with utmost confidence. Do not write your name on the questionnaire.

AGE:……RELIGION:……

BIRTH ORDER:
- ☐ FIRST BORN
- ☐ SECOND BORN
- ☐ MIDDLE BORN
- ☐ LAST BORN
- ☐ ONLY CHILD

☐ BOARDING STUDENTS
☐ DAY STUDENT

NUMBER OF SIBLINGS:……GIRLS…….BOYS……

EDUCATIONAL LEVEL OF PARENTS:

MOTHER……

FATHER……..

PART A

Respond to the statements by putting a circle around your response.

KEY:

SA	=	Strongly Agree
A	=	Agree
U	=	Undecided
D	=	Disagree
SD	=	Strongly Disagree

1. Examinations help students to fit well in the society after school.

   SA A U D SD

2. Examinations are useful in the educational system.

   SA A U D SD

3. Examinations are good in testing our understanding.

   SA A U D SD

4. Examinations are a fair system of classifying students.

   SA A U D SD

5. Examinations are important in one's life.

   SA A U D SD

6. Passing examinations well is a sign of a bright future.

   SA A U D SD

7. Examinations are a fair way of testing our knowledge of various subjects.

   SA A U D SD

8. Girls can compete well with boys in examinations.

   SA A U D SD

9. Examinations help students to think and reason intelligently.

   SA A U D SD

10. Students ought to do examinations.

    SA A U D SD

11. It is not easy to pass examinations.

    SA A U D SD

12. At the end of examinations I dislike referring to my notes for fear of being disappointed.

    SA A U D SD

13. Boys naturally perform better than girls in examinations in most subjects.

SA A U D SD

14. I hate examinations.

SA A U D SD

15. I get worried when waiting for results after doing my examination.

SA A U D SD

16. Examinations are not a good measure of students' mental ability.

SA A U D SD

17. Doing examinations is a waste of time.

SA A U D SD

18. Examinations are not important in modern society.

SA A U D SD

19. Examinations should be optional.

SA A U D SD

20. I am not comfortable doing examinations many times during the term.

SA A U D SD

PART B

INSTRUCTIONS

Put a circle around the response number that you have chosen for each statement.

RESPONSES:1 = Completely true
2 = Mostly true
3 = Partly false and partly true
4 = Mostly false
5 = Completely false

21. Mathematics examinations should be considered the most important.

1 2 3 4 5

22. I like doing mathematics examinations.

1 2 3 4 5

23. Mathematics examinations are easy.

1 2 3 4 5

24. Mathematics examinations should be optional.

1 2 3 4 5

25. I like doing English examinations.

1 2 3 4 5

26. English examinations are the least important.

1 2 3 4 5

27. English examinations are not easy.

1 2 3 4 5

28. Doing well in English examinations gives a person a better chance in life.

1 2 3 4 5

29. Kiswahili examinations are easy.

1 2 3 4 5

30. I hate doing Kiswahili examinations.

1 2 3 4 5

31. Kiswahili examinations should not be compulsory.

1 2 3 4 5

32. Kiswahili examinations are important.

1 2 3 4 5

33. I am not comfortable doing Kiswahili examinations many times during the term.

1 2 3 4 5

34. Girls can compete well with boys in physical science examinations.

1 2 3 4 5

35. Physical science examinations should be considered the most important examinations.

1 2 3 4 5

36. Physical science examinations should be optional.

1 2 3 4 5

37. I am always confident of passing well in humanity subjects examinations.

1 2 3 4 5

38. I do not like doing humanity subjects examinations.

    1 2 3 4 5

39. Humanity subjects examinations are hard.

    1 2 3 4 5

40. Humanity subjects examinations should be considered the most important examinations.

    1 2 3 4 5

41. Passing well in technical subjects examinations is very important.

    1 2 3 4 5

42. I like technical subjects examinations.

    1 2 3 4 5

43. I am not comfortable doing technical subjects examinations many times during the term.

    1 2 3 4 5

44. Technical subjects examinations are easy.

PART C
INSTRUCTIONS

Indicate your response by placing a tick (√) in the table against each statement.

RESPONSES:1 = Everyday
2 = Two or three days a week
3 = Once a week
4 = Once every two weeks
5 = Once a month

NO	**STATEMENTS**	**1**	**2**	**3**	**4**	**5**
45	How often would you like to do examinations?					
46	How often would you like to do Mathematics examinations?					
47	How often would you like to do English examinations?					
48	How often would you like to do physical science examinations?					
49	How often would you like to do humanity subjects examinations?					
50	How often would you like to do technical subjects examinations?					
51	How often would you like to do Kiswahili examinations?					

Appendix B

Introduction Letter to School Head Teachers

G. O. Nyangore,
School of Education,
Department of Educational Psychology
Moi University,
P.O Box 3900 – 30100
ELDORET

Tel. No. 0734 744158

13th May 2005

Dear Sir/Madam,

The undersigned is a researcher carrying out a research on **Attitudes Towards Examinations and Academic Performance Among Secondary School Girls. A Case of Kisii Municipality, Kenya.** The research will seek information from form four students by use of questionnaires and will also need their academic performance records.

Your school is among those selected for the purpose of providing the relevant information for the research. The participation and assistance of your school will be highly regarded. Please respond indicating whether your school will participate in the research.

Any information obtained will only be used for the purpose of this research. Therefore be assured that such information will be treated with utmost confidence.

Looking forward for a favourable response.

Thanking you in advance.

Yours sincerely

G. O. NYANGORE
EDU/PGGC/21/2003

Appendix C

Letter to Kisii District Education Officer Seeking Permission to Carry out Research in the District

G. O. Nyangore,
School of Education,
Department of Educational Psychology
Moi University,
P.O Box 3900 – 30100
ELDORET

13th May 2005

The District Education Officer
Kisii District
P.O Box 79
KISII

Dear Sir/Madam,

RE: PERMISSION FOR RESEARCH

I hereby seek permission from your office to carry out research entitled: **Attitudes Towards Examinations and Academic Performance Among Secondary School Girls: A Case of Kisii Municipality, Kenya**.

The research will obtain information from form four girls and co-educational schools within Kisii Municipality, Kisii District. It will also need their academic performance records.

Your assistance will greatly be appreciated.

Thanking you.

Yours faithfully

G. O. NYANGORE
EDU/PGGC/21/2003

Appendix D

Kisii District Education Officer Research Authorization Letter

Appendix E

Application Letter for a Research Permit

G. O. Nyangore,
School of Education,
Department of Educational Psychology
Moi University,
P.O Box 3900 – 30100
ELDORET

31st May 2005

The Permanent Secretary
Ministry of Education
Science and Technology
P.O Box 30040-00100
NAIROBI

Dear Sir/Madam,

RE: RESEARCH PERMIT

I hereby apply for a research permit to enable me carry out research in Kisii Municipality Secondary Schools in Kisii District Nyanza Province.

The topic of the research is entitled: "**Attitudes Towards Examinations and Academic Performance Among Secondary School Girls: A Case of Kisii Municipality, Kenya".**

The research will seek information from secondary school girls and will also need their academic performance records.

Looking forward for a favourable response.

Thanking you in advance.

Yours sincerely

G. O. NYANGORE
EDU/PGGC/21/2003

Appendix F

Research Permit

Appendix G

Attitudes Scores

Participants	Examinations	Maths	Eng.	Kisw.	Phy.Sc.	Hum.	Tech. sub.
1	85	19	11	20	9	23	15
2	54	8	6	23	16	25	18
3	85	17	20	17	14	19	10
4	70	10	17	11	5	24	20
5	66	17	7	18	20	23	17
6	74	6	25	20	15	21	7
7	50	5	10	15	7	23	14
8	60	8	13	19	13	9	11
9	40	10	16	24	13	24	18
10	60	10	19	16	14	22	12
11	76	10	16	24	13	24	18
12	62	10	11	12	25	14	15
13	68	9	9	14	18	19	6
14	47	7	14	16	13	25	22
15	59	16	17	19	9	24	16
16	56	5	20	20	11	18	5
17	71	11	10	20	5	12	19
18	84	13	18	20	14	24	17
19	51	4	23	19	9	17	23
20	36	5	11	21	19	20	13
21	49	5	15	8	8	21	17
22	52	5	18	10	13	17	20
23	48	9	12	16	12	11	24
24	68	12	22	18	18	22	16
25	78	14	17	5	11	18	14
26	103	13	13	18	9	20	19
27	50	6	16	16	16	18	20
28	87	4	19	15	10	10	25
29	43	6	14	15	14	19	21
30	54	7	16	15	11	23	11
31	90	6	21	10	17	19	16
32	60	9	12	19	15	25	25
33	55	6	15	14	5	25	23
34	90	7	12	17	12	20	5
35	70	8	10	19	8	16	19
36	59	8	17	21	14	23	11
37	96	10	17	23	16	22	17
38	101	11	19	16	22	21	22
39	80	15	18	18	6	24	10
40	53	7	11	24	13	19	24
41	61	10	17	23	9	20	20
42	72	9	5	16	15	25	12

43	80	9	19	15	11	23	6
44	65	6	5	11	18	18	10
45	68	7	18	17	7	14	20
46	100	11	6	19	14	23	17
47	84	13	12	19	10	20	13
48	79	8	20	7	6	24	18
49	59	7	6	22	8	22	6
50	52	10	19	10	13	17	25
51	93	9	22	20	8	15	14
52	60	15	13	25	15	18	19
53	75	10	21	14	11	19	11
54	68	7	17	20	7	15	7
55	61	17	7	19	9	17	20
56	78	8	14	23	5	21	15
57	44	10	21	12	11	16	20
58	62	6	9	18	10	11	12
59	34	9	22	12	6	14	8
60	45	8	15	15	12	24	15
61	77	18	25	17	19	20	16
62	63	5	22	19	11	15	11
63	69	12	8	20	7	18	13
64	95	16	16	21	13	24	21
65	64	6	23	24	5	11	23
66	76	5	7	18	12	18	5
67	65	7	17	14	15	24	15
68	76	7	25	19	7	9	22
69	65	10	7	5	24	19	14
70	77	13	24	17	6	20	10
71	75	9	6	22	13	25	12
72	75	6	18	6	11	19	11
73	74	20	5	18	8	25	20
74	66	11	25	23	16	17	12
75	58	14	5	21	7	18	16
76	85	6	20	23	7	25	19
77	43	20	5	15	14	14	6
78	67	8	10	18	9	20	13
79	79	8	19	17	15	20	10
80	95	14	12	20	8	24	24
81	72	9	11	10	11	16	13
82	43	13	18	20	15	14	22
83	68	7	13	22	10	24	9
84	80	8	15	18	18	15	17
85	50	7	17	6	9	21	14
86	105	7	9	17	16	23	20
87	69	7	19	24	14	5	12
88	21	6	16	17	10	15	18
89	71	10	7	21	15	16	14
90	53	19	24	15	17	22	21

91	70	6	15	14	11	20	17
92	32	8	20	17	25	20	15
93	30	12	18	11	11	7	7
94	71	21	14	22	7	17	24
95	40	5	6	10	22	23	21
96	23	9	6	8	17	13	11
97	72	5	13	16	15	16	25
98	24	10	5	22	5	6	12
99	50	17	15	18	12	24	22
100	70	5	21	17	18	20	18
101	66	5	12	8	7	18	7
102	73	10	21	9	14	8	19
103	58	19	25	18	6	25	21
104	60	16	16	22	13	18	10
105	69	6	6	14	8	20	14
106	74	8	11	24	11	20	13
107	26	9	22	16	13	10	19
108	49	9	17	19	7	17	6
109	58	9	22	24	14	11	17
110	32	9	24	5	17	19	23
111	27	16	10	6	12	25	14
112	80	7	25	18	8	21	20
113	67	10	18	22	15	21	11
114	76	6	16	14		18	9
115	58	13	7	9	11	13	13
116	40	8	18	18	16	16	24
117	66	8	18	16	9	20	15
118	37	22	9	9	10	24	22
119	100	20	19	24	16	24	10
120	60	17	23	10	6	14	21
121	65	6	11	11	10	19	16
122	78	5	8	22	9	17	22
123	30	6	19	17	10	6	11
124	103	6	25	19	17	21	14
125	24	9	20	10	8	15	10
126	39	5	12	11	11	7	17
127	63	18	7	14	25	25	20
128	31	9	24	17	7	13	23
129	42	11	6	13	14	25	25
130	80	11	24	23	19	20	9
131	100	19	14	18	5	16	22
132	62	14	5	19	10	11	20
133	58	11	8	8	15	16	12
134	32	1	16	5	18	7	11
135	33	19	8	6	6	25	7
136	19	6	10	19	6	24	14
137	51	6	18	23	11	15	24
138	82	9	15	10	14	21	19

139	34	5	11	12	8	14	11
140	68	13	9	15	14	23	5
141	60	22	13	17	6	8	8
142	83	7	20	20	11	10	17
143	35	10	15	23	16	25	10
144	90	21	6	10	19	20	16
145	59	6	10	14	9	16	6
146	84	7	21	19	15	22	19
147	36	8	16	7	7	13	23
148	58	6	24	20	12	18	16
149	85	7	16	6	14	10	20
150	101	10	11	18	10	17	15
151	97	13	14	22	16	23	17
152	67	12	17	24	5	21	20
153	78	12	7	9	7	17	14
154	98	11	12	3	8	18	19
155	86	6	18	18	5	24	21
156	86	9	17	11	13	12	24
157	88	9	13	22	18	20	17
158	58	5	18	17	9	19	7
159	55	6	19	19	14	19	13
160	80	10	8	20	12	25	20
161	87	5	14	23	11	12	20
162	39	5	20	17	5	17	14
163	85	6	5	9	13	22	6
164	54	10	15	16	8	25	18
165	85	9	10	23	13	16	21
166	88	6	15	22	5	17	15
167	53	15	18	25	6	21	23
168	40	15	21	23	14	14	13
169	89	11	20	12	8	18	15
170	62	10	7	24	12	23	19
171	83	6	16	17	17	21	20
172	60	12	25	19	7	15	16
173	90	12	20	18	15	13	23
174	41	6	24	10	10	8	24
175	51	9	5	7	20	18	12
176	31	5	17	20	8	9	11
177	50	5	7	5	11	24	22
178	80	10	19	18	5	14	17
179	28	13	11	9	15	19	22
180	42	16	21	20	9	24	11
181	29	15	18	16	14	20	18
182	79	15	9	21	13	19	21
183	41	5	7	23	11	10	16
184	43	6	11	7	10	19	12
185	77	7	19	15	16	15	7
186	28	7	7	19	9	20	21

187	94	10	6	7	21	25	19
188	44	9	12	16	11	17	15
189	76	9	20	22	7	11	13
190	61	9	13	24	15	15	20
191	35	16	11	8	12	16	10
192	45	5	6	7	6	21	5
193	46	5	11	19	9	18	14
194	96	8	13	22	15	25	24
195	76	8	11	16	11	20	6
196	24	9	9	9	16	18	12
197	37	15	15	18	15	13	19
198	97	13	18	24	10	17	20
199	75	14	15	20	9	24	20
200	52	10	10	11	14	16	13
201	38	6	7	25	25	7	22
202	70	9	16	9	13	11	11
203	48	7	6	8	7	23	21
204	32	10	17	6	11	14	13
205	99	11	23	10	15	24	22
206	75	8	9	19	9	23	16
207	100	21	19	22	17	14	12
208	60	6	13	11	13	18	20
209	49	6	16	15	5	20	23
210	101	7	12	20	12	22	17
211	6	5	11	20	7	14	11
212	60	10	21	21	24	20	15
213	102	16	15	25	11	19	21
214	93	21	19	14	14	18	23
215	38	8	6	24	13	17	25
216	97	5	17	16	20	21	15
217	40	12	7	19	16	24	11
218	63	9	14	23	6	23	16
219	51	16	18	18	14	15	22
220	50	12	20	11	6	5	6
221	73	13	16	7	19	25	16
222	101	13	23	16	10	21	14
223	52	6	9	15	15	17	20
224	45	6	19	12	7	10	17
225	100	14	12	20	21	25	22
226	53	5	14	23	24	25	7
227	60	10	6	17	13	22	11
228	45	6	16	11	15	22	18
229	70	9	21	9	15	8	10
230	8	6	17	17	9	14	15
231	54	6	11	19	6	15	21
232	60	11	18	25	17	21	12
233	50	15	8	12	9	21	17
234	55	17	7	7	7	17	9

235	50	5	10	23	16	20	11
236	70	5	17	15	14	23	20
237	80	9	22	25	18	24	19
238	5	9	9	19	17	20	21
239	56	13	17	25	9	25	5
240	62	14	12	21	13	20	16
Total scores	**15106**	**2344**	**3501**	**3955**	**2886**	**4416**	**3800**
Mean Scores	**62.94**	**9.77**	**14.59**	**16.48**	**12.03**	**18.40**	**15.83**

Appendix H

Examination Scores

Participants	Maths	Eng.	Kisw.	Ph./Sc.	Hum.	Tech.Sub.	Mean Grade
1	8	7	12	4	10	6	8
2	3	4	10	4	8	6	6
3	8	8	12	7	8	7	8
4	2	6	11	9	8	7	7
5	9	1	11	10	11	8	8
6	4	8	10	4	8	6	7
7	3	6	6	5	9	7	6
8	6	7	12	6	5	6	7
9	1	3	11	2	5	6	4
10	6	6	6	6	12	4	6
11	2	8	11	8	9	6	7
12	6	5	10	6	7	8	7
13	1	6	3	3	10	6	4
14	1	6	3	3	10	7	5
15	7	5	11	2	7	3	6
16	1	5	7	2	8	3	4
17	2	6	11	6	8	7	7
18	5	8	12	3	16	7	9
19	1	12	8	2	6	8	6
20	1	4	8	7	10	8	6
22	1	7	6	1	9	6	5
23	1	7	7	3	9	10	6
24	4	9	6	3	8	5	5
25	6	7	2	4	11	6	6
26	9	8	11	7	12	9	6
27	1	8	5	3	7	10	9
28	6	7	10	7	9	7	6
29	1	8	6	5	8	11	8
30	3	8	9	3	8	6	6
31	6	6	10	4	9	6	6
32	4	6	9	5	10	9	7
33	1	6	5	1	7	2	4
34	2	6	10	7	8	8	7
35	1	7	9	4	8	6	6
36	1	6	7	3	8	4	5
37	6	11	12	9	11	11	10
38	7	6	10	9	10	7	8
39	7	8	11	10	11	9	9
40	1	6	10	2	8	8	6
41	5	7	11	6	10	9	8
42	8	2	10	6	10	6	7
43	1	6	7	4	10	7	6

44	3	6	5	7	7	9	6
45	11	6	10	3	5	7	7
46	5	7	11	5	12	9	8
47	4	6	7	2	9	6	6
48	4	11	7	5	9	6	7
49	3	4	10	5	7	4	6
50	2	9	6	3	5	7	5
51	1	10	11	8	11	10	9
52	6	8	11	7	7	7	8
53	7	7	10	6	7	6	7
54	1	6	10	5	9	5	5
55	9	4	8	3	5	7	6
56	1	8	11	5	8	6	8
57	2	6	7	3	5	5	5
58	2	7	9	5	4	3	5
59	1	6	6	1	4	5	3
60	1	7	11	7	9	8	7
61	4	10	12	6	10	7	8
62	3	6	6	3	5	1	5
63	6	7	10	4	9	7	7
64	9	6	11	4	10	12	8
65	2	8	11	5	11	7	7
66	3	7	10	3	9	6	6
67	4	6	7	5	10	6	6
68	7	9	10	5	5	7	8
69	5	7	6	9	8	5	7
70	6	1	8	2	10	7	7
71	5	6	10	6	7	5	7
72	7	8	3	7	10	5	7
73	8	1	10	2	8	7	6
74	1	7	9	3	5	4	4
75	6	2	8	1	10	6	6
76	1	8	8	5	7	5	6
77	9	2	10	4	7	3	5
78	1	7	8	3	9	5	5
79	4	6	9	3	10	6	6
80	5	6	11	5	10	9	8
81	1	4	4	4	6	6	4
82	5	5	8	6	4	8	6
83	1	8	10	4	10	7	6
84	2	5	5	6	8	8	6
85	4	6	7	5	11	8	6
86	4	9	11	8	11	9	9
87	5	6	11	9	10	7	8
88	1	5	8	3	6	5	4
89	5	5	9	6	9	5	8
90	7	8	6	4	8	7	7
91	3	6	6	4	9	9	6

92	3	6	5	7	8	2	6
93	3	6	6	5	3	2	4
94	8	7	9	3	10	11	8
95	1	2	2	7	8	7	5
96	1	1	3	4	2	2	2
97	3	4	5	4	12	9	6
98	1	3	8	6	3	4	5
99	3	6	7	4	11	8	7
100	1	8	11	7	9	8	7
101	2	8	5	3	11	4	6
102	6	9	3	9	6	9	7
103	7	9	10	2	10	9	8
104	6	5	7	3	8	6	6
105	2	3	4	3	11	7	5
106	5	7	10	4	8	6	7
107	2	9	8	2	4	4	5
108	2	7	8	3	8	2	5
109	4	8	9	3	7	6	5
110	1	7	9	3	4	6	5
111	6	3	2	4	8	6	5
112	3	9	11	4	9	8	7
113	5	7	11	7	10	6	8
114	3	6	5	3	11	4	7
115	8	8	6	5	7	7	7
116	3	4	6	4	10	4	5
117	5	6	6	3	14	5	7
118	9	2	1	1	8	8	5
119	8	8	12	7	10	4	8
120	6	9	5	1	4	8	6
121	2	4	8	1	5	9	5
122	4	5	9	1	5	8	5
123	1	12	11	6	6	7	7
124	2	8	9	11	12	7	8
125	2	11	3	2	7	1	3
126	2	5	5	3	3	8	4
127	9	4	5	6	10	10	7
128	1	8	6	1	7	9	5
129	2	1	3	4	11	10	5
130	1	12	8	7	11	4	7
131	7	4	12	3	8	10	7
132	4	3	8	2	5	8	5
133	1	1	4	3	7	6	4
134	1	4	2	5	3	5	3
135	7	2	4	1	8	4	4
136	1	1	13	4	4	8	5
137	1	7	8	1	3	4	4
138	2	9	5	6	9	4	6
139	2	6	8	2	12	3	5

140	2	3	8	3	14	1	5
141	7	6	9	3	4	5	6
142	1	9	8	6	4	8	6
143	7	7	8	6	6	4	6
144	7	1	9	5	10	8	7
145	1	6	5	3	6	4	4
146	1	7	7	1	8	6	5
147	1	4	6	2	5	14	4
148	1	9	8	1	3	3	4
149	1	9	2	8	6	12	6
150	5	8	7	8	10	9	8
151	11	8	8	5	8	8	8
152	4	7	8	4	6	10	7
153	5	3	4	6	11	8	6
154	3	8	7	3	12	10	7
155	4	8	10	3	11	9	8
156	6	9	6	6	8	2	5
157	1	9	9	8	13	7	8
158	1	7	8	3	7	4	5
159	1	6	6	4	4	9	6
160	3	6	6	3	11	10	7
161	1	3	10	5	6	7	5
162	1	8	7	3	7	6	5
163	1	3	4	8	11	8	6
164	2	4	6	3	9	7	5
165	1	3	9	3	7	10	6
166	2	4	8	3	8	6	5
167	4	6	8	4	9	8	6
168	5	8	8	6	6	4	6
169	2	9	3	2	8	5	8
170	2	10	1	8	5	8	6
171	3	8	7	8	8	8	7
172	4	12	6	4	6	4	6
173	3	12	8	6	5	8	7
174	1	10	5	3	3	8	5
175	2	2	1	8	8	3	4
176	1	6	7	3	6	7	4
177	1	1	2	3	7	8	4
178	3	7	8	2	2	7	5
179	2	2	2	3	4	7	3
180	4	7	8	3	8	4	6
181	5	8	4	3	12	4	6
182	3	6	11	2	11	13	8
183	1	1	10	1	3	6	4
184	2	5	3	6	8	6	5
185	1	9	8	8	8	2	6
186	1	3	8	2	8	7	5
187	6	3	4	8	6	7	6

188	1	5	5	4	9	8	5
189	1	8	8	5	7	7	6
190	1	6	14	5	7	8	7
191	4	4	6	4	6	4	4
192	1	3	5	5	7	2	4
193	2	3	5	4	9	5	5
194	4	3	8	3	8	7	6
195	1	5	6	5	8	6	5
196	1	2	2	2	7	1	3
197	2	4	5	3	6	4	4
198	6	7	12	10	9	9	9
199	3	7	9	7	7	9	7
200	3	7	11	5	9	6	7
201	3	4	3	5	9	8	5
202	1	5	12	8	5	7	6
203	3	5	4	4	4	3	4
204	4	4	5	4	11	10	6
205	4	5	3	3	3	4	4
206	4	6	3	3	8	7	5
207	3	6	6	1	9	8	4
208	4	4	6	5	5	7	4
209	1	3	4	1	7	5	3
210	1	5	6	1	5	6	4
211	3	7	1	3	5	5	4
212	1	1	8	1	5	4	3
213	4	7	7	7	8	10	7
214	10	11	12	8	7	10	10
215	9	4	6	6	9	9	7
216	2	3	9	2	3	2	4
217	9	4	12	6	8	7	8
218	6	3	10	7	9	6	7
219	1	2	9	3	8	8	5
220	4	5	7	3	6	6	6
221	4	7	4	1	3	6	4
222	3	10	5	3	10	6	6
223	5	4	10	6	12	3	7
224	1	5	12	4	4	6	5
225	7	4	10	12	10	10	9
226	6	6	8	8	11	9	8
227	1	3	2	1	4	1	2
228	3	1	2	1	5	1	2
229	1	3	1	1	4	2	2
230	5	7	5	5	9	12	5
231	1	4	3	2	6	4	5
232	2	5	7	4	8	6	5
233	6	8	12	8	9	7	9
234	4	6	10	7	9	6	7
235	3	5	7	5	10	8	6

236	4	8	9	6	10	9	8
237	2	9	11	5	12	7	8
238	3	7	7	6	9	5	6
239	2	3	11	6	9	2	5
240	2	4	9	5	10	5	6
Total scores	**834**	**1529**	**1794**	**1067**	**1884**	**1549**	**1421**
Mean Scores	**3.49**	**6.37**	**7.49**	**4.45**	**7.85**	**6.45**	**5.92**

Appendix I

Location of the study Area (Kisii Municipality)