STUDENTS' SELF-CONCEPT OF ACADEMIC ABILITY AND STUDENTS ACADEMIC PERFORMANCE IN FOUR SELECTED SECONDARY SCHOOL SUBJECTS IN KENYA

BY

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DECLARATION

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

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This thesis has been submitted for examination with our approval as University Supervisors.

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DEDICATION

It is with deep appreciation and a greatful heart that I dedicate this thesis to my father and mother who have loved me and given themselves sacrificially to me throughout my school life.

ABSTRACT

The purpose of the study was to determine possible relationships that might be existing between secondary school students' self-concept of academic ability and academic performance of the students in selected school subjects; namely English, Mathematics, Biology and Geography. Secondly, the study sought to determine the relationship between teachers' perception of students' academic ability and students' actual academic performance in the four school subjects. Finally the study also focusse on the differences in students self-concept of academic ability between boys and girls in the four selected school subjects.

The sample of this study consisted of 290 secondary school students; 142 male and 148 female, drawn from a sample of Form Four students of some eight Government maintained secondary schools. The sample for the teachers consisted of those teachers who were teaching the four school subjects in the selected schools. A total of twenty-six teachers were used in the study.

Two questionnaires were utilized in this study: The Students' Questionnaire and The Teachers' Questionnaire. These questionnaires were administered to the students and the teachers from the selected schools. The data so collected were analysed by use of the computer. The Statistical Package for the Social Sciences (SPSS) Programme, was employed in analysing the data. Various statistical techniques (tests) were utilized in the study. These are: The chi-square test for determining the relationship between stated variables: The Analysis of variance test for determining the significance of the differences. All the hypotheses formulated were tested at the 0.05 level of significance.

The findings from this study revealed that there was a significant relationship between students self-concept of academic ability and their academic performance in English, Mathematics, Biology and Geography. This relationship was in favour of those

students who held high self-concepts of academic ability about themselves in these four school subjects. Those students who held high self-concepts of academic ability turned out to have good academic performance in the four school subjects.

The study also established a significant relationship between teachers' perception of students' academic ability and the students' actual academic performance in English, Mathematics, Biology and Geography. The students who were reported by their teachers as having high academic ability also turned out to be performing well in the four school subjects.

Further, the study findings revealed no significant difference in students' self-concept of academic ability and academic performance in both English and Mathematics between boys and girls in general. However, the study findings revealed significant differences in students' self-concept of academic ability and academic performance in Biology and Geography between boys and girls. In both cases the difference was in favour of girls.

Girls reported higher self-concept of academic ability in Biology and Geography than boys.

The findings of this study suggest that with regard to the students' self-concept of academic ability, if students hold low or negative self-concepts of academic ability in a particular school subject, then the students may tend to perform poorly in this particular school subject.

The present study has been able to determine the relationship between the students' self-concept of academic ability and their academic performance in school subjects. Hence, the study has acknowledged the need to cultivate in students positive self-concepts in themselves which would in turn enhance their actual academic performance in school.

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The task of writing a thesis is not an easy one; and therefore there are many people who helped me in one way or the other whose contributions I want to acknowledge here.

First, my sincere thanks go to Kenyatta University which granted me the scholarship without which I would not have completed my thesis.

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My wife, Njeri and my two daughters, Njoki and Katheu also deserve a mention. Their moral support was a source of encouragement to me.

The typing of the thesis was not an easy task; and therefore I want to register my sincere thanks to Irene, Margaret, Joyce and particularly Mary Khaemba who typed the final draft of the thesis.

Finally there are so many people who deserve a mention and by listing their names here I would run into the risk of omitting some; to all of them I say thank you very much. But let me mention the students and teachers who patiently completed the questionnaires which formed the body of the thesis.

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CHAPTER ONE

1.00. INTRODUCTION TO THE STUDY PROBLEM AND ITS CLARIFICATIONS

1.01. INTRODUCTION:

Every year thousands of Kenyan secondary school students sit for the Kenya Certificate of Education (K.C.E.) examination. K.C.E. replaced the former East African Certificate of Education (E.A.C.E.) examination which was done in Kenya for the last time in 1979. This examination is offered at the end of the four-year secondary school course which covers a variety of school sbujects. The list of subjects include English, Mathematics, Biology, Physics, Chemistry, Geography, History and so on.

The number of school candidates taking the K.C.E. examination has increased tremendously in recent years. (See Table 1). The number continues to increase even further into late 1980's. This increase in numbers of school K.C.E. candidates reflects the

increase in the number of students enrolled in Kenyan secondary schools.

The Kenya Certificate of Education (K.C.E.) examination is very important because it is the gateway to many avenues either for higher education or employment. Thus school performance at K.C.E. level is crucial for those who want to go with further studies or to enter various training institutions or to be employed. This argument has been supported by Emil R. Rado when he says that education was expanded with an economic motive in mind; that is, education would raise an individual's income and increase one's employment opportunities. Rado continued to argue that the more educated one is, the more one is likely to earn.[1] However, this observation by Rado may not be relevant today. This is because there are less educated people who are earning more than the highly educated ones. Despite this fact, the ideas of Rado emphasize the importance of academic performance in one's life expectations. Thus for one to compete effectively for higher education and/or good employment, a good academic performance is necessary. Those students who perform poorly in K.C.E. examination cannot compete effectively for the few opportunities that exist in the higher education

institutions such as teachers' colleges, technological colleges and universities.

The effect of examination results on the activities of school leavers is reported by Kabiru Kinyanjui.[2] His results showed that performance in the E.A.C.E. examination strongly influences the opportunities open to school leavers.

Kinyanjui studied the importance of the examination to the school leavers and found the results do exercise a lot of influence on what a student does after school, as he puts it;

> ... performance in the E.A.C.E. examination strongly influences the opportunities open to school leavers. Higher School Certificate (H.S.C.) courses tend to recruit the ablest entrants, namely those with grade aggregate points of about 23. Pupils in H.S.C. courses average about 10 grade aggregate points better than those who go into training courses. Entrants into public sector training have mean aggregate points of 33. Direct entrants into employment are of rather lower calibre (37) while the unemployed are the weakest students of (46).

These findings by Kinyanjui are in line with

those of I.L.O. report of 1972 which asserted that school performance probably bears the greatest direct relationship to occupational achievement. The report noted that:

> ... given the value attached to educational achievement in society at large and on the labour market in particular, those with little or no formal schooling are put at a distinct disadvantage in trying to obtain much more than subsistence.[4]

Despite the importance of good academic performance at the KCE level, school candidates have been doing poorly from year to year. The proportion of school candidates with a pass between division one and three fellfrom 50.02% to 35.1% in 1973 and 1980 respectively (see Table 1). This fall of about 15% is tremendous and should probably not be left in the dark without some attempt to explain possible causes of the decline in academic performance. By 1984 the percentage had fallen to 45.69%.

TABLE 1

PERFORMANCE OF SCHOOL CANDIDATES IN E.A.C.E. BETWEEN 1973 AND 1984.

YEAR	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
TOTAL NUMBER OF SCHOOL CANDIDATES	28,835	32,311	38,228	47,239	55,878	60,707	70,316	87,828	87,191	93,834	101,263	112,677
PERFORMANCE DIVISION 1-3	14,199	15,847	22,410	22,410	28,250	29,889	27,827	30,827	29,934	35,548	39,712	51,486
PERCENTAGE	50.02	39.05	49.23	47.11	50.56	49.23	38.38	35.10	34.33	37.48	39.21	45.69
DIVISION 4	8,598	8,866	10,532	7,660	15,140	16,648	23,712	26,186	27,742	29,842	33,081	33,862
DIVISION 1-4	22,797	24,713	29,353	30,070	43,390	46,537	51,014	57,013	57,676	65,890	72,793	85,354
PERCENTAGE 1-4	83.15	76.48	76.78	63.66	77.65	76.66	72.55	64.91	66.14	69.47	71.88	75.75

Sources: (i) Statistical Abstract; 1981 P. 202.

(ii) Statistical Abstract; 1984 P. 193.

1.02. Background to the Problem

Every year, when the K.C.E. examination results are announced, it has been observed that certain schools consistently do better than others at this examination despite the fact that all the schools follow common syllabuses for the various examination papers offered. That is, secondary schools are similar in their academic work in that they use the same centrally prepared and regulated curriculum.[5]

However, despite this similarity in the academic work, when the results are announced, some schools are permanently at the top of the list while others are always placed at the bottom of the list. Schools that are always at the top include Alliance Boys' High School, Ngandu Girls' High School, Alliance Girls' High School, Loreto Convent (Limuru), Starehe Boys' Centre, Mangu High School and Nyeri Boys' High School.[6]

The question arising then is, what could be the main factors which contribute to the

differences in academic performance between schools? Several reasons have been advanced to explain the differences regarding performance in Kenyan Secondary Schools. These include the following:

(i) facilities (textbooks, laboratories and classrooms).

(ii) teachers qualifications and teaching experience.

(iii) socio-economic background of the students.[7]

(iv) achievement motivation of the students.[8]

According to these studies, the four factors all exercise a lot of influence on academic performance and may account for the observed differences in performance among the schools. However, it is quite possible that in addition to the frequently studied factors, other factors have equally important influences on the students' academic performance. Such factors include some like personal behaviour, personal attitudes and self-concept of a student.

Bearing in mind the importance of school performance to an individual's future life career, the present study was set out to look into how a student

considers himself/herself capable of may have a bearing on his/her academic performance in selected school subjects. Further, the present study undertook to examine teachers' perceptions about student's academic ability as they may relate to students' academic performance.

The reason for choosing this particular aspect is that the studies done so far have indicated the need for further research. Secondly, the other four factors have been dealt with by other researchers to a considerable extent.

In Kenya today, school performance is being held with high esteem by parents, politicians and government officials. This can be supported by the reports appearing in the local daily newspapers immediately the results are announced. The seriousness with which poor performance by students is being treated by the Kenyan society is expressed in the articles quoted. Some of the articles are headed; "K.C.E. results are a disgrace."[9] "Poor examination results shock parents,"[10] and "K.C.E. results deplorable". From these examples, it is evident that poor performance by students is being

taken seriously in the Kenyan society. It is for this reason that the present research was undertaken. However, the accusations that are put forward to explain the poor performance tend to pivot on all or one of the first three factors mentioned earlier. They tend to ignore the personality characteristics of the students. They look at performance from an external point of view, that is from factors external to the student, such as school facilities and teachers' qualifications. It should be noted that these factors exercise a lot of influence in school performance.[12]

The present study undertook to explore performance with respect to students' personality characteristics. In this task the concern of the study, therefore, was geared towards understanding one important aspect of personality - self-concept of academic ability - particularly with regard to whether it is related to a student's academic performance in the school. As already suggested, most studies[13] dealing with what seems to affect academic performance tend to show little interest in incorporating students' self-concept as part

of the overall effect. Thus in conducting this study, the researcher emphasized the need to understand the students academic performance from another reference point - students' personality as expressed by self-concept. As one prominent Headmaster once said:

> "...poor results are the results of inadequate determination to do better all the time..."[14]

Thus, for students to perform well they must have the determination to do so. That is, they should see themselves as being capable of performing well, otherwise, they may loose interest and their desire to perform well in school. The interpretation one obtains from the headmaster's comment is that when a student's personality has no or little effort to do better all the time, he or she may tend to be poor in academic performance. This supports the reason why students' self-concept of academic ability should be considered when one is looking at school academic performance.

Further, school performance could be influenced or affected by certain perceptions of the people a student interacts with, particularly within the school organization. Hence, the need to look at teacher's

perception about student's academic ability and how this relates to students' academic performance because teachers possibly interact with the students for a long period of about eight hours per each school day and this interaction may be a source for a student's failure or success in school.

1.03. Statement of the Problem

From the background of the study delineated here, it was the task of this study to examine the relationship between students' self-concept of academic ability of selected Kenyan secondary school students and their academic performance in selected school subjects. Further, the study sought to establish whether there existed relationship between teachers' perception of students' academic ability and the students' actual academic performance in the selected school subjects.

Another minor task of this study was to study or to find out whether male students

differed with female students as regards self-concept of academic ability.

In studying the relationships, the study endeavoured to answer the following questions:

(i) How do students' self-concept of academic ability relate to academic performance in each of the four selected school subjects?

(ii) Is there any relationship between teachers' perception of students' academic ability and the students' actual academic performance?

(iii) Do male and female students differ in their self-concept of academic ability in each of the four school subjects?

The school subjects chosen for the study were English, Mathematics, Biology and Geography. The reason for choosing them is that the subjects are taught in all secondary schools in Kenya. The first two are compulsory for all examination candidates in most high

schools in Kenya. It was therefore, possible to obtain marks for the students who took part in the study from school records. This was necessary for comparison purposes (A detailed rationale for the choice of these four school subjects is given in Chapter Three).

1.04. CLARIFICATION OF THE STATEMENT OF THE PROBLEM

Definition of Terms:

Throughout the study several concepts and terms have been frequently used. their operational definitions are as follows:-

Academic performance:- This was defined as the mark that a student scores in a given school subject. (Marks were given in percentage form. For each student all the end of term marks in 1985 obtained in each of the four school subjects were averaged). The resulting average mark was used to represent the level of academic performance in that school subject. There were three terms in 1985.

Very Good Performance:- This was indicated by a 70 per cent average mark or above.

Good Academic Performance:- This was indicated by average mark between 50 per cent and 69 per cent.

Poor Academic Performance:- This was indicated by a mark less than 50 per cent.

Self-Concept of Academic Ability:- This was used to refer to evaluation that a student had of himself/herself in respect of his/her academic ability in a specific school subject. It was measured by the self-anchoring scale used by Maritim.[15]

Further specific levels of students' self-concept of academic ability were identified and are defined below to allow for quantification.

High Level of Self-Concept:- Students were classified as having high level of self-concept of academic ability if they located themselves between the first and fourth steps of the ability ladder contained in the questionnaire.

Medium Level of Self-Concept:- Students were considered to have a medium level of self-concept of academic ability when they located themselves between the fifth and seventh steps of the ability ladder.

Low Level of Self-Concept:- Students were considered to have a low level of self-concept of academic ability when they located themselves between the eighth and tenth steps of the ability ladder contained in the questionnaire.

Teachers' Perception:- Teachers' perception here refers to the way a teacher views a student's academic ability in a particular school subject.

For quantification purposes, teachers' perception was obtained by use of the self-anchoring scale used by Maritim[16] A student located by the teacher between the first and fourth step was regarded as having high level of self-concept of academic ability in that particular school subject. If a student was located by the teacher between the fifth and seventh step was regarded as having medium level of self-concept of academic ability in that particular school subject. Finally, if a student was

located by the teacher between the eighth and tenth steps of the ability ladder, he was considered to have a low self-concept of academic ability.

School Subjects:- These are the various types or departments of study in Kenyan secondary schools; such fields of study include History, English, Geography, Physics, Chemistry and so on. For the purpose of the present study, the actual school subjects used in the study are English, Mathematics, Biology and Geography.

Form Four:- The fourth year of secondary school level in Kenya. The Form Four students who took part in the study were male and female students in their fourth year of secondary school.

Government Maintained Secondary Schools:- These are schools run and financed by the Government.

Secondary School:- This refers to a formal Education Institution attended after primary school level in Kenya.

1.05 HYPOTHESIS FOR THE STUDY

In order to answer the questions raised earlier in this chapter, the following hypotheses were stated and tested in this study.

HO_1: There is no significant relationship between students' self-concept of academic ability and students' academic performance in:-

(a) English

(b) Mathematics

(c) Biology

(d) Geography

HO_2: There is no significant relationship between teachers' perception about students' academic ability and the actual students' academic performance in the four selected school subjects.

HO_3: There is no significant difference in students self-concept of academic ability between boys and girls in the four selected school subjects

1.06. NEED FOR THE STUDY

The need for this study arose as a result of three important reasons. First, research in self-concept and its relationship with academic performance has been carried out in many other countries (see Chapter II). Since, in these countries, self-concept has been shown to have a significant relationship with academic performance it would be of interest to find out whether Kenyan secondary school students fall under the same view pertaining to the impact of self-concept of academic ability on the students' academic performance.

Second, the research done in Kenya has been conducted using primary school pupils.[17] For this reason, it would be of interest to extend the investigation beyond the primary levels into the secondary school level where the students' self-concept can be described as having matured greatly. It is only with such investigations that one may

understand the self-concept as it may affect academic performance of a student as he grows emotionally, socially and educationally.

Finally, these studies have suggested the need for further research because social science research is not conclusive.

1.07. ASSUMPTION OF THE STUDY

The study was based on the following assumptions:-

(i) That responses on items contained in the instruments were a close approximation of the students' self-concept of academic ability and teachers' perception about the students' academic ability.

(ii) That during the administration of the instrument to the students, the presence of the researcher had minimal

effect and hence would not adversely affect the responses of the students.

(iii) That the Intelligent Quotient (1.Q.) of the students are not so diverse and differences not so distinct as to be reflected in the differences among the students.[18]

(iv) The standardized scores of the students' marks can be considered as effective measures of students' academic performance.

1.08 LIMITATIONS OF THE STUDY:

The study had the following limitations:-

(i) It was restricted to an examinations of very few factors bearing upon students' academic performance, namely,

(1) Students' self-concept of academic ability.

(2) teachers' perception of students' academic ability.

(ii) The study was limited to only four school subjects; namely English, Mathematics, Biology and Geography. Thus, this is a

limitation in that not all school subjects that are taught in Kenyan secondary schools were included in this study.

(iii) This study was limited only to the teachers who taught the school subjects named above to the Form Four class that took part in the study.

(iv) Another limitation of the study was the use of end-of-term marks from individual schools. The marks were obtained from examinations set and marked differently in the study schools. Besides the fact that standardization was carried out to make them similar, it still remains a limitation.

(v) Due to financial and time constraints the study was limited within a few selected Government Maintained schools in Eastern and Central provinces of Kenya. The finance granted for the research was not enough to allow an intensive research.

(vi) Finally, there was no method by which the researcher could have determined the honesty and accuracy of the responses given by the respondents.

1.09. SIGNIFICANCE OF THE STUDY

The findings of the study can be important in the following ways:-

(i) The findings could suggest an area of importance to be considered in the development and planning of secondary school curriculum in Kenya. That is, there may be a need to design the curriculum such that aspects such as motivation of the students which can enhance students' self-concept are included in the school subject contents to be taught in Kenyan secondary schools. The findings may thus help to lay a better foundation for changes in curriculum and methods of teaching.

(ii) The findings of this study could serve as a basis for evaluating a students' personality chracteristics in terms of how they affect one's academic performance in school

subjects.

(iii) The study attempted to measure the teachers' perception of students academic ability in relation to academic performance. The results obtained may serve as an empirical basis of understanding the influence of teachers behaviour and attitudes towards students' academic performance.

(iv) The findings may be used by teacher trainers to ensure that teacher trainees are given the necessary training in skills which will enhance students' self-concept of academic ability and consequently improve the students' academic performance in the school subjects that they teach.

(v) The findings from this study may provide evidence in the relationship between students' self-concept of academic ability and students' academic performance; and the relationship between teachers' perception of students' academic ability and the actual students'

academic performance in schools subjects. Hence, teachers and other educators may find relevant information which is based on solid evidence but not on conjecture or speculation.

1.10. RESEARCH DESIGN AND METHODOLOGY

The study was conducted as an *ex post facto* research.[19] The choice of this design was justified on the grounds that this study was not just for collecting and describing the data. It also sought to investigate and establish the existence of certain relationships among the variables identified in the study.

Selection of sample Schools for the study

Only eight Government secondary schools were selected for the study. This was in view of the limited financial resources and time available for research. The decision to include only Government

schools was an attempt to have similar schools as much as possible.

Study Samples

The sample for this study was 290 secondary school students; 142 were male and 148 were female drawn from a population of Form Four students in Government maintained secondary schools in Kiambu, Nyeri, Embu, Kitui and Machakos districts. The majority (60 per cent) of the students in the sample were aged between sixteen and eighteen years.

There were also 26 teachers; 22 males and 4 females. These formed the other subjects engaged in the study. About 61 per cent of the teachers were aged between 25 and 34 years.

Data sources

There were two main sources of data for this study. These are:-

(i) The students' and the teachers' questionnaires;

(ii) School records on students' academic performance.

The students who took part in the study were required to complete a questionnaire which contained items meant to elicit information on their self-concept of academic ability. The teachers provided information on their background and perception of students' academic ability.

From the school records, marks were obtained for all students who took part in the study for their school end-of-term examinations taken in 1985 for the four school subjects selected for the study.

Data Analysis

The data obtained were descriptively and statistically analysed. The data collected were analysed with the aid of the computer. The data, processing was done utilizing the statistical package for the social sciences (SPSS).[20] The raw data were coded and punched into cards for computer analysis. This was done at the Institute of Computer Science at Chiromo, University of Nairobi.

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Statistical Procedures

The following statistical tests were utilized in this study:-

(a) The Chi-Square Test: This was used to determine whether there were significant relationships between variables. It is a measure of how closely the observed distribution approximates the expected distribution.

(b) The Analysis of Variance Test: The analysis of variance (ANOVA) was used to test the significance of the differences between means of two groups. In this study one-way ANOVA was used to determine differences of means between groups.

It should be noted, however, that a detailed discussion of this section of 'Design of the study and methodology' is given in Chapter III. It is there that all elements discussed are greatly elaborated.

1.11. ORGANISATION OF THE REMAINDER OF THE THESIS

In Chapter Two, a review of literature related to the study has been presented. This chapter contains two major sections, namely theoretical framework and studies on self-concept. In the former, a framework upon which the study is based is given. Sub-topics on self-concept, academic performance socialization and the role of school and teachers in the development of self-concept are discussed. Studies done on self-concept both outside and within Kenya are given in the second half of Chapter Two.

Methodology of the study is treated in Chapter Three. This chapter contains discussion of the study design, namely ex post facto and details of sample selection, administration of the instruments and the statistical precedures used in the data analysis. In Chapter Four, data was analysed using

the statistical techniques discussed in Chapter Three. Interpretation of the findings were also provided in this chapter.

The last chapter discusses the conclusions arrived at based on the findings. The implications of the study to the educational practice and recommendations for further research in this area of students' self-concept of academic ability were suggested.

FOOTNOTES TO CHAPTER ONE

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2. Kinyanjui, K. 'Education, Training and Employment of Secondary School leavers in Kenya'. In Court, D. and Ghai (Eds.). Op.cit. pp. 52-54.

3. Ibid., p. 52.

4. International Labour Office. Employment, Incomes and Equality: A Strategy for Increasing Productive Employment In Kenya. (Geneva: I.L.O. 1972,)p. 69.

5. Gachathi, P.J. (Chairman), Republic of Kenya, National Committee on Educational Objectives and Policies. Nairobi: Government Printer; 1976, p. 62.

6. See Appendix E; Results of Schools In order of Merit 1978-1984.

7. See studies by:-

(i) Eshiwani, G.S. 'Factors Influencing Performance Among Primary and Secondary School Pupils In Western Province of Kenya'. Bureau of Educational Research, Kenyatta University College, 1983.

(ii) Kathuri, N.J. 'Factors that influence the performance of Pupils in C.P.E. Nairobi'. Bureau of Educational Research. Kenyatta University College, Research Paper No. 1093, 1982.

(iii) Mukras, M. 'An Input-Output Model for secondary school examination performance'. Journal of Eastern African Research and Development Vol. 9, No. 1, 1979 pp. 58-66.

(iv) Okumu, K.B. 'An Investigation into the Cause of Poor School Performance on C.P.E. in Kakamega District, Western

Province, Kenya'. Unpublished M.Ed. Project, University of Nairobi, 1981.

8. Maundu, J.N. 'A Study of the Relationship Between Kenyan Secondary School Pupils' need to achieve and their performance in selected schools subjects'. Unpublished M.A. Thesis. University of Nairobi, 1980.

9. The Standard Newspaper, 11th February, 1984, p. 3. Column 3.

10. The Standard Newspaper, 12th February, 1981, p. 5. Column 2.

11. The Standard Newspaper, 6th March, 1982 - p. 3. Column 6.

12. See studies by Eshiwani, Kathuri, Mukras and Okumu, op.cit.

13. Ibid.

14. Weekly Review; 15th April, 1984. P. 2. Column 2-3.

15. Maritim, E.K. 'The Academic Self-Concept and the Teachers' Perception: Their Relationship to Pupils Grade Attainment in Rural Kenya'. Unpublished Ph.D. Thesis, Havard University, 1979.

16. Ibid.,

17. Ibid. and Mwaniki, M.K. 'The Relationship Between Self-concept and Academic Achievement in Kenyan Pupils'. Unpublished Ph.D. Thesis: Stanford University, 1973.

18. The sample of students is relatively large and schools were selected randomly and difference in I.Q. therefore cancelled out among different individual students.

19. Kerlinger, F.N. Foundation of Behavioural Research. (New York: Holt, Rinehart and Winston; 1973); pp. 379-392.

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CHAPTER TWO

REVIEW OF RELATED LITERATURE AND THEORY

2.01. INTRODUCTION

This chapter contains two major sections. The first half gives a general outline under the heading theoretical framework of the study.

Under theoretical framework the following aspects are discussed:

(i) Self-concept

(ii) Academic Performance

(iii) Symbolic Interactionism Theory

(iv) Socialization

(v) The role of school in the socialization process

(vi) The role of teachers in the socialization process

The second half of this chapter gives an outline of the researches that have been done on self-concept and its relationship with academic performance.

2.02. THEORETICAL FRAMEWORK OF THE STUDY

2.03. SELF-CONCEPT

Definition of self-Concept

Since the 1940s, problems related to self-concept have surged forth as indispensable and legitimate topics for scientific study in sociology and psychology.[1] However, it should be noted that there is no one universal definition of the term self-concept as different experts have been involved in defining the term. Some of the various definitions that have been put forward are discussed below.

Mwaniki defined the self as conveying a person's attitudes, feelings and perceptions of himself as an object. In other words, it is like someone standing outside of himself and evaluating what he sees from a more or less detached point of view. In this sense, the self is what a person thinks of himself.[2]

Jersild defined self-concept as:

> ... a composite of thoughts and feelings which constitute a person's awareness of his individual existence, his conception of who and what he is.[3]

He went on to add more meaning to the term self-concept when he said that:

> The self includes, among other things, a system of ideas, attitudes, values and commitments. The self is a person's total subject environment. It is a distinctive centre of experience and significance. The self constitutes a person's inner world as distinguished from the other world consisting of all other people and things.[4]

Thus following the definition given by Jersild, the self is the individual as known to the individual.

One of the earliest people to mention the self was William James. James analyzed the self in terms of its constituent parts as the sum total of what the individual considers himself, including his body, his traits, characteristics, abilities, aspirations, family, work, possessions, friends and other social affiliations.

Thus, according to James, a person's self is the "sum total of all that he can call his". He went on further to distinguish the self as partly the known and partly knower, partly object and partly subject. These he called the "me" and the "I" respectively. That is, the self as known he called the "me" and the self as knower he called the "I".[5]

Another definition of self-concept has been given by Colin Rogers. According to him self-concept is:

> ... the description that a person would give of themselves if asked to do so or prompted to do so by circumstances.[6]

Finally Purkey provided another useful definition of the self. He says that the self is:

> ... a complex and dynamic system of beliefs which an individual holds true about himself, each belief with a corresponding value.[7]

However, despite these variations in the definitions of self-concept, several notions appear to be common to all. First, all the definitions encompass the fact that self-concept includes the way a person sees himself/herself. Secondly, self-concept will encompass the evaluation which the individual makes and maintains with regard to him/herself; it expresses an attitude of approval or disapproval, and indicates the extent to which the individual believes himself to be capable, successful and worthy. Thus all definitions express either implicitly or explicitly the fact that self-concept is a personal judgement of worthiness that is expressed in the attitudes the individual holds towards himself/herself.

Since self-concept is a measure of an individual's worth about himself, it follows then that self-concept cannot be directly observed. It can only be inferred from a person's self-reported data. Thus an individual's self-concept is not open to direct observation by a researcher. This means that researchers have to approach the

investigation of self-concept by the process of inference. By far the most popular method of evaluating the self-concept is the self-report: the subject is simply asked to provide information about himself, usually in form of a verbal response or some sort of choice response.

2.04 THE DEVELOPMENT OF SELF-CONCEPT

Self-concept is not innate as are the individual's biological urges such as hunger and sex. That is, one is not born with a self-concept about himself/herslef. Self is the product of interaction, from infancy onward, with the individual's physical and social environment. This interaction is, associated with things like pain, resistance, acceptance, rejection and gratification.[8]

However, it should be noted that the self develops from a simple one to a more complex one as the individual matures. Thus the self is a developmental formation consisting of interrelated

attitudes that the individual has acquired in relation to his own body and its parts, to his capacities and to objects, persons, family, groups, social values, goals and institutions all of which define situations and activities.[9]

Based on the above notion, then, the self is essentially a social product arising out of experience with people. Thus self-concept is primarily a product of social interaction. An individual learns the most signficant and fundamental facts about himself from inferences about himself made as a consequence of the ways he perceives others behaving towards him. We learn from the way we are treated by those who surround us; in our earliest years by our families and in later years by all those people with whom we come in contact. This has implication for educational practice. Students will learn about their academic abilities from their teachers with whom they interact in school. Hence they will ultimately develop a positive or a negative self-concept of their academic abilities depending on the teachers'

treatments. Early experiences by a student are likely to be highly important in determining the self-concept because they limit the possibilities of later experiences.

Among those who have emphasized the social origins of the self is Mead. He said that:

> The self... is essentially a social structure, and it arises in social experience... it is impossible to conceive of a self arising outside of social experience.[10]

Thus according to Mead, the self is made up of reflected appraisals. The earliest experiences which influence the development of the self are experiences with people. The child's earliest self-appraisal is in terms of what others think and feel about him. Mead therefore concluded that the origins of the self are in the hands of "significant" people.[11] Thus from the reactions of others in our social relationships, we find out what we ourselves are. Our self-concept is formed on what we think others' reactions are to us.[12]

Another exponent of the social origins of the self is C.H. Cooley. Cooley's notion of the "looking-glass self" stresses that a person's self-concept depends very much on how important the individual interprets the reactions and opinions of people important to his environment. The 'looking-glass self' is an important determinant of self-concept of academic ability. Cooley concluded that the notion of the generalized other is an important determinant of the self-concept in the looking-glass tradition. The essence of this idea is that interaction in a social relationship is impossible for the individual unless he is capable of putting himself in another person's place, so that he can perceive how the second person will act."[13]

In conclusion, therefore, it can be said that the self is acquired. It is not ready-made. It develops as the individual grows, with his inborn abilities and all that is inherent in his make-up. The development is influenced strongly by his relationships with other people.

The development of the self is influenced by the child's growing powers of perception and in time, by his ability to imagine to form large and comprehensive concepts, to appreciate values and commitments and to take the stand for or against.[14] Thus in general, the self-concept is as dependent on biological inheritance as upon any environmental influences.[15] Finally, it can be said that the development of self-concept is a gradual, never ending social process in which we learn about ourselves through interaction with others.[16]

2.05. SELF-CONCEPT OF ACADEMIC ABILITY

Following the discussion of the development of the self-concept in general, this section examines the self-concept of academic ability which is the central focus of this study.

In order to show the relationship between the general self-concept and the self-concept of academic ability a hierarchical model has

been presented in Figure 1. In this figure, it can be seen that a general self-concept exists at the top of the hierarchy. At the lower levels, differentiated and specialised elements emerge. Thus an academic self-concept is part of a general self-concept and would in turn have its own components, for example, self-concept of mathematical ability, Geography, English, History and others. (see Figure 1). It is from such basis that the four school subjects used in this study are selected to help understand the self-concept of students academic ability.

Each of the elements shown in Figure 1 would have its own associated value, that is, its own importance in a person's self-concept. That is, some elements would be positively evaluated, implying a positive self-concept, and others would be negatively evaluated, implying a negative self-concept. For instance, an individual may consider his negative self-concept as a Mathematics student to be unimportant but his positive self-concept as a Geographer to be of special significance. Another

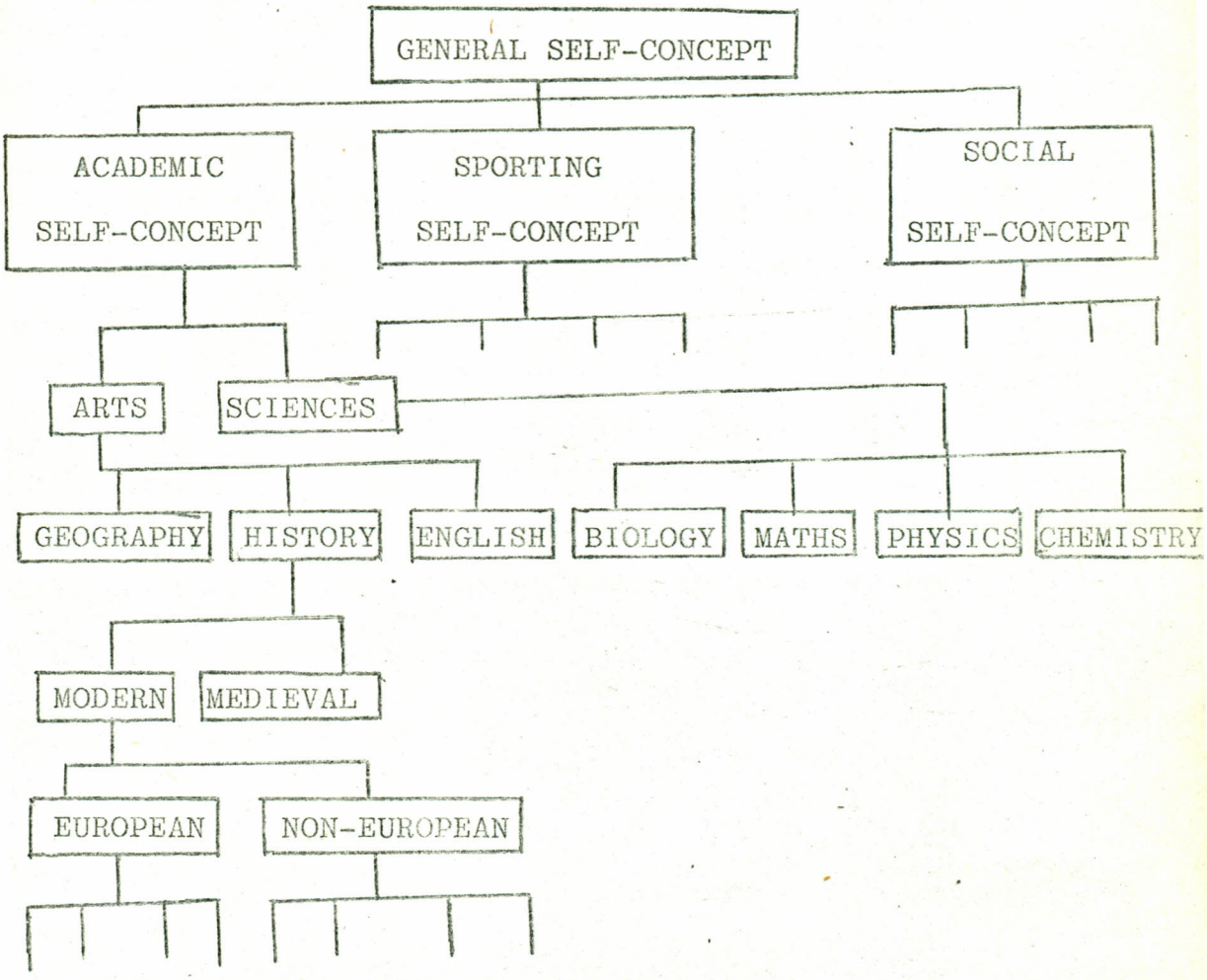
one might be greatly concerned about his low self-concept as a Mathematician but in the least bit impressed by his belief that he is talented in Geography.

Rogers noted the significance of the hierarchical model when one considers the development of the self-concept and its relationship with academic attainment. He said that:

> ... development must be in the direction from the general to the specific, with the more specific components of the total self-image only being formed as the individual begins to engage in relevant activities.[17]

This has an implication in education because pupils start with general subjects in primary schools and proceed to specific ones in the secondary schools. Hence in secondary schools, students will have developed specific academic self-concepts not only in the subjects that have been selected for this study, but also in the other school subjects.

FIGURE 1: THE HIERARCHICAL MODEL OF THE SELF-CONCEPT: AN ILLUSTRATIVE EXAMPLE



SOURCE: Rogers, C. A Social Psychology of Schooling. London: Routledge and Kegan Paul, 1982, p. 145.

2.06. IMPLICATIONS OF SELF-CONCEPT FOR EDUCATION

Self-concept of academic ability has implications for teaching and learning. As will be seen later in this chapter, self-concept influences to a large extent the level of educational performance of students. It has already been indicated that self-concept is learnt and develops as the individual grows. Thus, as a developing part of an individual's personality, it becomes necessary to include it in the theory and practice of teaching and learning.

The self functions in learning, particularly when it relates to motivation. People are motivated to maintain an image of themselves that is positive. Further, a major component of positive self-image is the view that one possesses a high level of ability.

The implciations of self-concept for school performance was noted by Nash when she

said that:

> A child who thinks well of himself will want to keep up his ideas of himself (maintain his self-concept), he will almost certainly regard the teacher as a 'significant other' and will wish to be favourably perceived by her, he will want to live up to the expectations she will have for him and in turn her reactions towards him are likely to become more favourable.[18]

Again, in contrast, Nash expressed the following concerning those students who have a negative self-concept:

> ... the child who does not think well of his abilities in school will tend not to do well. He may feel ashamed of his poor abilities and might even despair, or... he may want to maintain his idea of himself as someone who is not good at school work, he will probably not regard the teacher as a 'significant other' and will be less concerned with being favourably perceived by her. He will tend not to try very hard in class...[19]

Nash's argument comply with the general belief that people with positive perceptions (self-concepts) of their ability approach achievement tasks with

confidence and high expectations for success and consequently perform well in these tasks.[20] This is because, in performing a task, the level of performance is not determined solely by the nature of the problem (difficulty or ease), but other factors may come in to play a significant role. These include the goals one has set for himself in general, the place of the particular task in one's scheme of goals and one's standing relative to others. All these which can be grouped under self-concept may exercise a significant effect (influence) on one's performance.

The argument presented above is likely to happen in a school setting with regard to self-concept of academic ability. Thus, students with strong self-evaluations who fail, may criticize the test rather than blame themselves. On the other hand, students with negative self-images may continue to think negatively about themselves. This may lead to a difference in the academic performance of the two groups.

By way of conclusion, it can be said that self-concept theory has a role to play in academic performance of students since the self-concept is learned, it can be altered or enhanced through learning opportunities. Self-concept theory suggests that a person will "act like" the sort of individual he conceives himself to be. For example:

> ... a student who views himself as poor in Mathematics not only internalizes that perception, but he is also likely to project it in his behaviour. ... this usually leads to poor performance and ultimately leads to further evidence to support his negative self-concept.[21]

Thus, low performances in school may be due in part to negative perceptions of one's self-concept. Many students in school do poorly because they have learned to consider themselves unable to do academic work. For instance, if a student says, "I will never pass that test, I just, know it", he is expressing something not only about his potential behaviour, but he is also reflecting something about how he feels about himself. All things being equal,

chances are good that a student with this attitude probably will not do well on the test. Thus how a student performs may depend not only on how intelligent he actually is, but also on how intelligent he thinks he is.[22]

2.07. ACADEMIC PERFORMANCE

This part of the literature review begins by defining academic performance. Lavin defined academic performance as follows:

> The term 'academic performance' refers to some method of expressing a student's scholarstic standing. Usually this is a grade for a course, an average for a group of courses in a subject area; or an average for all courses expressed on a 0-to-100 or other quantitative scale.[23]

Throughout the entire education system in Kenya, that is, from primary school to the University, the measures of an individual's academic success are the grades one obtains in examinations. The grades provide the means by which a student's success is reported to the student, to his parents,

to prospective employers and to higher educational institutions such as the University and the Diploma Colleges. For this reason, good performance in school examiantions is held with high esteem by both the student and his/her parents.

However, it should be noted that there may be some connection between an individual's academic performance and his self-concept. This is because what a person thinks and how he behaves may largely be determined by the concepts he holds about himself and his abilities.[24]

2.08. SYMBOLIC INTERACTION THEORY

Definition of Symbolic Interactionism

Before a particular study can properly be understood or related to other work, it is necessary to know at least something of its underlying theoretical assumptions.[25] The theory upon which the study was based

is that of symbolic interactionism. The theory as developed by G.H. Mead is very much concerned with the idea of the self. Mead attempted to show that the human self arises in the process of social interaction.[26]

Symbolic interaction has been defined differently by different authors. In one case it is defined as:

> ... the process by which individuals relate to their own minds or the minds of others; the process, that is, in which individuals take account of their own or their fellows' motives, needs, desires, means and ends, knowledge and the like.[27]

Contained in the definition given above is the term symbol. This was defined by Rose as:

> ... a stimulus that has a learned meaning and value for people, and man's response to a symbol is in terms of its meaning and value rather than in terms of its physical stimulation of his sense organs.[28]

Another component of the term symbolic interaction is interaction. This was defined by Stone as:

> ... the relationship between the Self and certain others.[29]

Thus according to Blumer symbolic interaction refers to the peculiar and distinctive character of interaction, as it take place between human beings. The peculiarity consists of the fact that human beings interpret or define each other's actions instead of merely reacting to each other's actions. Their response is not made directly to the actions of one another but instead is based on the meaning which they attach to such actions. Thus, human interaction is mediated by the use of symbols.[30]

The relevance of the theory to the present study lies in the fact that in a school setting there exists social interaction between the teachers and the students. The students will interpret their academic abilities with reference to how

the teachers treat them. Thus the self-concept of academic ability that a student holds may be influenced considerably by how the teacher treats or sees the student's ability.

One important element, in the theory of symbolic interactionism is the use of language. Infact the name of the theory comes from the belief that the use of words provides the basis for relationships among men. Words have meanings given to them by society, and elicit common and meaningful responses among those who share the words.[31] Thus, through language the child can take the role of other persons and guide his behaviour in terms of the effect his contemplated behaviour will have upon others.

Mead, one of the leading exponents of symbolic interactionism has been particularly important in elaborating the origins of the self-concept. The self is is seen to have its origins in social interaction.[32]

Symbolic interactionism assumes that people respond to the environment in terms of the meaning

that the environment has for them, and that these meanings are determined by the process of social interaction. Thus according to symbolic interactionists, the Self is an object that is given meaning (defined) through the process of social interaction.[33]

The subject of symbolic interaction has important implications for the present study in the sense that relevant attitudes of significant others such as parents and teachers, can eventually be taken as attitudes that one holds towards oneself. Thus, if the significant people in one's life interact with him/her in a manner that suggests that they hold favourable attitudes towards him/her, then one will come to hold favourable attitudes toward himself/herself and vice versa. For example, if a teacher holds a low opinion about a student that he/she cannot do well in a school subject, then with time, that particular student may come to hold a similar attitude (opinion) and probably do poorly in that school subject.

Symbolic interactionism as developed by Mead states that the self emerges through the active process of a person accepting on his own the ideas about himself and what he perceives others to hold. Mead called this process 'taking the role of the other' and it describes how the child comes to have ideas about himself.[34] That is, how the child comes to have self-concepts which are similar to those his significant others have for him. These self-concepts held by children may have a measurable effect on their school performance.[35]

Mead treated the individual as being both subject and object at the same time. He showed that the personality of the individual emerges from the process of socialization through the interplay between these subjective and objective aspects. Mead made a further distinction between "I" and "Me". He distinguished the 'I' and 'Me' as follows:

> The 'I' is the response of the organism to the attitudes of the others; the 'Me' is the organized set of attitudes of others which one himself assumes. The attitudes of the others constitute the organized 'Me' and then one reacts toward that as 'I'.[36]

Mead went on further to explain that as a 'Me', the individual views himself or herself as an object. The individual reacts or responds toward the self in terms of the attitudes others have toward that self. This results to self-appraisal, which is the result of what the individual assumes to be the appraisal by others. Hence, the 'Me' reflects the laws and mores of the broader community. The 'I', however, represented "the answer which the individual makes to the attitude which others take toward him when he assumes an attitude toward them.[37] Thus the self as whole is a compound of both the stabilized reflections of the 'generalized other found in the "Me" and the incaculable, spontaneous activities of the "I". As such it is always an open self.[38]

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2.09. THE RELEVANCE OF SYMBOLIC INTERACTIONISM THEORY TO THE PRESENT STUDY

After explaining what the general theory of symbolic interactionism is all about, it is appropriate to assess or discuss its relevance to the present study, that is, how the theory may relate self-concept to academic performance. First, it was noted earlier that, the self emerges as a result of social interaction.

It has been suggested that the academic self-concept is an important variable affecting educational progress. The concept is derived from the symbolic interactionist theory of G.H. Mead; who suggested that individuals construct a 'Me' for each distinct social setting in which they find themselves.[39]

In each classroom, therefore, the student must construct a self-concept and a pattern of behaviour consistent with the expectations he perceives others to have for him. Through his interactions with others his conception

of himself in relation to others and the conceptions others have of him are realized. Interactions which convey praise, respect and understanding lead to mutual liking and positive self-evaluations, whereas interactions which convey criticism and rejection create self-derogatory evaluation.[40] Thus, in a school setting, teachers should endeavour to encourage the former type of interactions. This will lead to a positive academic self-concept amongst the students and consequently improved academic performance. The latter, will lead to demoralization of the students and hence poor academic performance.

Mead's writings have especially impressed the people concerned with the role of self-concept variables in determining educational performance. First, Mead's model assumed that the self plays a determining role in human activity. The meaning that the self has for an individual will determine in part, at least, the way in which that individual behaves. Secondly, the very strong emphasis placed upon the social origins of the self-concept point to the experience of school as a potential source of self-definitions. Thus the self-concept can be seen

to be partly a product of the experience of schooling.[41]

The interactionist theory predicts that students perceived unfavourably by their teachers will develop unfavourably self-concepts. In turn these unfavourable self-concepts will be reflected in the low class ranking these children will believe themselves to be capable of attaining. Conversely, the theory predicts that students favourably perceived will believe themselves to be highly placed in the class.[42] This could be partly explained by the fact that what a person believes about himself will form part of his motivational structure. Thus, for those students who are perceived favourably, they will be motivated to do well, Conversely, those students who are unfavourably perceived, will be less motivated to do well in school.

Relating the above notion to the present study, one can conclude the following: that when a student is admitted in a school which continually does well in an examination such as the KCE he may become

motivated to do well and eventually end up doing well. On the other, those students who are admitted to schools which repeatedly do poorly in KCE examination, they may be least motivated to work harder and at the outset see themselves as failures and hence end up performing poorly.

Symbolic interactionists argue that a child would come to take upon himself the attitudes towards him that he sees being expressed by various significant others. So the child who comes to acquire a strong and positive self-concept will have the self-confidence to tackle new tasks, will be more likely to believe that he is capable of fulfilling the tasks successfully and will be less likely to experience high levels of anxiety concerning the possibility of failure. This will lead to higher levels of attainment on school-related tasks. Thus, self-concept determines levels of attainment, and self-concept can be determined by the actions of 'significant others' (for example teachers). This being so, teachers could enhance academic attainment by behaving in such a way as to enhance pupils' levels of self-esteem which in turn would enhance attainment.[43]

Brookover, supports the symbolic interactionists' view of the self-concept and academic attainment relationship by stating that the perceived evaluations of a pupil by others will determine the self-concept of that pupil, and the self-concept will play a determining role in setting levels of academic attainment.[44]

Conclusion

It can be concluded that symbolic interactionism theory is powerful approach to the study of academic performance and self-concept relationships. This is because the theory is much concerned with the idea of the self. In itself, the self-concept reflects a student's level of academic attainment. Thus, a student who does well in school comes to form a strong positive self-concept concerning his/her academic ability. While the one who does poorly will form a negative self-concept concerning his/her academic ability. This is because what a person thinks and how he behaves are largely determined by the concepts he/she holds about himself/herself and his/her abilities.

2.10. SOCIALIZATION

Definition of Socialization

It was mentioned earlier that self-concept is a learned phenomenon. Socialization encompasses learning. For this reason, self-concept will encompass the elements of socialization. Hence we cannot discuss self-concept in isolation from the socialization process.

Socialization has been defined in many ways by different people. Socialization process is one during which the individual becomes a social being. It is a process where one acquires norms, values, and behaviours that are deemed necessary for the proper functioning of the individual in the society. Thus socialization integrates the individual into the community by teaching disciplines, skills, aspirations and social roles.[45]

Brim defines socialization as "... the process by which individuals acquire the knowledge, skills and dispositions that make them more or less able members of society"[46] Thus socialization is concerned with preparation for participation in group (society) life: with discovering how individuals learn to participate effectively in social setttings; with learning of culture and fitting the individual into an organised way of life.[47] This notion of socialization links directly with the development of self-concept because it entails social interaction which is a central theme in the development of self-concept as discussed in earlier sections.

Other definitions of socialization have been advanced. In one of them socialization has been defined as:-

> ...the process in which an actor is trained to engage in any or all types of symbolic interaction or communication.[48]

This definition links socialization with the general theory upon which this study is based; namely, symbolic interactionism. The link has been further strengthened when the author noted that:-

> Through symbolic interaction the individual learns to use and develop generalized codes that interrelate a conception of the particular other with generalized categories and collectivities. This is the foundation, in the process of socialization, of the internalization of cultural, as well as social system, which in turn come to be differentiated from each other.[49]

According to this definition socialization has an important function to play in the development of an individual's self. This is because, to understand the origin of an individual's self-concept, one must also take into account the pattern of interaction in which the child is socialized. However, the point of interest for the present study is the particular aspect of self-concept as it relates to school academic performance.

Another definition of socialization has been put forward by Biddle who defined socialization as:

> ... those learning processes that lead to greater ability of the person to participate within a social system- either through understanding it or by conforming to it inadvertently.[50]

Thus according to Biddle socialization will lead to an individual's change in behaviour and consequently enable the person to acquire greater ability to participate in a social system. This is in accordance with the summary given by Brim, O. (Quoted in Biddle) who said that:-

> The function of socialization is to transform the human raw material of society into good working members.[51]

From the definitions given above, it can be seen that socialization cannot be dispensed with in the present study. However, it should be noted that socialization of individuals does not occur only in secondary schools, which is the focus of the present study. Socialization is a life long process. This is because individuals are continually entering

new interactional systems, taking on new roles and acquiring new knowledge, skills and attitudes as they join and participate in new social groups.

Socialization takes place in a variety of institutional contexts. These include the school, the church, family, work groups, the mass media and so on. Of primary importance in the socialization process of the youth are the family and the school. In these two institutions, the individuals acquire the necessary social skills that will enable them to be well functioning members of their society and on how to adjust to societal demands and values. For the present study the main concern is the notion of socialization in school as it relates to the development of self-concept.

1. THE RELEVANCE OF SOCIALIZATION TO THE PRESENT STUDY

The relevance of the discussion of socialization process to the present study lies on the general notion that socialization procedures affect the formation of the self-concept.[52] The self-concept may, in turn influence the student's learning in

school.[53] This could be so particularly if one remembers that an individual may come to behave in the ways that he perceives others around him expect and define as appropriate for them. Thus, for example, in a Mathematics class if the teacher defines for a student that he is poor he may start to behave accordingly and vice versa. This feeling was expressed by Roth, who investigated the role of self-concept in achievement. He concluded that:-

> ... in terms of their conception of self, individuals have a definite investment to perform as they do. With all things being equal, those who do not achieve choose not to do so, while those who achieve choose to do.[54]

Following from this, it is likely that those students who perform well will be motivated to do even better. On the other hand, those who see themselves as failures may probably do poorly in school work. How an individual sees himself, will to some extent depend on how he is perceived by significant other people, for example, teachers and parents. This is an important aspect in the socialization process.

The school plays an important role in the socialization process. Some of the significant others who influence the students are the teachers. Each of these is discussed in the next pages.

2.12. THE ROLE OF THE SCHOOL IN THE SOCIALIZATION PROCESS

Other than the home, the school is the other important institution in which socialization takes place. Schooling has been defined by Biddle as:-

> ... the appearance of organized instructional activity in which the position of the teacher is differentiated from other positions in the system and given the explicit task of socializing neophytes.[55]

From the above definition one can see the importance of the school in the socialization of students. One way of appreciating the school's potential for socialization lies in the simple reckoning of the amount of time the youngsters spend in school and in activities related to the school.[56] The youngsters

spend a lot of time in schools from morning to evening in case of a day school and for boarding schools they stay for a duration of about three months. Obviously, during this time the student acquires a lot from the teachers and his/her fellow students. Due to this fact the school becomes an important agent of socialization.

The school performs several parts in the socialization process in each society. Schools are expected to nurture, shape or mould pupils in ways that ensure the attainment of certain prescribed attitudes and skills. Thus, creating academic mastery, teaching social interaction skills, helping students develop societal commitment and loyalty are examples of goals that schools reasonably might be expected to attain.[57] All these are aspects of socialization. However, the present study is limited to the first one of creating academic mastery.

The Kenya Government has realized the need of schools in socialization of the young. This can be seen in various Government documents concerning the Education System in Kenya.[58] The objectives of the education system of Kenya state in part:-

(i) Education must prepare and equip the youth of the country so that they can play an effective role in the life of the nation, whilst ensuring that opportunities are provided for the full development of individual talents and personality.

(ii) The educational system must respect and develop our rich and varied cultures.

(iii) Education must train in social obligations and responsibilities.[59]

It was noted earlier that the self has a social origin. This fact has important implications for education because many of the strongest social influences are brought to bear upon the student by way of his experiences at school. Thus the school offers new opportunities for self-discovery and for the realization of one's potentials. In other words, the school offers opportunities for the development of one's self-concept. This idea was acknowledged by Rogers when he concluded that:-

> ... the young child will enter school for the first time with only a rudimentary self-concept, especially as far as an academic self-concept is concerned.[60]

But with the passage of time in school, the child will begin to develop more specific aspects of self-concept. The children will begin to form images of themselves as school pupils. So the child gradually comes to see himself as being relatively good or bad in school generally, and as having varying degrees of ability in different subjects. Thus, in school children will develop attitudes towards themselves in respect to their abilities at school work in general and, more particularly they develop specific attitudes towards their ability in specific subjects such as Mathematics and English.

In support of the development of self-concept in School Staines said:

> The self emerges and develops as a factor within the personality and continues to develop as a learnt result of ordinary classroom activities...[61]

On the idea of an individual learning or developing specific self-concepts of ability Staines noted:-

> A boy says with satisfaction, 'I am good at Arithmetic'. He has learnt that he has at least one skill and has learnt a positive attitude to that aspect of himself. He adds, 'I am better at Arithmetic than at English', showing that he has also learnt a hierarchy in the knowledge and skills included in his self-picture,. . he finds this aspect of himself a source of satisfaction.[62]

Thus according to Staines, "the self is perhaps, the most influential fact learnt in a day's work in school.[63]

Conclusion

In general, it is clear that during the school years pupils will develop certain ideas about their self-concepts of academic ability which may in turn be reflected in school performance. Thus, in short, it can be said that for many young people, the school is second only to the home as an institution which determines the growing individual's concept of himself as it relates to academic ability. This is because, in a school setting, the student not

only learns about things and ideas but also learns about himself. It is here that a student is constantly reminded by either his teacher or peers of either his failures and shortcomings or of his strengths and possibilities.

2.13. The Role of Teachers in the Socialization Process

Teachers in schools represent the adult world and are therefore very important agents of socialization. They act as role models to the pupils. Therefore, teachers can have an improtant influence on the pupil's behaviour and the formation of his values and attitudes. The importance of teachers in a school setting was noted by Brookover, when he said:

> The teaching staff of the school, representing the community, reflects the aspirations shared by parents and the general population.[64]

There seems to be a general belief that what pupils feel and think can be manipulated by the teachers.[65] In other words, the teachers can manipulate the self-concept held by students. This is done through a system of interaction between the teachers and the learners. The interaction takes place as teachers pass on knowledge and skills to the learners. It is during this interaction that the teacher expresses his feeling about the ability of the students he teaches.

The attitudes a teacher has towards individual students is important in the development of the latter's self-concept of ability. This is based on the notion that the self-concept of most people will be found to have many elements of similarity with what other people think of them. Further, what an individual thinks others think he is like is of course learnt from the behaviour they portray towards him. For example, a child who is regarded by his teachers as capable may tend to adopt as his own much of the teacher's definition of him.

Samuels noted the improtance of teacher attitudes when he said that:

> ... positive teacher attitudes transcend methods, skills, techniques, performance, and competencies.[66]

Thus, a teacher can have an enormous influence on a student's self-concept by overtly expressing his attitudes towards the student. Teachers can either help students recognize their strengths and abilities or they can constantly remind them of their shortcomings and weaknesses. But if the teachers' aims are to improve the students' academic performance, they should aim at the former.

A prime focus of this study asked teachers how they perceived their students' academic ability. This is very important because a teacher's perception of indivdiual students may be translated into expressed attitudes. Thus the behaviour of students in classes where they are perceived unfavourably by the teacher will be different from their behaviour in classes where they are perceived favourably. This fact could have an effect on the pupils academic

performance. As Nash pointed out that:

> The teacher's expectations of the pupil will affect his academic behaviour in so far as his teacher's interactions with him contribute to his self-concept.[67]

Teachers perceive their students in ways that lead them to forming clear expectations for those students and in some way communicating those expectations to the students. For example, in a research by Barker Lunn, it was found that teachers did not particularly enjoy teaching low ability children. One teacher remarked, in front of the class 'I don't like teaching dull children; I wasn't trained, to teach them. Those are my bright children over there..., the average are in the middle and the dull children are over there.[68] Here the teacher has shown clearly through verbal communication the perception he has for the students. The students on their part, know their ability based on the teacher's estimation. Thus, the teacher by his perceptions about students may have contributed to the development of a negative self-concept among the dull children and a positive self-concept on the

part of the bright children. This could in turn be reflected in academic performance.

In support of the fact that what a pupil believes about his abilities can be reflected in his/her academic performance, Pidgeon said:

> ... pupil's conception of his own capabilities will also influence his performance. If he is led to believe that he is capable of little, that is, has low expectations for himself, he will have little self-motivation and will, infact, achieve little.[69]

Thus a teacher's behaviour and attitude towards his/her students may influence the performance of the students by affecting the students' self-concept. For example, teachers frequently use such phrases as 'You want to become number one, don't you? Then you will have to try hard'. The appeal here is to maintain or enhance the status of some aspect of the self (positive self-concept) and the child who accepts the importance of this aspect of the self will make vigorous and persistent efforts in the desired direction to improve his performance. Such ideas of the part played by

teachers in the academic performance of pupils through influencing self-concept development led Lavin to conclude that:

> A student's grade is more than something that characterizes him as does his score on a personality inventory or an intelligence test;... rather a grade should be viewed as a function of the interaction between student and teacher.[70]

For this reason, good teachers should be able to make reasonably good predictions of the performance capabilities of their students.

The people who are perceived as being significant by a student are the ones who are likely to have an influence upon the way the student comes to perceive himself. Among these significant people are the teachers. The student will have to have some understanding of how the teacher sees him. That is, how he stands in the eyes of his teacher. This perception will give rise to changes in the student's self-concept. These changes in self-concept may in turn give rise to changes in the level of academic performance.

The deduction made above is true if it is remembered that a child's self-concept is a reflection of the atttidues that the child sees others to hold towards him, and this self-concept will have a determining effect upon the child's behaviour. So, if a teacher has unfavourable attitudes towards the child, the child will notice these, incorporate these into his self-concept and begin to act accordingly. Therefore, teacher expections may become transformed into pupil performance.[71]

The above notion stems from the ideas of symbolic interactionism (discussed earlier). Thus, an individual builds up a self-concept based upon the views of himself that he sees others as having. This self-image is seen to be a motivating force, for example, towards school work. An individual is strongly motivated to behave in ways that are consistent with his self-concept, for example, the student who comes to believe that he is held in low esteem by his teachers will come to hold herself in low esteem also and consequently behave accordingly. The same process helps to ensure that the child who sees herself as being highly valued by her

teachers tends to do well.[72]

Thus, the student who perceives her teachers to have high expectations for her, develops high levels of confidence and is highly motivated. On the other hand, the pupil, who perceives that his teachers have low expectations for him, develops low levels of confidence and motivation. These two types of behaviour may eventually lead to relatively high and low levels of academic success respectively.

Conclusion

In conclusion, teachers should endeavour to raise the levels of attainment of their students. This they can do by behaving in a such a way as to enhance the student's levels of self-concept which, in turn would enhance academic performance. Therefore, if a teacher can change the academic, self-concept of his students, he is likely to bring about changes in learning through changes in motivation. This is because:

> "... the attitudes a pupil comes to develop towards herself as a pupil, and the attitudes that she acquires to the challenges provided by the school, are likely to be important

> determinants of that pupils academic progerss...[73]

For this reason, teachers should be aware of the self-concept held by their students, in order to be able to increase the effectiveness in their teaching.

However, it should be noted that teachers will encounter problems in attempting to change a student's self-concept. This is particularly so if a child has already built a negative academic self-concept about himself. Hence, care must be exercised to achieve this. One alternative is to use much praise and encouragement to be able to change the academic self concept from a negative one to a positive one. This can be achieved by teachers who are effective in their teaching career. Effective teachers differ from less effective ones when it comes to perceptions of others. In relation to this, effective teachers have been characterized by Ganfield[74] in the following ways:-

(i) They seem to have a generally more positive view of others - students, colleagues and administrators.

(ii) They are not prone to view others as critical, attacking people with ulterior motives, but rather see themselves as potentially friendly and worthy in their own right.

(iii) They have a more favourable view of democractic classroom procedures.

(iv) They have the ability and capacity to see things from the other person's point of view.

(v) They do not see students as persons "you do things to" but rather as individuals capable of doing for themselves once they feel trusted, respected and valued.

Thus, if teachers behave in a way consistent with the principles and characteristics enumerated above, their teaching would build their students rather than destroy them.

2.14. STUDIES ON SELF-CONCEPT AND ACADEMIC PERFORMANCE

Introduction

The literature concerning the relationship between students' self-concept and their academic ability has increased in recent years. This section reviews some of the studies that have been conducted under the follwoing headings:-

(i) Studies at the primary school level.

(ii) Studies at the secondary school level.

(iii) Studies at the College/University level.

2.15. STUDIES AT THE PRIMARY SCHOOL LEVEL

Caplin[75] conducted a study to show the relationship between self-concept and academic

achievement in three elementary schools. To measure self-concept he used self-reports to obtain the data. Fifty items were selected which seemed to present clear examples of self-concept definitions. Other items, describing pupil ability were also included.

The sample consisted of 180 intermediate grade children from three elementary schools. Equal number of children from the three types of schools was selected, that is, thirty children from each school. All the children were matched on the basis of age, sex, grade, intelligence, race, and socio-economic status.

Analysis of variance were computed on the scores obtained from self-report instrument administered and correlations between these scores and achievement scores were calculated. It was found that the children having high self-concepts had higher academic achievement. Further, the scores on the self-concept instrument and scores on the achievement test showed a significant correlation of 0.52. This finding lends strong support to the significant positive relationship between self-concept and academic achievement. From this finding it could not be said

that academic achievement is determined by the self-concept. But, while a correlation does not imply a cause-effect relationship, it does at least give educators the reason to look for a cause-effect between self-concept and academic achievement.

Caplin further analysed the sex differences between the ninety girls and ninety boys in the sample group. He found that there was no significant difference between the self-concept of boys and that of girls.

Peper and Chansky[76] did a study to examine the relationship between achievement in Arithmetic and esteem. The purpose of their study was to test the hypothesis that rankings of achievement in Arithmetic made by a pupil, his peer group, and his teacher are significantly related to achievement in Arithmetic.

The sample consisted of fifth-grade class of twenty-four pupils and their teacher in a sub-urban public elementary school. The age of the pupils ranged from ten to eleven years.

In their study, esteem was measured by a paired-comparison technique. The technique required that a judge compare each member's of a set with every other member of that set. The judge was to select from each pair that member who was preferred. A frequency distribution votes received by each member was constructed.

The researchers administered a socio-metric paired-comparison test to the pupils on two different times. On both occasions each pupil was given a list that paired him with every other pupil in the class. The pupil was to select from each pair the one who was more able in Arithmetic: the rater or the peer named.

Two tests were administered one as pre-test and the other as post-test, to assess Arithmetic achievement. In both cases, the results were ranked. Finally the teacher completed a paired-comparison test of her pupils as Arithmetic achievers, the results were also ranked.

For data analysis, coefficients of correlation

were computed for all sets of ranks. The findings showed a significant correlation of 0.5 and 0.7 between a pupil's self-evaluation and teacher's evaluation in arithmetic achievement during both the pre-test and post-test respectively. These co-efficients of correlation between test-rankings and rankings by the pupil themselves, and their teachers are of sufficient magnitude to support the hypothesis of the study. Thus their study suggested "that there is agreement in judgement of achievement as rated by self-standardized tests and the teachers."[77]

Cole[78] did a study to investigate the relationship between self-concept, attitude and achievement motivation of average third grade students and their academic achievement. The students in the sample were one hundred third grade students. The achievement areas used as measures were scores of total reading, language, spelling and total mathematics on a standardized achievement test. In addition, teachers of the students in the sample were asked to fill out an inventory of behavioural traits, which was used as a measure of achievement motivation.

To measure self-concept, Cole used a self-concept index which had been developed earlier. The purpose of this index was to assess the degree of positive self-concept in children in the primary grades.

The data were correlated using the Spearman rank-order and multiple correlation procedures. The findings revealed significant relationships among all the variables except one; that is, no significant relationship was found between self-concept and spelling. The explanation offered for this was that for achievement in spelling and how one feels about himself are less important than being motivated to achieve.

In Cole's study, the highest correlation was found between self-concept and total Mathematics achievement. For this reason, Cole concluded that: "... a degree of confidence is an important factor for attempting work in Mathematical concepts".[79] Hence students should have some confidence in themselves for them to succeed in Mathematics.

For this reason Cole went on further to suggest that:

> ... having confidence in one's self contributes significantly to willingness to work with Mathematical concepts.[80]

Cole's findings have implications for educational practice. The findings of this study indicate that the personality variables of self-concept and achievemert motivation are important to achievement of third grade children. For this reason, the findings have potential significance for educational decision-making concerning achievement in the primary grades. This implication led Cole to suggest that:

> ... the time of educators would be well spent if more emphasis was given to the development of methods which would build affective traits such as self-concept.[81]

What Cole is suggesting is that teacher trainees should be trained in skills that would enable them to enhance students' self-concept of academic ability.

Brookover and Gottlieb[82] did a study to analyse differences in achievement of seventh grade children. They also analysed the students'

self-concept of academic ability.

The sample was over 1,000 pupils. The pupils' self-concepts of academic ability were investigated through questionnaires. Some of the questions included asked, for example, 'How would you rate yourself in school ability compared with those in your class at school? From the answers to questions like these which were received over a number of years, the researchers were able to reach certain conclusions about self-concept in school children and their relationship to achievement.

The researchers reported a significant relationship between students' self-concept of ability and their school achievement as measured by grade point average (GPA). They found that the general self-concept of ability and grade point average in the seventh grade was 0.57 for both boys and girls in their sample. Further, data from this study indicated that in some areas of school subject matter there are differences in self-concept of ability. The correlations between self-concept of ability in arithmetic, science and social studies and the respective grades in these subjects ranged around

0.60 for boys and slightly lower for girls. The self-concept of ability in English was correlated at about 0.40 level with grades in English.

Brookover and Gottlieb who followed Mead's thought on the importance of the self, suggested that self-concept of academic ability is an improtant variable in a student's academic performance. For this reason, the two researchers concluded that the findings supported their proposition that:-

> If the child perceives that he is unable to learn Mathematics or some other area of behaviour, this self-concept of his ability becomes the 'functionally limiting' factor in his school achievement. 'Functional limit' is the term used to emphasize that we are speaking not of genetic organic limits of learning but rather of those perceptions of what is appropriate, desirable, and possible for the individual to learn.[83]

Thus, from the data analysis in Brookover and Gottlieb's study which showed a significant correlation between self-concept of ability and actual level of achievement in school subjects, one would tend to infer that self-concept of

ability is an important factor in the total learning process. The implication here is that how one sees himself, either able or unable, will be reflected in the school performance. It can be concluded that having a high self-concept or confidence in oneself will contribute to an individual's good performance in school. The opposite can also be true. Hence teachers should spend more time in instilling positive self-concepts in their students in order to facilitate good student performance in school work.

Another related study was done in England. The large National Foundation for Educational Research in England and Wales by Barker Lunn[84] also investigated self-concept. The total number of pupils in the study was 5,521 selected from twenty eight streamed and non-streamed primary schools. The main emphasis was to study streaming in primary schools.

Barker Lunn's academic self-image scale consisted of nine questions which formed part of a much larger questionnaire. Statements such as I'm

useless at school work', 'I'm very good at sums and 'my teacher thinks I'm clever' are representative examples of those found in the questionnaire. The children were asked to indicate whether each statement was true for them - most of the time, sometimes, or never. For analysis purposes, the children were divided into three ability groups: (i) above average, (ii) average, (iii) below average. Separate analyses were carried out for boys and girls.

Barker Lunn's study produced important findings In general, the study found that academic ability was correlated with self-concept for all pupils. She found that there was little difference in the development of academic self-image of children of above average in ability in the two types of schools. Boys with below average ability in streamed schools showed a more favourable development in self-image than their non-streamed counterparts. However, this was not true for girls in this ability level. The results of her study also revealed that boys tended to have a better academic self-image than girls while brighter children had better self-image than duller ones.

The studies discussed up to this point have been carried out outside Kenya. However, two typical studies of this nature have been conducted in Kenya by Mwaniki[85] and Maritim.[86] These studies are worth while to analyse in view of the present study.

Mwaniki did a study to explore the relationship between self-concept and academic achievement among Kenyan pupils from urban and rural communities in Kenya. Mwaniki's study sought to find out whether the pupils's personal feelings and self-evaluations were important to his academic achievement.

The sample consisted of 208 standard seven elementary school pupils selected from four schools. The schools were located in a predominatly Kikuyu community.

Mwaniki's study adapted an instrument that had been developed earlier in order to measure self-concept For the purpose of her study, six areas were used. These were physical ability, mental ability social relations with same sex, happy qualities, school subjects and social virtues. These areas were

selected because they concentrate on school experiences and social relations. Each of these areas consisted of ten items, making a total of sixty items. Some representative of the items used in the study were:-

(1) Being good at games-for physical ability.
(2) Asking and answering questions in class - for mental ability.
(3) Having plenty of friends among the girls - boys for social relations with the same sex.
(4) Having a good happy life at home - for Happy Quality.
(5) Doing well in English - for school subejcts.
(6) Being respectful to other people - for social virtues.

For each of these statements the pupils were requested to rate themselves by saying whether they were excellent, very good, better than most, fair, and not so good.

For academic achievement, two measures were used. The subjects used were Mathematics, English

and General Paper. The first measure comprised of the marks and position obtained by each pupil for each subject in the C.P.E. Mock examination. The second measure was the actual result of points obtained by each pupil in the 1971 C.P.E. examination.

Based on the findings from the data Mwaniki arrived at important findings. First, she found that physical ability self-concept measure was negatively correlated with school achievement. This seems to be obvious since physical ability may not be related to school academic work. Secondly, mental ability self-concept measure was positively correlated with school achievement particularly with Mathematics, General Knowledge and total achievement measures. Further, school subjects self-concept measure was positively correlated with Mathematics, while social virtues self-concept measure was positively correlated with English. Based on these findings Mwaniki concluded that certain areas of self-concept (school subjects, mental ability, social virtues) are positively correlated with school achievement measures.

Mwaniki's study further indicated that there were differences between the sexes on self-concept measures of school subjects and social relations with the same sex. Mwaniki explained these differences to be determined by different specific roles assigned to each sex type, the upbringing of boy or girl and the kind of pressure a boy or a girl receives from parents.

Another study done in Kenya was that by Maritim. The study centred on the academic self-concept and the teacher's perception and how these relate to pupils' grade attainment in rural Kenya. The Kipsigis community was selected as the location for the study.

A sample of 432 pupils from seventh grade in thirteen primary schools were involved in Maritim's study. The data for this research were obtained through the school records, the pupils' and the teachers' questionnaires, academic, self-concept scale and the teachers' perception scale administered to the pupils and teachers respectively.

The data were subjectd to t-test and correlational analysis and significant differences were obtained by all methods. Maritim found that self-concept and teacher's perception were the strongest predictors of grade attainment. The pupils who thought highly of their abilities significantly out-achieved those who had low perception of their abilities. Similarly, those pupils who were highly thought of by their teachers had higher grade scores and high self-concept scores. Depending on the achievement area, both self-concept and teacher's perception, as determined by a stepwise multiple regression program, accounted for 26% to 36% of the variance in pupil's grade attainment in the national tests.

Further, the relationship between self-concept, teacher's perception and the selected background variables were determined by t-test technique. With the exception of sex, the other selected background variables failed to show a consistent relationship with pupil's self-concept, teacher's perception and pupil's grade scores.

Maritim further found that there was a difference between boys' and girls' grade scores. The significant differnces that were found between boys and girls showed that girls were not doing as well as boys in all achievement variables. Maritim concluded on the basis of the findings, that differences in self-concepts among pupils and the teachers' perceptions, contribute to the differences in school performance.

These results have implications for educational practice. First, the findings suggest that if a pupil's academic achievement is to be raised, attentio should be paid to his sense of competence in curriculu areas and his general school experiences. Thus, according to Maritim, the results suggest that conditions necessary for the development of a healthy self-view or a sense of competence should be the major concern of those who are engaged in primary education. Teachers in particular should be aware of this suggestion because teachers can change the pupil's self-perceptions and subsequently the pupil's academic performance.

Maritim's study bears more similarity to the present one out of those discussed thus far. This is because the same method used for measuring self-concept has been adapted for the present study.

Despite the important implication on education these studies at the primary school level have some differences with the present study. First, the level of the students; the present used secondary school students. The secondary school students were preferred because they may be able to report their self-concepts of academic ability with a relatively higher degree of accuracy than the primary school students because they are more mature and have a longer school life experience as regards their academic performance.

Another area of departure of these studies from the present one was in the measurement of self-concept. The researchers used different methods to measure self-concept of academic ability. However, the present study borrowed the method used by Maritim and some questions used by Brookover all et. al.[87]

There were differences also in the sample sizes used. Some studies used large sample sizes (Caplin,

Brookover and Gottlieb, Barker Lunn, Mwaniki and Maritim) while others used small sample sizes (Cole, Peper and Chansky). The present study used a sample size of 290 students. Results from small sample sizes may limit the generalizability of the study findings.

The studies by Mwaniki and Maritim used pupils from one ethnic background. A difference occurs here in that the present study has used students from varying ethnic backgrounds. This is an advantage in that Kenya has many ethnic groups and thus generalizations of the findings are likely to be more wider.

Despite such differences all these studies at the primary school level have helped to shed light on the present one. This is by showing how various aspects of self-concept relate to students' academic ability

6 Studies at the Secondary School Level

Nash[88] conducted a research to investigate the self-concepts of ability of some children.

One class was used for the study. Each pupil was seen individually and presented with a set of thirty-five cards. On each card was written the name of one of the children in the class. Each pupil was asked to sort the cards into three groups:-

(i) a group a 'bit more clever than you'
(ii) a group 'about the same as you' and,
(iii) a group 'not so clever as you'.

To establish the child's estimate of his position he was given those he had named 'about the same' as himself and, asked to 'put them in the right order'. His own name is included in this group. If, for example, a child placed ten pupils in group (i), and twelve in group (iii), his estimate of his position must lie between eleventh and twenty-third. If the pupil then places himself fourth in group (ii), his position must be fourteenth. The resulting positions were rank-ordered.

A second measure was obtained by counting the number of times each pupil was

named by his classmates as 'more clever than me', subtracted from the number of times he was mentioned as 'slower than me'. These were ranked. This rank was assumed to correspond to the position each child was collectively seen to hold. Two ranks were thus obtained:-

(i) ranks derived from pupils' estimates of their own positions, and

(ii) ranks derived from pupils' estimates of each other's positions.

These two ranks were found to be significantly correlated.

Nash, further analysed the teachers' perceptions about their pupils' academic ability. She did this by correlating the teachers' perception about their pupils' academic ability with the class ranks the pupils estimated they were capable of attaining. These two ranks were also found to be significantly correlated. From these results, it is suggested that the perceptions teachers have about pupils' academic abilities and the pupils' estimates of each other's class position may tend to correlate

highly in many instances, in this case it was $r = 0.69$; and infact the results may be taken to reflect the high degree of agreement between the pupils' and the teachers' perception of the relative academic abilities in the classroom.

Nash's results may be taken to support the interactionist theory, which predicts that children perceived unfavourably by their teachers will develop unfavourable self-concepts of academic ability and that such self-concepts will be reflected in the low class positions these children will come to believe they are capable of attaining. Conversely, it predicts that the children who are perceived favourably will believe themselves to be highly capable in the class. Further, the results support the fact that children are continually engaged in forming a concept of themselves and developing a consistent pattern of behaviour appropriate to this self-concept. For example, if children see themselves as being good in academic work in the class they will behave accordingly and vice-versa.

Youngblood[89] did a study on self-esteem and academic achievement of Filipino high school students. The relationship between self-esteem, and socio-economic status of Filipino high school students and the academic performance in English, social studies, mathematics and science was examined in the study. The data were gathered in Manila from paper and pencil questionnaires administered to 907 students from three public high schools. Within each school, students were selected randomly. Additional information on academic achievement was obtained from the students' grade report compiled by the guidance and conselling staff in each school.

In order to obtain self-esteem data, Youngblood used a scale developed to measure favourable and unfavourable self-attitudes among high school students in New York State.

This measure was designed to determine an adolescent's self-worth and self-dissatisfaction. Social status was created from a combination of student report of parental education and occupation.

From this study, Youngblood found that girls registered significantly higher self-esteem than did boys. He also found higher correlations between self-esteem and scholastic performance. The data revealed that the strongest relationships were between high self-esteem and greater achievement, with the correspondence between self-esteem and achievement being slightly higher, though not significantly so, for boys in all subjects except English. Thus in all, self-esteem emerged the strongest predictor of academic achievement in all academic subjects that were examined.

Based on his findings, Youngblood arrived at the following conclusion:-

> Having confidence in one's self, then, may be a key factor contributing to an adolescent's willingness and ability to grapple with difficult intellectual problems. If so, efforts expended by educators to develop more positive self-esteem among students promise to yield high achievement dividends.[90]

Based on these findings, Youngblood suggested that educational decision makers should devote

attention to personality variable if academic achievement is to be raised.[91] What these findings suggest is that personality variables such as self-esteem are crucial to the academic performance of high school students. For this reason, such personality variables should continue to receive the attention of educators if they aim to improve the pupils' academic performance.

Another related study was done by Calsyn and Kenny.[92] Their sample consisted of 556 students. The self-concept of ability scale (SCA) was an eight - item scale. Half of the items asked the students to rate on a five-point scale their present school ability as compared with other classmates. The remaining three items asked the students to rate their future plans, for example to complete college. Educational aspiration was a single-item scale which asked the students how far they desired to go in school. Educational expectation was also a single-item scale which asked the students how far they expected to go in school.

Finally Grade Point Average (GPA) was calculated on the basis of grades in the so-called "solid" subjects. Grades in Art, Music and Physical Education were excluded from the calculation of GPA.

From their study, Calsyn and Kenny arrived at a number of findings. First, they found that higher socio-economic (SES) respondents tended to have higher grade averages, more positive self-evaluations and higher educational aspirations and plans. Secondly, males tended have higher self-concepts of ability as compared to females. Thirdly, males were found to have higher educational plans and aspirations than the females.

The studies discussed thus far are relevant to the present study. They all used secondary school students as subjects. All the three studies produced importance results regarding the relationship between self-concept of academic ability and academic performance. Nash's study produced important results regarding teachers' perceptions and academic abilities of students

which is a major focus of the present study.

Another relationship of these studies and the present study is that one used information compiled by the school staff for academic performance; that by Youngblood. Similarly, the present study used marks compiled by teachers as measures of academic performance. In addition the study by Calsyn and Kenny used a relatively large sample. The present study's sample is relatively large.

However, these studies also differ from the present one. First the sample size for two of them (Nash and Youngblood) are small as compared to the present study. The latter used only three schools from Manila while the former used only 33 students. The present study used eight schools and the sample of 290 students.

2.17. Studies at the College/University Level

Reitzes and Mutran[93] did a study on significant others and self-conceptions. The data are based on a questionnaire administered to 396 college students. In their study these researchers

selected the following elements in defining self-concept:-

(i) Sociability
(ii) Assertiveness
(iii) Commitment to ideas
(iv) Intellectual curiosity
(v) Commitment to college
(vi) Self-esteem

They found that father's education was moderately related to the college students's academic performance. Thus students with more educated parents tended to have higher scores on the intellectual curiosity identity dimension while students with less educated parents tended to have college student identities which were more assertive. This consequently led students from better educated families to perform well in college since the intellectual curiosity identity dimension was positively associated with grades.

The researchers also found that, students who felt that their parents are important to them as students had lower grade points than those who

did not. Thus the perceived 'importance of parents was negatively related to performance. They offered a possible explanation that, college students tend to use parents as sources of socio-emotional rather than academic support.

Other findings from this study are; the background variables of high school grades and particular significant others directly influence academic performance, while academic performance and some particular significant others are associated with educational expectations. The findings suggest that an important use of significant others is to aid individuals in establishing self-conceptions which in turn may influence behaviours and plan through self-evaluations.

A major finding of their research was the direct effects of variables on academic performance and educational expectations. They found that self-variables were directly associated with both expectations and academic performance.

These findings suggest that students may use self-concepts to interpret behaviours and these concepts may serve as motivational forces towards behaviours and plans consistent with their self-meanings. For example, students who repeatedly do well in school may be motivated to do better while those who do poorly may not be so motivated.

Finally, the findings of these two researchers suggest that background characteristics influence self-concepts through past socialization experiences and role modelling behaviour. For example father's education influences the formation of college student identities of personal assertiveness and intellectual curiosity. Further, the findings also suggest that significant others selected by the students, also aid the socialization process, exerting both direct and indirect effects on academic performance and educational plans.

Jones and Grieneeks[94] did a study on measures of self-perception as predictors of scholastic achievement. The investigators explored the usefulness of self-perception measures with a

population consisting of 877 students (411 girls and 466 boys).

They defined self-concept of ability as the student's concept of his own academic ability. It was measured by a multiple choice questionnaire composed of items relating to academic achievement. Academic achievement was measured by the Mean of all Grades (GPA) earned by each student in the year 1967 semester examiantion.

To analyse the data, correlational procedures were employed to determine the relationship among the dependent and independent variables. They obtained correlation of 0.52 and 0.54 for boys and girls between self-concept of ability and academic achievement. These correlations are high at the 99% level of confidence. The researchers arrived at the conclusion that self-concept of ability is positively associated with scholastic achievement.

Based on the finding that self-concept is positively associated with scholastic achievement,

the investigators suggested that, educators should pay particular attention to the self-concept of students, for them to improve academic performance.

The two studies discussed above however differ from the present study in some ways. In the present study, self-concept of academic ability was obtained from a self-anchoring scale whereby the students rated themselves. It also used questions to supplement information obtained from the self-anchoring scale. The two studies used only questions to arrive at student's self-concept of academic ability. In comparative terms, the present study went further in its analysis of self-concept of academic ability than the two studies.

The present study went further in the study of self-concept of academic ability by incorporating teacher's perception of the students academic ability. The two groups of researchers whose studies are discussed above did not incorporate this aspect in their researches.

However, the present study and those two studies discussed above have two major similarities. First, the questions utilized in the instruments were similar to those used in the present study. Second, the methods of measuring academic performance were similar.

Summary of the section

From the above discussed studies, it is largely evident that there is a positive and persistent relationship between students' self-concept of academic ability and the students' academic performance. Hence it seems safe to conclude at this point that the level of school academic performance is significantly related to students' self-perception of their academic ability.

Finally, Hamachek[95] concluded that self-concept and achievement are mutually reinforcing to each other to the extent that a positive change in one facilitates a positive change in the other.

He however, noted that the possession of a high positive self-concept does not cause high academic achievement. It appears to be a necessary and vital personal quality for one to have prior to achievement, but it is no guarantee that high achievement will naturally follow.

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CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.01. INTRODUCTION

Several particulars about the study have been presented in Chapters One and Two. The work of Chapter Three is to present the details pertaining to the research design and methodology, the data collection tools, sampling procedures and the data analysis techniques.

3.02. THE RESEARCH DESIGN

Specifically, this study was conducted as an ex post facto research which has been defined by Kerlinger as:

> ... a systematic inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable. Inferences about relations among variables are made without direct intervention from concomittant variables of independent and dependent variables.[1]

From the definition given above it follows that ex post facto research is suitable for this study because first, it is not possible to manipulate the independent variables. In this study the independent variables are:

(i) Students' self-concept of academic ability and,

(ii) Teachers' perception of the students' academic ability.

Second, the manifestations of these variables have already occurred, that is, it was assumed that the students have already developed a self-concept of academic ability and that teachers have already formed (developed) perceptions about the students' academic ability. For these two reasons ex post facto research design was suitable for manipulation of the independent variables would have been difficult.

3.03. TARGET POPULATION SELECTION

Selection of the Schools Sample

This study was conducted among selected Government Maintained Secondary Schools in Eastern and Central provinces of Kenya. In total, eight secondary schools were selected, four being for boys and four for girls. The reason for selecting Government Maintained Secondary Schools was an attempt to have similar schools and similar students and teachers as much as possible to participate in the study.

The choice of the particular schools was as follows. First, four schools were chosen among the schools that have featured between position one and fifty repeatedly in K.C.E. examination between 1978 and 1985. However, the choice was such that two girls' and two boys' secondary schools were chosen. The remaining four schools were selected randomly. The method used here was to write down all the schools in the separate groups, one for boys and the other for girls.

Each school in each group was then given a number. The numbers representing the schools were written on separate pieces of paper, folded and placed in separate containers, one for boys' schools and the other for girls' schools. A research assistant was then asked to pick two papers from each box. This way, four schools were selected and added to the first four selected earlier making a total of eight schools.

Although the sample used here is fairly small in the light of the number of all secondary schools in Kenya, and generalization may be limited to some extent, the study is useful in that it could serve as a starting point for a bigger research project to include more secondary schools. Secondly, by picking a sample of secondary schools which comprises diverse ethnic groups, it is quite possible to draw up inferences to support the argument that students' self-concept of academic ability is related to students academic performance among students from different ethnic groups.

Selection of the Students Sample

The students sample comprised of 290 secondary school students; 142 were male and 148 were female drawn from a population of Form Four students in the eight selecte Government Maintained Secondary Schools. The majority (60 per cent) of the students in the sample were aged between sixteen and eighteen years. These students were in their final year of the secondary school course and hoped to go on with their education or seek employment once done with high school studies.

The researcher used one class per school. It was expected that each class will have forty (40) students; but this turned out not to be the case. Hence in some schools, the Form Four class could have students exceeding forty or less than forty (40). The number present at the time of the research was the one that was used to complete the questionnaire. Further, there were students who completed the questionnaire but their end-of-term marks were missing from the school records. Such students were omitted during data analysis.

The students were chosen to participate in the study because:

(i) at their age and long duration of school life experiences, Form Four students will have developed reportable self-concept of academic ability and also have sufficient experience and ability to think abstractly. Thus, they would be able to report with a higher degree of accuracy about their self-concept of academic ability.

(ii) the fact that they were preparing for a national examination (K.C.E.) meant that they would be better placed to assess their own academic abilities fairly accurately.

Selection of the Teachers Sample

The teachers sample was made up of the teachers who taught the four selected school subjects in the selected Form Four classes. There were twenty-six teachers; twenty-two males and four females.

In some cases, the teachers had just started teaching the class and, hence, they were not able to assess the students' academic ability fairly accurately. In such cases, the researcher requested those teachers who had taught the students for long periods of time to complete the questionnaire for they could assess the students' academic ability fairly accurately.

Since some of the teachers did not complete the questionnaire, the analysis of the data pertaining to the teachers' response was based only on the twenty-six (26) teachers who completed the questionnai satisfactorily instead of the expected number of thirty-two (32).

Selection of School Subjects

The school subjects that were selected for this study are Mathematics, English, Biology and Geography. These school subjects were chosen because:-

(i) Mathematics and English are offered to and taken by all secondary school students in Kenya; that is, these subjects are compulsory

for all K.C.E. examiantion candidates. The inclusion of these two subjects in this study allowed the researcher to have marks for all the students in these subjects which were used as a measure of the students' academic performance.

(ii) Each of the other two subjects (Biology and Geography) were thought to represent the two major fields of study, namely science and arts respectively in the Kenyan Secondary Schools. For this reason, most secondary schools, if not all, tend to make them compulsory for all K.C.E. candidates. Hence, the researcher would have marks for all students in thse subjects which would be used as a measure of academic performance of the students.

3.04. DATA COLLECTION METHOD

There were two major sources of information used in this study. These are:-

(i) The school records.

(ii) The students' and the teachers' questionnaire.

Data From School Records

From the school records, information pertaining to the kinds of end of term marks each Form Four student attained in the academic year of 1985 was obtained. The marks were for English, Mathematics, Biology and Geography. The marks were averaged and then standardized to facilitate their use in measuring academic performance.

Instrument

The major instrument used in gathering information in this study was the questionnaire. The questionnaire used in this study was adopted from that used by Maritim.[2] This was the main source of the questions contained in the questionnaires. However, some questions were borrowed from a study by Brookover et. al.[3] Finally, some questions were constructed by the researcher. All these were combined to form the research tools that were used in data collection for this study. For details of the research tools see the questionnaires for both students and teachers. (Appendix B and Appendix C).

The student questionnaire contained items that sought the background information of the students such as age, sex, and parental level of education. In addition, it contained ability ladders that were used to measure the students' level of self-concept of academic ability in each of the four school subjects.

The teachers' questionnaire provided general background information about the teachers like age, sex and professional qualifications. The teachers' questionnaire was used to provide more information on the students' academic ability from the teachers' perceptions.

Administration of the Instruments

Having obtained the authority to conduct research from the Office of the President, an introductory letter was sent to each school selected for research. The letter stated the intention of the research and the required help and materials that would be needed by the researcher. The letter also informed the schools the approximate time of the researcher's visit within the first term of school in 1986 academic year (See Appendix A).

The students' questionnaire was administered by the researcher himself to the students. Thus, the questionnaire of the students was filled in the presence of the researcher. It was assumed that the presence of the researcher would have minimal effect on the students' responses. Enough time was allowed for each student to complete filling the questionnaire In all schools the researcher used one normal class teaching period which lasted about fourty (40) minutes for the students to fill the questionnaires.

The teachers' questionnaire was completed at the teacher's own time. However, the researcher first conferred with the teachers teaching the four school subjects to the Form Four students that were used in the study. The researcher explained to the teachers what was required, particularly on the section seeking teachers' perceptions about students' academic ability. The researcher then gave out the questionnaire to the teachers. An interval of two weeks was allowed before the teachers' questionnaires were collected. But some teachers took longer than this and even others never responded at all. This was one of the problems the researcher faced in data

collection.

3.05. PREPARATION OF END-OF-TERM MARKS BY STANDARDIZATION OF THE RAW SCORES

After all the data were collected, the next step was to analyse the data. Data analysis for this study followed several steps. These steps are discussed as follows:

First, means were calculated from the end-of-term examination marks obtained by each student in each of the four school subjects used in this study. To arrive at the means the following formula was used.

$$\bar{X} = \frac{X}{N}$$

where

$\bar{X}$ = the mean mark for each school subject

X = the sum of the marks for each school subject.

N = the number of school terms in 1985 which was three (3).

An example is shown below. The example is based on one student's marks. He obtained the following marks.

English:

Term 1 = 60

Term 2 = 64

Term 3 = 69

$$\text{mean} = \bar{X} = \frac{X}{N} = \frac{193}{3} = 64$$

mean mark = 64

The means were rounded to the nearest whole number.

Mathematics:

Term 1 = 53

Term 2 = 64

Term 3 = 61

$$\bar{X} = \frac{178}{3} = 59$$

mean mark = 59

Biology:

Term 1 = 60

Term 2 = 62

Term 3 = 65

$$\bar{X} = \frac{187}{3} = 62$$

mean mark = 62.

Geography:

Term 1 = 73

Term 2 = 73

Term 3 = 79

$$\bar{X} = \frac{225}{3} = 75$$

mean mark = 75

This procedure was used for all marks obtained by the students who took part in the study and yielded mean scores for each student in each of the four school subjects. Academic performance was thus expressed in terms of the average (mean) mark obtained in the end-of-term school examinations for 1985.

The marks obtained from the means were for different examinations taken in the individual schools. An attempt by the researcher to compare the examination marks as they were would not have been correct. It would have been better to have the students take common examinations. This would exclude differences in the content of the tests, style of setting, time taken for the test and so on.

These are problems which are found in the tests given in each of the schools studied. However, the time for the research was so short to allow for the construction of tests for the various school subjects by the researcher. Further, the use of a standardized examination like K.C.E. was not possible due to the time the data for this study was to be collected. Data collection was done in the first term of 1986, that is, from January to March in 1986. Therefore, the researcher decided to use end-of-term marks obtained from tests offered by the schools themselves in 1985.

As the students sat for different end-of-term tests, it was necessary to standardize the raw scores in order to make these scores equivalent and hence comparable. This is because standard scores are ... used to provide a common clearly defined scale for reporting and comparing results from different tests. By transforming the raw scores to standard scores the researcher was able to obtain sets of scores which were comparable. Standard scores are defined as: scores, ... whose distributions have standard

deviations and means of some standard value.[5]

The procedure followed to arrive at the standard scores which involved two steps is discussed below. Raw scores were transformed into standard scores on the basis of the raw score mean and standard deviations. The formula used to do this is given as: $Z = \frac{X-\bar{X}}{S}$ [6]

Z = standard score

X = a given raw score

$\bar{X}$ = a given mean score for the raw data.

S = standard deviation for the raw data for which $\bar{X}$ is the mean score.

The standard deviation was obtained by the formula:[7]

$$S = \sqrt{\frac{\Sigma(X-\bar{X})^2}{N}}$$

where:

S = Standard deviation

X = A given raw score

$\bar{X}$ = The mean mark for the raw data

N = The number of students in a class

The distribution given by the above formula has a mean equal to zero and a standard deviation equal to one.

Standard scores as defined by the above formula gave both positive and negative values and decimal points. Since these were awkward to work with, a further transformation was made in such a way as to yield a distribution with a preassigned mean and standard deviation, instead of the zero and one, that hold for the standard scores defined by the above formula. To arrive at the new standard scores the following formula was used:

$$T = \frac{(X-\bar{X})}{S}. \quad 10+50^{8}$$

where T = transformed standard scores

X = a given raw score

$\bar{X}$ = a given mean score for the raw data

S = standard deviation for the raw data for which $\bar{X}$ is the mean

10 = preassigned standard deviation

50 = preassigned mean

The formula could be reduced to

$$T = 50+10Z$$

The new scores obtained from the above formula are called T-scores. Popham defined T scores as follows:

> A T score is simply a Z score that has been multiplied by 10 (to get rid of the decimals) and 50 added to it (to get rid of minus values).[9]

A similar definition of T scores was given by Kohout:

> Standard scores that have been further transformed by (1) multiplying by a constant and (2) adding a constant are referred to as T-scores.[10]

Thus in short T scores are transformed standard scores. As a consequence of these two operations, that is adding a constant and multiplying by a constant, the resulting T scores had a mean of 50 and a standard deviation of 10. This procedure was referred by McNemar as T-scaling and the resulting scores are known as T-scores with a mean of 50 and standard deviation of 10. T-scaling changes the distribution to the normal form.[11] That means that to allow two distributions to be compared, the standard scores must be normal. The use of the T scores changes the standard scores to the normal form.

A worked example is given below to show how the T-scores were arrived at. It is these T-Scores that were utilized in subsequent analysis of the data. The example given below is based on the means of one of the students.

English: Raw mark = 64.

Standard T score: $T = \frac{(X-\bar{X})}{S}. 10+50$

$= 50+10Z$

But $X = \frac{X-\bar{X}}{S}$

mean mark for English = 58; standard deviation = 6.62

$T = \frac{64-58.}{6.62} 10+50$

Transformed score = 59

Mathematics: Raw mark = 59

mean mark for Mathematics = 41

Standard deviation = 13.1

Transformed standard score:

$\frac{59-41.}{13.1} 10+50$

Transformed score = 64

Biology: Raw mark = 62

mean mark for Biology = 55

Standard deviation = 9.16

Transformed standard score = $\frac{62-55.}{9.16}$ 10+50

Transformed score = 58

Geography: Raw mark = 75

mean mark for Geography = 62

Standard deviation = 10.15

Transformed standard score: $\frac{75-62.}{10.15}$ 10+50

Transformed score = 63

This process was repeated for all the students. It is these standard T-scores that were used for subsequent data analysis.

3.06. DATA ANALYSIS METHODS

All the data analysis discussed thus for was done by the use of a desk-top scientific calculator. Subsequent analysis was complicated and called for use of the computer. Data so obtained was subjected to a statistical analysis using the computer sub-programs in the

Statistical Package for the Social Sciences (SPSS).[12] This was done at the Institute of computer science at Chiromo, University of Nairobi.

The first information that the computer produced were the frequency distributions of all the variables. Descriptive statistics like the means, variance and percentages were given at this stage for each variable.

For the researcher to be able to test the hypotheses envisaged in the study, the follwoing SPSS sub-programs were utilized:

(1) Sub-Program Crosstabs:- In this program the statistical procedure was χ^2. Data was cross-tabulated giving the chi-square analyses for the relationships between student variables of self-concept of academic ability and academic performance. Further, analysis was given for teachers' perceptions of students academic ability and students actual academic performance b use of the χ^2. This enabled the researcher to test hypotheses HO_1 and HO_2. (See page 17).

(2) Sub-Program Breakdown:- This gave the analysis of variance, one-way tests for differences between male and female students with regard to self-concept of academic ability. This enabled the researcher to test hypothesis HO_3 (See page 17).

3.07. STATISTICAL PROCEDURES

The following statistical tests were utilized in this study:

The Chi-Square Test. The chi-square is abbreviated as χ^2. The chi-square is used to determine whether there are significant relationships between variables. For this study the chi-square was used to establish whether or not any significant relationships existed between students' self-concept of academic ability and academic performance and also the relationship between teacher's perception of student's academic ability and students' actual academic performance in the four school subjects. The chi-square test was used to analyse hypotheses one and two

(HO_1 and HO_2 - See page 17).

The chi-square test is a measure of how closely the observed distribution approximates the expected distribution.

The formula used for the chi-square is:[13]

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

Where χ^2 = the chi-square statistic

O = the observed frequency

E = the expected frequency

To compute χ^2 degrees of freedom are needed.

These are given by: (r-1) (c-1)

Where, r = rows

c = columns

The Analysis of Variance Test (ANOVA)[14]

The analysis of variance was used to test the significance of the differences between the means of two or more different groups. The question that the analysis of variance (ANOVA) tries to answer is, "Do the means between groups differ significantly?"

For a one way ANOVA the formula is given by:

$$SS_T = SS_w + SS_b$$

Where;

SS_T = Total sum of squares

SS_w = Sum of squares within groups.

SS_b = Sum of squares between groups.

The following table usually is presented when data arranged in a one-way layout have been analyzed by ANOVA.[15]

(2 groups)

Source	SS	df	Ms	F
Between groups	SS_b	K-1	$SS_{b/K-1}$	
Within groups	SS_w	N-K	$SS_{w/n-k}$	
TOTAL		N		

The significance for F- ratio is assessed with reference to the table of F values with (k-1) degrees of freedom and (N-K) degrees of freedom. If the obtained F-ratio is greater than the appropriate table F-value, the differences are statistically

significant. In such a case the null hypothesis stating that there is no difference between means is rejected at the chosen level of significance and the alternative hypothesis would be accepted.

For the purpose of this study only one-way ANOVA was used because no more than three groups were used in data analysis. The one-way ANOVA was meant to analyse data for hypothesis three (HO_3, See page 17).

08. SIGNIFICANCE LEVEL

Researchers speak of accepting or rejecting the null hypothesis. To be able to accept or reject the null hypotheses stated in this study, the level of significance was needed. The purpose of a test of significance is to give a clear statement of the degree of evidence against the null hypothesis obtained from the sample.[16] Thus, the significance level is taken to be evidence against the null hypothesis being true. The implication of this is that when a particular level of significance is selected, say 0.05,

also, a description of the data analysis procedure was given. By use of the methodology discussed in this chapter, some valuable data were obtained and these formed a basis for the development of subsequent chapters of this thesis.

FOOTNOTES TO CHAPTER THREE

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CHAPTER FOUR

DESCRIPTION, PRESENTATION OF ANALYSED DATA AND INTERPRETATION OF FINDINGS

4.01. Introduction

In the previous chapter was presented details about the methods used in collecting the data and the statistical techniques used in the analysis of the data. The task of Chapter Four is to describe information pertaining to the study samples, present the result of the data obtained from the questionnaires, the statistical analysis of the data and the interpretations of the findings.

4.02 DESCRIPTION OF BASIC DATA ON STUDENTS' BACKGROUND INFORMATION

A sample of 290 students from Form Four classes in eight Government Maintained secondary schools was involved in this study. The data results shown in this section are

descriptions of the basic information which the students provided in the questionnaire. The information includes sex distribution, age, parental level of education, parental occupation and parental place of residence.

However, though these variables are briefly discussed, no attempt was made to analyse the background information as it related to the students' self-concept of academic ability and academic performance.

As concerns sex distribution, 51 per cent of the sample were females while males made up 49 per cent. Majority of the students, 60 per cent, were aged between sixteen and eighteen years.

On parental level of education, the results showed that 40 per cent of the students had fathers with primary education, while 41.4 per cent had mothers with primary education. Further, a larger percentage (30.3 per cent) of the students had mothers who had not received any formal schooling

as compared to a smaller percentage (17.9 per cent) of the fathers. Finally, it was found in this study that more students had fathers with secondary and university education (28.3 and 13.8 per cent respectively) as compared to the mothers (23.1 and 5.2 per cent respectively. Thus, it can be concluded based on the data, that fathers of students who took part in the study were relatively more educated than mothers.

Looking at the kind of occuptions pursued by the students' parents, it was noted that more students came from peasant farming backgrounds than from any other occupations. The percentages were 32.4 per cent for fathers and 33.8 per cent for mothers.

The last variable considered under this heading is the parental place of residence. Majority of the students 65.5 per cent came from rural environments.

4.03. DESCRIPTION OF BASIC DATA ABOUT TEACHERS' BACKGROUND INFORMATION

The teachers who taught the four school subjects to the students in this study formed the other group of the sample. In this section, none of the variables described below were subjected to any other statistical analysis beyond the basic descriptions.

Initially, a total of thirty-two teachers were selected to take part in this study. However, only twenty-six teachers finally responded. Of these, 84.6 per cent were males and only 15.4 per cent were females. Hence, the data analysis is based on only twenty-six teachers. As regards the teachers' ages, the results showed that majority (92.4 per cent) of these teachers who took part in the study were aged between twenty-five and thirty-nine years.

Majority (69.2 per cent) of the teachers had a university degree. The rest were trained S1 or had a Diploma in Education (15.4 per cent and 11.5 per cent respectively) and only one (3.8 per cent) was untrained and was teaching after completing Form six work. In terms of teaching experience, majority of the teachers had taught for many years. While a majority of the teachers, 61.5 per cent had taught for five years and over, 30.8 per cent had taught for a period between one and four years and only 7.6 per cent had taught for less than one year.

Teachers' Responsibility for Students' Academic Performance

The teachers were asked to indicate how responsible they felt for students' academic performance. This item was meant to obtain information on the importance of teachers in students' academic performance. The results obtained are presented in Table 2. The results shown here indicate that all teachers felt highly responsible for the students academic performance.

This response showing the feeling of responsibility for the academic success of students is probably indicative of an important or essential characteristic that all teachers should have while teaching students.

TABLE 2: TEACHERS' RESPONSIBILITY FOR STUDENTS' PERFORMANCE

Level of Responsibility	N	%
Very Responsible	13	50
Responsible	13	50
Somewhat Responsible	0	0
Not Very Responsible	0	0
Not Responsible at all	0	0
TOTAL	26	100

The Effect of Teachers' Attitudes on Students' Academic Performance

Finally, the teachers were asked to indicate to what extent they thought their (teachers) attitudes towards their students would affect the

students' academic performance in the subject that they taught. The results obtained are shown in table 3.

TABLE 3: THE EFFECT OF TEACHERS' ATTITUDES ON STUDENTS' ACADEMIC PERFORMANCE

Level of Effect	N	%
Have a great deal of effect	15	57.7
Have a substantial effect	8	30.8
Have some effect	3	11.5
Do not have much effect	0	0
Have no effect at all	0	0
TOTAL	26	100

The results show that, majority (57.7 per cent) of the teachers indicated that teachers' attitudes towards their students had a great deal of effect on students' academic performance, 30.8 per cent

indicated that teachers' attitudes had a substantial effect and 11.5 per cent said that teachers' attitudes had some effect on students' academic performance. These results point to the fact that teachers are aware that their attitudes towards their students have an effect on how students perform academically.

4.04 FINDINGS PERTAINING TO HYPOTHESES FORMULATED IN THE STUDY

Introduction:

This section is devoted to the testing of the hypotheses that were formulated in Chapter One of this study. Data were subjected to either Chi-Square test to establish relationship between variables or ANOVA to establish the statistical significance of the differences between group means

In each case, the level of significance chosen by the researcher was 0.05. Each hypothesis, stated in null form, was rejected when the computed value exceeded the critical table value at the 0.05 level of significance and accepted when the computed value fell below the critical table value at the same 0.05 level of significance.

This section is discussed under the following topics:-

(i) Hypotheses testing the relationship between students' self-concept of academic ability and academic performance.

(ii) Hypotheses testing the relationship between teachers' perception of students' academic ability and the students' academic performance.

(iii) Hypotheses pertaining to differences in students' self-concept of academic ability between boys and girls. The results of each hypothesis are discussed below.

4.05. Hypotheses Testing the Relationship Between Students' Self-Concept of Academic Ability and Students' Academic Performance

Introduction

In order to measure the students' self-concept of academic ability in English, Mathematics, Biology and Geography the students were asked to locate themselves on a ten-point ladder where they felt they were in terms of academic ability in each subject. The results are given in Table 4.

The students' academic performance in each subject was obtained from the school records of end-term-marks for the examinations taken in each school in 1985. The marks from each school were averaged and then standardized to make them comparable. The results obtained after standardization of the marks are shown in Table 5.

TABLE 4: DISTRIBUTION OF STUDENTS BY SELF-CONCEPT OF ACADEMIC ABILITY IN THE FOUR SCHOOL SUBJECTS

Students' Levels of Self-Concept of Academic Ability	School Subjects							
	English		Mathematics		Biology		Geography	
	N	%	N	%	N	%	N	%
High	178	61.4	159	54.8	188	64.8	212	73.1
Medium	92	31.7	65	22.4	79	27.2	58	20
Low	18	6.2	63	21.7	21	7.2	18	6.2
No Response	2	0.7	3	1.0	2	0.7	2	0.7
TOTAL	290	100	290	100	290	100	290	100

TABLE 5: DISTRIBUTION OF STUDENTS BY ACADEMIC PERFORMANCE IN THE FOUR SCHOOL SUBJECTS

'Students' Levels of Academic Performance	School Subjects							
	English		Mathematics		Biology		Geography	
	N	%	N	%	N	%	N	%
Poor	121	41.7	136	46.9	133	45.8	121	41.7
Good	117	40.3	103	35.5	106	36.6	114	39.3
Very Good	52	17.9	51	17.6	51	17.6	55	19.0
TOTAL	290	100	290	100	290	100	290	100

Hypothesis HO_1 (a):- There is no significant relationship between students' self-concept of academic ability and academic performance in English.

The results given in Table 4 show that 61.4 per cent of the students located themselves at the high level category of self-concept 31.7 per cent at the medium and only 6.2 per cent at the low level category.

In order to establish whether there is a relationship between students' self-concept of academic ability and academic performance, data for this hypothesis was subjected to a Chi-square test at the 0.05 level of significance. The results given in Table 6 show that there is a statistically significant relationship between students' self-concepts of academic abilities and their academic performance in English. This was in favour of those students who had high self-concepts of academic ability. A large proportion of those students who had high and

medium self-concepts of academic ability occupied the performance categories of good and very good (46.7 per cent and 26.4 per cent; and 31.5 per cent and 5.4 per cent respectively). (See Table 6).

Based on the computed χ^2 value of 51.28 and the table value of 12.59 at the 0.05 level of significance, the relationship between students' self-concept of academic ability and students' academic performance was highly significant. Since the computed value is greater than the table (critical) value, then the hypothesis $HO_1(a)$ was therefore rejected. The alternative hypothesis that there is a significant relationship between students' self-concept of academic ability and academic performance in English is accepted.

It can be concluded from these results that those students who placed themselves highly in terms of self-concept of academic ability also tended to perform well in English. Thus, students' self-concept of academic ability significantly influences the students' academic performance in English.

TABLE 6: THE RELATIONSHIP BETWEEN STUDENTS' SELF-CONCEPT OF ACADEMIC ABILITY AND ACADEMIC PERFORMANCE IN ENGLISH

Students' Academic Performance in English	Students' Levels of Self-Concept of Academic Ability in English									
	HIGH		MEDIUM		LOW		NO RESPONSE		ROW TOTAL	
	N	Column %	N	Column %	N	Column%	N	Column %	N	%
POOR	48	27.0 (39.7)	58	63.0 (47.9)	13	72.2 (10.7)	2	100 (1.7)	121	41.7
GOOD	83	46.7 (70.9)	29	31.5 (24.8)	5	27.8 (4.3)	0	0	117	40.3
VERY GOOD	47	26.4 (92.2)	5	5.4 (9.8)	0	0	0	0	52	17.9
COLUMN TOTAL	178	61.4	92	31.7	18	6.2	2	0.7	290	100

χ^2 = 51.28 Table Value = 12.59

DF = 6

Significance = 0.0

$P < 0.05$ (significant at 0.05 level of significance)

* The figures in brackets are row percentages)

Hypothesis HO_1 (b):- There is no significant relationship between students' self-concept of academic ability and academic performance in Mathematics.

The results given in Table 4 show that 54.8 per cent of the students located themselves as having high self-concept of academic ability in Mathematics, 22.4 per cent as having medium and 21.7 as having low academic ability in Mathematics.

The same data were subjected to a Chi-square test in order to establish the relationship between students' self-concept of academic ability and the students' academic performance in Mathematics. This was to test the above hypothesis. The results given in Table 7 showed a statistically significant relationship between students' self-concept of academic ability and academic performance in Mathematics at the 0.05 level of significance. The significance was somewhat magnified among students holding medium and low self-concepts of academic ability in Mathematics. It was observed

TABLE 7: THE RELATIONSHIP BETWEEN STUDENTS' SELF-CONCEPT OF ACADEMIC ABILITY AND ACADEMIC PERFORMANCE IN MATHEMATICS

Students' Academic Performance in Mathematics	Students' Levels of Self-Concept of Academic Ability in Mathematics									
	HIGH		MEDIUM		LOW		NO RESPONSE		ROW TOTAL	
	N	Column %	N	Column %	N	Column %	N	Column %	N	%
POOR	48	30.2 (35.3)	34	52.3 (25)	51	80.9 (37.5)	3	100 (2.2)	136	46.9
GOOD	66	41.5 (64.1)	26	40.0 (25.2)	11	17.7 (10.7)	0	0	103	35.5
VERY GOOD	45	28.3 (88.2)	5	7.7 (9.8)	1	1.6 2.0	0	0	51	17.6
COLUMN TOTAL	159	54.8	65	22.4	63	21.7	3	1.0	290	100

$\chi^2 = 58.47$ Table Value = 12.59

DF = 6

Significance = 0.00

$P < 0.05$ (Significant at 0.05 level of significance)

* The figures in brackets are row percentages.

that these students tended to occupy the performance category of poor. On the other hand, a large proportion of students with high self-concept of academic ability occupied the good and very good performance categories. (See Table 7).

The results found were as follows: Computed χ^2 value = 58.47 and the table value of 12.59 at the 0.05 level of significance. These results established a highly significant relationship between students' self-concept, of academic ability and the students' academic performance in Mathematics. The hypothesis HO_1 (b) was therefore rejected at the 0.05 level of significance and the alternative hypothesis that there is a significant relationship between students' self-concept of academic ability and the students' academic performance in Mathematics is accepted. Thus, the students' self-concept of academic ability significantly influences a student's actual academic performance in Mathematics.

Hypothesis HO_1 (c):- There is no significant relationship between students' self-concept of academic ability and academic performance in Biology.

Results given in Table 4 show that 64.8 per cent of the students had high self-concept of academic ability, 27.2 per cent medium and 7.2 per cent had low self-concept of academic ability in Biology.

Further, the relationship between students' self-concept of academic ability and academic performance in Biology was established at the 0.05 level of significance. The results given in Table 8 show that there is a statistically significant relationship between students' self-concept of academic ability and academic performance in Biology. This was in favour of those students who had a high self-concept of academic ability. These students turned out to be performing well in Biology. Hence, they occupied good and very good performance categories. (See Table 8).

Based on the computed χ^2 value of 38.91 and the table value of 12.59 at the 0.05 signifcant level, the relationship between students self-concept

TABLE 8: THE RELATIONSHIP BETWEEN STUDENTS' SELF-CONCEPT OF ACADEMIC ABILITY AND ACADEMIC PERFORMANCE IN BIOLOGY

Students' Academic Performance in Biology	Students' Levels of Self-Concept of Academic Ability in Biology									
	HIGH		MEDIUM		LOW		NO RESPONSE		ROW TOTAL	
	N	Column %	N	Column %	N	Column %	N	Column %	N	%
POOR	65	34.6 (48.9)	48	60.8 (35.6)	18	85.7 (13.3)	2	100 (1.5)	133	45.8
GOOD	79	42.0 (74.5)	25	31.6 (23.6)	2	9.5 (1.9)	0	0	106	36.6
VERY GOOD	44	23.4 (86.3)	6	7.6 (11.8)	1	4.8 (2.0)	0	0	51	17.6
COLUMN TOTAL	188	64.8	79	27.2	21	7.2	2	0.7	290	100

$\chi^2 = 38.91$ Table Value = 12.59

DF = 6

Significance = 0.00

$P < 0.05$ (significant at the 0.05 significance level).

* The Figures in brackets are row percentages.

of academic ability and students' academic performance in Biology was highly significant. Since the computed value is greater than the table (critical) value, then the hypothesis $HO_1(c)$ was therefore rejected at the 0.05 level of significance. The alternative hypothesis that there is a significant relationship between students' self-concept of academic ability and academic performance in Biology is accepted. Hence, students' self-concept of academic ability significantly influences the actual academic performance in Biology.

Hypothesis HO_1 (d):- There is no significant relationship between students' self-concept of academic ability and academic performance in Geography.

Data pertaining to this hypothesis shows that 73.1 per cent of the students indicated that their academic ability was high, 20 per cent medium and only 6.2 per cent indicated that their academic ability was low (See Table 4).

The same data was subjected to a Chi-square test at the 0.05 level of significant to establish the relationship between students' self-concept of academic ability and academic performance in Geography. The results so obtained are given in Table 9 below.

Based on the x^2 value of 33.29 and table value of 12.59 at the 0.05 level of significance the relationship between students' self-concept of academic ability in Geography and academic performance in Geography was highly significant. The statistically significant relationship indicated by Table 9 below was in favour of those

TABLE 9: THE RELATIONSHIP BETWEEN STUDENTS' SELF-CONCEPT OF ACADEMIC ABILITY AND ACADEMIC PERFORMANCE IN GOEGRAPHY

Students' Academic Performance in Geography	Students' Levels of Self-Concept of Academic Ability in Geography									
	HIGH		MEDIUM		LOW		NO RESPONSE		ROW TOTAL	
	N	Column %	N	Column %	N	Column %	N	Column %	N	%
POOR	72	34.0 (59.5)	32	55.2 (26.4)	15	83.3 (12.4)	2	100 (1.7)	121	41.7
GOOD	87	41.0 (76.3)	24	41.4 (21.1)	3	16.7 (2.6)	0	0	114	39.3
VERY GOOD	53	25 (96.4)	2	3.4 (3.6)	0	0	0	0	55	19.0
COLUMN TOTAL	212	73.1	58	20.0	18	6.2	2	0.7	290	100

$\chi^2 = 33.29$ Table Value = 12.59

DF = 6

Significance = 0.00

$P < 0.05$ (significant at the 0.05 level of significance.

* The figures in brackets are row percentages.

students who held high self-concept of academic ability about themselves. From the Table 9 it can be seen clearly that most of the students who had high self-concept of academic ability in Geography occupied the good and very good performance categories. Thus, they turned out to be the ones who performed well in Geography.

The hypothesis stated above was therefore rejected. The alternative hypothesis that there is a significant relationship between students' self-concept of academic ability in Geography and academic performance in Geography is accepted. Thus, students' self-concept of academic ability significantly influences their actual academic performance in Geography.

Summary of the Section

In comparison with the other three subjects (English, Mathematics and Biology), more students had a high a self-concept of academic ability in Geography than any of these three other school subjects. The order in terms of self-concept of academic ability held by students from highest to lowest is Geography, Biology, English and finally Mathematics.

These findings may be taken as a partial explanation of why students tend to perform poorly in Mathematics and English while they perform well in Geography and Biology. Based on these fingings, students' self-concept of academic ability could be taken as a partial explanation of the variations in students' academic performance among the school subjects at the high school level.

4.06. Hypotheses Testing the Relationship Between Teachers' Perception About Students' Academic Ability and the Students' Academic Performance

Introduction

As noted in Chapter Two, teachers play a crucial role in the development of students' self-concept of academic ability. The teachers were therefore asked to report on how they actually perceived the academic ability of each student. This was done by the teachers locating their students' academic ability on the ability ladders contained in the teachers' questionnaire. Each student was located by the subject teacher on this ladder. The data so obtained is presented in Table 10 below.

Hypothesis HO_2 (a):- There is no significant relationship between teachers' perception about students' academic ability and the students' academic performance in English.

The results given in Table 10 show that 30.3 per cent of the students were reported by their teachers as having high level of academic ability, 25.3 per cent were reported as having medium level of academic ability and only 16.2 per cent were reported as having low level of academi ability in English. There was no information available for 28.6 per cent of the students as their teachers never filled the questionnaire.

The same data was subjected to a Chi-square test at the 0.05 level of significance in order to establish whether there is a relationship between teachers' perception about students' academic ability and the students actual academic performance in English. Based on the findings given in Table 11 of χ^2 = 40.54 and Table value of 12.59 at the 0.05 level of significance, the relationship between teachers' perception about students academic ability and the students' actual academic performance in English was highly significant. The significant relationship was in favour of those students who were reported by their teachers as having high and medium levels

TABLE 10: THE DISTRIBUTION OF STUDENTS' LEVELS OF ACADEMIC ABILITY AS REPORTED BY THE TEACHERS IN THE FOUR SCHOOL SUBJECTS

Teachers' Perceptions (Rating) of Students' Academic Ability	School Subjects							
	English		Mathematics		Biology		Geography	
	N	%	N	%	N	%	N	%
High	88	30.3	108	37.2	99	34.1	56	19.3
Medium	73	25.2	77	26.6	86	29.7	68	23.4
Low	47	16.2	67	23.1	45	15.5	16	5.5
No Response	82	28.2	38	13.1	60	20.7	150	51.7
TOTAL	290	100	290	100	290	100	290	100

of academic ability. Large proportions of these students occupied the performance categories of good and very good (See Table 11).

Thus, the hypothesis that there is no significant relationship between teachers' perception about students' academic ability and the students' academic performance in English was therefore rejected at the 0.05 level of significance. The alternative hypothesis that there is a significant relationship between teachers' perception about students' academic performance about and the students' academic performance in English is accepted. This implies that teachers' perception about students' academic ability may significantly influence the students' actual academic performance in English.

TABLE 11: THE RELATIONSHIP BETWEEN TEACHERS' PERCEPTION OF STUDENTS ACADEMIC ABILITY AS REPORTED BY TEACHERS AND STUDENTS' ACADEMIC PERFORMANCE IN ENGLISH

Students' Academic Performance in English	Teachers' Rating of Students' Academic Ability									
	HIGH		MEDIUM		LOW		NO RESPONSE		ROW TOTAL	
	N	Column %	N	Column %	N	Column %	N	Column %	N	%
POOR	21	23.9 (17.4)	39	53.4 (32.2)	29	61.7 (24.0)	32	39.0 (26.4)	121	41.7
GOOD	40	45.5 (34.2)	29	39.7 (24.8)	13	27.7 (11.1)	35	42.7 (29.9)	117	40.3
VERY GOOD	27	30.7 (52.9)	5	6.8 (9.8)	4	8.5 (7.8)	15	18.3 (29.4)	51	17.6
COLUMN TOTAL	88	30.3	73	25.3	47	16.2	82	28.2	290	100

χ^2 = 40.54 Table Value = 12.59

DF = 6

Significance = 0.00

P < 0.05 (significant at the 0.05 level of significance.)

* The figures in brackets are row percentages.

Hypothesis HO_2 (b):- There is no significant relationship between teachers' perception about students' academic ability and students' academic performance in Mathematics.

The results given in Table 10 show that 37.2 per cent of the students were reported by their Mathematics teachers as having high level of academic ability, 26.6 per cent as having medium level of academic ability and 23.1 per cent as having low level of academic ability in Mathematics. No information was available for 13.1 per cent of the students because their Mathematics teachers never filled the questionnaire.

In order to test the hypothesis stated above, data was subjected to a Chi-square test at the 0.05 significance level. The results given in Table 12 below showed that there is a statistically significant relationship between teachers' perception about students' academic ability and the students' actual academic performance in Mathematics based on the χ^2 value of 65.0 and table value of 12.59

TABLE 12: THE RELATIONSHIP BETWEEN TEACHERS' PERCEPTION OF STUDENTS' ACADEMIC ABILITY AS REPORTED BY TEACHERS AND STUDENTS' ACADEMIC PERFORMANCE IN MATHEMATICS

Students' Academic Performance in Mathematics	Teachers' Rating of Students Academic ability									
	HIGH		MEDIUM		LOW		NO RESPONSE		ROW TOTAL	
	N	Column %	N	Column %	N	Column %	N	Column %	N	%
POOR	24	22.2 (17.6)	41	53.2 (30.1)	51	75.0 (37.5)	20	52.6 (14.7)	136	46.6
GOOD	48	44.4 (46.6)	29	37.7 (28.2)	16	23.9 (15.5)	10	26.3 (9.7)	103	35.5
VERY GOOD	36	33.3 (70.6)	7	9.1 (13.7)	0	0.0 (0.0)	8	21.1 (15.7)	51	17.6
COLUMN TOTAL	108	37.2	77	26.6	67	23.1	38	13.1	290	100

$\chi^2 = 65.0$ Table Value = 12.59

DF = 6

Significance = 0.00

$P < 0.05$ (significant at the 0.05 level of significance)

* The figures in brackets are row percentages.

because the computed value is greater than the table (critical) value. The implication of this finding is that a majority of the students who were reported by their teachers as having high level of academic ability in Mathematics turned out to be actually performing well in Mathematics. On the other hand majority of those students who were reported to have low academic ability in Mathematics also turned out to be actually performing poorly in Mathematics (See Table 12).

The hypothesis that there is no significant relationship between teachers' perception about students' academic ability and students' performance in Mathematics was therefore rejected at the 0.05 level of significance. Hence the implication that teachers' perception about students' academic ability may significantly influence the students' actual academic performance in Mathematics.

Hypothesis HO_2 (c):- There is no significant relationship between teachers' perception about students' academic ability and students' academic performance in Biology.

The results given in Table 10 show that 34.1 per cent of the students were reported by their Biology teachers as having high level of academic ability in Biology, 29.7 per cent as having medium level of academic ability and 15.5 per cent as having low level of academic ability in Biology. No information was received for 20.7 per cent of the students because their Biology teachers never filled the questionnaire.

The same data was subjected to a Chi-Square test at the 0.05 level of significance in order to test the hypothesis stated above. The results obtained and given in Table 13 showed that there is a statistically significant relationship between teachers' perception about students' academic ability and the students' actual academic performance in Biology. This significant relationship is based on the $\chi^2 = 38.94$ and

TABLE 13: THE RELATIONSHIP BETWEEN TEACHERS' PERCEPTION OF STUDENTS' ACADEMIC ABILITY AS REPORTED BY TEACHERS AND STUDENTS' ACADEMIC PERFORMANCE IN BIOLOGY

Students' Academic Performance in Biology	Teachers' Rating of Students' Academic Ability									
	HIGH		MEDIUM		LOW		NO RESPONSE		ROW TOTAL	
	N	Column %	N	Column %	N	Column %	N	Column %	N	%
POOR	31	31.3 (23.1)	43	50 (32.1)	30	66.7 (22.4)	30	50 (22.4)	134	46.2
GOOD	36	36.4 (34.3)	37	43.0 (35.2)	11	24.4 (10.5)	21	35.0 (20.0)	105	36.2
VERY GOOD	32	32.3 (62.7)	6	7.0 (11.8)	4	8.9 (7.8)	9	15.0 (17.6)	51	17.6
COLUMN TOTAL	99	34.1	86	29.7	45	15.5	60	20.7	290	100

$\chi^2 = 38.94$ Table Value = 12.59

DF = 6

Significance = 0.00

$P < 0.05$ (significant at the 0.05 level of significance)

* The figures in brackets are row percentages.

table (critical) value of 12.59 because the computed value is greater than the table (critical) value. Thus majority of those students who were reported by their Biology teachers as having high level of academic ability in Biology, also turned out to be actually performing well in Biology; they occupied the good and very good performance categories. Further, majority of those students who were reported by their Biology teachers as having low level of academic ability, actually turned out to be performing poorly in Biology (See Table 13).

The hypothesis stated above HO_2 (c) was thus rejected at the 0.05 level of significance and the alternative hypothesis that there is a significant relationship between teachers' perception about students' academic ability and students' academic performance in Biology, is accepted. Hence the conclusion that teachers' perception about students' academic ability may significantly affect or influence the students' actual academic performance in Biology.

Hypothesis HO_2 (d):- There is no significant relationship between teachers' perception about students' academic ability and students' academic performance in Geography.

The results given in Table 10 showed that 23.4 per cent of the students were reported by their Geography teachers as having medium level of academic ability, 19.3 per cent as having high level of academic ability and only 5.5 per cent were reported as having low level of academic ability in Geography. However, it should be noted that no information was received on more than half (51.7 per cent) of the students because their Geography teachers never filled the questionnaire.

To test the relationship in the hypothesis stated above, data was subjected to a Chi-square test at the 0.05 level of significance. The results obtained are given in Table 14. These results showed a statistically significant relationship between teachers' perception about students academic ability and the students' actual academic performance in

TABLE 14: THE RELATIONSHIP BETWEEN TEACHERS' PERCEPTION OF STUDENTS' ACADEMIC ABILITY AS REPORTED BY THE TEACHERS AND STUDENTS' ACADEMIC PERFORMANCE IN GEOGRAPHY

Students' Academic Performance in Geography	Teachers' Rating of Students' Academic Ability								ROW TOTAL	
	HIGH		MEDIUM		LOW		NO RESPONSE			
	N	Column %	N	Column %	N	Column %	N	Column %	N	%
POOR	7	12.5 (5.8)	30	44.1 (25.0)	9	56.3 (7.5)	74	49.3 (61.7)	120	41.4
GOOD	31	53.4 (26.5)	31	45.6 (26.5)	5	31.3 (4.3)	50	33.3 (42.7)	117	40.3
VERY GOOD	18	32.1 (34.0)	7	10.3 (13.2)	2	12.5 (3.8)	26	17.3 (49.1)	53	18.2
COLUMN TOTAL	56	19.3	68	23.4	16	5.5	150	51.7	290	100

$\chi^2 = 34.30$ Table Value = 12.59

DF = 6

Significance = 0.00

$P < 0.05$ (significant at the 0.05 significance level).

* The figures in brackets are row percentages.

Geography; because the computed χ^2 = 34.40 is greater than the table (critical) value which is 12.59.

The significant relationship noted in Table 12 was in favour of those students who were reported as having high and medium academic ability levels in Geography. Majority of these students turned out to be performing well and hence occupied the good and very good performance categories. On the other hand, majority of those students who were reported as having low academic levels in Geography turned out to be actually performing poorly in Geography and therefor occupied the poor performance category. (See Table 14)

The statistically significant relationship noted above led to the rejection of the stated hypothesis $HO_2(d)$ at the 0.05 level of significance. The alternative hypothesis that there is a significant relationship between teachers' perception about students' academic ability and students' academic performance in Geography is accepted. Hence the implication that teachers' perception about

students' academic ability may significantly influence the students' actual academic performance in Geography.

Summary of the section

Findings from this section indicated that there was a significant relationship between teachers' perception about students' academic ability and students' actual academic performance in the four secondary school subjects used in the study. Hence the rejection of the stated hypothesis (HO_2) that there is no significant relationship between teachers' perception about students academic performance and the actual students' actual academic performance in English, Mathematics, Biology and Geography.

4.07. Hypotheses Pertaining to Differences in Students' Self-Concept of Academic Ability Between Boys and Girls

Introduction

A secondary problem of this research

was to find out whether differences existed in students' self-concept of academic ability between male and female students. As indicated at the beginning of this chapter, a total of 290 students were used in the study, and they consisted of 51 per cent female and 49 per cent male students.

Data were subjected to analysis of variance (ANOVA) in order to test the null hypotheses concerning differences between the male and female students. The level of significance was set at 0.05. The null hypothesis (HO) was rejected if the calculated 'F' or 't' values were greater than the theoretical "F" or "t" values at the given degrees of freedom and at the 0.05 level of significance.*

Hypothesis HO_3 (a):- There is no significant difference in students' self-concept of academic ability in English between boys and girls.

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*In the tables, Fc is calculated value of F and F_t is the theoretical value of F. T_c is calculated value of t and T_t is the theoretical value of t.

Data pertaining to hypothesis HO_3 (a) were analysed by means of analysis of variance and subjected to F - and t - tests at the 0.05 level of significance. The results so obtained are given in Table 15. The findings are as follows: $F_c = 3.5874$ and $F_t = 3.87$; $T_c = 1.8940$ and $T_t = 1.96$. Since the computed F - and t values are less than the theoretical F - and t values, the hypothesis stated above (HO_3) was accepted at the 0.05 level of significance.

These findings indicate that boys and girls do not differ in their self-concepts of academic ability in English. Hence the implication that sex of a student seems to have no bearing or effect on what the student perceives (himself/herself capable of doing in English.

TABLE 15: ANALYSIS OF VARIANCE FOR STUDENTS' SELF CONCEPT OF ACADEMIC ABILITY IN ENGLISH BETWEEN BOYS AND GIRLS

GROUPS	SUM	MEAN	STANDARD DEVIATION	SUM OF SQUARES	N
Boys	198	1.394	0.571	45.915	142
Girls	235	1.588	1.081	171.858	148
TOTAL	433	1.493	0.873	217.774	290

ANOVA TABLE

SOURCE OF VARIATION	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARE	F_c	F_t
Between Groups	2.7126	1	2.7126	3.5874	3.87
Within Groups	217.7736	288	0.7562		
TOTAL	220.4862	289			

$T_c = 1.8940$ $T_t = 1.96$

$P > 0.05$ (Not significant)

Hypothesis HO_3(b):- There is no significant difference in students' self-concept of academic ability in Mathematics between boys and girls.

Data related to this hypothesis were analysed by means of analysis of variance and subjected to both F - and t - tests. The results are given in Table 16. Based on the F_c = 3.21 and F_t = 3.87; T_c = 1.7917 and T_t = 1.96 at the 0.05 level of significance, where both the computed F_c and T_c values are less than the theoretical (table) values, the hypothesis that there is no significant difference in students' self-concept of academic ability in Mathematics between boys and girls was not statistically significant. Therefore, this hypothesis was accepted at the 0.05 level of significance.

It can be concluded from these findings that sex of the student has no contribution to differences in students' self-concept of academic ability in Mathematics between male and female students.

TABLE 16: ANALYSIS OF VARIANCE FOR STUDENTS' SELF-CONCEPT OF ACADEMIC ABILITY IN MATHEMATICS BETWEEN ALL BOYS AND ALL GIRLS

GROUPS	SUM	MEAN	STANDARD DEVIATION	SUM OF SQUARES	N
Boys	227	1.599	0.799	90.120	142
Girls	268	1.811	1.174	202.703	148
TOTAL	495	1.707	1.012	292.822	290

ANOVA TABLE

SOURCE OF VARIATION	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARE	F_c	F_t
Between Groups	3.2638	1	3.2638		
Within Groups	292.8224	288	1.0167	3.21	3.87
TOTAL	296.0862	289			

$T_c = 1.7917$ $T_t = 1.96$

$P > 0.05$ (Not significant).

Hypothesis HO_3 (c):- There is no significant difference in students' self-concept of academic ability in Biology between boys and girls.

Data pertaining to this hypothesis were subjected to F - and t - tests from the analysis of variance at 0.05 level of significance. The results obtained are presented in Table 17 below. The findings were as follows:- computed $F_c = 4.9195$; $F_t = 3.87$; and $T_c = 2.2180$, $T_t = 1.96$. Since the computed F - and t - values were greater than the theoretical values, then HO_3(c) was rejected at the 0.05 level of significance. The alternative hypothe that there is a significant difference in students' self-concept of academic performance in Biology between b and girls is accepted. Based on the findings from the data, the differences between boys and girls were found to be statistically significant.

The significant difference observed was in favour of the girls. From the findings, girls tended to see themselves more positively and thus indicated higher self-concept of academic ability

TABLE 17: ANALYSIS OF VARIANCE FOR STUDENTS' SELF-CONCEPT OF ACADEMIC ABILITY IN BIOLOGY BETWEEN ALL BOYS AND ALL GIRLS

GOUPS	SUM	MEAN	STANDARD DEVIATION	SUM OF SQUARES	N
Boys	192	1.352	0.586	48.394	142
Girls	234	1.581	1.088	174.027	148
TOTAL	426	1.469	0.885	222.421	290

ANOVA TABLE

SOURCE OF VARIATION	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARE	Fc	Ft
Between Groups	3.7993	1	3.7993	4.9195	3.87
Within Groups	222.4214	288	0.7723		
TOTAL	226.2207	289			

Tc = 2.2180 Tt = 1.96

P $<$ 0.05 (significant)

in Biology than boys. This is indicated by the higher means for girls (1.581) as compared to a lower mean for boys (1.352) (See Table 17). Based on these results, girls were more likely to perform better in Biology than boys.

Hypothesis HO_3 (d):- There is no significant difference in students' self-concept of academic ability in Geography between boys and girls.

Data in relation to hypothesis HO_3 (d) were analysed by means of analysis of variance and subjected to both F - and t - test at the 0.05 level of significance. Results so obtained are presented in Table 18 below. The results found were as follows: $F_c = 5.9845$, $F_t = 3.87$ and $T_c = 2.4463$, $T_t = 1.96$. Based on these findings the hypothesis HO_3 (d) was rejected at the 0.05 level of significance because the computed F_c - and T_c values were greater than the theoretical values. Thus the results showed a statistically significant difference in students' self-concept of academic ability in Geography between boys and girls. The alternative hypothesis that there is a significant difference in students' self-concept of academic ability in Geography between boys and girls was therefore accepted.

From these findings the girls indicated higher self-concepts of academic ability than boys.

TABLE 18: ANALYSIS OF VARIANCE FOR STUDENTS' SELF-CONCEPT OF ACADEMIC ABILITY IN GEOGRAPHY BETWEEN ALL BOYS AND ALL GIRLS

GROUPS	SUM	MEAN	STANDARD DEVIATION	SUM OF SQUARES	N
Boys	178	1.254	0.538	40.873	142
Girls	222	1.500	1.079	171.0	148
TOTAL	400	1.379	0.865	211.873	290

ANOVA TABLE

SOURCE OF VARIATION	SUM OF SQUARES	DEGREE OF FREEDOM	MEAN SQUARE	Fc	Ft
Between groups	4.4026	1	4.4026	5.9845	3.87
Within groups	211.8732	288	0.7357		
TOTAL	216.2759	289			

Tc = 2.4463 Tt = 1.96

$P < 0.05$ (significant)

The girls had a higher mean (1.5) than the boys (1.256) (See Table 18). Hence the implication that the girls are more likely to perform better than boys in Geography.

Summary of the Section

The results of the differences between male and female students as regards their self-concept of academic ability are varying. On one hand no significant differences in self-concept of academic ability between boys and girls were registered in English and Mathematics; and on the other hand significant differences were found in students' self-concept of academic ability in both Biology and Geography. In both cases the girls indicated higher self-concepts of academic ability as compared to the boys.

This Chapter has presented and discussed the findings of the study. The next chapter will give a summary of the entire study.

CHAPTER FIVE

SUMMARY OF THE STUDY, CONCLUSIONS, IMPLICATIONS FOR EDUCATIONAL PRACTICE AND RECOMMENDATIONS

5.01. INTRODUCTION

In the previous chapter, an attempt was made to present the analysis of the data and the interpretation there of for this study. The purpose of the present chapter is to give a general summary of the study and the reported findings, the implications of the study for educational practice and recommendations for further research.

5.02. GENERAL SUMMARY OF THE STUDY

In general, the main purpose of the study was to investigate whether there exists any relationship between secondary school students' self-concept of academic ability and academic performance in English, Mathematics, Biology and Geography. In addition, the study sought to determine the relationship if any between teachers' perception of the students' academic ability and the students' actual academic performance. Further the

study investigated the differences between boys and girls with regard to their self-concept of academic ability. All these are discussed in Chapter 1 of the thesis.

Chapter II gave the theoretical framework of the study and presented studies that are related to the present study. The research design and methods of data collection and analysis are the contents of Chapter III. Data analysis, presentation and discussion of findings were presented in Chapter IV.

5.03. SUMMARY OF THE FINDINGS

The summary of the findings is accomplished in several distinct sections as follows:

Summary of Findings about Students' Background

The sample consisted of 290 students with about equal numbers of males and females (49 percent and 51 percent respectively). Majority of the students were aged between sixteen and eighteen years.

As concerns parental education, more students had fathers who had received secondary and university education than mothers. In addition, more mothers had no formal schooling as compared to fathers. Majority of the students came from peasant farming backgrounds as compared to other occupations. Finally, 65 5 per cent of the students came from rural environments. Thus very few students came from urban areas.

Summary of Findings Pertaining to Teachers' Background

A total of 26 teachers took part in the present study. Majority of them (84.6 per cent) were males and only 15.4 per cent were females.

As regards their level of education, 62.9 per cent of them had a university degree, 11.5 per cent had a Diploma in Education and trained S1 teachers were 15.4 per cent. Only one (3.8 per cent) was untrained and was teaching after Form six.

On teaching experience, 61.5 per cent of the teachers had taught for five years and over; 30.8 per cent had an experience of between one and four

years and 7.6 per cent had taught for less than one year.

Finally, all the teachers felt that they were responsible for students academic performance. Hence teachers should always endeavour to help their students to attain high levels of academic performance. In addition, all the teachers indicated that teacher's attitudes towards students may have an effect on students' academic performance. Hence, teachers should not redicule their students if they hope to raise the academic performance of their students.

5.04. SUMMARIES OF FINDINGS PERTAINING TO THE FORMULATED HYPOTHESIS

This section summarises the findings based on the tested hypotheses. Three hypotheses were tested. The summarises are organized in such a way that the null hypotheses which tested significantly are summarized first followed by the null

hypotheses which failed to test significantly in the Chi-Square statistics. Finally, the null hypotheses that had no significant differences are discussed followed by the null hypotheses that tested significant differences.

(i) Summary of Hypotheses Related to Significant Relationships between Variables.

(a) Students' Self-Concept of Academic Abilit and Academic Performance

Hypothesis HO_1: There was a statistically significant relationship between students' self-concept of academic ability and students actual academic performance in English, Mathematics, Biology and Geography. The significant relationship was in favour of thos students who held high self-concepts of acade ability about themselves. They also tended to perform well in the four school subjects. (See Tables 5, 6, 7 and 8). This result provides a possible basis for the conclusion that students who hold a high self-concept

of academic ability about themselves tend to perform well academically.

The above conclusion supports findings from other studies that were discussed in Chapter II of this thesis. These studies also found a significant relationship between students' self-concept of academic ability and their academic performance.

(b) Teachers' Perception and Students' Academic Performance

Hypothesis HO_2: There was a statistically significant relationship between teachers' perception of students' academic ability and the students' academic performance in English, Mathematics, Biology and Geography. The significant relationship was in favour of those student who were reported by their teachers as having high academic ability levels. Thus, those students who were reported as having high academic ability levels also turned out to be performing well academically in each of the four school subjects. Hence, this finding provides a possible basis for the conclusion that students who are perceived by their teachers as having high academic ability also tend to perform well

in schools.

This finding is in accordance with other studies cited in Chapter two which established a significant relationship between teachers' perception of students' academic ability and students' actual academic performance.

(ii) Hypothesis Related to No Significant Differences Between Boys' and Girls' Self-Concept of Academic Ability

(a) Self-Concept of Academic Ability and Sex of the Students

Hypothesis HO_3 (a) and (b): There was no statistically significant difference in students' self-concept of academic ability in both English and Mathematics between boys and girls in general. Thus, according to these findings the sex of the students appears to have no significant influence on the students' self-concept of academic ability in English and Mathematics.

(iii) Hypothesis Related to Significant Difference Between Boys' and Girls' Self-Concept of Academic Ability.

(a) Self-Concept of Academic Ability and Sex of the Students.

Hypothesis HO_3 (c) and (d): There was a statistically, significant difference in students' self-concept of academic ability between boys and girls in Biology and Geogra In both cases the difference was in favour o girls. Therefore, according to these findin the girls in general held high self-concepts of academic ability in both Biology and Geography about themselves as compared to the boys.

5.05. IMPLICATIONS OF THE STUDY FINDINGS FOR EDUCATIONAL PRACTICE

This study has provided a number of important findings which may be of use to educational policy makers in Kenya. These are discussed below:

The present study has established a significant relationship between students' self-concept of academic ability and academic performance. Thus, to improve academic performance, teachers should endevour to help the learners to cultivate positive self-concepts of academic ability. This way the teachers can, to some extent, improve the peformance of the learners.

The above observation has an implications for teacher training. To be able to help students cultivate positive self-concepts of academic ability, there is need for would-be teachers to be trained in skills that are geared towards improving their students' self-concept. Once they go to practice teaching, the teachers will be better placed to encourage their students to have high or positive self-concept which would in turn lead to improvement in students' academic performance.

The study has established a significant relationship between students' academic performance

and teachers' perception of students' academic ability. For this reason, teachers should attempt in all cases to portray a picture which in a way shows the students that they (students) are capable of achieving a high level or a better academic ability.

The present secondary school curriculum puts more emphasis on the subject matter to be learned by the students. There is inadequate consideration taken regarding the skills that enhance self-concept. In one sense, this study suggests that if the techniques of raising or promoting self-concepts in students can be incorporated wherever appropriate in the secondary school curriculum, student teachers and schools would greatly benefit in their performance.

Another implication of the study is that students should be made aware of the fact that they have a role to play in as far as their academic performance is concerned. This is based on the finding that students' self-concept is significantly related to academic performance. The former is

a personality characteristic of the student of which he must be made aware.

Based on these implications, the following suggestions are offered to the teachers:

(i) The teachers should adopt the teaching methods which are more democratic than authoritarian; the former will provide for adaptation to individual differences, encourage students initiative, urge individual and group participation and stimulate self-involvement. All these are likely to achieve positive results in both students' self-concept and academic performance.

(ii) The teachers can effect changes in students' self-concepts. One way to do this is to try to help the doubting (weak) students to see themselves as capable of achieving a high academic performance. However, one should be aware that, change takes place slowly over a long period of time throughout school life. One should not expect sudden changes in the way a child feels about himself.

(iii) The teachers should note that many and continuous successes are required to help a person feel better about himself. Thus, almost anything a teacher does from calling a student by his name to complementing him on his attempt to answer a question helps to create a sense of self-worth.

(iv) Further, teachers should note that relating successes or strengths to one another is important. Teachers can stress the impact of any success enhancing experience by relating it to others the student has had. For example, when a student produces a good Mathematics assignment, the teacher can say to the student 'I really like your work, you learned how to use the Mathematical tables very quickly'. This relates his Mathematical ability to a more central belief about himself - his ability to learn.

(v) Finally, the teachers should create an environment of mutual support and caring. Students should recognize that they are valued

and will receive affection and support. Without the environmental dimension of trust, caring and openness, the teachers' efforts to enhance students' self-concept of academic ability will be seriously limited and, in the long run, the actual academic performance will equally be hampered. For this reason, teachers should not show or express negative attitudes to their students. Teachers should not for example redicule students or express to them that they are failures as this may substantially have negative effects on students' academic performance. This is in conformity with the finding that teachers' perception of students' academic ability is significantly related to the students' academic performance.

5.06. RECOMMENDATIONS FOR FURTHER RESEARCH

By way of conclusion, this study has raised a number of important questions which were in reality beyond this research. For this reason they could not be answered by the present study to a great depth.

Answers to them will serve to illuminate unresolved issues associated with or raised by this study particularly in the area of students self-concepts of academic ability and students academic performance.

Based on this, the following recommendations for further research in Kenya secondary education are suggested:-

(1) More intense study should be done in other parts of the country especially urban areas to determine rural-urban disparities in both students' self-concept and academic performance and the impact of such disparities on the actual students academic performance.

(2) Further research should also focus on other school categories, that is, to cover "Harambee"* and "Private"* secondary schools. These form a large proportion of secondary schools in Kenya.

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*"Harambee" secondary schools are those schools started and run on self-help basis by members of the community in which the school is situated.

"Private" schools are owned and managed by individuals or organizations such as churches.

(3) Further research of similar nature need to be done incorporating other subjects that are taught in Kenyan secondary schools.

(4) There is need for a futher study to be undertaken using a common examination for all subjects like Kenya Certificate of Education Examination.

(5) A more intensive and extensive research of similar nature needs to be done involving different variables in addition to those discussed in this study. These variables should be those which might influence academic performance in the four school subjects. These could include school variables, teachers' variables and student variables like motivation and other personality traits.

(6) There is need for a further study to determine whether previous academic performance of students has any relationship with future academic performance. This can be done by trying to establish the Correlation of Certificate of Primary Education (CPE) examination performance and performance at the KCE examination.

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APPENDIX A

Kenyatta University,
Foundations Department,
P.O. Box 43844,
N A I R O B I.

To: _____

_____

_____

_____

I am writing to inform you that I have been granted the permission to carry out a research study in Kenya by the Office of the President. Your School has randomly been chosen as one of the sites for the study. This is a scientific educational research to be carried out in my personal capacity, with the support of Kenyatta University, Department of Educational Foundations. The study is designed to investigate the relationship between student's self-concept and academic performance of Secondary School students in Kenya. It is hoped that the results of the study may be of help to teachers, parents, students and curriculum planners of Kenyan secondary schools.

The main purpose for writing this letter is to inform you that I will visit your school any time during the first term of 1986. During this visit I will administer a questionnaire to one from Four Class of 40 students. So please make available one class for me during the visit. Also during the visit I will administer another questionnaire to the teachers who teach the following subjects to the same Form Four class: Mathematics, English, Geography and Biology. Further, I will also like to collect the marks for the first, second and third term for the same students and for the same subjects mentioned earlier for the end term examination for 1985.

Thanking you in advance for your attention to this matter.

Yours sincerely,

ISAAC W. MUASYA.

APPENDIX B

KENYATTA UNIVERSITY

EDUCATIONAL FOUNDATIONS DEPARTMENT

P.O. BOX 43844, NAIROBI

STUDENTS' SELF-CONCEPT AND ACADEMIC PERFORMANCE

STUDENT'S QUESTIONNAIRE

The questions which follow seek information concerning your background, your self-concept, that is, how you see yourself with regard to how you perform in selected school subjects. Please select the answer which is closest to your response and place an X in the appropriate box provided.

This is a chance to look at yourself and how you can perform in the school subjects given. However, note that this is not a test and therefore there are no right or wrong answers. Most of what I am asking you in this questionnaire is to choose one answer that fits or describes you from a number of alternatives.

Please answer all questions as accurately and honestly as possible. The information you provide will remain strictly confidential and will be used for research purposes only. Rest assured that your teachers will not see your answers. Thus complete confidentiality is assured.

If you have any comments to make, feel free to write

them at the back of this questionnaire.

Section One Background Information

1. Name _____

2. Name of your school _____

3. Your sex is:

   1. Male ☐
   2. Female ☐

4. Your age is

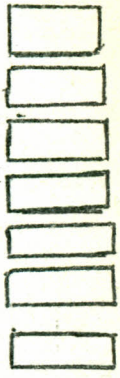
   1. Less than 14 years ☐
   2. Between 14 and 16 years ☐
   3. Between 16 and 18 years ☐
   4. Between 18 and 20 years ☐
   5. Over 20 years ☐

5. How many years of full-time schooling did your father r

   1. No schooling ☐
   2. Lower Primary (Std.. 1-4) ☐
   3. Upper Primary (Std. 5-8) ☐
   4. Form two ☐
   5. Form four ☐
   6. Form six ☐
   7. University ☐

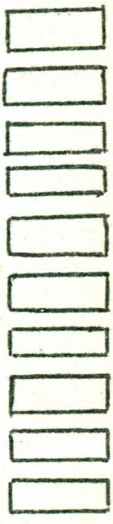
6. How many years of full-time schooling did your Mother receive?

1. No schooling
2. Lower primary (Std. 1-4)
3. Upper primary (Std. 5-8)
4. Form Two
5. Form Four
6. From Six
7. University



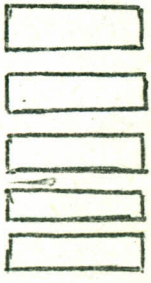
7. What is your Father's occupation (that is, what he does for a living? (If your Father is deceased (not alive) give your guardian's occupation).

1. Peasant farmer
2. Large scale farmer
3. Teacher
4. Clerical Officer
5. Non-executive Officer of industrial worker
6. Executive
7. Businessman
8. Politician
9. Other please specify



8. Where do your parents live?

1. Rural farm
2. Rural Village
3. Small town
4. Medium sized town
5. Large urban centre

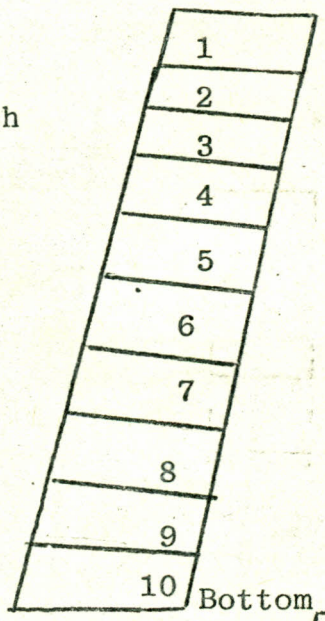


Section Two: I think I am:

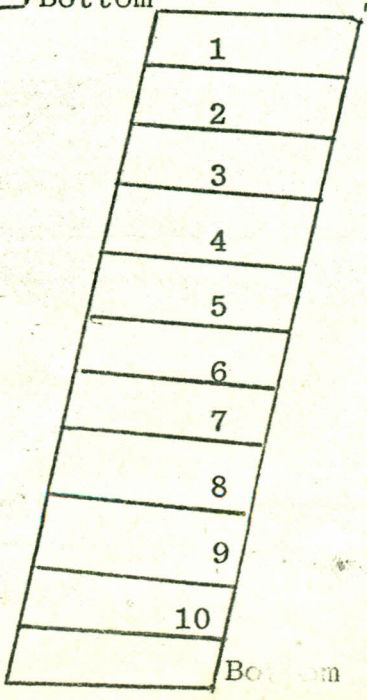
In various school subjects, English, Mathematics, Biology and Geography; there are students who are at the top (best) and there are those who are at the bottom (wor
Where do you think you are NOW in each of these subjects?

Locate yourself on the ability ladder of each subject provided below by writing "ME" on the appropriate step of the ladder.

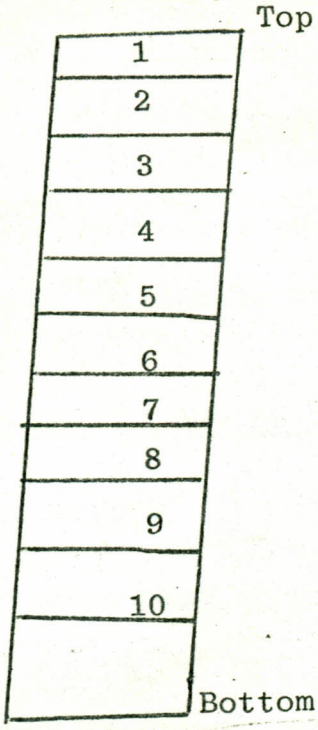
1. English



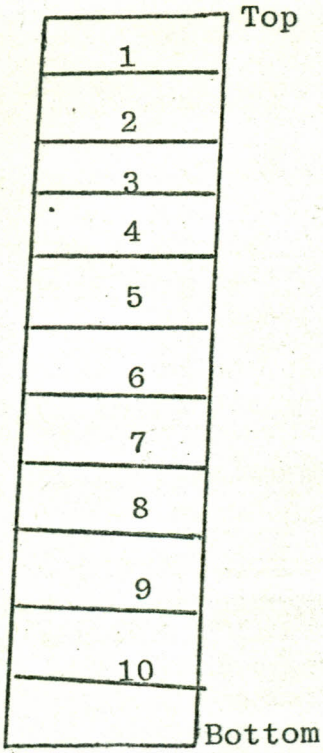
2. Mathematics



3. Biology



4. Geography



Thank you for your cooperation

ISAAC W. MUASYA

APPENDIX C

KENYATTA UNIVERSITY

EDUCATIONAL FOUNDATIONS DEPARTMENT

P.O. BOX 43844, NAIROBI

STUDENTS' SELF-CONCEPT AND ACADEMIC PERFORMANCE

TEACHERS' QUESTIONNAIRE

I am trying to learn more about students and how they perform in selected school subjects. I therefore kindly request you to respond to the following questions. The questions are meant to have you give a general evaluation of the students you teach.

Please select the answer which is closest to your response and place an X against the appropriate box provided.

The information which you give on this questionnaire will be strictly confidential, and will be used for research purposes only. Reports will be made with aggregate data, and no one person will be identified with particular data. After your questionnaire has been completely coded for computer use, your questionnaire will be destroyed. Hence Complete Confidentiality is assured. Therefore answer all questions as accurately and honestly as possible. If you have any other comments to make, feel free to write them at the back of this questionnaire.

Section One Teacher's Background

1. Name _____

2. Name of School _____

3. What subject do you teach in From IV?

_____

4. Your sex is

1. Male ☐

2. Female ☐

5. Your age is:

1. Less than 25 years ☐

2. Between 25 and 30 years ☐

3. Between 31 and 34 years ☐

4. Between 35 and 39 years ☐

5. 40 years and over ☐

6. Which level of formal teacher training did you receive?

1. None (Untrained) ☐

2. SI ☐

3. Dip.Ed. ☐

4. B.Ed/B.A/B.S.C. ☐

5. M.Ed/M.A/M.Sc. ☐

7. How many years have you taught?
(i.e. your teaching experience)

1. Less than one year
2. Between 1 and 4 years
3. Between 5 and 9 years
4. Over ten years.

Section Two: Teacher's Responsibility for Students Academic Performance

1. How responsible do you feel for a student's academic performance.

1. Very responsible ☐
2. Responsible ☐
3. Somewhat responsible ☐
4. Not very responsible ☐
5. Not responsible at all ☐

2. To what extent do you think teachers' attitudes toward their students affect their students' performance in a subject area?

1. They have a great deal of effect on student performance. ☐
2. They have a substantial effect on student performance. ☐
3. They have some effect on student performance. ☐
4. They do not have much effect on student performance. ☐
5. They have no effect at all. ☐

Section Three: Teacher's Perception

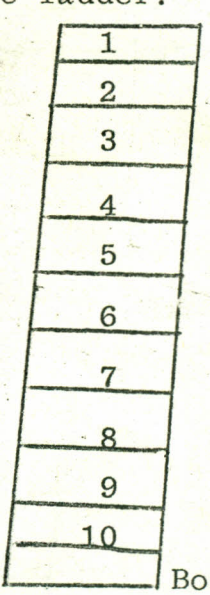
Name of School_____

Name of Student to locate_____

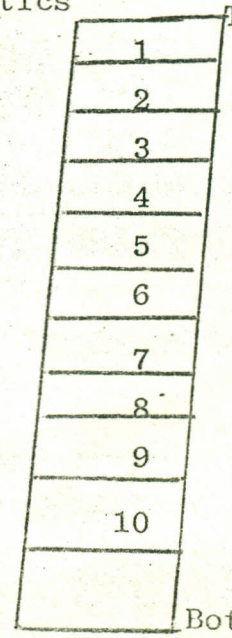
Teaching Subjects_____

In various school subjects, English, Mathematics, Biology and Geography that are offered in Form Four there are students who are at the top (best) and there are those who at the bottom (worst). In the subject you teach, where on the ability ladder provided would you say the above, named student is NOW? Locate him/her by circling the number of the steps of the ladder.

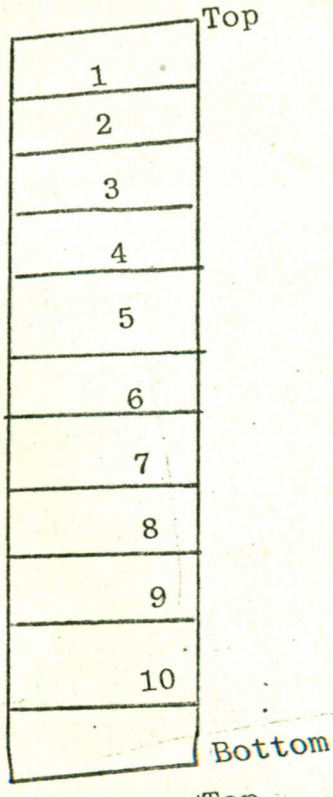
1. English



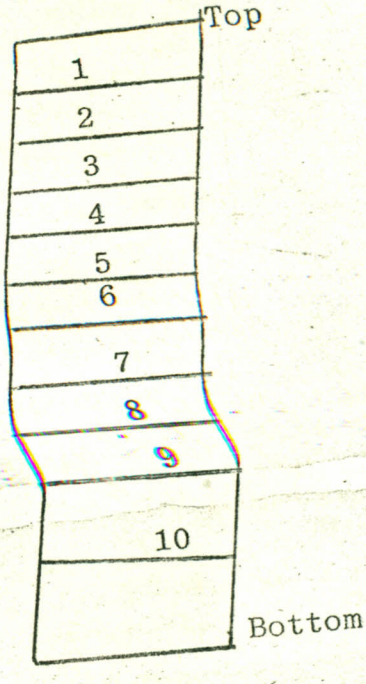
2. Mathematics



3. Biology



4. Geography



Thank you for your cooperation

ISAAC W. MUASYA.

APPENDIX D

LIST OF SCHOOLS USED IN THE STUDY

1. Alliance Boys High School
2. Mangu High School
3. Limuru Girls High School
4. Ngandu Girls High School
5. Miswani Girls Secondary School
6. Nguviu Boys High School
7. Ikutha Boys Secondary School
8. Lema Girls Secondary School

APPENDIX E

EACE/KCE RESULTS IN ORDER OF MERIT

(a) 1978 EACE Results

1. Alliance Boys' High School.
2. Alliance Girls' High School.
3. Loreto Convent, Limuru.
4. Starehe Boys' Centre, Nairobi.
5. Ngandu Girls' High School.
6. St. Mary's, Nairobi.
7. Loreto Convent, Msongari.
8. Lenana High School.
9. Nyeri Boys' High School.
10. St. Mary's Lushangoni, Taita.
11. Kagumo High School.
12. Njiri's High School.
13. Singobe Girls' Secondary School.
14. Limuru Girls' Secondary School.
15. Murray Girls' High School, Taita.
16. Cardinal Otunga High School.
17. St. Charles Lwanga, Kitui.
18. Koelel Secondary School.
19. Mangu High School.
20. Loreto Convent, Valley Road.
21. Kenya High School.

Source: Daily Nation February 22, 1979 P.5 Column 5.

(b) 1979 EACE Results

1. Alliance Boys' High School.
2. Loreto Convent, Limuru.
3. Alliance Girls' High School.
4. Starehe Boys' Centre, Nairobi.
5. Mangu High School.
6. Ngandu Girls' High School.
7. Loreto Convent, Msongari.
8. St. Mary's School, Nairobi.
9. Kagumo High School.
10. Cardinal Otunga High School.
11. Lenana High School.
12. Nyeri, Boys' High School.
13. St. Charles Lwanga, Kitui.
14. Loreto Convent, Valley Road.
15. Limuru Girls' High School.
16. Thika High School.
17. Nairobi School.
18. Njiri's High School.
19. Mtito Secondary School.
20. Nkabune Girls' School, Meru.
21. Alliance Girls' High School.

Source: Daily Nation 28th February, 1980 P. 20, Colum

(c) 1980 KCE Results

1. Alliance Boys' High School.
2. Starehe Boys' Centre.
3. Loreto Convent, Limuru.
4. Ngandu Girls' High School.

5. Mangu High School.
6. St. Charles Lwanga, Kitui.
7. Alliance Girls' High School.
8. Lenana High School.
9. Nkabune Girls' School, Meru.
10. Kenya High School.
11. Nyeri Boys' High School.
12. St. Patrick, Iten.
13. Njiri's High School.
14. Limuru Girls' High School.
15. St. Mary's School, Nairobi.
16. Kagumo High School.
17. St. Brigid's Girls' Kitale.
18. Molo Secondary School.
19. Naromoru Girls' Secondary School.
20. Loreto Convent, Valley Road.

Source: Standard, 3rd February, 1981. P. Column 2.

(d) 1981 KCE Results

1. Alliance Boys' High School.
2. Strathmore College.
3. Loreto Convent, Limuru.
4. St. Mary's School, Nairobi.
5. Alliance Girls' High School.
6. Starehe Boys' Centre.
7. St. Brigid's Girls', Kitale.
8. Loreto Convent, Msongari.
9. Njiri's High School.

10. Mangu High School.
11. Bura Girls' High School.
12. H.H. The Aga Khan, Mombasa.
13. Maseno High School.
14. Loreto Convent, Valley Road.
15. Limuru Girls' High School.
16. Naromoru Girls' Secondary School.
17. Kenya High School.
18. Lenana High School.

Source: Standard, 29th January 1982. P. 3, Column 2.

(e) 1982 KCE Results

1. Alliance High School
2. Loreto Convent, Limuru.
3. Ngandu Girls' High School.
4. Strathmore College, Nairobi.
5. Mangu High School.
6. Alliance Girls' High School.
7. Lenana High School.
8. St. Brigid's Girls' Secondary School, Kitale.
9. Maseno High School.
10. Starehe Boys' Centre, Nairobi.

Source: Standard, 21st January 1983. P. 1 Column 3-4.

(f) 1983 KCE Results

1. Alliance High School.
2. Ngandu Girls' High School.
3. Alliance Girls' High School.
4. Loreto Convent, Limuru.

5. Mangu High School.
6. Starehe Boys' Centre, Nairobi.
7. Nyeri High School.
8. Precious Blood Secondary School, Riruta.
9. St. Brigid's Girls' High School, Kitale.
10. Nkabune Girl's School, Meru.
11. Starthmore College, Nairobi.
12. St. Mary's School, Nairobi.
13. H.H. The Aga Khan Secondary School, Mombasa.
14. Queen of Apostles Seminary, Nairobi.
15. Loreto Convent, Msongari.

Source: Daily Nation 2nd February, 1984. P. 1. Column 1.

(g) 1984 KCE Results

1. Alliance Boys' High School.
2. Ngandu Girls' High School.
3. Alliance Girls' High School.
4. Mangu High School.
5. Starehe Boys' Centre, Nairobi.
6. Nyeri High School.
7. Nkabune Girls' Secondary School.
8. St. Brigid's, Kitale.
9. Loreto Convent, Limuru.
10. Nkubu Secondary School.

Source: Daily Nation 30th January 1985. P. 1. Column 4.