

ANALYSIS OF FACTORS INFLUENCING EFFECTIVE  
IMPLEMENTATION OF HOME SCIENCE CURRICULUM  
IN KENYAN SECONDARY SCHOOLS: A CASE STUDY  
OF NAIROBI AND MURANG'A DISTRICTS.

BY

DOROTHY OWINO ROMBO

Rombo, Dorothy Dwins  
*Analysis of factors  
influencing effective*

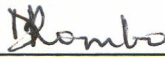


A THESIS SUBMITTED TO THE FACULTY OF  
EDUCATION IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF MASTER OF  
EDUCATION IN KENYATTA UNIVERSITY

SEPTEMBER, 1989

DECLARATION

THIS THESIS IS MY ORIGINAL WORK AND HAS NOT BEEN  
SUBMITTED FOR A DEGREE IN ANY OTHER UNIVERSITY.



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DOROTHY OWINO ROMBO

THIS THESIS HAS BEEN SUBMITTED WITH OUR APPROVAL AS  
UNIVERSITY SUPERVISORS.



---

DR. N. GITAU

SENIOR LECTURER, DEPARTMENT OF EDUCATIONAL COMMUNICATION  
AND TECHNOLOGY, KENYATTA UNIVERSITY.



---

DR. P.O. DIGOLO

CHAIRMAN, DEPARTMENT OF EDUCATIONAL COMMUNICATION AND  
TECHNOLOGY, UNIVERSITY OF NAIROBI.



---

MRS. C. KITHINJI

LECTURER, DEPARTMENT OF EDUCATIONAL COMMUNICATION AND  
TECHNOLOGY, KENYATTA UNIVERSITY.

ACKNOWLEDGEMENT

It is impossible to name everyone who deserves my thanks and who played an important role in this study.

I am particularly grateful to Dr. Gitau, Mrs. Kithinji and Dr. Digolo for their guidance and encouragement, throughout the time of the study.

The researcher also wishes to express deep appreciation to the Kenya Institute of Education and the Home Science Inspectorate personnel for their assistance in obtaining some of the literature used in the study.

All the headteachers, the Home Science teachers and students of Home Science who provided data are highly acknowledged.

Special thanks to Mr. John Chege for editing the work and to my friend Eucabeth for her efficient typing of the manuscript.

Finally special thanks to my parents, sisters, brothers and friends whose words of encouragement served as a source of inspiration.

DEDICATION

This work is dedicated to my parents  
Mr. and Mrs. S. Rombo for their  
moral support, understanding and  
encouragement.

ABSTRACT

Home Science is one of the practical subjects which recently acquired its long overdue emphasis in the Kenyan School Curriculum. Raising of funds for the construction of Home Science Workshop is a common activity in many Schools, both Primary and Secondary. For some Schools it is an old subject which has broadened dimensions in the 8.4.4 System, for others it is totally new.

This Study aimed at analysing factors that influence the effective implementation of Home Science Curriculum in Nairobi and Muranga Schools. Specifically the Study aimed at fulfilling the following objectives;

1. To find out the availability of Home Science syllabi, textbooks, reference books, teachers' guides, materials, tools and facilities that are used to enhance the quality of Home Science teaching.
2. To determine teachers' professional qualifications.
3. To establish the adequacy of pre-service and in-service training for the Home Science teachers.

## VII

4. To analyse the problems experienced by teachers in implementing the current Home Science Curriculum.
5. To recommend strategies for the improvement of the teaching of Home Science in the Secondary Schools.

Literature was reviewed under four major topics. The development of Home Science in Schools which traces the history of the subject in Kenya was reviewed first. This was followed by the strategy for Curriculum *implementation with* particular emphasis on Home Science. Literature was also reviewed on the role of the teacher in Curriculum implementation and finally on related studies.

The research instruments used included questionnaires, interview schedules and observation checklists. Data was obtained from 47 Home Science teachers through questionnaires and interviews. Thirty headteachers were interviewed and 300 Home Science Students responded to questionnaires. The observation checklists were filled in by the researcher. The respondents were drawn from 30 different Schools, 15 in Nairobi district and another 15 in Murang'a district.

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Analysis of data was carried out, responses were tabulated and reported in both tabular and descriptive form. Findings from data collected by the four instruments were compared and compiled. From them conclusions were drawn to the effect that;

1. Home Science is dominated by females and might stay inferior because of that dominance.
2. Nairobi (Urban) Schools are better placed in terms of qualified teachers than Murang'a ones (rural).
3. The pre-service education and in-service training which were offered to the teachers have loopholes which have led to incompetent teaching.
4. The in-service programmes are too rare to assist in improving Home Science Education.
5. The in-service programmes are not organized to cater for all the teachers.
6. The in-service programmes are too brief to adequately cover the different areas of Home Science.
7. Home Science teachers do not form panels to assist them in solving daily problems encountered when teaching Home Science.
8. Improvisation is minimal in the Home Science classes.
9. The practical aspects of Home Science are least carried out due to lack of equipment, tools and facilities.

10. The headteachers though aware, do not assist Home Science teachers in solving problems encountered during implementation.
11. In any one given School a 'cobweb' of problems affected implementation of Home Science.
12. The teaching-learning resources were very scarce in Schools and where they were available, they had to be shared between many students.

On the basis of these findings recommendations were made. These were to serve as guideline for the Home Science teachers, Kenya Institute of Education, (K.I.E), the Inspectorate and the Ministry of Education. They were also to serve as a base for further research in the area of Home Science Education.

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## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of Study

Home Science, a subject which focuses heavily on family living has its roots in North America. The founders of the subject designed it specifically for the woman who was considered the sole homemaker Hellen Richards, one of the great founders of the subject stated that Home Economics stands for:

The ideal home life for today unhampered by the traditions of the past. The utilization of all resources of modern Science to improve the home life. The freedom of the home from dominance of things and their due subordination to ideals.

The simplicity in material surroundings which will most free the spirit for the more important and permanent interests of the home and of society.<sup>1</sup>

It is with such objectives that Home Science is taught in the world over.

The subject as it was introduced in the colonial Kenya was treated as part of Industrial Education as it involved a lot of practical work. The history of Industrial Education in Kenya shows that, Industrial Education has an inferior propelling force which has

been sieving through into each generation right from the colonial times. Home Science inevitably suffers from this persistent inferiority. Sifuna (1984) posed an important question in relation to the development of these Industrial Subjects to the effect that:

"what probabilities are there that practical subjects will succeed in independent East African territories when they failed in colonial days?"<sup>2</sup>

In an attempt to answer this question he suggested that for such programmes to succeed a number of constraints had to be studied critically.<sup>3</sup> This project aims at studying the factors related to the implementation of Home Science. Following is a brief historical outline of Home Science in Kenya.

Domestic Science, Home Science, Home Management, Housewifery, Hygiene, Needlework, Cookery, etc. are some of the names that have been used over the times for the current Home Economics Education. The many names used are a manifestation of the unsteady position the subject has been holding in the academic field.

The origin of the subject in Kenyan Schools goes far back to the coming of the Missionaries.

Elements of the subject like Hygiene, Cookery and Housewifery were taught to the African women by the White women.

Following the Phelps-Stokes Commission (1924) emphasis was placed on practical subjects such as Agriculture, Home Economics, Health Education and Physical Education. When The Kabete Jeanes School opened on 1st August, 1925, the Curriculum faithfully reflected, the official policy of the Commission. For the male teachers it included Singing, Kiswahili, Physical Training, Games, Religious and Moral Instructions, Simple Hygiene, Sanitation and First Aid, and simple Agriculture. For the wives it covered Reading, Writing, Arithmetic, simple Hygiene, Maternity, Child Feeding, First Aid, Selection of Native Foodstuffs, Cookery, Sewing, Knitting and simple Dressmaking.<sup>4</sup> The curriculum for the female was heavily centered on Domestic Science so that they could not only teach fellow African women, but also set them good example. In 1926 a Domestic Science Centre was started in Eldoret for girls. The subjects taught included Needlework, Housewifery, Cookery, Housecraft and Hygiene. The

different Church missionaries took as part of their duty to teach elements of Home Science in their centres scattered all over the colony.

After independence education had to be reorganized to meet the demands of the new nation. There was need to train man-power to take over jobs from the out going Whites. Emphasis was therefore placed on other academic subjects. However, Home Science naturally found its place in the Primary School curriculum as a subject for girls only. Alliance and Kenya High Schools were for a long time the only two schools which offered the subject at secondary school level. The teachers at secondary level were diploma graduates of Home Science from the then Royal Technical College which started offering the course in 1956.

The Bessey Report (1971), recommended the teaching of Domestic subjects to girls based on needs of home and family life education. Besides pursuing a career, the women would be able to manage their homes.<sup>5</sup>

A directive based on this recommendation was issued to all girls schools. The directive

required them to offer Home Science for the first two years. At the same time, Bachelor of Science and Bachelor of Education in Home Science were introduced at the University of Nairobi. By 1976 other institutions started offering aspects of Home Science. These institutions included Nyeri Technical School for Fashion and Dress-making, Polytechnic for Institutional Management, Catering and other related Courses, Egerton for Agriculture and Home Economics, Young Women Christian Association (Y.W.C.A), Kibondeni School for Catering, Nairobi Home Economics Training Centre and Waithaka Youth Training Centre. The subject was expanding from its small home dimension to broader areas like Institutional Management. Despite the broadening of the subject in Colleges, in schools when compared to other academic subjects, Home Science has taken rather long to be commonly accepted. This slow development can be attributed to the following:

1. 'False-Start' - It was introduced outside the formal classroom unlike other subjects.
2. Its dynamic nature and fragmentation into various subject areas such as Clothing and Textiles, Home Management, Cookery et cetera.

3. Female orientation.
4. Vocational subject, thus including elements of working with hands which has been despised over the years.

It is no wonder that as late as 1981, Marangu L.T. the then, Head of Economics Department of Kenyatta University, still had to justify the existence of the subject. She said:

Home Economics should play an educative role in the country's development. It aims at improving family life, not only in the field of nutrition, but also in the alleviation of problems which result from poor interaction in a family. Hence, family discipline should not be treated as a women's domain since men are a part of the family and have their part to play in it. They too have a lot they can learn from Home Economics discipline. <sup>6</sup>

Studies have been carried out to give backbone to the subject. These include Studies by Kasuku (1984) on "Factors Leading to Low Acceptability of Home Economics in Kenyan Schools."<sup>7</sup> Mbae (1984) Studied "The Relevance of Home Management to Individual and Family needs."<sup>8</sup> Onyango (1985) Studied, "Factors that Influenced the Low Acceptability to Study Home Economics Among Male Students at Kenyatta University College."<sup>9</sup> All these authors made one common recommendation. Home Science should be taught to both sexes.

The introduction of the 8.4.4 System of Education heeded to the common cry of Home Ecomomists. It is the objective of making the school curriculum relevant and practically oriented that subjects like Home Science, Agriculture, Business Education, Art and Design and other practically oriented subjects found their way into the general school curricula. The Home Science curriculum has merged all the courses which were previously offered separately under a common umbrella of Home Science. The syllabus has also been expanded and restructured to meet more objectives. This new System has brought change to the Home Science curriculum. Hawes (1972) Stresses that:

No factor affects curriculum change so deeply as the energy capacities and morale of teachers. 10

Besides "the quality of education depends mainly upon the personal characteristics, academic and professional qualifications and classroom interaction between the teacher and his pupil." <sup>11</sup> The teacher is therefore an important figure in curriculum implementation. It is these important attributes of the teacher that became the pivotal in the study.

## 1.2 Statement of the Problem

Researches ought to be conducted by curriculum developers not only prior to the implementation of a new subject but, continuously throughout the implementation process. This ensures a steady improvement in the quality of teaching. Surveys were conducted before launching the 8.4.4. The in-service workshops and increased numbers of teacher training colleges were some of the activities that took place in preparation for the new system. The Kenya Institute of Education, Ministry of Education and the Inspectorate for Schools have worked jointly to produce syllabuses, textbooks, teachers' guides and other materials to assist in the successful launching of the 8.4.4. This involvement has forced K.I.E to overlook some of its functions especially in research. Owano in reviewing researches undertaken by K.I.E from 1980 to 1986 observed that "areas where no research seems to have been carried out include Secondary Education, Teacher Education, Technical and Business Education, Special Education, Adult and Continuing Education and the whole area of Educational Media."<sup>12</sup>

Since Home Science falls in the same category with technical and business education, it is evident that it has been ignored in researches undertaken by K.I.E. A review of the researches which have been conducted in Home Economics shows that emphasis has been laid on justifying the existence of the subject. They aim at making the subject popular. They have not stopped to ask how successful the dissemination of this important knowledge can be. It is this question that this Study aims at answering.

The purpose of the study is to analyse factors affecting efficient implementation of the newly introduced four-year Home Science Curriculum in Nairobi and Muranga schools as viewed by the teachers of the subject, headteachers and students.

### 1.3 Objectives of the Study

Specifically, the Study seeks to fulfil the following objectives;

1. To find out the availability of Home Science syllabus, textbooks, reference books, teachers' guides, materials, tools and facilities that are used to enhance the quality of Home Science teaching.

2. To determine teachers' professional qualifications with reference to Home Science.
3. To establish adequacy of pre-service and in-service training for the Home Science teachers.
4. To analyse the problems experienced by teachers in implementing current Home Science curriculum.
5. To recommend strategies for the improvement of the teaching of Home Science in the Secondary Schools.

#### 1.4 Basic Assumptions

The assumptions underlying the study were:

1. Teachers are key agents in effecting education changes.
2. There are factors influencing implementation of Home Science in Kenyan Secondary Schools.
3. The implementers (teachers) would best provide the feasible solutions to the factors influencing implementation.
4. Educational personnel are unlikely to change simply because a directive has been issued by the Ministry of Education.
5. The degree or intensity of the influencing factors depends on the status and location of the school, other than the teacher's qualification.
6. The sample chosen for the study represents the different types of schools and teachers of Home Science in Nairobi and Muranga.

### 1.5 Significance of the Study

This study attempted to answer some questions in the curriculum development such as:

What factors facilitate or block the achievement of the set objectives of Home Science? How best can Home Science curriculum developers work to achieve these objectives?

In answering these questions, the educationists particularly the teachers, headteachers, curriculum developers, School Inspectors and the Kenya Examination Council members would use the knowledge to effectively play their role as curriculum developers.

Specifically as study pinpoints the strengths and weaknesses of the Home Science teachers. In so doing it contributes towards a better understanding of the problems faced by curriculum implementers in Kenya so that, the Ministry of Education, Kenya Institute of Education and the Subject Inspectors may offer timely and feasible solutions. By outlining the headteachers' roles in curriculum implementation in the school, the study provides useful knowledge

which can go a long way in educating the head-teachers. The success of a subject in a school depends on the coordination between the subject teachers and the school head.

A forum was provided for the teachers to evaluate a new curriculum and in so doing shed some light on the new curriculum as a whole. This may bring its designers to review some objectives and content of the programme in view of the emerging problems.

Generally, the study would help reduce the possibility of failure in the effective implementation of the current Home Science Curriculum. As such a failure would have far reaching consequences for the educational system which emphasizes on practical subjects. This is based upon the assumption that the findings would apply to other newly introduced subjects like Industrial and Business Education.

It may motivate others to carry out similar researches in other subjects with an aim of improving curriculum implementation.

## 1.6 Limitations of Study

The sample has been limited to thirty schools. This was consistent with the nature of the problem investigated. A larger sample would have required a longer period which would have inhibited the urgency of the study. A smaller sample enhanced the continuous nature of evaluation in curriculum development. Besides, the cost of carrying out the study would have been prohibitive if it were extended over a wider area.

The study having been limited to a small number of schools restricts the generalization of findings to only those institutions used in the study, therefore, not applicable to all schools in the republic. Public schools, which include; government maintained, assisted and harambee were the only ones included in the study.

## 1.7 Definition of Terms and Abbreviations

1. Home Science - " A programme of instruction which assists boys and girls, men and women to understand and solve problems in personal home and family living such that their quality of life will be improved."13 The Subject matter in the Kenyan Secondary School syllabus includes; Home Management, Foods and Nutrition, Clothing and Textiles, Consumer Education and Childcare.

2. Implementation - Refers to the Stage when syllabuses, learning and teaching resources are being used by target group, usually the teacher and the pupil.
3. Curriculum - "A programme of activities designed so that pupils will attain, as far as possible certain educational ends, or objectives."<sup>14</sup> In Home Science, this is aimed at the acquisition of knowledge and skills to facilitate the improvement of the quality of life for the individual, family and community.
4. 7.6.3 is the education system which is being faced out in Kenya. It stands for 7 years Primary education, 6 years Secondary education and a minimum of 3 years University education.
5. 8.4.4 is the education structure which has replaced the 7.6.3. It stands for 8 years Primary education, 4 years Secondary education and at least 4 years of University education.
6. Maintained schools - These are schools whose general financial responsibility for maintenance is met by the Ministry or local authority <sup>15</sup>.
7. Assisted schools - These are schools which receive some form of financial assistance from the Ministry of Education or the Teachers Service Commission. For example if in a Harambee School the government decides to take over one stream or the teachers' Service Commission posts a teacher to such a school. The financial assistance given to such a school is not as extensive as that for maintained Secondary Schools and sponsors of pupils <sup>16</sup> attending such schools have to pay more.
8. Harambee Schools - These are usually initiated on the basis of a felt need within a community to cater for children who have not been able to get places in government schools. Development of these schools maybe initiated by some religious, political or local leaders who mobilize members of community so that they can contribute finances, materials and even labour to start the Schools. These schools gradually become assisted or maintained by the government.<sup>17</sup>

9. Materials are those items that are used in practical Home Science lessons which diminish or perish with time. Examples include: fabric, foodstuff, washing detergents et cetera.
10. Tools - These are the gadgets or equipment that are used in any process for the production of any product in Home Science practical lesson. Example are Kitchen equipment like cutlery used in food preparation or buckets used in laundrywork.
11. Facilities consists of the immovable equipment like the Home Science laboratory and the large equipment, for example cookers and sewing machines. They form the 'backbone' of the subject as the utilization of tools and materials are dependant upon them. Facilities often determine the practicability of the subject.
12. K.J.S.E. - The Kenya junior Secondary Examination taken at the end of Form Two. It was done for the last time in 1985.
13. E.A.C.E./K.C.E. - The certificate obtained on passing East African Certificate of Education examination. Replaced in 1980 by the Kenya Certificate of Education. The examination is done at the end of Form Four. K.C.E. was done for the last time in 1987 and has been replaced by K.C.S.E., Kenya Certificate of Secondary Education.
14. E.A.A.C.E./K.A.C.E. East African Advanced Certificate of Education. Replaced in 1980 by the Kenya Advanced Certificate of Education at the end of form Six. K.A.C.E will be done for the last time this year (1989).
15. P1 - Trained Primary School Teacher Grade One with a K.C.E. division Three or better.
16. S1 - Originally trained Secondary School teacher having passed E.A.C.E. and undergone training at either Kenya Science Teachers College or Kenyatta College for a period of three years. A P1 may be promoted to S1 status on merit.
17. H/Sc - Home Science.

CHAPTER TWO  
LITERATURE REVIEW

2.1 The Development of Home Science in Kenya

In this section the development of Home Science is examined historically with particular emphasis to schools. This historical survey explores the fallacies on which Home Science was founded in the colonial times and after. It therefore serves as a background to which innovations have to be made in strategy formation for the improvement of teaching Home Science. This is very central to the Study as it provides background information on which recommendations for the improvement of Home Science education are laid.

Kamau (1984) in outlining the history of Home Science in Kenya stated that;

"the development of Home Science in Kenya can be traced effectively through the history of education of the country."<sup>18</sup>

In the strength of this statement literature on the history of Education in Kenya was reviewed. Such literature included among many others; the Education Commission Reports, the Colonial Education

Department Annual Reports, Reports of the Ministry of Education, the Development Plans and individual written publications.

Although formal education was introduced in Kenya in the middle of the nineteenth century, it is accurate to assume that elements of Home Science were taught before this introduction. The early missionaries and settlers were interested in getting African household helpers as they provided cheap labour. Those who were employed by Europeans as household helpers were the first Africans to acquire some knowledge and skills of Domestic Science. These skills mainly consisted of laundrywork, housecare and kitchen activities. They were specifically to serve the interests of the white masters and not for the improvement of the living standards of the African.

Formal teaching of Domestic Science however, started in August 1925 at the Kabete Jeanes School. It was considered a very vital course which formed the 'backbone' of the curriculum for teachers' wives. It is reported in the Kenya Colony and Protectorate Education

Department Report of 1925 that the Jeanes teachers even visited homes surrounding the school to help wives and mothers with cooking, sewing, keeping the house clean, care of children and sending them to School. In this report the following was said by James Dougall (1925) about the curriculum for teachers' wives;

"Hence I attach great importance to the teaching of the wives of the Jeanes workers. I am not prepared to say that their course of training should exclude reading, writing, etc, but I think it should treat the home and the garden, the care, clothing, feeding of children, the elements of cleanliness and hygiene (personal, domestic, social) and make these the focus point of all teaching that is given, literary or practical.19"

The missionaries realized that there was need to teach wives of the teachers elements of Domestic Science. The usefulness of the subject broadened from a training for European household helpers to a means of improving family living. These African women would not only teach others, but would also set good example to others as they were wives of prominent people in the society.

In 1926 a Domestic Science centre was started in Eldoret by Humphries who was the headmistress.

The Centre was for post School course aimed at assisting girls to take up vocational jobs. The headmistress had to abandon this idea because there was not a sufficient number of girls to justify the use of a full time teacher or the cost of the equipment. The Domestic Science classes included; Needlework, Housewifery, cookery and Hygiene.<sup>20</sup>

As the missionaries spread over the country, more Home Science Centres were opened up. Although these centres did not open up specifically to teach Domestic Science, the subject was taught to African women as a matter of routine. In Central Province, Church Missionary Society started in Kahuhia (1928), Church of Scotland in Kikuyu and Tumutumu. Others included the Dagoretti Women's Industrial Home where the teachers were being paid unlike other Missionary Centres where the work was done voluntarily. In 1929 a building was put up in Pumwani, Nairobi for training girls in Domestic Science and ordinary School curriculum. It was at this time that the Kabete Jeanes School started taking girls, not wives to attend the day School and learn dress-making and infant welfare.

Home science was recognized as a subject for girls or women and report on its progress were covered under the topic "Education for Girls". The 1930 "Education Department Annual Report" shows how different Churches contributed to the development of Home Science. The nuns in Nyanza, notably Rang'ala, Kibuye and Kakamega taught practical hygiene and handicraft to women and girls. At Kaimosi, Friends Africa Mission began a School for girls where they offered all round training to include maternity work and elementary literary instruction. In South Kavirondo the Seventh Day Adventists of Kisii Girls also covered elements of Domestic Science.<sup>21</sup> Meanwhile the old stations like Kabete, Kahuhia, Ng'iya, Catholic Mission at Nyeri and St. Theresa's in Nairobi were all improving. As early as 1930, the missionaries had realized the need to have a guiding coordinator for all these Centres. This was because each centre taught different aspects which did not facilitate uniformity when taking examinations. By 1931 it is recorded that there were 37,878 girls in Schools according to missionary returns. Some of them were in Schools specially organized for the training of girls and women while others were in the mixed missionary Schools.

All girls schools made a point of improving facilities for the teaching of Domestic Science in the year 1937. The Domestic Science Syllabus then required the girls to show a sound knowledge of Domestic Science if they wished to qualify for Primary School Certificate. It was reported that;

"The main object of girls' education however, must be the training of home-makers, welfare workers and teachers at the lower level of Primary Education"22

Domestic Science steadily progressed as a subject for girls such that when mention is made of technical education for boys, Domestic Science is the equivalent for girls. Some missionaries even covered topics like manners and playing host as part of Domestic Science. Refresher courses were offered to Domestic Science teachers especially Indians and Africans. Examinations were taken by girls in Domestic Science as part of Kenya African Primary School Examinations.

Records show that in December 1947 a conference on women and girls' education was held in Nairobi. In this conference stress was laid on the teaching of Homecraft and a Committee was appointed to look

into the question of its future development throughout the colony<sup>23</sup>. During the emergency period (1952 to 1958) girls education remained unaffected, however those in the war areas particularly Central Province were moved to safer zones. In September 1953 another Conference of all women education officers was held in Nairobi. Like the 1947 conference, emphasis was placed on Homecraft, a subject which was unique to women alone.

The teaching of Home Science continued in intermediate and mission Schools from the 1930's to 1960's. The teaching staff was trained at Tumutumu and Kabete Jeanes School. The Primary School Home Science Syllabus included stitches such as running, oversewing, hemming, loops, simple design (embroidery), daisy, needle darning flat pinafore, pilch making of knickers, matinee coat, child's bonnet and petticoat. The subject was very practical and mainly consisted of demonstration by the teacher followed by actual doing by the learners.

In the Colonial period Domestic Science flourished greatly as a girls' subject. After independence the trend of development

changed. Consequences of independence changed the content of Domestic Science and restricted its widespread learning in Schools. Soon after independence (1963) education drifted from emphasis on practical education for Africans to academic education. The rush for academic education led to the abandonment of technical education. With the rush and eagerness to get white collar jobs thereafter, Domestic Science together with other technical subjects lost the emphasis they had over the colonial times. It ceased to be examinable in the Primary Schools with the introduction of Certificate of Primary Education (C.P.E) in 1967. A few secondary schools, notably Alliance and Kenya High were the only ones offering it at Secondary level.

By 1970 unemployment was becoming a great problem in Kenya. There was a call by educationists to include industrial skills in the School Curriculum so that learners could become self reliant on leaving School. These calls resurrected Home Science particularly in Secondary Schools. This was accompanied by the increment in the enrolment of girls in Schools. At this time the Government started offering

a degree course in Home Science at Nairobi University. The Home Science Syllabus was revised to suit the local situation. It had been realized that the syllabus tended to be European oriented. It was inevitable for the Europeans to impart knowledge of Domestic Science without including their culture. Following the "deculturization" of the syllabus, in-service courses were offered to the teachers to familiarize them with the changes. To emphasize deculturization, Needlework practicals which were previously sent to Cambridge for marking were done locally.

In 1971 there was a remarkable increment in the number of Schools offering one or more of Home Science subjects at 'O' level.<sup>24</sup> At the same time 'A' level Home Science was introduced for girls and Cookery theory in East Africa Certificate of Education, (E.A.C.E.). A directive was issued in 1972 to the effect that;

"For the first two years in Secondary Schools, all girls take a general course in Home Science Subjects. The subjects include Needlework, Cookery, Home Management. After the two years those who wish to continue with the subject, specialize in one or two of the subject upto the 4th Year.<sup>25</sup>

District Inspectors for Home Science were increased to assist in improving the teaching of the Subject. At this time well over 800 girls studied the subject. Sixty-five Schools were offering one of the Home Science Courses at 'O' level and five Schools offered 'A' level Home Science. There was also an improvement in training the teaching staff. At Kenyatta University in 1972 between 20 and 25 students enrolled in B.Sc and B.Ed (Home Science). Besides plans were being initiated to replace the course with a 2-year Diploma course in Home Science.<sup>26</sup> In 1974 UNESCO experts visited Kenyatta University College with an intention of expanding the Home Science Unit.

Secondary Schools showed more interest in the subject and some headteachers asked for guidance and or assistance in offering the subject in their Schools. The subject became examinable at Form Two as part of the Kenya Junior Secondary Examinations, (K.J.S.E). By 1976, 112 Schools offered Home Science at 'O' level with a total of 1,991 girls sitting examinations at the end of 1976, and 6 Schools offered it at 'A' level. It is in this year that men in teacher training colleges were introduced

to the subject for the first time. In primary School the subject was ignored as it was not examinable. Some Schools organized classes for Domestic Science for the girls where a few topics considered useful to the girls were taught.

The introduction of the 8.4.4 has enabled Home Science to gain greater importance than ever before. This system reintroduced Home Science in Primary Schools and the subject is now examined in the Kenya Certificate of Primary Education, (K.C.P.E.). Besides that it is offered to both boys and girls. In the Secondary School however, the subject is still optional and is offered against other technical subjects like Woodwork, Metalwork and Agriculture.

Home Science like other vocational subjects has undergone a lot of changes in the School Curriculum right from its introduction in Schools to the present. First it was introduced in bits of skills to be used by the African house servants of the early settlers and the Missionaries. Gradually the Missionaries started teaching it to the African women and girls to improve their living standards. It was centred on Homelife. Although

the subject content was deculturized after independence, the girls who learnt it were to use it for the improvement of Homelife. The 8.4.4 system of education introduces the subject on a different philosophy from those before it's implementation. In this system it is hoped that the subject will not only improve homelife but will also promote self reliance. One of the general objectives of Home Science clearly states that; "Specifically the learner will have acquired relevant knowledge and skills in Home Science to make items for home and income generating activities."<sup>27</sup>

Before the introduction of the 8.4.4, the success of the subject was not recognized as very crucial as is the case now. It is evident from the history that the changes that the subject has undergone renders it's success very unpredictable. If nothing is done to elevate the implementation of Home Science in School and consequent employment of the School leavers who have studied it, then the future of the subject is at stake.

## 2.2 Strategy for Curriculum Changes.

As outlined in the development of Home Science, the subject has undergone a lot of remarkable changes. Change however, is not unique to Home Science alone as it is a frequent occurrence in any education system. The change in education system is reflected in the school curriculum. This is because Education has to change to meet the changing needs of the society. This has been observed by D'Lima who states that:

Since Kenya attained independence in 1963, policy makers have continually reviewed the educational system to ensure that it keeps abreast with national development and serves to fulfil the aspirations of the Kenya people. 28

It is these policy makers and particularly those concerned with education that have a direct influence on Home Science Education. If their call emphasizes Home Science, it's education is elevated and should it ignore the subject, the opposite happens.

The Ominde Report (1964), called for expansion of education away from manual skills into academic education for filling in jobs

being vacated by Indians and Europeans. With such emphasis Home Science and other related manual skill subjects like Agriculture though they appeared on the School, timetable were replaced by other academic subjects. It therefore follows that soon after independence the quality and quantity of Home Science reduced in Schools.

By 1969 unemployment was already a problem. Hence education reports which followed Ominde's namely; Bessey Report (1971), Ndegwa Report (1971), Gachathi Report (1976), Mackay Report (1980) and Wanjigi Report (1982) all called for education oriented to industrial skills. It is under this umbrella of Industrial Education that Home Science falls.

The Gachathi Report of 1976 specifically recommended the removal of demarcation between Secondary academic and Secondary technical to make Secondary education increasingly Scientific, pre-vocational and craft oriented. It further suggested that the Secondary School should train for Community leadership, family life and sex education. Such recommendations to some extent promote the development of Home Science in schools.

"Report of the Presidential Committee on Unemployment" specifically quoted Home Science as one of the subjects that would help curb unemployment in the nation. It is stated in the report that;

Primary education should be made terminal by introducing pre-vocational subjects which would assist those who do not go to Secondary Schools to enter into further vocational training or engage in self-employment. Such subjects should include carpentry, metalwork, Masonry, Home Science, basket making, tailoring, typing, book-keeping et cetera. <sup>30</sup>

It is further argued in the report that "Home Economics, Commerce, Industrial Arts etc were introduced in Secondary School curriculum for instilling an appreciation for manual work and impart some basic skills required in a wide range of rural based activities."<sup>31</sup>

Despite all these recommendations, vocational subjects have been viewed with a lot of mixed feelings. D'Souza (1983) strongly put it forward that "the state cannot solve the problem of unemployment by diluting curriculum and offering an admixture of general and vocational-+technical education in all Secondary Schools" <sup>32</sup> D'Souza

bases his observation on the argument that even those Schools which are purely technically oriented do not perform well. He therefore doubts the success of vocational technical subjects in a normal ordinary Secondary School. Wamalwa (1972) had earlier on criticized pre-vocational training in the then 8 vocational and 4 technical Schools because School leavers left with no terminal qualification of marketable value. "If the 12 specialized technical institutions did not secure the desired objectives the intended comprehensive School never will." 33

Such mixed feelings could have been attributed to the delay in the implementation of industrial education and related subjects such as Home Science. Much as the need for these practical subjects was realized early as evidenced in the 1971 Bessey Report, it was not implemented until 1985 as Ndirangu observes that;

"the Commission of the working party on the second University is the most far reaching document on education since the Ominde Report. 34

It is with the introduction of 8.4.4 that Home Science got it's long overdue emphasis in the

School curriculum. This is evidenced in the various educational reports both formal and non-formal. The courses offered in this system are designed and developed to give skills through practical subjects. These applied education include among other subjects, Home Science.<sup>35</sup>

The raising of funds to assist Schools, has been for the construction of a Home Science room besides a workshop. Ng'eno in the launching of the 8.4.4 listed Home Science among other subjects to be taught in Schools to prepare students for self reliance. To elaborate on the practical nature of the subject, he gave example of articles to be made in the subject lessons.<sup>36</sup>

These recommendations made by policy makers are drawn into the School curriculum by the designers. A School curriculum however well planned, cannot meet the set objectives unless implementation is also geared towards the achievement of these objectives. Asiachi and Okech Observed that; "One of the pitfalls of curriculum design is trying to consolidate a plan before you have sufficient information from classroom"<sup>37</sup>

The School provides the vital link between curriculum and reality such that, "the innovations taking place in Schools are to a large extent, a reflection of

efforts countries are making to use the School; which train future nationals, towards solving some of their problems."<sup>38</sup> The education reports unfortunately emphasize on the goals or objectives. Indeed Mugiri (1979) observed that there has been over emphasis on what should be taught at the expense of how it should be taught. He put it forward that:

...much concern has been devoted to decision relating to school curriculum. Different personnel of curriculum development though aiming at a common goal worked without coordination, they even conflicted.<sup>39</sup>

It is evident therefore, that the success of any curriculum depends upon the users; these are the teachers, headteachers and learners. A survey of the possibilities and impossibilities of having the right kind of instruction becomes a necessity in any curriculum development. The strategies employed in changing or improving a curriculum include several activities, some of which directly involve the implementers. Asiachi and Okech (1986) say that "these activities include the orientations of the teachers, supervisors and headteachers in handling and using the materials which have been developed to be used in the new curriculum".<sup>40</sup>

Mugiri being a curriculum developer also elaborates further that :

... a new course cannot be considered complete until instructional materials have been developed, tried, teachers in-serviced and an appropriate examination devised. This would ensure successful implementation of the course. 14

Orientation for the teachers may be done through seminars, workshops, in-services and conferences. Change in curriculum is inevitable, but a change is only worthwhile if it can bring the desired end. To get the desired end a lot has to be done. It should however be noted that there is need for carrying out adequate evaluation and making effective and practical decisions at all levels of education system, for its effectiveness and efficiency. Considering the change that Home Science has undergone especially in the

8.4.4 System of education, an evaluation study becomes a necessity at this 'take off' stage. This will assist in streamlining the future development of Home Science education.

### 2.3 The Teacher and Curriculum Implementation

Ogula (1984) in outlining the research needs of curriculum developers emphasized the importance of involving the teacher in designing a curriculum. He said;

However qualified he may be, a curriculum developer cannot loose touch with schools and still retain a viable programme ... Every curriculum developer is expected to refine his goals and make his curriculum relevant to the needs of today and tomorrow. This demands a continuous dialogue between the curriculum developer and those implementing the curriculum. 42

The teacher to a large extent determines the success of any curriculum. Using the objectives drawn in the syllabus as a guide the teacher manipulates resources to assist the learners so that the objectives are met. The curriculum planner therefore, needs to coordinate with the teacher so that viable curriculum may be drawn out. Using Home Science as a typical example, there is need to find out if the teachers of the subject can handle the merging of the courses besides any other constraints. The omission of such can have negative effects as Hawes (1972) laments when he says:

... the transition has been easily effected, for there is usually nobody to oppose such moves. Teachers may be conservative, but they are usually not vocal. Besides, they tend not to be consulted. New syllabi are by tradition, imposed on schools for their own good, and if the medicine proves a little difficult to swallow, schools are nevertheless expected to realize it contains the best ingredients. 43

Besides this lack of dialogue between the curriculum developer and implementer, the teachers often stand to blame for poor results in National Examinations. For instance in 1987, the Chairman of Kenya National Union of teachers, (KNUT) reckoned that instead of pointing accusing fingers at the teachers, research should be done to find out the cause of the matter. This, he said, would assist teachers in improving learners' performance. 44

Summative evaluation based on the Examination results at national level gives delayed feedback long after the harm has been done to the learners. Owano (1986), noted that;

Effective curriculum development requires more than just evaluation. It requires research into methods and content that improve the quality of education.45

The success of teaching should not be based on the National Examinations results alone and especially

for subjects such as Home Science where the usefulness may be experienced outside the school. The means of teaching Home Science should justify the end and not vice versa.

A teacher cannot achieve curriculum objectives single handedly. Both human and non-human resources come into great use in helping the teachers and the learners. The teaching-learning resources range from simple chalk and books to advanced technological items like the closed circuit television. Documents on education often make demands on the teachers and other concerned parties. For example there are usually calls for "more relevant curricula, more rural curricula, more stimulating teaching etc."<sup>46</sup> Hawes (1972) explains that these reforms never materialize as expected due to "the basic underestimation of the difficulties and complexities involved in achieving effective curriculum change."<sup>47</sup> He cautions that teaching of vocational and pre-vocational skills if attempted without the necessary equipment can reduce them to mockery "where girls sew on small squares of clothes because they could not afford material to make clothes in their needlework lessons."<sup>48</sup>

Until the introduction of the 8.4.4 system of education, Home Science was taught under three

different examinable subjects, namely; Home Management, Clothing and Textiles, and Foods and Nutrition. The 8.4.4 Home Science merged all these three and added consumer education and Childcare. To minimize the expenses on facilities and materials the Home Science teachers are advised to improvise equipment and to be economical on the use of resources. The merging of the subjects and the recommendations accompanying it are reforms which make demands on the subject teachers. It would be of great importance to teachers and curriculum planners to find out how the teachers are handling these reforms. This observation has also been realized by Owano (1986) who states:

Ignoring research in curriculum development can be frustrating to the children, teachers and parents; costly and time and scarce resources wastage.<sup>49</sup>

Home Science is a practical subject. It's usefulness extends beyond the home boundaries as the skills acquired can be utilized as a source of income. Planners, however, should not be possessed by it's desirable objectives such that "an end is so educationally desirable that it seems worth pursuing even though it may be difficult to attain."<sup>50</sup>

#### 2.4 Literature on Related Studies

In the introduction of this study, it was mentioned that very little has been done regarding the implementation of Home Science in Kenyan Secondary Schools. The lack of study is however widespread to other subjects as well because Kenya is so possessed by the content matter of the subjects that emphasis is laid on what is taught at the expense of how it should be taught. The over emphasis on content is evident in the education Commission Reports right from the Ominde Report to date. These reports outline subjects which are to be taught to meet the national goals of the country. Other researchers have also realized that the Kenyan curriculum among other countries reflect emphasis on content at the expense of methodology of teaching. Hawes, notably has echoed this in his writings.

In addition to this general drawback, Home Science could have possibly been assumed to have no problem in it's implementation. This is because it was an optional subject in Secondary Schools and therefore only those schools with relevant and adequate facilities offered the

subject. Before a school could start taking examinations in Home Science, the Home Science Inspectorate had to confirm that the school had adequate facilities to undertake the examinations. The few schools offering the subject had ample supply of qualified teachers.

In 1972, all government maintained schools were served with a circular instructing them to offer Home Science for the first two years. Home Science continued to get popular among girls such that between 1972 and 1976, the number of schools offering the subject almost doubled from 65 in 1972 to 112 in 1976. It is possible that implementation faced some problems as the population increased in schools. The Home Science Examination results were also poor. This prompted Muthui (1981) to carry out a study on "The Problems in Teaching Clothing and Textiles as viewed by Teachers of the Subject."<sup>51</sup> Her findings were that the various resources both human and non-human which interact in the teaching of Clothing and Textiles each posed a problem. She categorized them as curriculum related, learner related and teacher related.

Another study which threw some light into the implementation of Home Science was that conducted by Wagah (1985). In an attempt to find out how attitudes of teachers and students towards foods and Nutrition affected the learner performance she revealed that learners attitudes had no bearing on performance. She however found out that attitudes varied among students according to societal class the student belonged to and the type of school being attended.<sup>52</sup>

In the 8.4.4. Secondary Home Science the teachers have been asked to improvise equipment and tools while teaching to reduce cost of teaching the subject. Thinwa (1987) conducted a study to investigate on the extent to which teachers improvise and the factors that lead them to do so. In this investigation some problems interfering with the teaching were outlined. The problems were mainly teachers' ignorance of improvisation techniques and reluctance to improvise even when they were aware.<sup>53</sup>

Wang'ombe (1988) carried out a "Survey of the Factors that Affect the teaching and learning of Home Science in Primary Schools."<sup>54</sup> Although her study covered a small area of a division within

Kiambu district, it also revealed some problems that hinder implementation in primary schools. The main problem according to her findings was scarcity of teaching-learning resources.

Other researchers have also shown concern over curriculum implementation and have conducted studies for other subjects. Eshiwani for example, has conducted studies into the implementation of Mathematics and Science education. Ouedraogo (1983) carried out a study in Upper Volta where he analysed factors that affect curriculum implementation in that country. The study was carried out after a major education reform almost similar to the Kenyan transition from the old system of 7.6.3 to 8.4.4. The key factor that influenced implementation was what he called "Sensibilization". This is the process of informing the population and policy makers of the country in order to win their support for the reform. He noted that people resisted change due to ignorance and conservatism.<sup>55</sup>

The success on any reform, whether small scale as the reorganization of a syllabus or a major one as the overhauling of an education system should be of central concern to the entire nation. In the

8.4.4 System, Home Science has undergone some reformation and thus it's implementation is of concern. As evidenced in the mentioned studies many factors influence curriculum implementation. Some factors are general to various subjects while others are unique to a given subject. These unique factors if identified and tackled appropriately lead to the improvement of an individual subject. Curriculum implementation if evaluated at subject level can lead to accurate reforms. Such evaluations reveal prevailing problems with an intention of improving education. Since a problem discovered is a problem half solved, such discoveries would go along way to improve education.

This study is timely in providing a forum for the presentation of the "teething problems" of a new education System and particularly to Home Science which has experienced an outstanding reform. The information gathered will be of use not only to direct users of education like teachers and students, but to the curriculum planners and the nation at large who in one way or another benefit from this education. The mode of information gathering is outlined in the next chapter.

## CHAPTER THREE

### METHODOLOGY

#### 3.1 Introduction

In this section procedures and strategies used in the Study are described. The section particularly focuses on drawing of samples, development of research instruments, administration of the instruments and an outline of methods to be used in the analysis and presentation of data. The instruments were specifically designed to meet the objectives of the Study as outlined in Chapter One of this report.

#### 3.2 Area Covered by the Study

The researcher used Schools both in rural and urban setting so as to represent Schools from both areas and also include Schools of various grades in the Kenyan Education System. Nairobi was selected to represent urban areas for two reasons. Firstly, it has the largest representation of Schools (24 in number) that offer Home Science out of all the urban centres in Kenya. Secondly, these Schools presented a homogeneous and a heterogeneous representation of sample variables. Homogeneous because the teaching of Home Science in Kenyan Secondary

Schools is part of a uniform 8.4.4 System of Education. Heterogeneity on the other hand was expected in the area of teaching methodologies.

Using simple random sampling Muranga, one of the five districts in Central Province, was selected to represent the rural environment.

### 3.3 Sampling

Sampling included determining the area to be covered by the Study (districts), choosing the samples of schools and selecting respondents for the Study. Initially the researcher intended to use 50 Schools in the Study. From these 50 Schools, 25 were to be drawn from urban and the other 25 from rural area. Fifty headteachers, 100 Home Science teachers and a total of 250 Home Science students were to be the respondents. This sampling did not materialize due to unavoidable circumstances which are explained hereafter.

1. School Sample

The Schools used in the Study included government maintained, assisted and Harambee which form the larger percentage of the Kenyan Schools. In Nairobi a total of 24 Schools were listed as those offering Home Science. Before starting the Study in Schools from which the sample teachers were to be drawn, all the headteachers of these 24 Schools were approached to seek permission for the Study. Of the 24 headteachers approached, only 15 gave their consent. The rest declined permission for various reasons. Some claimed to be too busy to spare time for the Study while others kept postponing the dates for the Study. Some headteachers claimed that researches have not improved their Schools in any way and they declined to participate.

It was decided that the 15 Schools that eventually agreed to participate be accepted as representational. The 15 sample schools represent over 60 percent of the total population of Schools that offer Home Science in Nairobi.

Many Schools in Murang'a offer Home Science. However, for the sake of sample uniformity, a similar number of Schools as in Nairobi had to be used. Consequently only 15 Secondary Schools in Murang'a were therefore used. The reason for this was that an equal number of Schools from both rural and urban environments would facilitate comparison of the two different areas. In selecting these 15 Schools from Murang'a, judgement or "purposive" sampling was applied. This was based on the argument put forward by Miller (1976);

When practical considerations preclude the use of probability sampling, the researcher may seek a representative sample by other means. He looks for a subgroup that is typical of the population as a whole. Observations are then restricted to this subgroup and conclusions from the data obtained are generalized to the total population.<sup>56</sup>

A total of 30 Schools were used in the study. This number enabled the researcher to collect more detailed data as opposed to having used a larger number where only questionnaires would have been used. The number enabled the writer to use questionnaires, interview and observation schedules to gather data.

The lists of Schools in Nairobi and Murang'a districts were obtained from the provincial Education office and the District Education Office respectively. With the assistance of personnel from the two offices, lists of Schools offering Home Science were drawn from the lists of Schools in the two districts. In Muranga, the District Home Science Inspector provided the list while in Nairobi, the provincial Home Science Inspector gave a similar list of Schools offering Home Science in Nairobi. The lists of Schools offering Home Science in the two districts are shown in Appendix A and B.

As stated earlier the researcher intended to use random sampling in selecting Schools but, circumstances forced her to use 15 Schools in Nairobi. The other 15 Schools in Murang'a were selected using judgement or "purposive" sampling. The following are the lists of schools used in the study in Table III.1 and Table III.2.

Table III.1 Schools Which Participated in Nairobi

Name of Schools	Type of School	Student Composition
Muslim	Assisted	Girls
State House	Maintained	Girls
Our Lady of Mercy	Maintained	Girls
Kamiti	Assisted	Mixed
St. Teresa's Girls'	Maintained	Girls
St. Teresa's Boys'	Maintained	Boys
Buru Buru	Assisted	Mixed
Ofafa Jericho	Maintained	Mixed
Ngara	Maintained	Girls
Dandora	Assisted	Mixed
Nile Road	Assisted	Mixed
Ruaraka	Assisted	Mixed
Parklands Arya	Assisted	Girls
Lang'ata	Assisted	Mixed
Moi Forces Academy	Maintained	Boys

Table III.2 Schools Which Participated in Murang'a

Name of Schools	Type of Schools	Student Composition
Kahuhia	Maintained	Girls
Kiangunyi	Assisted	Girls
Njumbi	Maintained	Mixed
Kanyanyeini	Assisted	Mixed
Gathinja	Harambee	Mixed
Mumbi	Maintained	Mixed
Muguire	Maintained	Girls
Kiriaini	Maintained	Girls
Gaturi	Assisted	Girls
Gitweku	Assisted	Mixed
Muguru	Assisted	Mixed
Koimbe	Assisted	Mixed
Gitugi	Assisted	Girls
Naaro	Assisted	Mixed
Iyego	Assisted	Mixed

## 2. Respondents

From the 30 schools, 47 Home Science teachers were used as respondents. In each school only those teachers who were willing to participate were included. These were teachers who successfully filled in the questionnaires and participated in the interview.

The number of Home Science teachers in the schools ranged from one in a school to six in others. The tables that follow show the number of Home Science teachers in each school and those among them who participated in the Study:

Table III.3 Number of Home Science Teachers who Responded in Nairobi

Name of Schools	No. of Home Science Teachers	No. of Participants
Muslim	4	2
State House	4	4
Our Lady of Mercy	2	2
Kamiti	2	1
St. Teresa's Girls	3	3
St. Teresa's Boys	1	1
Buru Buru	2	2
Ofafa Jericho	2	1
Ngara	6	4
Dandora	1	1
Nile Road	1	1
Ruaraka	2	2
Parklands Arya	4	4
Lang'ata	2	1
Moi Forces	2	2
<b>TOTAL</b>	<b>38</b>	<b>31</b>

Table III.4 Number of Home Science Teachers who Responded in Muranga

Name of Schools	No. of Home Science Teachers	No. of Participants
Kahuhia	2	2
Kiangunyi	1	1
Njumbi	2	1
Kanyanyeini	1	1
Gathinja	2	1
Mumbi	1	1
Mugoire	2	1
Kiriani	1	1
Gaturi	1	1
Gitweku	1	1
Muguru	1	1
Koimbe	1	1
Gitugi	1	1
Naaro	1	1
Iyego	1	1
<b>TOTAL</b>	<b>19</b>	<b>16</b>

In each of the thirty Schools, the headteacher was interviewed. Since the headteachers granted permission for research to be conducted in their schools, they felt obliged to contribute to the data through interviews.

Students who responded to the questionnaire were derived from Form 2 class in each of the 30 Study Schools. Form 2 class was selected on the following grounds:

1. Some Schools offer the subject up to Form 2. It was necessary to find out students' view of the subject to approve or disapprove the worth of the subject at this early stage.
2. Form 2 students did not have so much work as the senior forms and yet not very new to the system as the Form I students. They were at least familiar with the trend of learning Home Science in their Schools.
3. At Form 2 level the subject was still optional. It was therefore assumed that the students would give their opinions free from biases as would be the case in senior forms. The senior classes would have opted for the subject and are therefore likely to give a biased opinion about the subject.

In each of the schools a total of 10 students, 5 who were bright and 5 who were not bright in Home Science were selected. The teachers assisted in

identifying these students using the end of term examination results. A total of 300 students responded to the questionnaires.

#### 3.4 Development of Research Instruments

Library reading of literature related to the study was carried out initially to assist in the development of research instruments. The objectives of the study however formed the basis from which the instruments were designed. The Kenya Institute of Education, Home Science department provided some relevant materials which assisted in the construction of some of the instruments particularly the observation checklists. The reading provided a basis for development of instruments used in the pilot programme. Two different schools were used for pilot testing. These schools were not included in the research sample. The pilot programme consisted of administering instruments to respondents. The data collected was analysed and adjustment was made appropriately. Some of the adjustments involved the reframing of certain questions and the addition of some questions which were suggested by some respondents in the pilot tests.

Reading, construction of instruments, pilot programme and the amendments to questionnaires that followed led to the development of the following tools:

1. Questionnaire for Home Science teachers.
2. Interview schedule for Home Science teachers.
3. Interview schedule for Headteachers.
4. Questionnaire for students.

In addition to these tools, Observation Checklists were used to enter observed data from the schools. These tools are shown in appendices C to H.

For the purpose of the study, the instruments were designed to provide information related to:

1. Preparation of teachers of Home Science, both in pre-service and in-service programmes.
2. Availability and quality of teaching-learning resources for Home Science Education.
3. Teachers' and pupils' views towards Home Science School Curriculum.
4. Problems encountered by teachers when implementing the Home Science Education Curriculum.
5. Appraising the teachers' efforts in overcoming these problems for example, determining the level of improvisation of materials and equipment.

The questionnaire for Home Science teachers provided most of the needed information. It was divided into two sections; Section A was concerned with finding out

facts related to the teachers' academic and professional qualifications, teaching experience and promotions. Section B was purely on Home Science Curriculum issues. The interview and observation schedules just added on to the information provided by the questionnaire. The interview by introducing dialogue between the researcher and respondents provided further answers to similar questions covered by the first instrument, the questionnaire. One observation checklist was specifically to confirm or reject the presence and quality of improvisation carried out by the teachers and the learners. Another observation checklist was used in quantifying the tools and facilities present in schools for teaching Home Science.

### 3.5. Procedures of Data Collection

Data from individuals were gathered by use of questionnaire and interview schedules. Observation checklists were also used to gather observable data.

At the beginning of the study a research permit was obtained from the office of the president to enable the researcher to visit the schools. The permit is shown in appendix I. It was granted and all research venues were visited to collect data. The schools were

visited both in the morning and in the afternoon. On arrival the headteacher was approached and the purpose of the visit explained. Often this was followed by introduction to the Home Science teacher or the head of Home Science department depending on the number of Home Science teachers in the School. The questionnaires were then delivered to the teachers by the researcher. The teachers were to state when the filled in questionnaires were to be collected. They often gave themselves a duration of one to two weeks, although some took more than two weeks. It was arranged such that when the questionnaires were being collected, the interview would then be conducted. The schools had to be revisited to conduct the interviews with the headteachers.

The subject teachers assisted in administering the questionnaires to the Form 2 students. Home Science rooms and stores were checked to assist in filling in of observation checklists. To accomplish all these, each school had to be visited more than twice.

Data gathered with the instruments were computed manually using descriptive statistics such as percentages and means. To assist in this, data was presented in tables. Analysis was carried out to reveal factors

influencing effective implementation of Home Science Curriculum in Kenyan Secondary Schools. Problems were listed from most prevalent to the least common. Data collected from observation was analysed and documented in note form. Detailed analysis of data collected by use of the above instruments are presented in chapter four of the Study.

## CHAPTER FOUR

### DATA ANALYSIS AND PRESENTATION

#### 4.1 Introduction

The purpose of the Study was to analyse factors affecting efficient implementation of the newly introduced four-year Home Science Curriculum in Nairobi and Muranga Schools. To fulfil this Objective data was collected from Home Science teachers using questionnaire and interview schedules. The other sources of data included headteachers and students where interviews and questionnaires were used respectively. Observation checklists used by the researcher also added to the data collection.

This chapter therefore, presents the analysis of data and report of findings in five parts. First, is the report of the responses of teachers, second is the report of the headteachers' responses and third is the report of the responses of the students. Part four constitutes the report of the researcher's observations and part five presents a summary of the findings.

3

## PART ONE

### 4.2 Teachers as Respondents

Teachers are the central figures in any curriculum implementation as they are the ones who try to achieve objectives in any given learning situation. Their opinion on curriculum implementation was regarded as useful data in such a Study which is particularly concerned with implementation of a subject.

### 4.3 Report of the Teacher's Responses

Data gathered from Home Science teachers are presented covering the following;

1. Respondents' personal data.
2. Quality and quantity of in-service.
3. Workload of the Respondents.
4. Adequacy of time allocated to Home Science teaching.
5. Respondents involvement in the management and improvement of Home Science.
6. Availability of teaching-learning resources.
7. Problems encountered by the respondents when teaching.
8. Respondents' suggestions on ways of overcoming the problems.
9. Improvisation.

The responses are tabulated and reported in both tabular and descriptive forms and the frequencies presented in percentages. All the items that were considered important are presented in tables along with their descriptions.

1. Respondents' Personal Data

Included in the personal data of the respondents were; age, sex, academic and professional qualifications, teaching experience and promotions. Data were collected in each of these areas and presented in the following tables.

(a) Age

The age of the respondents was considered important as it reflects on the years of experience in teaching. Age enables some of the respondents to outline the changes they have experienced in the teaching of Home Science over the years. Age being a factor which throws more light to experience and changes in teaching was thus included in the Study. The respondents were classified according to their age as shown in table IV.1.

Table IV.1 Respondents Classified According to the Age Groups

Age (Years)	No. of Teachers	Percentage
Under 30	30	63.8
30-40	15	31.9
41-50	2	4.3
Over 50	-	-
TOTAL	47	100.0

As shown in Table IV.1, out of the 47 teachers who responded, 30 (63.8 percent) were under 30 years in age, 15 (31.9 percent) were aged between 30 and 40 years and only 2 (4.3 percent) were aged between 41 and 50 years. None was above 50 years in age.

(b) Sex

The significance of including sex of the respondents in the Study is on the fact that Home Science has been considered a female domain. To some extent, this female dominance has been proposed to contribute to the inferiority of the subject. There is therefore, need to find out the sex distribution of the respondents.

Table IV.2 Respondents Classified According to Sex

Sex	No. of Teachers	Percentage
Female	46	97.9
Male	1	2.1
TOTAL	47	100.0

(c) Academic Qualification

Based on the assumption that the level of academic attainment affects the quality of teaching such that a K.A.C.E certificate holder is a better teacher than a K.C.E holder, it is necessary to find out the respondents' qualification individually. The findings are presented in table IV.3.

Table IV.3 Academic Qualifications of the Home Science Teachers.

Qualification	No. of Teachers	Percentage
K.J.S.E	-	-
E.A.C.E/K.C.E	9	19.2
E.A.A.C.E/K.A.C.E	3	6.4
Sl (Teacher Cert.)	6	12.8
Diploma in Education	3	6.4
Bachelor of Education	23	48.9
Bachelor of Arts	1	2.1
Bachelor of Science	1	2.1
Master in Education	1	2.1
<b>TOTAL</b>	<b>47</b>	<b>100.0</b>

Table IV.3 shows that the academic qualifications of the respondents were varied. Almost half of the respondents (48.9 percent) were holders of Bachelor of Education in Home Economics. A considerable number of the remaining half (19.2 percent) were Form Four certificate holders.

(d) Level at which Teachers did any Home Science as an Academic Subject

Since Home Science was first introduced in Secondary Schools, it has been studied under three major categories each of which was treated as a separate subject. These were; Home Management, Foods and Nutrition (Cookery) and Clothing and Textiles. The respondents therefore studied only one of the three branches at Secondary School. In the present Education System (8.4.4) all the three have been merged and the teachers are supposed to handle the subject wholesale. Biases depending on the branch studied at Secondary School may affect quality of teaching. It was of great importance to find out the branch of Home Science studied by the Respondents in Secondary School. This is in Table IV.4.

Table IV.4 Branch of Home Science and Level at which it is Studied by the Respondents

Level \ Subject	Clothing and Textiles	Home Management	Foods and Nutrition	All
E.A.C.E/K.C.E	15 (31.9%)	6 (12.8%)	2 (4.3%)	
E.A.A.C.E/ K.A.C.E	4 (8.5%)		2 (4.3%)	
Sl (Teacher Certificate)				6 (12.8%)
Diploma in Education				3 ( 6.4%)
Bachelor of Education				23 (48.9%)
Bachelor of Science				1 ( 2.1%)
College of Technology				9 (19.2%)
Not done at any level				2 ( 4.3%)

As shown in Table IV.4 above Clothing and Textiles tended to be the most popular Branch of Home Science in Secondary School as 15 (31.9 percent) out of the 47 respondents studied it. The other two branches namely; Home Management and Foods and Nutrition attracted

smaller numbers, 6 (12.8 percent) and 2 (4.3 percent) respectively. Only 23 (48.9 percent) studied any branch of the subject in Secondary School. Twenty-two (46.8 percent) picked the subject at College and 2 (4.3 percent) were actually teaching the subject without any prior knowledge of the subject.

(e) Professional Qualifications

Teachers in Secondary Schools are graded according to their professional qualifications. These are, graduate teachers who are holders of Bachelor of Education degrees; SI teacher Certificate, Holders of diploma in Education; Approved graduate Teacher who is an SI or Diploma holder promoted to graduate level on merit. Others include the untrained technical teacher who holds a certificate after studying a technical subject in College of technology and the untrained teacher who has not attended any College for teacher training nor that of technology. This latter group has risen in number in the teaching force especially for technical subjects like Home Science which has not been a common subject. Professional training is a factor which affects teaching. The importance accorded to professional training in teaching makes it necessary to find out the

professional grade of the respondents. This information was analysed and presented in table IV.5.

Table IV.5 Highest Professional Qualification of Home Science Teachers

Qualification	No.of Teachers	Percentage
Untrained Teacher	4	8.5
Untrained Technical Teacher	9	19.2
S1 (Teacher Certificate)	5	10.7
Diploma in Education	3	6.4
Bachelor of Education	23	48.9
Bachelor of Arts	1	2.1
Bachelor of Science	1	2.1
Master of Education	1	2.1
TOTAL	47	100.0

As shown in Table IV.5 above, 23 teachers (48.9 percent) were graduate teachers, 9 (19.2 percent) were untrained technical teachers, 5 (10.7 percent) were S1, teacher certificate holders and 3 (6.4 percent) had Diploma in Education. Only 4 (8.5 percent) were untrained teachers, however two of them had studied aspects of Home Science in

Secondary school and the remaining two had not.

(f) Years of Teaching Experience

Closely linked with the age of the respondents is the number of years of teaching experience. As mentioned earlier the time factor throws light into the historical development of Home Science Education. Data was collected in relation to the years of experience in teaching, analysed and presented as shown in Table IV.6.

Table IV.6 Respondents Classified According to Duration of Experience in Teaching Home Science

No. of Years	No. of Teachers	Percentage
Under 3	23	48.9
3-6	10	21.3
7-10	4	8.5
Over 10	10	21.3
TOTAL	47	100.0

As may be observed from Table IV.6 above the length of teaching experience varied a great deal.

Twenty-three teachers (48.9 percent) had teaching experience of less than 3 years. Twenty-four (51.1 percent) had taught for over 3 years.

(g) Promotions Awarded to the Teachers

Promotions are awarded to teachers depending on academic achievements or purely on merit. Besides being a symbol of acknowledgement for hard work it helps in boosting the morale of the teachers so that they feel obliged to put more effort in their work. Occurrences of promotions were noted, analysed and presented as in Table IV.7.

Table IV.7 Incidence(s) of Promotion of Home Science Teachers.

Promotions		No. of Teachers	Percentage
From	To		
P1	S1	2	4.3
S1	Approved Graduate	3	6.4
Diploma in Education	Approved Graduate	1	2.1
Graduate 3	Graduate 2	2	4.3
Graduate 2	Graduate 1	1	2.1
None		38	80.8
TOTAL		47	100.0

Table IV.7 Shows that a large number of the respondents, 38 (80.8 percent) have not been awarded any promotion during their years in teaching. Only 9 (19.2 percent) had been awarded promotion from a one grade to another.

## 2. Quality and Quantity of In-Service

In-service is a short training given to those already in a profession with an aim of refreshing their Subject content or making them aware of changes in the Subject as it develops. In-service is therefore very essential especially for a subject like Home Science which changes with the changing life pattern in the society. Besides the change in the Home Science curriculum as outlined in the 8.4.4 system of Education requires intensive and extensive orientation courses or in-service programmes to support it's implementation. Data was collected in relation to the frequency, quality, duration and when the in-service was conducted. This was tabulated and analysed as follows;

### (a) Attendance

Table IV.8 In-Service or Orientation Courses Attended by Teachers

Attendance	No. of Teachers	Percentage
Yes	24	51.1
No	23	48.9
TOTAL	47	100.0

It is observable from Table IV.8 that 23 (48.9 percent) had not attended any In-service or Orientation Courses for the teaching of Home Science. For the 24 (51.1 percent) who had attended any course, only 7 (14.9 percent) had attended more than once.

(b) Duration of the In-Service Programmes

The length of time used in these programmes reflects on how extensively and intensively the work has been covered. The following is an analysis and presentation of the duration of the In-Service Programme(s).

Table IV.9 Duration of the In-Service Programmes Attended by the Teachers

Duration (Days)	Frequency	Percentage
1-2	15	48.4
3-4	9	29.0
5-6	4	12.9
7-8	2	6.5
9-10	-	-
Over 10	1	3.2
TOTAL	31	100.0

Table IV.9 Shows the duration of each of the 31 In-Service Programmes conducted and out of the 31 programmes, 15 (48.4 percent) took one to two days, 9 (29.0 percent) lasted three to four days, 4 (12.9 percent) took five to six days and only 1 (3.2 percent) lasted over 10 days.

(c) Time When the In-Service Programmes Were Conducted

In-Service is supposed to be a continuous exercise in the teaching profession. In finding out when these programmes were conducted the trend of this activity may be determined. Data collected to assist in the establishment of the trend is analysed and presented in Table IV. 10.

Table IV.10 Distribution of In-Service Programmes

Date	No.of In-Services	Percentage
Before 1970	-	-
1970 - 1975	-	-
1976 - 1980	-	-
1981 - 1985	10	32.3
After 1985	20	64.5
No date	1	3.2
<b>TOTAL</b>	<b>31</b>	<b>100.0</b>

As shown in Table IV.10 above, between 1981 and 1985, ten (32.3 percent) In-Service programmes were conducted. After 1985, twenty (64.5 percent) programmes were carried out. Before 1980 no In-Service programme was recorded to have taken place.

(d) Quality of In-Service Programmes

The teacher's opinion on the quality of the In-Service Programmes they attended were used for evaluating the programmes. The following is an analysis and presentation of the quality of the programmes as presented in Table IV.11.

Table IV.11 Quality of the In-Service Programmes

Quality of Programme	No. of In-Service	Percentage
Very Useful	12	38.7
Useful	17	54.8
Not Useful	-	-
Undecided	2	6.5
TOTAL	31	100.0

As outlined in Table IV.11 above, 12 (38.7 percent) of the 31 programmes were rated as being very useful to the respondents. Seventeen (54.8 percent) were rated useful, only 2 (6.5 percent) were not rated and none was rated 'Not Useful'.

### 3. Workload of the Respondents

The amount of work that a teacher has to do directly influences the quality of teaching. To determine the teachers workload the number of lessons per week and number of students handled by the teachers were considered. Data was collected, analysed and presented as follows;

(a) Student Population

For each of the teachers, the student population of two classes in Forms One and Two were considered. A total of 94 classes were tabulated according to the number of students in each class.

Table IV.12 The Student Population in Each Class

No. of Students	No. of Classes	Percentage
Less than 20	5	5.3
20 - 30	19	20.2
31 - 40	18	19.2
41 - 50	20	21.3
Over 50	32	34.0
TOTAL	94	100.0

As can be seen from Table IV.12, 32 classes (34.0 percent) had a student population of over 50, 20 classes (21.3 percent) had between 41 and 50 students, 18 classes (19.2 percent) had between 31 and 40 students per class. Only 5 classes (5.3 percent) had less than 20 students each.

(b) Lessons taught by the Respondents

The number of lessons taught in a week by individual respondents were considered and presented as shown in Table IV.13.

Table IV, 13 Number of Teaching Lessons Per Week

Teaching Load Per Week	No. of Teachers	Percentage
Upto 10	2	4.3
11 - 15	6	12.8
16 - 20	23	48.9
21 - 25	14	29.7
26 - 30	2	4.3
Over 30	-	-
TOTAL	47	100.0

Table IV.13 Shows that Home Science teachers had fairly heavy workload as reflected in the number of lessons each had in a week. Twenty three respondents (48.9 percent) had between 16 and 20 lessons in a week. The 14 (29.7 percent) fell in the bracket of 21-25 lessons in a week. Only 2 (4.3 percent) had lessons between 26 and 30 in a week. And 2 (4.3 percent) taught upto only ten lessons.

#### 4. Adequacy of Time Allocated to Home Science

Being aware of the amount of work to be covered and time taken to cover it, teachers opinion on the time allocated to Home Science were sought. Their recommendations on adequate time for teaching were similarly considered, analysed and presented as follows;

Table IV. 14 Respondents' Opinion on Number of Lessons Allocated for Teaching Home Science

Adequacy of Time	No. of Teachers	Percentage
Yes	20	42.6
NO	27	57.4
TOTAL	47	100.0

The Table IV.14 above shows that 27 respondents (57.4 percent) felt that the number of lessons allocated to Home Science were inadequate, while 20 (42.6 percent) claimed that the number was adequate.

Table IV.15 Number of Lessons per Week Advocated for Home Science by the Teachers.

No. of Lessons Per Week	No. of Teachers	Percentage
4 - 5	19	70.4
6 - 7	8	29.6
Over 8	-	-
TOTAL	27	100.0

As illustrated in Table IV.15 above, out of the 27 teachers, 19 (70.4 percent) advocated an addition of one to two lessons to the three lessons per week allocated to Home Science. The remaining 8 (29.6 percent) felt that addition of 3 to 4 lessons would make the teaching time adequate.

5. Respondents' Involvement in the Management and Improvement of Home Science

The Home Science Panels operate from School to National levels. These panels aim at finding possible solutions to problems encountered in the teaching process besides engaging in any other activities which

aim at promoting Home Science education in general. Teacher's membership in any panel is an indication of involvement in improving Home Science education. This made it necessary to establish membership of the teachers in panels in this particular study. Data covering teachers' membership in panels is presented in table IV.16.

Table IV. 16 The Panels of Home Science to Which the Teachers Belong.

Panel	No. of Teachers	Percentage
School	9	19.1
Divisional	1	2.1
District	-	-
Municipal	-	-
Provincial	1	2.1
National (K.I.E)	-	-
None	36	76.7
<b>TOTAL</b>	<b>47</b>	<b>100.0</b>

Table IV.16 above indicated that, out of the 47 respondents, 36 (76.7 percent) were not members

of any panel, not even at school. Only 9 (19.1 percent) were members of school panels. From divisional to provincial level only a total of 2 teachers (4.3 percent) were members.

#### 6. Availability of Teaching-Learning Resources

Home Science being a practical subject has a wide range of teaching-learning resources. In this section only two sets of the teaching-learning resources were considered namely;

- (a) the books which included the syllabus, textbooks, reference books and teachers' guides
- (b) audio and visual aids.

Data in relation to the above two sets were collected, analysed and presented as follows;

Table IV.17 Books Available for Teaching and Learning Home Science

Name of Book	No.of Teachers	Percentage
1. Home Science Syllabus K.I.E.	47	100.0
2. Teachers' Guide 1 and 2 K.I.E.	37	78.7
3. Form 1 Pupils Book K.I.E.	26	55.3
4. Home Management by Johnstone, Akingbein and Macfie Second edition (1-4)	5	10.5
5. Home Management for Schools and Colleges N.L, Were	19	40.4
6. Principles and Practices of Home Management, J. Gitobu	39	83.0
7. Foods and Nutrition, H.K. Ndungi	2	4.3
8. Cooking Explained, B. Hammond	32	68.1
9. Cookery for Schools, M. Neal	16	34.0
10. Traditional Dishes (Teachers' guide)K.I.E.	5	10.6
11. Junior and Senior Needlework, Hart	11	23.4
12. Junior Needlework, R. Giles	8	17.0

Table IV.17 Cont'd

Name of Book	No. of Teachers	Percentage
13. Advanced Needlework Notebook, R. Davis	6	12.8
14. Basic Needlework, W. Bill	32	68.1
15. Needlework for Schools, R. Giles	18	38.3
16. Clothing and Textiles Pupils Book for CESAC	7	14.9
17. Fabric and Sewing Process, M.A Macquire	3	6.4

The list of books in Table IV.17 was developed from a list prepared by the K.I.E. and recommended for use in the teaching of Home Science. From the table it is observable that all the respondents used the Home Science Syllabus drawn by the Kenya Institute of Education (K.I.E). The Teachers guides for Forms One and Two had been used by 37 (78.7 percent) of the respondents. Only 26 teachers (55.3 percent) had used the only pupils textbook recommended. As for the other reference books, their availability in schools varied. Some books like Foods and Nutrition by H.K. Ndungi had been used by only 2 teachers (4.3 percent). Principles and Practices of Home Management by J. Gitobu was the most commonly used reference book as it had been used by 39 (83 percent) of the respondents. Cooking

Explained , B. Hammond and Basic Needlework , W. Bill were indicated to have been used by 32 (68.1 percent) of the respondents.

Table IV.18 The Availability and Use of Teaching Aids in Teaching Home Science

Teaching Aids	Frequency of Use	Always	Rarely	Never	TOTAL
Charts		23.4	6.6	70.0	100.0
Sewing Machines		12.8	24.3	62.9	100.0
Cooking Equipment		12.8	18.4	68.8	100.0
Childcare Equipment		6.4	12.3	81.3	100.0
Needlework Samples		8.5	27.8	63.7	100.0
Chalkboard		100.0	-	-	100.0

Table IV.18 above shows that the Home Science teachers used a very limited range of teaching aids. None of the teachers used any audio aids like School broadcasts, recorded tapes and discs, on the other hand a small number used some visual aids which they enlisted. Of the few visual aids used, they were not frequently put into use by most of the respondents.

7. Problems Encountered by the Respondents  
When Teaching

The teaching learning process involves mainly the teacher, learner and learning resources. Other factors may influence any or all of the three to hinder the achievement of teaching-learning objectives. These factors can be identified chiefly by the teacher, though learners may also recognize some. Data in relation to these factors was collected and presented in table IV.19.

Table IV.19 . The Prevailing Problems of Teaching Home Science.

Type of Problems	Frequency	Percentage
Lack of facilities	38	80.9
Wide Syllabus	25	53.2
Lack of tools	25	53.2
Too large Classes	20	42.6
Lack of Books	19	40.4
Disinterested Students	17	36.2
Lack of Materials for Practical lessons	15	31.9
Lack of Support from School Administration	9	19.1
Too Much Work to do	9	19.1
Teachers' Incompetence in Some Topics	7	14.9
Vague Objectives (Undefined Scope)	7	14.9
No Major Problems	3	6.4

As illustrated in Table IV.19 the main outcry of the respondents was lack of facilities. Among the respondents, 38 (80.9 percent) expressed this as a draw back in the teaching of Home Science. Even the remaining 9 (19.1 percent) expressed the inadequacy of

facilities when interviewed. Wide syllabus and lack of tools ranked second in the list of prevailing problems. About 25 teachers (53.2 percent) in both cases stated these as the problems. Twenty teachers (42.6 percent) found their classes too large to handle especially in practical lessons where each student demanded some attention or close supervision. The other problems listed on the table add to the major problems centered on facilities, tools, syllabus and large classes.

8. Respondents' Suggestions on Ways of Overcoming the Problems

The implementers of the curriculum being aware of the problems in teaching are likely to offer some practical solutions to the problems. It is these feasible solutions that were sought as it was necessary in this Study. Data on the respondents suggestions were analysed and presented as outlined in Table IV.20.

Table IV.20 Ways of Overcoming Teaching Problems

Solutions to Existing Problems	No. of Teachers	Percentage
Provision of facilities	38	80.9
Add extra teaching time	17	36.2
Divide Classes into Smaller Groups	17	36.2
Make the Subject Optional	12	25.2
Redivide the Subject to 3 branches as before	12	25.2
Restructure the Syllabus with definite Scope	9	19.1
Change the Student general attitude towards Home Science	8	17.0
No recommendations	7	14.9

It is evident from Table IV.20 that a few suggestions on how to overcome teaching problems were outlined. Among the respondents 38 (80.9 percent) suggested the provision of facilities. All the other suggestions required a third party to effect and none required the teachers themselves to put in extra effort

to assist in overcoming teaching problems.

### 9. Improvisation

Home Science is one of the most expensive subjects to implement. Teachers have therefore been requested to emphasize economy and to economise use of materials when teaching. To cut on the costs of expensive gadgets, they have been further asked to improvise tools and equipment as much as possible. To appraise the teachers effort in improvisation, it was necessary to find out the frequency of improvisation when teaching. This data was collected and presented in Table IV.21.

Table IV.21 The Frequency of Improvisation as Carried Out by Respondents.

Frequency of Improvisation	No. of Teachers	Percentage
Always	10	21.3
Rarely	13	27.6
Never	24	51.1
TOTAL	47	100.0

Table IV.21 shows that 10 (21.3 percent) respondents improvised teaching tools very often when teaching, 13 (27.6 percent) improvised once in a while and the majority of them, 24 (51.1 percent) did no improvisation when teaching. Those who did no improvisation claimed that they were not capable of improvising equipment.

## PART TWO

### 4.4 Headteachers as the Respondents

The Headteachers being concerned with the general wellbeing of the Schools have some control over the teachers. Part of their administrative duties include supervision of the teaching-learning process, they are therefore aware of the management of each subject taught in their schools. As Home Science was an optional subject offered only in Schools which could afford it, its 'compulsory' appearance in Schools has created some impact which the headteachers are inevitably aware of. For the Schools offering aspects of it before, the expansion of the subject also creates some impact. It is for these reasons that the headteachers were used as respondents in this Study.

#### 4.5 Report of the Headteachers' Responses

To throw more light into the findings based on the responses of the Home Science teachers; data gathered from the headteachers covered the following;

1. The headteachers' awareness of Home Science problems and nature of the problems.
2. Assistance offered by Headteachers to Home Science.
3. Means of obtaining funds for Home Science.

The responses given by the headteachers through interviews were analysed and presented in much the same way as the responses obtained from the Home Science teachers. The Schools that were used in the Study included, 17 assisted, 12 government maintained and 1 harambee school. Of these 30 Schools 17 were located in Urban Centres and 13 were found in the rural villages.

##### 1. The Headteachers' Awareness of Home Science Problems and Nature of Problems

Since the teachers are supposed to report their progress to the School heads, in these reports problems if any, are bound to be pointed out with a hope that the

heads may offer some solutions. This would involve the School heads in the management of the subject, thus it was found appropriate to find out the level of awareness. Data collected in this aspect is presented as follows;

Table IV.22 Headteachers' Awareness of Problems Faced by Home Science Teachers.

Aware	No. of Headteachers	Percentage
Yes	26	86.7
No	4	13.3
TOTAL	30	100.0

As is evident in Table IV.23, 26 headteachers (86.7 percent) were aware that Home Science teachers faced some problems in the teaching of the subject. Only 4 (13.3 percent) were not aware of any problems.

Table IV.23 *Types* of the Problems which the  
Headteachers Had Awareness of

Problem	No. of Headteachers	Percentage
Lack of adequate Equipment	23	76.7
Lack of Home Science Room	11	36.7
Teachers' Incompetence	8	26.7
Disinterested Students	5	16.7
Overcrowded Classrooms	4	13.3
Wide Syllabus	3	10.0
No Problem	4	13.3

As is observable in Table IV.23 above, 23 head-  
teachers (76.7 percent) were aware that the teachers  
lacked adequate equipment to use in teaching the  
practical aspects of Home Science. Eleven (36.7 percent)  
mentioned lack of a Home Science room as a hinderance  
in teaching. 8 (26.7 percent revealed the teachers'  
incompetence in handling certain aspects of Home  
Science. Disinterest of the students in Home Science,  
overcrowded Classrooms and wide syllabus manifested  
in the lagging behind of term work were also mentioned  
by a few headteachers.

2. Assistance offered by Headteachers to the  
Home Science Departments

Headteachers control the School budget and are therefore capable of promoting a subject using the finances. This Study aimed at finding out the assistance offered by the headteachers to the named subject. Data collected in this aspect is presented in Table IV.24.

Table IV.24 Type and Amount of Assistance Offered  
by The Headteachers

	Frequency	Percentage
Bought a few items for Sharing among Students	15	50.0
Constructing a Home Science Room	5	16.7
Offering some professional guidance to the teachers	3	10.0
Counselling Students to improve their attitude towards the subject	5	16.7
Asked for a higher vote for Home Science than Other Subjects	3	10.0
Asked teachers to divide classes into smaller teaching groups	2	6.7
Asked teachers to improvise tools and equipment	1	3.3
Introduced other Optional Subjects to reduce Student Population	1	3.3
Requested teachers to teach extra time	1	3.3
Nothing done	1	16.7

Most of the headteachers expressed that they could not offer much assistance because they believed that the prevailing problems were beyond their control. The assistance offered as listed in Table IV.24 were very meagre and rarely offered. Some of them claimed that the teachers of the subject were more capable of finding possible solutions to some of the problems. The assistance included, buying a few items for sharing as stated by 15 (50.0 percent) headteachers.

Only 3 headteachers (10 percent) did not feel any strain in offering the Subject. The strain was mainly felt in terms of funds and time to cover the wide syllabus. The practical lessons require funds frequently to buy materials.

### 3. Means of Obtaining Funds for Home Science

Headteachers solicited funds from various Sources to maintain Home Science Department. The following is an outline of the various sources of funds.

Table IV.25 Sources of Funds for Home Science

Source of Funds	Frequency	Percentage
Students Pay extra Money	25	83.3
Part of the Tuition Fee	21	70.0
Harambee	5	16.7
Donations from Charitable Organizations	3	10.0

Table IV.25 shows that the headteachers obtained funds from various sources to use in the running of Home Science Departments in their Schools. In any one given School more than one Source of Fund was used for example most Schools were relying on extra money paid by those students studying the Subject as well as a given percentage of the total tuition fee paid by all students.

### PART THREE

#### 4.6 Students as the Respondents

The target group in the curriculum are the Students as the success or failure of any curriculum is manifested in the change observable on the Students. Being active participants in curriculum implementation

they are capable of giving some genuine observation on the Curriculum implementation and were therefore included as respondents in this Study.

#### 4.7 Report of the Student's Responses

For the Students, the data gathered covered the following;

1. Students background.
2. Students observation of the teaching.
3. Students recommendations for the improvement of Home Science Classes.

The Student responses were also presented in descriptive form alongside frequency tables.

##### 1. Students' Background

Included in the students background were; their level of enjoyment in learning Home Science, number in their groups for practical learning sessions, skills they have acquired in the lessons and value which they place on Home Science education. These were considered to be factors within the students which have a direct link with their performance in the subject.

They further assist in evaluating the possibility of achieving the Home Science Objectives. Data was collected for each of the four factors and presented in the following tables;

(a) Student Level of Enjoyment in Learning Home Science

Based on the assumption that those who enjoy a subject learn it better and vice versa it was found appropriate to investigate the Students' level of enjoyment in learning the Subject. The rating of the levels were done in Table IV.26.

Table IV.26 Level of Enjoyment in Learning

Level of Enjoyment	No. of Students	Percentage
Very Much	210	70.0
Much	56	18.7
No	34	11.3
TOTAL	300	100.0

Table IV.26 shows that out of 300 Students, 210 (70.0 percent) enjoyed the Subject very much, 56 (18.7 percent) enjoyed it Much and only 34 (11.3 percent) had no interest in learning the Subject.

(b) Number Per Group in the Practical Skill Learning

In any skill learning, the learner must learn by doing and not watching or listening although these two activities often precede the doing by the learner. Below is a presentation of the number of Students in a group for skill learning.

Table IV.27 Number of Students in Each Group for Practical Lessons.

No. of Students Per Group	Frequency	Percentage
1-2	50	16.7
3-4	66	22.0
5-6	68	22.7
above 6	56	18.6
No Practical Lessons	60	20.0
TOTAL	300	100.0

As is shown in Table IV.27 above the groups consisted mainly of over 3 Students. Such large groups reduce the possibility of having each Student acquiring a given skill. Sixty students (20 percent) were not exposed to any practical lessons.

(c) Skills Acquired in Home Science Lessons

To appraise the level of achievements in skill acquisition the Students listed the skills they had acquired in the lessons. Following is an analysis and presentation of findings in this aspect.

Table IV.28 Skills and Their Degree of Acquisition

Skill	No. of Students	Percentage
Stitching	180	60.0
Cooking	138	46.0
Housecare	152	50.7
Personal Hygiene	200	66.7
None	60	20.0

Table IV.28 above shows that a total of 200 Students (66.7 percent) claimed that they had acquired skill in personal hygiene. Stitching as a skill had been learnt by 180 students (60.0 percent), Housecare was listed as a skill known by 152 Students (50.7 percent) while cooking was known by 138 Students (46.0 percent). Sixty students (20 percent) had not learnt any skill in Home Science.

(d) Students Value of Home Science

Intrinsic motivation to learn a subject can be due to the value the learner places on the subject. This value can be manifested in what use the learner hopes to make of the subject in the future. Data was thus collected to show value and analysed in Table IV.29.

Table IV.29 Use of Knowledge Learnt in Home Science

Use	No. of Students	Percentage
Pursue a Career	62	20.7
Source of Income	36	12.0
Self and family	72	24.0
Higher Education	18	6.0
Undecided	112	37.3
<b>TOTAL</b>	<b>300</b>	<b>100.0</b>

As is evident in Table IV.29 above, most of the Students hoped to put into some use the knowledge acquired in Home Science. Only 112 students (37.3 percent) were undecided as to what use they would make of the Home Science Knowledge.

## 2. Students' Observation of the Teaching

To find out the teachers teaching methods used, the students listed the teaching methods that were commonly used by their teachers. They further added information to approve or disapprove the presence of improvisation in learning Home Science. Findings on teaching methods and improvisation were analysed and presented in Table IV.30 and Table IV.31.

Table IV.30 Teaching Methods Used by Teachers as Perceived by the Learners

Teaching Methods	Frequency	Percentage
Practical laboratory Exercise	102	34.0
Lecture (Teacher talk, Student take notes)	238	79.3
Demonstration by teacher	208	69.3
Educational trips	-	-
Guest Speakers	-	-

Table IV.30 above shows that the teaching method most commonly used by the teachers was the lecture method as indicated by 238 Students (79.3 percent). Demonstration by the teacher followed closely with 208 Students (69.3 percent). Educational trips and Guest Speakers were not used by any teacher.

Table IV.31 Improvisation in the Learning of Home Science.

Frequency of Improvisation	No. of Students	Percentage
Always	-	-
Rarely	214	71.3
Never	86	28.7
TOTAL	300	100.0

It is observable in Table IV.31 that improvisation was very rare in learning Home Science, 214 Students (71.3 percent) indicated that they rarely improvised tools and materials. Eighty-six students (28.7 percent) claimed that they did not carry out any improvisation in learning Home Science.

### 3. Students Recommendations for The Improvement of Home Science Classes

From the problems experienced by learners when learning Home Science, Students outlined certain suggestions for the improvement of their Classes. These were aimed at enhancing learning. The following is an analysis and presentation of data collected on this area in Table IV. 32.

Table IV.32 Recommendations for The Improvement of Learning.

Recommendations	No. of Students	Percentage
Variation in teaching Methods	140	46.7
Provision of Adequate Equipment	132	44.0
Add more time for Lessons	34	11.3
More Teachers	14	4.7
Provision of Adequate Space	28	9.3
Have frequent Tests	8	2.7
Smaller Practical Groups	8	2.7
Repair Equipment	10	3.3
Provision of material for practicals	32	10.7
Have Conferences with other Schools	2	0.7
Provision of Textbooks	24	8.0
Provide Skilled Teachers	12	4.0
Home Science Room	32	10.7
None	14	4.7

Table IV.32 shows that varied problems prevailed in the classes as the recommendations were also varied, out of 300 Students, 140 (46.7 percent) called for a variation in the teaching methods. One hundred and thirty-two (44 percent)

appealed for adequate equipment for their practical lessons. The other recommendations as listed on table IV. 32 were given by smaller numbers of Students, although they are useful recommendations which can go along way to improve Home Science Classes.

#### PART FOUR

#### 4.8 Report of the Researcher's Observations

Observation checklists were used to find out the availability of tools, materials and facilities required for Home Science. The other was to find out the amount of improvisation carried out by the teachers. The results were presented in descriptive form as follows.

##### 1. Availability of Tools, Materials and Facilities

From a total of 30 Schools visited 15 had Home Science Rooms. Four of these 15 Schools had rooms which were similar to ordinary classrooms. These rooms had large tables and stools only. No special facilities like cookers, sinks, storage cupboards, sewing machine were found in these rooms. Therefore only 11 Schools could be termed as having useful Home Science rooms.

Model houses were very rare in the Schools, only 4 Schools (13.3 percent) had model houses. Two of the 4 Schools had Model houses which were not equipped and were therefore not put into any practical use.

At least 16 Schools (53.3 percent) had electric or gas cookers. The remaining 14 Schools (46.7 percent) either had charcoal or energy saving jiko or stoves. Eleven schools (36.7 percent) carried out cooking practical lessons where Students participated in the actual cooking. The other Schools had limited cooking equipment particularly cookers such that the teachers either demonstrated as Students watched or they simply taught cookery in theory.

Childcare equipment were minimal in the few Schools where they were available. Only 6 Schools (20.0 percent) had some equipment for Childcare. This could be attributed to the fact that childcare has not been given emphasis in the Home Management Classes of the Older education system (7.6.3).

Foods and Nutrition and baking items were found in eleven Schools which were offering Home Management in the 7.6.3 education system and were put into use.

The remaining 19 had enough of these items for demonstrations by the teacher or simply for familiarizing Students with them and not necessarily for using.

Needlework proved to be the most popular aspect of Home Science. Twenty schools (66.7 percent) had sewing machines. Generally needlework equipment was the majority even in very poor Schools. Although the machines were not enough for the Students, Stitching by hand was commonly done. The headteachers were positive in buying needlework equipment as they used the products of these classes for example shorts were used for games. Storage for needlework items posed no problem as they were not perishables as would be the case with foodstuffs for cookery.

## 2. Improvisation

The teachers carried out very little improvisation. Of the thirty Schools visited only 3 (10 percent) carried out some improvisation and to a very small extent. The improvised items included washing abrasives, hangers and pegs. No constructive improvisation as of ovens, storage facilities like refrigerators, or use of any appropriate technology was observed.

PART FIVE4.9 Findings

This section presents a summary of findings from observations made from the analysis of data obtained from all the four research instruments used in the study. These are in line with the objectives of the study which were:

1. To find out the availability of Home Science syllabus, textbooks, reference books, teacher's guides, materials, tools and facilities that are used to enhance the quality of Home Science teaching.
2. To determine teachers' professional qualifications.
3. To establish the adequacy of pre-service and in-service training for the Home Science teachers.
4. To analyse problems experienced by teachers in implementing Home Science Curriculum.
5. To recommend strategies for the improvement of the teaching of Home Science in the Secondary Schools.

1. Teaching-Learning Resources

The Home Science syllabus was used by all teachers. Of the 15 books recommended by K.I.E only 3 were available in a reasonable number for use by teachers. These three were; Cooking Explained

by B. Hammond, Basic Needlework by W. Bill and Principles and Practises of Home Management by J. Gitobu.

Tools, materials and facilities were more of a hinderance than books. About 60 percent of the schools could not conduct practicals in cookery and Home Management due to lack of tools, materials and facilities. The large number of students, that is, 33.7 percent, conduct practicals in groups.

The teachers were young and predominantly female. Sixty-eight percent of the teachers were holders of K.A.C.E or its equivalent and above. On the other hand only half of them studied any branch of Home Science in Secondary Schools. The other half began studying the subject at college level. The studying of any of the branches and studying the subject at college level only creates loopholes in the pre-service training. Teachers are either biased depending on what was studied or not fully equipped to handle all the areas effectively. Such academic upbringing breeds incompetence on the part of the teachers.

In-service was not conducted until the eve of the introduction of 8-4-4 education system as none is recorded before 1980. The programmes are too short to cover extensively the three areas of Home Science. They normally lasted less than one week, with some taking even one to two days.

In any one given school it was observed that a 'Cob-Web' problems entangled and thus hindered in the teaching of Home Science. Of the prevailing problems below is a list ranging from the most common downwards;

	<u>No.</u>	<u>%</u>
1. Lack of facilities or adequate facilities	201	58.0
2. Lack of equipment or adequate equipment	224	64.5
3. Too long a syllabus which cannot be covered in the given time	109	31.5
4. Disinterested students especially boys	92	26.4
5. Lack of books especially student textbooks	90	20.2
6. Overcrowded Classrooms	95	27.5
7. Lack of support from the school administration	32	9.5
8. Incompetence of teachers in handling certain areas of Home Science	12	3.4
9. Teachers felt overworked	32	9.5
10. Home Science objectives were vague and did not assist the teachers in defining the Scope	32	9.5
11. Lack of materials or inadequate materials	55	16.0

In view of these problems some teachers were in a state of despair and resorted to just teaching theory. They used audio aids and only a few used visual aids once in a while. Improvisation was minimal. For most schools the practical aspect of Home Science was in danger and particularly Home Management and Foods and Nutrition. Teachers did not form panels at Schools to assist them in curbing some of these problems. Even the suggestions they offered for the improvement of Home Science Education clearly indicate that they simply want an ideal situation to teach the subject. Their suggestions included the following;

1.	Provision of adequate facilities	80.9%
2.	Addition of extra teaching time	36.2%
3.	Division of classes into smaller teaching groups	36.2%
4.	Making the subject optional so that the number is reduced besides having only those students who are interested	25.2%
5.	The subject should be split into three areas as before	25.2%
6.	Restructuring of the syllabus so that definite scope is clearly indicated	19.1%
7.	Change the student attitude towards Home Science	17.0%
8.	Provision of adequate equipment.	14.9%

A discussion based on the analysis of findings is presented in Chapter V. Besides it includes the conclusion and recommendations also based on the findings.

## CHAPTER FIVE

### DISCUSSION, SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### PART ONE

#### DISCUSSION OF RESULTS

##### 5.1 Introduction

The findings of this study are discussed and presented in this section. The discussion based on the data collected from the respondents, follows the topics outlined in the objectives of the study.

##### 5.2 Background of Home Science Teachers

Demographic data of Home Science teachers formed the basis upon which analysis and discussion in this section is based. Table IV.1 shows that the respondents are young as 63.8 percent are under 30 years of age and 95.7 percent are under 40 years of age. Being young they should be able to devote their energy into the development of Home Science Education.

Apparently, Home Science is dominated by females. It is evident in table IV.2 that 97.9

percent of the respondents are females. Besides the subject is offered in purely girls' schools or mixed schools. Out of the 30 schools used in the study only 2 were purely boys' schools. One of the common reasons cited by headteachers for offering Home Science in their school was that they found it very appropriate for girls. This high concentration of female teachers and female learners in Home Science somehow stereotypes the discipline. A lot of people are bound to look at Home Science as a "female" undertaking. The consequences of such a perception does not augur well for Home Science.

Although about 50 percent of the teachers are holders of B.Ed. degrees as shown in Table IV.3, they tend to be concentrated in Nairobi. A school like Ngara has 6 graduate teachers while an equally large school in Murang'a, notably Kahuhia has only 2 graduate teachers. The schools in Murang'a have all the untrained technical and untrained teachers in the lot of respondents. Quality of teaching Home Science in rural schools is thus more affected than those in Nairobi.

A comparison of Tables III.3 and III.4 shows that Nairobi has twice the number of teachers Murang'a has for the

same number of schools. This further disadvantages the rural schools in that one teacher cannot form a Home Science panel in the school. Having more teachers in a given school facilitates teaching because teaching is a profession that requires teamwork.

Over 70 percent of the teachers began studying the subject at college as recorded in table IV.4. They are therefore not confident in teaching all the areas of Home Science. This is because the courses covered at college are not necessarily fully learnt by the teachers while in training. A study by Mbithe (1985) showed that one of the causes of dissatisfaction in learning Home Economics at Kenyatta University was that some courses were not well taught.<sup>57</sup> Such inadequate instruction leads to incompetency later on when the trainee teacher starts to teach. The 21.2 percent of the teacher respondents who studied Home Science in school, covered one of the three major courses namely; Home Management, Foods and Nutrition and Clothing and Textiles. The fact that they opted for any one and left out two shows that they probably liked that course more than the others. This bias interferes with the teaching

such that a teacher would prefer to teach Clothing and Textiles simply because she is familiar with it right from school. Such biases affect the teaching of Home Science especially where the courses have been merged as is the case with 8.4.4.

Almost half of the respondents (48.9%) have taught for a very short time. Table IV.6 clearly shows that 70.2 percent have taught for less than six years. They are teachers who joined the profession when 8.4.4 was at its inception stages. They should be able to adjust so as to accommodate the changes in the teaching of Home Science. The short duration of their teaching experience could explain why promotions have been very rare among the teachers. Table IV.7 states that 80.8 percent had not been awarded any promotions.

In-service is a very necessary activity in any profession and teaching is no exception. As stated in Table IV.8, 48.9 percent of the Home Science teachers had not attended any in-service or orientation course in the teaching of the subject. Table IV.9 shows that the in-service

programmes lasted a few days and infact 48.4% of them lasted a day or two. Home Science being a broad subject consisting of numerous sections and new to some of the teachers cannot be well covered in an in-service programme that lasts for a day or two. In-service appeared to be very neglected in the teaching of Home Science. Table IV.10 shows that the in-service programmes emerged with the introduction of 8.4.4. Before 1980 no programme was recorded as having taken place. This may explain why the programmes take short periods. The planners of the programmes look at it as a new requirement which they are not familiar with and are thus not prepared to implement it effectively. These haphazard and second rate in-service programmes are however not unique to Home Science alone. It was observed by Orwa (1986) that this drawback is widespread throughout the Kenyan education System. He goes on to say that in-service programmes were conducted haphazardly, did not cater for the majority of the teachers, they lasted for too short a time, and programmes were not evaluated for improvement.<sup>58</sup>

Teachers of Home Science handled very large classes. Table IV.12 shows that 74.5 percent of the

Home Science Classes consisted of over 30 students each. Over 60 percent of the students shown in Table IV.27 were divided into groups of more than three in practical lessons. Twenty percent did not learn practical aspects of Home Science due to the large numbers. Moreover, close supervision by the teacher during practicals becomes impossible. Some teachers resorted to assigning work, particularly stitching to be carried out outside the class time. Such work is either not well done or not done by the students. It becomes very difficult for the teachers to ensure that practical skills are acquired.

Table IV.13 shows that 66 percent of the teacher respondents have up to twenty lessons per week, an average of four lessons in a day. Some of the teachers claimed that their workload was too taxing especially when they have to teach another subject in addition to Home Science. Such teachers expressed the feeling that they should be allowed to teach Home Science only. The time allocated for teaching Home Science was inadequate as indicated by the 57.4 percent of the respondents in table IV.14. This also

explains why the syllabus was too long to be covered in the given class time. Both the Home Science teachers and headteachers recognized the lengthy syllabus as a drawback in Home Science Education. Tables IV.19 and IV.23 both show that the syllabus was too long. Additional one or two lessons were suggested as ideal.

Home Science panel seemed to be a new concept to most of the teachers. Table IV.16 shows that 76 percent belonged to no panel, while the 24 percent who belonged to any panel were members who rarely met to discuss Home Science Education. Some of them could not state what had been discussed in their panel meetings. Panels if effectively organized can go a long way in improving the teaching of Home Science. School panels would help the teachers solve their daily problems and would provide background information for the in-service programmes.

### 5.3 Availability of Teaching-Learning Resources

In addition to the teachers' personal attributes, other resources have to be used for effective learning. The resources range from simple chalk to complex gadgets like closed circuit television. Experience has shown that learning is enhanced when these resources are put into use.

Table IV.17 shows that all the teachers had access to the Home Science syllabus. A good percentage (78.7 percent) had used the teachers' guides one and two. Only 55.3 percent had used the only K.I.E drawn and recommended textbook for pupils in forms one and two. From the long list of reference books suggested by K.I.E, only three tended to be popular among teachers. Principles and Practises of Home Management by Gitobu, J. was the most commonly used as 83 percent of the teachers stated. Cooking Explained by B. Hammond and Basic Needlework by W. Bill were the other two popular reference books used by 68.1 percent of the respondents in each case. These three books seem to cover the three broad areas of Home Science namely; Home Management, Foods and Nutrition and Clothing and Textiles.

Findings regarding the availability and use of audio and visual aids in teaching revealed that audio aids were not used. Of the few visual aids available, Only the chalkboard was frequently used. Others such as charts, sewing, cooking and childcare equipment were rarely used. This information is outlined in table IV.18. The limited use of visual aids and lack of audio aids explains why 79.3

percent of the student respondents stated that their teachers used the lecture method when teaching. In their recommendations for the improvement of Home Science teaching, about 50 percent of them requested for a variation in the teaching methods. Table IV.30 and IV.32 which show these respectively clearly affirm that lack of variation in teaching could be attributed to limited use of the audio and visual aids. This supports findings of Kiviu (1985) who reported that;

The lecture method was the most commonly used. Instruction in Home Science was inclined towards an expository rather than an inquiry approach. Teachers did more talking than playing the role of a facilitator or challenger ... Other methods like class discussion and community study were in very little use.<sup>59</sup>

#### 5.4 Problems Encountered by the Respondents When Teaching.

Although the teachers listed many problems that were interfering with the teaching of Home Science, only a few appeared to be common. Table IV.19 shows these problems to include; lack of facilities (80.9 percent), wide syllabus (53.2 percent), lack of tools (53.2 percent), large classes (42.6 percent), Lack of facilities, tools and materials for practical

lessons pose the greatest hinderance in teaching because without them, the subject ceases to be a practical one. This further explains why teachers resort to ~~the use of~~ lecture method when teaching as stated earlier. Similar problems are echoed by the headteachers as shown in table IV.23. In stating their recommendations for the improvement of learning Home Science, students also cited the existence of some problems, notably inadequacy of equipment. This has been stated by 44 percent of student respondents in table IV.32.

#### 5.5 Improvisation

Improvisation in Home Science is the act of using available resources to construct an item for use instead of the actual item. A pair of forks could be placed back to back and used as an eggwhisk where one is not available. The forks are used as an improvised eggwhisk. Home Science requires a variety of tools and equipment which are expensive. Teachers are advised to improvise as much as possible in order to cut down costs.

The teachers who claimed to have improvised equipment when teaching Home Science were 48.9 percent of the total teacher respondents. However, 51.1 percent of them were frank and admitted that they did not improvise. This makes table IV.21 of the teachers responses very contradictory to table IV.31 of the students responses. The students (71.3 percent), stated that their teachers rarely improvised while the remaining 28.7 percent had teachers who never improvised. No teacher was found to be regular in improvisation. The students observation supported the researcher's observation in that only 10 percent of the visited schools carried out some improvisation. Unfortunately, the improvisation carried out in these three schools was minimal. It included small items like hangers, pegs, abrasives and brooms. None of the schools visited had any large scale, constructive improvised equipment like those designed by the Appropriate Technology Department of the Ministry of Applied Sciences and Appropriate Technology or the Ministry of Agriculture. Such items would include; improved fireplace, cool storage facilities, meat safes, improvised ovens and other kitchen items. Findings regarding improvisation support Thinwa's (1987) study which also reported that;

The majority of the teachers were found not to be aware of the type of improvisation they could use when teaching certain aspects of Home Management. 60

Her study was concerned with Home Management which is one area of Home Science. If the teachers almost failed to improvise in one area, then there would be even lesser improvisation when other areas of Home Science have to be covered simultaneously.

#### 5.6 Discussion of the Headteachers' Responses.

Although headteachers may not carry out the actual classroom teaching, they do contribute towards the success of any subject in the school. Introduction of a subject like Home Science in a School to a large extent depends on the headteacher's initiative to do so. It is for this reason that the headteachers' responses are discussed here.

It is observable in Table IV.22 that 86.7 percent of the headteachers were aware that Home Science teachers in their schools encountered some problems in teaching the subject. They further went ahead and listed the problems as shown in table IV.23. These were very similar to those

Problems stated by the teachers in table IV.19. Despite the fact that the headteachers are aware of problems of teaching Home Science, they offer minimal assistance. After mentioning one or two modes of assistance they offer, they claimed that the problems were beyond their control. Table IV.24 shows that buying a few items for practicals is the most the headteachers can do to assist Home Science education. This selective buying has only been done by 50 percent of them.

The list of sources of funds for Home Science as outlined in table IV.25 shows that there are very limited sources of funds for the subject. Scarcity of funds suggests lack of imagination as far as soliciting for funds is concerned. Headteachers should be able to initiate activities which bring in funds for the development of the subject. Such activities would include formation of Home Science Clubs to engage in money making activities like preparation of food items for sale, organizing Home Science promoting entertainment at a fee, "bob a jobbing" and so on.

The future existence of the subject in schools was confirmed by the headteachers' willingness

to continue offering the subject over the years. If they insist on offering the subject, chances are that implementation will improve with time.

#### 5.7. Discussion of the Student's Responses

The responses of the students affirmed the existence of problems affecting the learning of Home Science. It is evident from table IV.27 that the number of students in the Home Science classes were large. This is a problem already mentioned by the teachers and headteachers. They also cited limited improvisation in table IV.31 and that there was monotony in teaching, shown in table IV.30.

The students however enjoyed learning the subject as reflected by 88.7 percent of their responses. They claim to have acquired skills in their lessons, although there is a variation in the level of acquisition. Table IV.28 shows that some skills were known by more students than others. For example, cooking was the least known as only 46 percent of the students claimed to have acquired the skill. Personal hygiene was rated highest with 66.7 percent of the students. None of the skills was 100 percent known to all students.

Students made very constructive recommendations which can go a long way in laying strategies for the improvement of learning Home Science. These recommendations are clearly outlined in table IV.32.

#### 5.8 Summary of Findings

Based on the discussion of the responses of Home Science teachers, headteachers, students, and researcher's observations, the following major findings were made:

1. The subject is dominated by females.
2. Urban schools are better placed in terms of qualified teachers than rural ones.
3. The pre-service education and training which were offered to the teachers had loopholes which have led to incompetent teaching
4. The in-service programmes are too rare to assist in improving Home Science Education
5. The in-service programmes are not organized to cater for all the teachers.

6. The in-service programmes are too brief to adequately cover the different areas of Home Science effectively.
7. Home Science teachers do not form panels to assist them in solving daily problems encountered when teaching Home Science.
8. Improvisation is minimal in Home Science classes.
9. The practical aspects of the subject are least carried out due to lack of equipment, tools and facilities.
10. The headteachers though aware of the problems encountered by Home Science teachers do not assist the teachers in solving them.
11. In any one given school a 'cobweb' of problems affected implementation of Home Science. The outstanding problems were lack of facilities, tools and equipment coupled with crowded classrooms.
12. The teaching-learning resources were very scarce in schools and where they were available, they had to be shared between many students.

PART TWOSummary, Conclusion and Recommendations5.9 Introduction

In this section a summary is given covering the problems, objectives, related literature, methodology and conclusion based on the objectives of the study.

1. The Problem

The purpose of the study was to analyse factors affecting efficient implementation of the newly introduced four-year Home Science curriculum in Nairobi and Murang'a Schools with a view of recommending strategies for the improvement of the teaching of the subject.

2. Objectives

Specifically the study sought to fulfil the following objectives;

1. To find out the availability of Home Science syllabi, textbooks, reference books, teacher's guides, materials,

tools and facilities that are used to enhance the quality of Home Science teaching.

2. To determine teacher's professional qualifications
3. To establish the adequacy of pre-service and in-service training for the Home Science teachers
4. To analyse the problems experienced by teachers in implementing the current Home Science curriculum.
5. To recommend strategies for the improvement of the teaching of Home Science in Secondary Schools.


### 3. Related Literature

Besides providing data which was used to draw research instruments, related literature gave grounds for the need to conduct the study as well as providing answers to some of the objectives of the study.

Review of related literature revealed that Home Science being a vocational and technical subject has suffered a persistent inferiority right from its introduction in the school curriculum (Sifuna 1984). It was also evident from the literature reviewed that it is a subject which has gained emphasis because of the desirable ends one may gain after learning it. Very little consideration has been given to the possibility of it's successful implementation in schools (Mugiri, 1979 and Ogula, 1984)

Literature further revealed that the classroom teacher is left at the receiving end in the chain of curriculum development. Very little attention, if any is paid to the teachers in the exercise (Hawes; 1972, Ogula; 1984, Owano; 1986, Okech and Asiachi; 1986).

There is need to conduct studies on curriculum implementation. A few studies such as those conducted by Muthui (1981), Wagah (1985), Kiviu (1985) and Wang'ombe (1988) revealed that there is need to conduct studies on Home Science Education. Such a study would not only give a nationwide outlook of Home Science but, would throw some light into the teaching of the subject.



#### 4. Methodology.

The methodology used in the study included drawing the samples, developing instruments, administering instruments and analysing data. Nairobi was selected as a study area because of its central position and coverage of a wide area. Using simple random sampling Murang'a one of the five districts surrounding Nairobi was selected to represent the rural study area. All the schools offering Home Science in Nairobi were visited. A total of 15 schools responded positively. A similar number of schools were identified in Murang'a using 'purposive' sampling. From these 30 schools, 47 Home Science teachers responded to the questionnaire and interview by the researcher. In each school, ten form two students responded to the questionnaires. The 30 headteachers were also interviewed. Two checklists were used by the researcher to collect observable data. The observable data included information on improvisation and the availability of tools, equipment and facilities of Home Science in schools. The research instruments consisted of;

1. A questionnaire for the Home Science teachers.

2. An interview schedule for the Home Science teachers.
3. A questionnaire for Home Science students.
4. An interview schedule for the headteachers.
5. Observation checklists used by the researcher.

These instruments were piloted and adjustment made appropriately.

The gathered data was analysed into frequencies and percentages. Data collected by the checklists were compiled and reported in note form.

## 5. Conclusion and Recommendations

In accordance with the research objectives, conclusions of the study are given in this section. This is followed by recommendations based on the results.

### Objective One:

To find out the availability of Home Science Syllabi, textbooks, reference books, teachers' guides, materials, tools and facilities that are used to enhance the quality of Home Science teaching.

Data gathered in relation to Objective One when analysed gave a discouraging picture. Although the syllabus was available in every school, the other books were very scarce. The textbooks prepared by the Kenya Institute of Education had not reached all schools. As for the reference books, only three were available in considerable numbers used by the teachers. It is evident that there is a poor distribution of books. The books prepared by the Kenya Institute of Education would be expected to be in all schools since they are the main curriculum developers in the republic. Besides these books are designed in accordance with the curriculum. It is a great drawback in the teaching if books of such great value are not distributed to all Schools promptly. It is evident that the Kenya Institute of Education does not inform the teachers of the recommended books. Teachers are left to arbitrarily select books to use in teaching Home Science.

Materials, tools and facilities were either inadequate or available in small numbers that cannot be used. Kenya Institute of Education prepares a list of these requirements but again fails to distribute them to all schools. Teachers buy what they think are necessary for teaching the

subject. Without this guiding list, it was common to find a school having bought a set of saucepans and other kitchen equipment, while a cooker of any kind is left out. Such items just lie in the school stores instead of being put into any good use simply because the shopping was done arbitrarily. Some schools, however did not have the funds to buy the necessary materials, equipment and facilities.

Objective two: To determine teachers' professional  
Qualifications

The teachers who are qualified are over 70 percent of the total teacher respondents. It is only unfortunate that these qualified teachers, mostly graduates are concentrated in Nairobi (Urban). The small percentage who are untrained have a substantial impact as they form the majority of the teachers in Murang'a (rural). The quality of teaching the subject in Murang'a (rural) is thus low compared to the Nairobi (urban) schools.

Objective Three:      To Establish the adequacy of pre-  
service and in-service training for  
the Home Science  
teachers

The pre-service education provided to the teachers shows that only sections of Home Science were covered. From the secondary schools to colleges, the teachers have shown their preferences. Such biases persist throughout their training such that when they graduate into teaching, incompetence is inevitable. For some of the teachers, the beginning of learning Home Science started at college. The duration in college is too short to train a competent teacher in all areas of Home Science. In the previous 7.6.3 system of education some teachers who were by then students excelled in different aspects of Home Science especially if the area was favoured in school and college. With the merging of the three areas of Home Science in the 8.4.4, such teachers feel inadequately equipped to cover areas not so familiar to them. The pre-service education is thus not in favour of the 8.4.4 Home Science syllabus.

It is impossible to retrain all the teachers in the field by putting them back to college. However, the quality of teaching can be improved through extensive and intensive in-service programmes. Such programmes can go a long way in curbing the incompetencies. In-service programmes are very scarce and brief, besides not all teachers have the opportunity to attend the in-service programmes.

Objective Four: To analyse the Problems experienced by teachers in implementing the current Home Science Syllabus.

Much as the teachers were quick to cite various problems which affect their teaching, they tended to have drifted the problems away from themselves. They claimed they lacked facilities, materials, equipment, books, support from school administration and classes were too large. These problems aggravated the difficulties experienced in teaching. However the real root cause of the problem emanates from lack of coordination between the teachers, Kenya Institute of Education, Kenya Education Staff Institute and the Ministry of Education. Each teacher was teaching the subject in their own unique style. Some chose to

give more theory than practicals and they even used different reference books. They seemed to be waiting for the National Examinations to prove them right or wrong. This is a pure manifestation that Kenya Institute of Education has failed to distribute the information concerning Home Science to the teachers. The Ministry of Education, particularly the Home Science Inspectorate has also failed to offer the daily guidance to the teachers. The pre-service education has proved inadequate, yet the concerned parties are not in-servicing the teachers in order to improve the quality of their teaching.

Although the teachers suggested various recommendations for the improvement of Home Science Education, the provision of these items alone cannot improve the teaching quality. Facilities, tools, materials may be provided, classes may be divided into smaller teaching groups, but if the teacher is not competent the provision of these resources would be a waste. It is therefore necessary that before the resources are provided, teachers are equipped with the relevant knowledge to enable them to handle all areas of the subject.

Improvisation in the teaching of Home Science is very vital as it would help cut down costs. It appears that teachers do not improvise tools and equipment when teaching. They lack the technical knowhow to assist them in improvisation.

Objective five: To recommend Strategies for the Improvement of the teaching of Home Science in Secondary Schools

From the conclusions, recommendations are made for the concerned parties namely; the teachers, headteachers, Kenya Institute of Education, Kenya Education Staff Institute, the Home Science Inspectorate and the Ministry of Education. These parties are to work together if the implementation of Home Science is to be a success. The success of the new curriculum cannot be left to teachers alone. This was also observed by Ouedraogo (1983) that;

If we consider that the success or failure of the reform depends on the involvement of the teachers and the school administrators, we have to admit that the reform is in jeopardy if nothing is done to alter the present trend of affairs.61

There is urgent need for the Kenya Institute of Education, the Home Science Inspectorate, the Kenya Education Staff Institute and the Ministry of Education to organize in-service programmes for Home Science. These programmes could be organized for each separate branch of Home Science so that teachers with little knowledge on Clothing and Textiles for example are in-serviced in that area. This would enable the programmes to be intensive and relevant to the target group. Hawes (1972) has also realized that in-service is very vital in teacher education. He says that in-service should be equated to pre-service especially for a new curriculum. He recommends that;

Compulsory periods of in-service training must be built into the career structure of every teacher and in-service training centres must be planned as carefully and staffed generously as pre-service training colleges. 62

It is with such vigour that in-service programmes should embark to improve teaching. The teacher training colleges should also have their courses revised and restructured to cater for 8.4.4

Home Science syllabus. This may call for a longer period in college, but such a change would be worthwhile.

The Kenya Institute of Education should ensure that all teachers are informed of the development in the subject. Circulars on the subject should be sent to all schools.

With the assistance and supervision by the Inspectorate, Home Science teachers should form panels. Panels at school level would help the teachers in solving daily implementation problems. Higher level panels such as division, district and municipality would provide some information which can be used as a base for the in-service programmes. The inspectors should see to it that constructive school panels are formed.

Ideas can be borrowed from the Ministry of Applied Sciences and Appropriate Technology to elevate the level of improvisation in the teaching of Home Science. This would assist

in the provision of facilities such as water purification plants, water storage tanks, refrigerators and improved fireplace to mention a few. Improvisation of other materials such as detergents, cleaning equipment and so on can be made known to the teachers in panels or in-service programmes. The Inspectorate should also work together with the teachers to ensure that improvisation is actually carried out in teaching.

The schools should aim at providing funds to establish the subject. They should engage in activities to raise funds for the facilities, tools and equipment for teaching Home Science. Under the supervision of Home Science teachers, clubs can be organized to raise funds. Funds raised from such activities, together with the regular school funds can be used.

The distribution of Home Science teachers should be looked into so that there is no concentration of qualified teachers in certain areas while others lack such teachers.

These changes cannot happen overnight as changes in curriculum involve many parties. All parties involved in the change should accept the slowness of change. However, this slowness should not be an excuse for maintaining a "status quo." It is each individual's responsibility to effect this change and one step towards this desired change is better than sitting back and lamenting.

#### 5.10 Recommendations for Further Research

It is evident from this study that many factors interfere with the implementation of Home Science. Similar researches should be conducted all over the republic so that the Identified factors which are proved valid can be dealt with from a National level. Since Home Science was highly recommended as part of the school curriculum to curb unemployment, a study should be conducted to identify the employability skills in secondary school Home Science programmes. Such a study would help identify the more marketable aspects of Home Science. Such studies would improve the implementation of Home Science in schools and colleges.

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APPENDIX AList of Schools Offering Home Science in Nairobi

1. Kenya High School
2. Moi Forces Academy
3. Parklands Secondary School
4. St. Teresa's Boys School
5. Parklands Arya Girls School
6. Huruma Girls' High School
7. Muslim Girls' School
8. Moi Nairobi Girls School
9. Ngara Girls School
10. Our Lady of Mercy School
11. Pangani Girls High School
12. Precious Blood Secondary School
13. State House Road Girls School
14. St. Teresa's Girls Secondary School
15. H.H. Aga Khan School
16. Ofafa Jericho Secondary School
17. Mutuini High School
18. Langata High School
19. Dandora Secondary School
20. Kamiti High School
21. Buru Buru Secondary School
22. St. George's Secondary School
23. Ruaraka Secondary School
24. Nile Road Secondary School

APPENDIX BLists of Schools Offering Home Science in Muranga

1. Kahuhia Girls School
2. Mugoire Girls School
3. Njumbi High School
4. Mbugiti Secondary School
5. Nginda Girls School
6. Gatanga Girls School
7. Kamahuha Girls School
8. Kibutha Girls School
9. Makuyu Secondary School
10. Dr. Kiano Boys School
11. Githunguri Girls School
12. Iyego Girls School
13. Kiangunyi Secondary School
14. Muthithi Secondary School
15. Mathareini Secondary School
16. Ihiga Secondary School
17. Kiriaini Girls School
18. Gitweku Secondary School
19. Koimbe Secondary School
20. Naaro Secondary School

List of Schools Contd.

21. Gititu Secondary School
22. Gatitu Secondary School
23. Kiranga Secondary School
24. Mumbi Girls School
25. Ndutumi Secondary School
26. Gaturi Girls School
27. Nguku Secondary School
28. Kiarutara Secondary School
29. Gathinja Secondary School
30. Gitugi Girls School
31. Kanyanyeini Secondary School
32. Muguru Secondary School

APPENDIX C

Study: Analysis of the factors influencing  
effective implementation of Home Science  
in Kenyan Secondary Schools.

Questionnaire for TeachersInstrument 1

Please put a tick (✓) in the appropriate  
bracket ( ) or fill in the information as your re-  
sponse to the following questions.

SECTION A (Personal Data)

1. You are
  - (a) Male ( )
  - (b) Female ( )
  
2. Your age
  - (a) Less than 30 years ( )
  - (b) 30 - 40 years ( )
  - (c) 41 - 50 years ( )
  - (d) Over 50 years ( )
  
3. Which is your highest academic qualification
  - (a) K.J.S.E. ( )
  - (b) E.A.C.E./K.C.E. ( )
  - (c) E.A.A.C.E./K.A.C.E. ( )
  - (d) B.Ed./B.A./B.Sc. ( )

(e) M.Ed/M.A./M.Sc. ( )

(f) Other, Specify \_\_\_\_\_  
\_\_\_\_\_

4. By filling in the boxes, indicate the level and year you studied Home Management, Clothing and Textiles and Foods and Nutrition

Level	Subject	Year	Results
(a) C.P.E.			
(b) K.J.S.E.			
(c) E.A.C.E/K.C.E.			
(d) College, Specify			

5. Indicate the number of years of your teaching experience under the following grades:

Grade	Experience in Years
P1/S1	
S1	
SA	
Approved Graduate Teacher	
B.Ed/B.A/B.Sc.	
Other, Specify	

6. Indicate the year of promotions you may have had.

From Grade	To Grade	Year
P1	S1	
S1	Approved Graduate	
Graduate 3	Graduate 2	
Graduate 2	Graduate 1	
Other, specify		

7. If trained, state;

- (a) Year of entry into college 19\_\_
- (b) Year you completed training 19\_\_
- (c) Professional grade awarded \_\_\_\_\_
- (d) Any further training 19\_\_
- (e) Grade/qualification obtained \_\_\_\_\_
- (f) Present teaching grade \_\_\_\_\_

8. Have you attended any in-service or orientation course in the teaching of Home Science?

- (a) Yes ( )
- (b) No ( )

9. If Yes, complete the following

Year (Dates)	Duration in days	No. Of partici- pants	organizer	comments
				(a) very useful (b) useful (c) not useful
				(a) very useful (b) useful (c) not useful
				(a) very useful (b) useful (c) not useful
				(a) very useful (b) useful (c) not useful
				(a) very useful (b) useful (c) not useful

10. How long have you taught in your school?

- (a) Less than one year ( )
- (b) 1 - 2 years ( )
- (c) 2 - 3 Years ( )
- (d) 3 - 4 years ( )
- (e) Other, specify \_\_\_\_\_

11. What classes are you teaching now?

- (a) Form 1 \_\_\_\_\_
- (b) Form 2 \_\_\_\_\_
- (c) Form 3 \_\_\_\_\_
- (d) Form 4 \_\_\_\_\_
- (e) Other, specify \_\_\_\_\_

12. What is the student population in each class that you teach?

	<u>Number</u>
(a) Form 1	_____
(b) Form 2	_____
(c) Form 3	_____
(d) Form 4	_____
(e) Other, specify _____	

13. What is the total number of periods you teach per week in Home Science or any other subject if any?

Subject	Periods per Weeks
Home Science	
Other, specify	

14. Are the periods allocated to Home Science per week adequate?

(a) Yes ( )

(b) No ( )

15. If no, what number of periods per week do you advocate? \_\_\_\_\_

16. In view of the periods allocated to you per week, do you feel;

- (a) overworked ( )
- (b) underworked ( )
- (c) adequate ( )

17. If underworked or overworked, what recommendations would you make to rectify your workload?

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18. Indicate whether you are a member of any of the following Home Science Panels;

- (a) school ( )
- (b) divisional ( )
- (c) provincial ( )
- (d) municipal ( )
- (e) national (K.I.E.) ( )
- (f) none ( )

19. If you are a member of any, how often does your panel meet?

- (a) very frequently ( )
- (b) frequently ( )
- (c) rarely ( )

20. What topics or problems have you discussed in your subject panel?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

SECTION B (Teaching-Learning Resources)

21. Indicate if you have used the following Home Science Materials.

	Name of Book	Book used	Form	Year
1.	Home Science Syllabuss K.I.E.			
2.	Teachers' Guide 1 and 2 K.I.E.			
3.	Form 1 Pupils Book K.I.E.			
4.	Home Management by Johnstone, Akingbein and Macfie Second Edition (1 - 4)			
5.	Home Management for Schools and Colleges, N.L. Were			
6.	Principles and practices of Home Management, J. Gitobu			

No. 21 cont....

Name of Book	Book used	Form	Year
7. Foods and Nutrition, H.K. Ndungi			
8. Cooking Explained, B. Hammond			
9. Cookery for Schools, M. Neal			
10. Traditional dishes (Teachers' Guide), K.I.E.			
11. Junior and Senior Needlework, Hart			
12. Junior Needlework, R.Giles			
13. Advanced Needlework Notebook, R. Davies			
14. Basic Needlework, W. Bill			
15. Needlework for Schools, R. Giles			
16. Clothing and Textiles Pupils Book for CESAC			
17. Fabric and Sewing Process, M.A. Macquine			
Other _____			

22. Do you think having only one series of textbooks for teaching Home Science will help improve the

No. 22 cont...

teaching of the subject?

(a) Yes ( )

(b) No ( )

(b) Give reasons for your answer \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

23. How often do you make your own schemes of work in Home Science?

(a) always ( )

(b) sometimes ( )

(c) never ( )

24. Do you have a Home Science Laboratory or room?

(a) Yes ( )

(b) No ( )

25. What are the fixed equipment you have in this laboratory or room?

	Equipment	No. of Equipment
1.		
2.		
3.		
4.		
5.		
6.		

26. Below in a list of audio and visual aids used in Home teaching . Which ones do you use regularly, sometimes or never use. Tick (✓) in the appropriate box.

Frequency in use	Regularly	Sometimes	never
School Radio Broadcasts			
Recorded tapes and discs			
Charts			
Chalkboard			
Flannel boards			
Slides			
Overhead transparencies			
Any Other			

27. How do you obtain materials used in the practical lessons?

- (a) Brought by students ( )  
 (b) Bought by Headteacher ( )  
 (c) Bought by headteacher and subject teacher ( )  
 (d) Bought by head of Home Science ( )  
 (e) Other, specify \_\_\_\_\_

28. Do you enjoy teaching Home Science?

- (a) Yes ( )  
 (b) No ( )

If no, explain why \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

29. What general problems do you encounter in the teaching of Home Science?

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_
- 6. \_\_\_\_\_

30. Suggest some ways by which these problems could be overcome.

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_
- 6. \_\_\_\_\_

31. How often do you improvise materials or equipment when teaching Home Science?

- (a) always ( )
- (b) rarely ( )
- (c) never ( )

32. State any other recommendations that you would like to see implemented in the development and teaching of Home Science in Kenyan Secondary schools.

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_

STUDY: ANALYSIS OF THE FACTORS INFLUENCING  
EFFECTIVE IMPLEMENTATION OF HOME SCIENCE  
IN KENYAN SECONDARY SCHOOLS.

INTERVIEW SCHEDULE FOR TEACHERS

INSTRUMENT 2

1. When did you start teaching Home Science? \_\_\_\_\_
2. How many periods do you teach Home Science in a Week? \_\_\_\_\_
3. What changes have you experienced in the teaching of Home Science since you started teaching it.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. What problems do you experience when teaching Home Science? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. How do you overcome these problems? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
6. Do you belong to any Home Science panel?  
\_\_\_\_\_ Yes [ ]      No [ ]
7. What topics or problems have you discussed in your subject panel?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

8. Do you feel confident enough to teach Home Science?

Yes ( ) No ( )

(b) Give reasons

9. Do you receive any professional guidance in teaching Home Science?

Yes ( ) No ( )

If so, who provides it?

10. Do you enjoy teaching Home Science?

Yes ( ) No ( )

Give reasons

11. Do you think Home Science is appreciated by;

(a) Pupils ( )

(b) Headteachers ( )

(c) Parents ( )

(d) Community ( )

12. Do you think Home Science contributes anything to the secondary school curriculum?

Yes ( ) No ( )

(b) Explain your answer

13. What do you consider to be the most important objective of Home Science education in Secondary Schools?

14. Which topics would you like revised with you to improve the quality of your teaching?

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15. What recommendations would you make to improve the teaching of Home Science in Kenya secondary schools? \_\_\_\_\_

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16. What is your opinion on the periods allocated to Home Science per week?

Adequate [ ]

Not adequate [ ]

(b) What do you recommend? \_\_\_\_\_  
\_\_\_\_\_

Study: Analysis of the factors influencing effective implementation of Home Science in Kenyan Secondary Schools.

Interview Schedule for the Headteacher

Instrument 3

1. Is your school;
  - (a) Assisted ( )
  - (b) Maintained ( )
  - (c) Harambee ( )
  
2. Where is your school located?
  - (a) City ( )
  - (b) Municipality ( )
  - (c) Township ( )
  - (d) Village ( )
  
3. Are there any problems experienced by the Home Science teachers which you are aware of?
 

Yes ( ) No ( )

  - (b) If yes, what are the problems?
    1. \_\_\_\_\_
    2. \_\_\_\_\_
    3. \_\_\_\_\_

(c) What have you done to assist them?

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. Are there any special demands that Home Science places in the school in general?

Yes ( ) No ( )

(b) If yes, which ones?

\_\_\_\_\_  
\_\_\_\_\_

5. How do you obtain the funds to support Home Science as a subject? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

6. Do you give any professional guidance to Home Science teachers?

Yes ( ) No ( )

(b) If yes, how often? \_\_\_\_\_

(c) If no, why? \_\_\_\_\_

\_\_\_\_\_

7. What special contributions do the Home Science teachers and students make to the school?

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

8. Do you experience shortage of Home Science teachers?

Yes ( ) No ( )

If yes, how do you deal with the shortages?

\_\_\_\_\_  
\_\_\_\_\_

9. Why did you opt for Home Science instead of other subjects that are offered against it?

\_\_\_\_\_

10. Do you intend to continue offering Home Science over the year?

Yes ( ) No ( )

APPENDIX F

Study: Analysis of the factors influencing effective implementation of Home Science in Kenyan Secondary Schools.

Questionnaire for StudentsInstrument 4

Please put a tick (✓) in the appropriate bracket ( ) or fill in the information as you response to the following questions.

1. Do you enjoy Home Science as a subject?

(a) Very much ( )

(b) Much ( )

(c) No ( )

(b) If no, explain why \_\_\_\_\_

\_\_\_\_\_

2. How many are you often divided into for your practical lessons? \_\_\_\_\_

3. How often do you improvise materials or equipment in the practical lessons?

(a) Always ( )

(b) Rarely ( )

(c) Never ( )

4. Do you enjoy the practical lessons?

(a) Yes ( )

(b) No ( )

5. If no, explain why. \_\_\_\_\_

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6. Which of the following skills have you acquired in Home Science lessons?

(a) Stitching ( )

(b) Cooking ( )

(c) Housecare ( )

(d) Personal Hygiene ( )

7. What use will you make of the knowledge and skills acquired in Home Science?

(a) pursue a career ( )

(b) Source of income ( )

(c) For myself and family ( )

(d) Undecided ( )

(e) Higher Education ( )

8. Tick (✓) in the list below against those method or methods that is/are commonly used to teach you Home Science.

- (a) Educational tours and trips ( )
- (b) Guest speakers ( )
- (c) Practical laboratory exercises ( )
- (d) Teacher talking, student taking notes ( )
- (e) Demonstration by the teacher ( )

9. Which of the methods do you enjoy most? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. What improvements would you like to be made in your Home Science classes?

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_

APPENDIX G.Instrument 5 Researcher's Observation  
Checklist.

Availability of Equipment and Material for  
Home Science.

School -----

Date -----

Home Management	Available	Not Available	Used
1. Home Science Room(s)			
2. Model House			
3. Gas/Electric Cookers			
4. Charcoal or Energy Saving Jiko			
5. Large-Jiko			
6. Improvised Ovens.			
7. Kerosine stove			
8. Saucepans/Sufurias			
9. Frying pans			
10. Clay pots			
11. Refrigerators			
12. Cool storage			
13. Water heater			
14. Water storage tank.			

Home Management	Available	Not Available	Used
15. Pressure cooker			
16. Meat Mincer			
17. Motor and pestle			
18. Basins (plastic)			
19. Buckets ( " )			
20. Baby bath (Plastic)			
21. Garbage bin with cover			
22. Dust pans (plastic)			
23. Brooms			
24. Hand brushes			
25. Scrubbing brushes			
26. Rubber squeezers			
27. Stiff brooms			
28. Floor mops			
29. Floor cloths			
30. Dusters			
31. Cobweb brush			
32. Clothes-line			
33. Pegs			
34. Hangers			
35. Irons (charcoal, electric, gas)			
36. Ironing boards			
37. Blankets			
38. Sheets			

Child Care Equipment and Material

1. Cot sheets
2. Baby blankets
3. Mattress
4. Baby cot
5. Mosquito net
6. Doll
7. Baby clothes
8. Safety pins
9. Baby potty
10. Baby basket.

Foods and Nutrition

1. Knives
  - Vegetable
  - Bread
  - Kitchen
  - Palatte knives
2. Spoons
  - Tablespoon
  - Dessert
  - Teaspoon
  - Serving spoon

Ladle

Mwiko

Wooden spoons

Fish slice

Spatula (plastic and wooden)

3. Dredgers
4. Sieves
5. Mixing bowls
6. Chopping boards
7. Enamel plates
8. Measuring jugs
9. Rolling pins
10. Drinking Glasses
11. Plates
12. Cassroles
13. Serving dishes
14. Graters
15. Kettles
16. Tea Clothes
17. Cups
18. Dinnerware set
19. Table cloths
20. Napkins (Serviettes)
21. Tray Clothes
22. Salt shakers

23. Pepper shakers
24. Water jugs
25. Glassware Dessert
26. Trays
27. Dish washing cloth
28. Potato peeler

#### Baking Equipment

1. Bun tins
2. Baking trays
3. Cutters
4. Baking tins
5. Piping set
6. Lemon Squeezers
7. Cooling wire trays
8. Grease proof paper
9. Flannings
10. Girdle
11. Potato mashers
12. Whisks
13. Bread tins
14. Measuring cups
15. Skewers
16. Weighing scales
17. Roasting dish.

Needlework Equipment

1. Sewing machine  
treadle  
electric  
hand
2. Cutting out tables
3. Cutting scissors
4. Tape measures
5. Thimbles
6. Pins
7. Needles
8. Sleeve board
9. Metre rulers
10. Tracing wheels/carbon papers
11. Large Mirror
12. Storage cupboards/ward-robos
13. Seam rippers
14. Stilletos
15. Bobbin
16. Clothes hangers
17. Buttonhole scissors
18. Pinking shears
19. Trimming scissors
20. Tailors chalk
21. French curves

- 22. Knitting and crotchet needles
- 23. Machine sewing thread
- 24. Demonstration cotton materials.
- 25. Tacking thread

APPENDIX HInstrument 6 Researcher's Observation  
Checklist

Improvisation in the teaching of Home Science

School -----

Date -----

<u>Name of Equipment</u> <u>Home Management</u>	<u>Improvisation (alternative Method)</u>
Oven	
Cooker/Cooking Place	
Refrigerator/Cool Storage	
Water filter	
Motor and pestle	
Rubbish bin	
Brooms	
Brushes	
Mops and Rugs	
Cobweb brush	
Pegs	
Hangers	
Ironing boards	
Blankets	
Sheets	
Water Sprinkler	
Soap dishes.	

Childcare Equipment and  
Material

Cot sheets

Baby blankets

Matress

Baby cot

Doll

Improvisation

(Alternative Method)

Foods and Nutrition

Rolling pins

Graters

Baking Equipment

Baking trays

Cutters

Baking tins

pipng set (parts)

Whisks

Needlework Equipment

Hangers

Others.

OFFICE OF THE PRESIDENT  
PROVINCIAL ADMINISTRATION AND  
INTERNAL SECURITY  
P.O. BOX 30510  
NAIROBI

REF: OP.13/001/18C 213/3

20th Sept. 19 88

The Secretary  
National Council for Science  
and Technology  
P.O. Box 30623  
NAIROBI

RESEARCH AUTHORISATION

APPLICANT(S) Miss Dorothy Owino Rombo

The above named has been authorised to conduct research on  
"Analysis of the factors influencing effective Implementation  
of Home Science Curriculum in Kenyan Secondary Schools"

As indicated on the application form, this research will be conducted  
in Muranga and Nairobi districts  
for a period ending October 1990

Under the Standing Research Clearance awarded to Kenyan Universities/  
Public Institutions.

I herewith enclose copies of his/her application for record purposes.  
He/She has also been notified that we will need a minimum of two copies  
of his/her research findings at the expiry of the project.

*C. A. Mwangi*  
C. A. MWANGO (MBS.)

for; PERMANENT SECRETARY/ADMINISTRATION

C.C.  
The Chairman  
The Secretary  
Dept. of Educational  
Comm. & Technology  
Kenyatta University

*[Signature]*  
The applicant(s)  
Miss Dorothy Owino Rombo  
Dept. of Educational Comm. &  
Technology, Kenyatta University

C.C. District Commissioner, Muranga District  
Provincial Commissioner, Nairobi Area