TEACHING CONSTRAINTS EXPERIENCED BY HOME SCIENCE TUTORS IN PRIMARY TEACHER TRAINING COLLEGES IN THE CENTRAL PROVINCE OF KENYA

BY

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DECLARATION

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

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This study is dedicated to my late father Harry Johnstone Telewa and my late sister, Margaret Namuyemba Telewa who were a great source of inspiration in my social and academic endeavours.
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ABBREVIATIONS AND ACRONYMS

B. Ed: Bachelor of Education
CAT: Continuous Assessment Test.
Dip.Ed: Diploma in Education
H/Econ: Home Economics
H/Sc: Home Science
KAPE: Kenya African Preliminary Education
KCPE: Kenya Certificate of Primary Education
KIE: Kenya Institute of Education
LRC: Learning Resource Centre
M.A: Master of Arts
M. Ed: Master of Education
M. Sc: Master of Science
P1: Primary Teacher 1
PDE: Provincial Director of Education
PTE: Primary Teacher Education
S1: Senior Teacher one
TAC: Teachers’ Advisory Centre
TP: Teaching Practice
TTC: Teacher Training College
UNESCO: United Nations Educational Scientific and Cultural Organization
U.T: Untrained Teacher

8:4:4: The current (2003) structure of education in Kenya with eight years of Primary education, four years of secondary education and four years of university education.
ABSTRACT

Mwangi (1991) in her study on the teaching of Home Science showed that the teacher trainees were being inadequately prepared. Male (1988), asserts that there are social, political, economical, cultural and technological changes that affect the proper teaching of Home Science. This study aimed at unearthing the constraints that the Home Science tutors were encountering in training Primary Home Science teachers. To be able to do this, the researcher investigated the curriculum, methodology, tutors’ qualifications, teaching resources and facilities that were being used in teaching Home Science in TTCs.

The four selected public Primary TTCs used in the study are Murang’a, Thogoto, Kamwenja and Kilimambogo. A pilot study was carried out in Highridge TTC. A survey research was applied using three instruments of data collection namely, interview guide, classroom observation schedule and Home Science tutors’ questionnaire. Fourteen out of the sixteen questionnaires given out were received back giving a response rate of 87.5%.

A survey research study was carried out and the data collected was analysed using both qualitative and quantitative methods. The results of the study revealed that the major constraints that the Home Science tutors were facing include: inadequate teaching resources, limited time allocated for teaching Home Science, wide curriculum (scope) and large classes. To alleviate these constraints the researcher came up with suggestions and recommendations regarding the teaching of Home Science in the TTCs. These included the expansion of BEd. (Primary Option) and MEd. (PTE), encouragement of specialization in one area of Home Science, reduction of the Home Science scope and revision of the TTC Home Science curriculum. Finally, suggestions for further research in some aspects of Home Science teacher educator were given.
CHAPTER ONE:

INTRODUCTION

1.1 BACKGROUND TO THE PROBLEM

Teacher education in general and pre-service training in particular has been one of the areas of great concern to educational planners, policy makers, teacher educators and researchers all over the world for long. Many scholars agree that the renewed concern or emphasis on the preparation of teachers since the late 1950's has grown out of the recognition of the decisive role teachers play in education. This is in the task of implementation and evaluation of curriculum changes and innovations.

Home Science aims at improving the welfare of individuals and the entire society. It is an art, as it involves skills that are based on certain traditions and on qualities that are tangible and indefinable, such as beauty, tastes and values. Home Science began in America in the 19th century and spread to other parts of the world. Olaitan and Agusiobo (1981), assert that before this formal introduction, Home Science was taught to boys and girls informally by their parents. Girls were taught some aspects of childcare, cookery, Home management, sewing and weaving. Boys on the other hand were taught how to take care of the compound, personal hygiene and how to be responsible members of the society. There was no organized form of teaching and much of the learning was through traditional approaches such as observation.

Home Science does not try to teach Philosophy, Mathematics, Physics, Art, Music, Religion or Chemistry but it attempts to intergrate them all and apply them in daily processes of making a home. The subject has moved beyond the earlier emphasis on
cooking, sweeping and other skills of Home making. Today, the subject has a wider scope and is progressively getting more attention. The subject involves all aspects of family and consumer education, foods and nutrition, clothing and textiles and Home Management.

Primary school teachers in Kenya are trained for two years at the TTC and the curriculum is based on four components; subject matter, foundations of education, professional studies and teaching practice. The British model, which guided the early Home Science curriculum development and implementation, is still perceived as a requirement in today’s school setting in Kenya. The practice is based on an ideal situation rather than the realities of the African family thus making the content to be irrelevant to the local needs (Gitobu, 1991). Teacher education in Kenya is organized in three major phases; foundation phase, laboratory phase, and transfer phase.

1.1.1 Foundation Phase

At this phase, the student is expected to demonstrate mastery of basic knowledge, which is a pre-requisite to the development of the instructional and non-instructional competencies.

1.1.2 Laboratory Phase

The student should demonstrate instructional and interpersonal competencies under simulated classroom conditions. In the TTCs, this phase is called microteaching.

1.1.3 Transfer Phase

Under this phase, the student needs to demonstrate the instructional and interpersonal competencies in the actual classroom situation from where he/she is supervised and
evaluated; This is the teaching practice. Bruce and Marsha (1980), designed a teacher training model which can clearly illustrates this concept in further five phases as follows:

<table>
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<th>PHASE</th>
<th>CONTENT</th>
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<tr>
<td>1</td>
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<td>Clarification of objectives and rationale of performance</td>
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<td>3</td>
<td>Demonstration</td>
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<td>4</td>
<td>Simulated practice</td>
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<td>5</td>
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Source: Adapted from Bruce and Marsha (1980:64).

There has been an outcry of poor quality of Home Science teachers teaching in Primary schools in Kenya. Sifuna (1985:13) observed that the quality of teacher training in Kenya does not lead to teaching effectiveness in Primary schools. He attributed this failure to the many problems tutors are encountering in the teachers’ colleges. On this point, Sifuna (1985: 53), states that:

The curriculum to which primary school teachers are exposed in Kenya makes no sense to any meaningful discussion of the subject of effective teaching. It is a standardized one handed down from the Ministry of Education and is based on the urban situation. It is usually assumed that what works in one setting will automatically work in another.

Home Science has generally been criticised for being conservative, theoretical and irrelevant to the needs of the learners. The task of producing Home Science teachers who are competent enough to teach Home Science in primary schools has also remained a big problem. The goals of Primary Teacher Education are well stipulated in the ‘Kenya Teacher Training Syllabus.’ The major goal is to develop basic, theoretical and practical
knowledge about the teaching profession. The performance of teachers, their competencies in stimulating and facilitating growth of students is generally assumed to be a function of their own preparation.

According to Farrant (1980), teacher preparation requires dual approach. The teacher trainee must be given the educational basis of teaching as well as the practical training in essential skills of teaching and learning. Education and training are both essential and one without the other leaves the teacher incomplete.

Farrant (1980:49) points out that:

A teacher cannot enlighten his pupils if he himself is ignorant. He cannot lift them any higher than himself...after college and throughout his career he or she should be learning and improving himself or herself and also have an active mind.

The teaching of Home Science in TTCs has continued to experience major obstacles that Home Science tutors seem to be working against. This is seen in the fact that they continue teaching Home Science yet it is no longer examinable in primary schools. Home Science is taken as a compulsory subject at the Teacher Training College regardless of whether the student had a background in Home Science or not.

Home Science has also remained a female dominated field ever since it was introduced in Kenya. This has made the male teacher trainees to have a negative attitude towards the subject. This poses a big problem to the Home Science tutors. Their efforts are not appreciated and are almost ignored by the general public, scholars in other disciplines and
some teacher trainees since they have not yet discovered its usefulness in their families and the society at large.

1.2 STATEMENT OF THE PROBLEM

Home Science has faced many problems and drawbacks since its formal introduction in Kenya (Gitobu 1991). Studies done in an attempt to improve the situation especially at the primary school level have cited various reasons to these problems. These include, limited time for teaching it, sex stereotype, wide scope, inadequate resources and facilities (Mwangi, 1991). These attempts however, have not shown any significant improvement in the performance of the trained primary Home Science teachers.

Mukhalu (1982), asserts that Primary school Home Science teachers have largely contributed to the students’ negative attitude towards the subject. This is because of their failure to motivate students. Gitonga (1990), observed that the final quality of the trained teacher is largely dependent on the type of training received by the teacher. A number of studies in Home Science education such as Male (1988), Karingithi (1988), Mukhalu (1982) and Mwangi (1991) have already been carried out.

These studies focused on Home Science teacher education, but from literature used by the researcher, no specific study on the teaching constraints of Home Science tutors in TTCs was found to have been done. Gitonga (1990), cited some problems encountered by tutors in teaching mathematics in TTCs in Kenya. This created the urge in the researcher to carry out this study to establish whether there are constraints encountered by the Home
Science tutor in teaching in the TTCs as well. The study took the following conceptual framework.
1.2.1 Conceptual Framework.

Figure 1.2.1 Conceptual Framework of the Study.

- TEACHING HOME SCIENCE
- SOURCES OF CONSTRAINTS
  - a. Political
  - b. Societal
  - c. Economic
  - d. Cultural
- ENVIRONMENT
  - a. Administrative style
  - b. Teaching resources and facilities
  - c. Time
  - d. Methodology
  - e. Curriculum
  - f. Class size

**Trainer**
- a. Academic and professional qualification
- b. Experience
- c. Motivation

**Trainee**
- a. Interest
- b. Academic background
- c. Past experiences
- d. Past achievements
- e. Future aspiration
- f. Gender
- g. Socio-economic background

**Training policies**
- a. Certification policies
- b. Enrolment criteria
Teacher training needs to be taken as a period of imparting in the trainee the ability to perform the skill of teaching. However, there are times when objectives of teacher training are not met because of social, political, economical and cultural problems. The teacher is seen as a vehicle through which information from the environment is supposed to reach the learner (Male, 1988). Teacher training is essentially a period of thought in education. Too often, it has been regarded as a period of learning techniques of teaching. Farrant (1980:46), says, “If that is all what teacher training entails, then its products are no better than performing hyenas, able to do all the tricks without a reason save that of trying to please their masters.”

1.3 THE OBJECTIVES OF THE STUDY

The objectives of this study were to:

1.3.1 Identify the constraints experienced by Home Science tutors in teaching Home Science in Teacher Training Colleges.

1.3.2 Analyse the Home Science teaching resources and facilities in the Teacher Training Colleges.

1.3.3 Determine the frequency of use of the different teaching techniques by tutors in the TTC.

1.4 RESEARCH QUESTIONS

The study was guided by the following broad research questions:

1.4.1 What constraints affect the effectiveness of Home Science tutors in preparation of primary school Home Science teachers?
1.4.2 How do tutors cope with the constraints they face in the process of training student teachers in TTCs?

1.4.3 What methods of teaching do tutors use in the training of Primary school Home Science teachers?

1.4.4 Which Home Science teaching resources are available and are used in teaching in Teacher Training Colleges?

1.4.5 Are there any weaknesses in the Home Science teacher-training programme that affect the preparation of Primary school Home Science teachers?

1.5 SIGNIFICANCE OF THE STUDY

Identifying the constraints encountered by tutors in the preparation of Primary school Home Science teachers in Teacher Training Colleges will be of high significance because this study will:

1.5.1 Be of help to curriculum developers of Home Science programme at Kenya Institute of Education (KIE) to determine whether there is need to review the TTC Home Science curriculum.

1.5.2 Highlight the constraints encountered by Home Science tutors in Teacher Training Colleges for intervention by the Ministry of Education.

1.5.3 Be of help to tutors to design some strategies that can help in reduction of the problems they face in teaching of Home Science in TTCs.

1.6 ASSUMPTIONS

The study was based on the following assumptions:
1.6.1 The information given by tutors orally and by the questionnaire was correct and a true reflection of the current situation in the TTCs.

1.6.2 The sample population was a fair representation of the whole population.

1.6.3 The Home Science tutors in the TTCs were professionally trained.

1.8 SCOPE

The study concentrated on all the Teacher Training Colleges in one of the eight Provinces in Kenya, which was purposively sampled. Out of the twenty-one (21) TTCs in Kenya, the researcher used four colleges only. The number was within the accepted representative sample according to Gay (1981). He recommends that about 20% of a sample can be used. The four colleges were appropriate since the total number of TTCs in Kenya is small. The researcher confined the study to the problems that emerged from the tutors themselves, the trainees' academic, social and economic background, the environment and the policies governing the recruitment and training of Primary School teachers in Kenya.

1.7 LIMITATION OF THE STUDY

1.7.1 A sample of four colleges in the total population of Primary Teacher Training Colleges in the Central Province is representative enough but this is not the case of the entire population of the whole country, which has twenty-one Primary Teacher Training Colleges in all. It is worth noting that these colleges are governed by the same policies and they get students from all over Kenya. It will however be possible to use the information gathered from the four colleges in the sample to throw light on the kind of constraints that the Home Science tutors in the country are experiencing.

1.7.2 Objectivity is limited when trainers have to give views relating to their personal competence.
1.8 DEFINITION OF TERMS

Central Province of Kenya:

This is one of the eight Provinces in Kenya having four TTCs; Murang’a, Thogoto, Kilimambogo and Kamwenja. The headquarter is in Nyeri District.

Constraints:

These are things that limit one’s freedom of action or choice. They are forces that compel one to act under conditions that are beyond his/her thus causing hindrances to performing as expected.

Content:

Subject matter comprising of knowledge, skills, learning experiences and learning activities.

Curriculum:

Shiundu and Omulando (1992), define curriculum as a plan of activities that are aimed at achieving a set objective or goal. It is a means of production, with the students as raw materials, which in the end will be transformed into a finished and useful product under the control of a highly skilled technician, in this case a classroom teacher.

Home Science:

A family-centred multidisciplinary area of study that focuses on an individual, family and community. The terms Domestic Science and Home Economics were used synonymously with Home Science.
Objective:
Paulocci (1961) defines an objective as a guide that one uses to obtain a cause of action.

P1:
The highest calibre of teachers trained in Primary Teacher Training Colleges in Kenya.

Practical work:
Learning experiences, which provide practice in application of principles and concepts in Home Science. It is the actual performance of an idea or activity.

Pre-service training:
The initial training, which equips prospective teachers with competencies in theoretical knowledge about subject matter to be taught and in the technical skills of teaching that facilitates effective pupil learning.

Profession:
A body that provides a special service to the community, based on accumulated knowledge and experience acquired after training in a certain field. Home Economics is a profession.

Public Teacher Training College:
These are colleges, which train primary school teachers and are developed, equipped and provided with staff from public funds by the government, parents and communities.

Resource:
Any stimulant used in teaching and learning such as persons, facilities, equipment and reading materials to help achieve the objectives.
Scope:

Refers to the depth of all that is selected for teaching at a particular level.

Skill:

It is a special ability to do something well after learning and practice. The ability to perform or do something efficiently and with ease.

Teacher category:

The various qualification of teachers, it will be used in this study to illustrate the professional qualification of the teachers; in this case S1, Dip.Ed, B Ed, M Ed, M Sc, and MA.

Teacher Education Program:

This is a set of phenomena deliberately intended to help students acquire the knowledge, skills, dispositions and norms of the occupation of teaching. It will be used in this study to include lectures, classes, seminars, field trips, teaching practice, microteaching and tutorials.

Teaching method:

The structure or sequence of activities, which are to be followed while teaching and it involves the choice of what it is to be taught and the order in which it is to be taught. It will be used synonymously with the teaching technique and teaching approaches.

Theory work:

Entails the teaching and learning of facts, concepts and principles of Home Science content.
CHAPTER TWO:
LITERATURE REVIEW

2.0 INTRODUCTION

This chapter reviewed literature related to teacher education in general and Home Science education in particular, which helped the researcher to put the problem into perspective. The literature reviewed fell under the following topics: Home Economics Education, Home Economics curriculum, and qualification of tutors, resources and facilities. It also included the academic background of the student teachers, methodology and instructional skills used in teaching Home Economics, evaluation of the student teachers' performance and finally, the problems encountered in teaching Home Science in TTCs in Kenya.

2.1 HOME ECONOMICS EDUCATION

Home Economics was started in America in the 19th century and then it spread to the other parts of the world. It was introduced in Kenya by the missionaries (Anderson, 1970). The subject has undergone a series of changes since its formal introduction in Kenya by these missionaries.

In the beginning, Home Science perpetuated the sex stereotype in the sense that courses like simple house wifery, sewing and hygiene were taught to wives of the African converts while men were taught carpentry and catechism. Olaitan and Agusiobo (1981), noted that Domestic Science was taught to older girls in special classes known as brides' classes in preparation for their married life. The men whom they were betrothed to paid the fee. This information clearly indicates that from the beginning the subject was given a gender identity.
The subject was first taught at the Jeans School Kabete and later at Pumwani, which was a centre for training girls in Domestic Science. In 1930, nuns in Nyanza started teaching practical hygiene and Home Craft to women and girls. In 1955, Domestic Science was being examined in the Kenya African Preliminary Education (KAPE).

However, it is important to note that the teachers were mostly untrained and that after only two years, the subject was removed from KAPE. This was due to its failure to achieve its goals and the major goal was to prepare young girls for their roles as future wives. In addition, the Ominde Commission of 1964 also recommended subjects that were non-vocational so as to get Africans to fill the white-collar jobs, which the Europeans had left vacant after independence. Home Economics was therefore one of the subjects that was removed from the curriculum.

It is observed that even after independence although Home Science was not being examined, it was being taught. The syllabus included needlework, House craft and cookery, tasks that were obviously gender-biased. Perhaps this was part of the reasons that led to the recommendation of the Bessy Report of 1972, which stated that Domestic Science should be taught to both boys and girls under a different name. Gitobu (1991) rightly notes that the recommendation was not implemented until the inception of the 8:4:4 education system in 1985.

The preceding reports like the Gachathi Report of 1976 and the Mackay Report of 1981 have otherwise given the subject a lot of emphasis. Gitobu (1991), reports that the name Domestic Science was changed at a conference that was held by women educationists in.
Limuru. There have also been other major changes in the subject ever since. In 2001, the subject was eliminated from the Kenya Certificate of Primary Education (Daily Nation 15th July 2002). The subject is taught but it is not examined. It is with this reason that the researcher seeks to understand the position, which Home Science is given due to the many drawbacks that it has faced since its formal introduction in Kenya.

The current situation of Home Science in Kenya leaves many unanswered questions such as: Is there need for Home Science teachers in Kenya to be trained? What is the future of Home Science in Kenya as a subject? Does the subject have any contribution to the well being of the society that makes it worth being taught and examined? This study attempted to give some answers to these questions.

2.2 HOME ECONOMICS CURRICULUM

2.2.1 The Primary Teacher Training College Curriculum

The aim of Home Science course in TTCs as stated in the syllabus, is to give the student a good foundation in Home Economics by going deeper into the areas of the subject. These areas are Clothing and Textiles, Foods and Nutrition, Care of the Home, Child Care and Consumer Education. Methodology includes: General information on the lesson plans, schemes of work, use of learning aids, microteaching, demonstration and observation, procedure in practical tests and assignments and record keeping in the department. The objectives of the Home Economics course are also well stated. In this regard,
Tyler (1949: 16) contends that:

a satisfactorily confirmation of the objectives indicate that both behavioral and content aspect provide a clear specification to indicate just what educational job is... educational objectives should be defined as clearly as possible and the criteria for selecting content and suggesting learning activities for deciding on the kind of teaching procedures to follow should also be well prepared.

Hawes (1979), stated that despite all of the official curriculum plans, there are instances where the plans themselves are largely responsible for the weakness in implementation. Kagatunyi (1986), observed that Home Science syllabus for pre-service teacher trainees demands a lot of time to make adequate coverage of all topics stated in the syllabus. However, Hawes (1979), laments that because examinations are set on knowledge and abilities required by the examining body, it forces the teachers to cover the materials with the students whether they understand or not at the expense of the methodology aspect. Jemantia (1991:43), states that, “it is sad that at the moment much training is a real ritual necessary for the certificate to which it is entitled to the teacher but worth very little more than that.”

Jemantia (1991), observed that the 8:4:4 Home Science syllabus had been broadened at primary school to include areas previously handled at secondary school. This was in the area of childcare and consumer education. Due to the wide scope, students are forced to memorize facts a situation, which is contrary to the 8:4:4 policy, which emphasizes learning by doing. The teacher therefore has no choice but to neglect the practical aspect of Home Science and teach theory only. The researcher investigated how the time allocated for teaching Home Science had influenced how the subject was being taught.
2.2.2 Primary Home Science curriculum

Kenya Institute of Education (KIE) Home Science syllabus (1983), states that Home Science is a family-centred area of study consisting of Foods and Nutrition, Health Education, Clothing and Textiles, Home Management and Consumer Education. According to the syllabus, the aims and objectives of the course are well stipulated just like in Primary Teacher Training syllabus. Male (1988), found that the content to be covered in Primary school syllabus by each class was too much for the time allocated for the subject (three periods each of 35 minutes per week). She added that:

The certificate of primary education should test materials which are fairly within the grasps of the primary school teacher...the materials should be relevant and practical so that they can be useful for those whom primary education is terminal.

2.2.3 The Interrelatedness of the two Curricula

Hawes (1979) suggested that the development of the Teacher Training College and Primary school curricula should be very closely linked at every stage and the process of curriculum development and implementation should march in step in all areas. Hall (1967), observed that the purposes of the Home Economics curriculum should run through all education tiers.

Fleck (1968), found that the gap between teacher education and Primary school curricula exists. He pointed out that the main problem is lack of correlation between what trainees are expected to teach in Primary schools after graduation and what they were trained in while in college.
The Report of the Primary Teacher Upgrading Programme (1978) stated that if the emphasis is on teaching of integrated units throughout the Primary school, it is essential that the principles and practice of the integrated approach be taught in the Teacher Training Colleges. The tutors should also follow the same integrated approach in organizing their teaching.

2.3 QUALIFICATION OF TEACHERS

The success of any educational endeavour depends on the quality of teachers. The quality of a teacher determines the quality of education. Qualitative improvement of education in whatever level can never be realized without a major improvement on the quality of the teachers and teacher educators.

This becomes a big problem to the tutors themselves if they are not qualified and the product is an ill-prepared teacher. Gachathi Report (1976), recommended the training of teachers with substantial academic and professional content. He added that, no matter how education is viewed, the role and quality of teachers must be given the most critical consideration if the problems related to education and training are to diminish.

It is therefore possible that the tutors concentrate more on subject content and forget methodology, which is an important aspect of teacher training. This is supported by the report of Primary Teachers Upgrading Programme Committee (1978). The report noted that the emphasis on academic performance has affected the training of teachers in Kenya. This is because the present training programme concentrates on academic content and leaves out the professional aspect of the student teachers.
Kagatunyi, (1980) noted that there is very little information about induction schemes in developing countries possibly because very little is actually being done. The preparation and professional enrichment of the teacher trainer continues to be neglected. Yet it is potentially the most powerful way of introducing innovations in schools. He added that, teachers who join the Teacher Training Colleges from secondary schools needed induction courses to help them cope with the demands of teaching in such institutions.

Fafunwa (1968:29) in his paper presented at the Kenya Conference on Teacher Education stated that:

We are all in agreement that we cannot hope to train better teachers unless our teacher trainers are effectively and competently trained... to produce the kind of tutor we have in mind, he must be carefully selected, effectively and professionally encouraged throughout in the service.

2.4 THE ACADEMIC BACKGROUND OF THE STUDENTS

The background of student teachers also poses a major problem in training of Primary school teachers. There is a setback in that students are compelled to take all the subjects regardless of whether they attained suitable grades at the KCSE level or not. The previous method of admission of students to college has not been taking into consideration the qualification of students during selection for enrolment. Previously, the criterion, which was used as a rationale of excellence, was whether the student had a mean grade of ‘D+’ though it is now commendable that the minimum grade has now been raised to ‘C’ (Daily Nation 23rd March 2002).
Mukhalu (1982), noted that the results obtained by the student teachers in Home Science in KCSE are not taken into consideration. He adds that there is no consideration on the allocation of subjects during teaching practice. Whether they passed or failed the subject in school, the trainees are expected to teach. He reiterated that, majority of students interviewed confessed that they had never done Home Science at ‘O’ level. Mukhalu (1982), confirms that lack of Home Science background creates a big problem to the Home Science tutors because they require a ‘fresh start’, which is not possible because of limited time. Tutors also have a problem in teaching a mixed class of students with Home Science background and those without.

2.5 INSTRUCTIONAL SKILLS

A good teacher should master all instructional skills so that proper teaching and learning can take place. Burke (1972) argues that procedural skills must be mastered in order to enter the teaching profession and stay in it with any degree of success.

2.5.1 Microteaching

This is a scaled down form of teaching whereby the trainees perform in a real life situation but with few students, limited time, few objectives and brief content. Farrant,(1980) affirms that microteaching is necessary for any training because it gives students an opportunity to perfect on what they have already learnt in class theoretically.
2.7 Teaching Practice

Mukhalu (1982), observed that the duration of twelve weeks given to teaching practice during the two years was not adequate to expose the students to a wide range of teaching activities and other pedagogical experiences. Ngaywa (1980), found the method of assessing the students on teaching practice wanting because any tutor observed and advised students on any subject.

2.8 METHODS USED IN TRAINING OF PRIMARY HOME SCIENCE TEACHERS

The methods of training are bound to have some effects on the extent to which the teacher trainees become effective teachers. A number of studies have investigated the methods used by tutors in training. This section attempts to review those studies with a view to painting a clear picture of how effective or how relevant those methods are. Some studies, which have assessed the effectiveness of “A Systems Approach to Teacher Education”, exist.

This approach involves the precise specification of the behaviour that the objective of the learning experience, carefully planned training procedure aimed explicitly at those objectives. They measure results of training in terms of the behavioural objectives, feedback to the learner and the instructor’s re-entry into the training procedure. The measurement of the results following the repeated training is carried out again. This approach has been found to be effective in inducing desirable teaching behaviour in cognitive and in affective aspects.
Anderson (1970), studied the effect of training student teachers to induce an initial learning set in Primary school pupils. As compared with traditionally instructed control group, these teachers were judged by their pupils to be significantly more effective in their instruction. Hatcher and Andrews (1963) compared the effectiveness of four procedures of training primary school Home Science teachers. These are unstructured discussion, oral instruction on how to teach, videotape and demonstration.

Analysis of later classroom operation showed that demonstration plus discussion were significantly the most effective treatment while unstructured discussion the least effective. The provision of feedback has also been shown to play an important role in modifying teacher behaviour. Paulocci (1961), tested the effects of feedback in two comparable groups of student teachers. The teachers who received feedback became significantly more learner-centred than those who received no feedback.

### 2.9 EVALUATION OF TRAINEES' PERFORMANCE

Hawes (1979), observed that much of training in the Teacher Training Colleges in Kenya at the moment is a ritual necessary for certification. He describes this as a “backwash” effect of examination on the school curriculum. Kagatunyi (1980) found that it is possible that examinations determine what is to be taught in the Teacher Training Colleges.

Olaitan and Agusiobo (1981), suggest that tutors in TTCs should use diagnostic tests to find out the problem areas of the trainees and help them accordingly. Monroe (1970), says that it is important that weak areas are detected and rectified during pre-service
training. The pertinent question is who should evaluate teaching as a professional course? Is an examination syndicate justified to evaluate professional courses?

Tyler (1949:28), concluded that, “the capability to evaluate is presently within our command but the fluidity of our experiment and bluntness of our test (tools) deny us the ability.” Mwangi (1991), found that most tutors in colleges used end of term theory examinations to evaluate their students. Only 9.07% evaluated after every topic. The most frequent questions were multiple-choice questions and structured essay questions. Tutors evaluated practicals by assessing the finished articles and not during the making process. Therefore, the skill training was not emphasized.

2.10 PROBLEMS OF TEACHING HOME SCIENCE IN TTCs

Hawes (1979), has cited the problems faced by tutors in TTCs as overloading of curriculum, inappropriate pedagogical modalities, irrelevance of some topics and students’ low motivation.

2.11 CONCLUSION

From the foregoing literature review, it is apparent that proper training of Home Science teachers is necessary for their teaching effectiveness. Studies such as Male (1988) and Mwangi (1991) conducted to find out how relevant the teaching programme is to the actual primary school teaching indicate that the subject is not being taught effectively at the TTC. They attributed this to the problem Home Science teachers face in various institution. This study was aimed at finding out the constraints experienced by tutors in the teaching of Home Science in the TTCs in the Central province of Kenya.
CHAPTER THREE:
DESIGN AND METHODOLOGY

3.0 INTRODUCTION

The current study is a survey study that employed the use of descriptive and analytical research. This provided an opportunity to find facts about the teaching constraints experienced by the Home Science tutors in TTCs without controlling the variables. The analytical research enabled the study to make use of the information that was already available at the TTCs. These data was then analysed to make a critical evaluation. To do this, the study described the sample size, gave the research design, instruments of data collection, data collection procedures and data analysis.

3.1 RESEARCH DESIGN

The researcher employed a survey type of design because it is considered as a tool for educational fact finding. This enabled her to gather data on the current constraints that Home Science tutors are facing. The design provided information on how the Home Science tutors were being recruited to teach in the TTC, their academic and professional qualification and how the training process was being carried out. The information on why the Home Science tutors were encountering problems in teaching in the TTC was also obtained and the data gathered was both qualitative and quantitative. Consultation of the written sources, the interviews and classroom observations supplemented the information received through the questionnaire. Figure 3.1.1 on page 24 gives the research design that was used for this study.
Figure 3.1.1: Research Design

RESEARCH POPULATION:
PRIMARY TTC's

1 PURPOSEFUL SAMPLING
2 RANDOM SAMPLING

SAMPLE:
TEACHER TRAINING COLLEGES
AND HOME SCIENCE TUTORS

DATA COLLECTION

DATA ANALYSIS

DATA PRESENTATION
a) Tables
b) Percentages
c) Frequencies

CONCLUSION

RECOMMENDATION

RESEARCH INSTRUMENTS
a) Questionnaire
b) Interview guide
c) Classroom Observation Schedule

Adapted from Cohen and Minion (1989: 89)
3.2 STUDY AREA

The study area was centred in one out of the eight Provinces in Kenya. There are eight Provinces in Kenya. These are Nairobi, Central, Coastal, Western, Eastern, North Eastern, Nyanza and Rift Valley Provinces. These are as shown the map of Kenya given on figure 3.1.1 on the next page. The shaded region shows the position of the Central Province, an area where the research was carried out.
Figure 3.2.1: The Position of the Central Province from the map of Kenya

3.3 DESCRIPTION OF POPULATION AND SAMPLE

The sample used was derived from the population of the Primary Teacher Training Colleges in Kenya. There are twenty-one (21) Public TTCs in Kenya. The twenty-one PTTCs are unevenly distributed within the eight Provinces in Kenya with some such as Nairobi and Coast having only one college each. Central Province was purposively sampled because it has at least four TTCs which was the required sample size for the study. Table 3.3.1 provides the names of the colleges listed alphabetically and in the provinces in which they are located.

Table 3.1: Public Teacher Training Colleges and their locations

<table>
<thead>
<tr>
<th>S. NO.</th>
<th>TTC NAME</th>
<th>PROVINCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Asumbi</td>
<td>Nyanza</td>
</tr>
<tr>
<td>2</td>
<td>Bondo</td>
<td>Nyanza</td>
</tr>
<tr>
<td>3</td>
<td>Eregi</td>
<td>Western</td>
</tr>
<tr>
<td>4</td>
<td>Garissa</td>
<td>North Eastern</td>
</tr>
<tr>
<td>5</td>
<td>Highridge</td>
<td>Nairobi</td>
</tr>
<tr>
<td>6</td>
<td>Igoji</td>
<td>Eastern</td>
</tr>
<tr>
<td>7</td>
<td>Kaimosi</td>
<td>Western</td>
</tr>
<tr>
<td>8</td>
<td>Kamwenja</td>
<td>Central</td>
</tr>
<tr>
<td>9</td>
<td>Kericho</td>
<td>Rift Valley</td>
</tr>
<tr>
<td>10</td>
<td>Kilimambogo</td>
<td>Central</td>
</tr>
<tr>
<td>11</td>
<td>Machakos</td>
<td>Eastern</td>
</tr>
<tr>
<td>12</td>
<td>Meru</td>
<td>Eastern</td>
</tr>
<tr>
<td>13</td>
<td>Migori</td>
<td>Nyanza</td>
</tr>
<tr>
<td>14</td>
<td>Mosoriot</td>
<td>Rift Valley</td>
</tr>
<tr>
<td>15</td>
<td>Murang’a</td>
<td>Central</td>
</tr>
<tr>
<td>16</td>
<td>Moi Baringo</td>
<td>Rift Valley</td>
</tr>
<tr>
<td>17</td>
<td>Narok</td>
<td>Rift Valley</td>
</tr>
<tr>
<td>18</td>
<td>Shanzu</td>
<td>Coastal</td>
</tr>
<tr>
<td>19</td>
<td>St.Mary’s Kigari</td>
<td>Eastern</td>
</tr>
<tr>
<td>20</td>
<td>Tambach</td>
<td>Rift Valley</td>
</tr>
<tr>
<td>21</td>
<td>Thogoto</td>
<td>Central</td>
</tr>
</tbody>
</table>
3.4 SAMPLING PROCEDURES

The researcher found Central province to be ideal for this study because it has four colleges that have similar characteristics found in other colleges. This is in terms of funding, policies governing them, location (both in the rural and urban) and they include new and old colleges. These colleges are Murang’a, Thogoto, Kilimambogo and Kamwenja.

Four Home Science tutors from each college were treated to a questionnaire. This gave a total of sixteen (16) Home Science tutors from all the colleges. Two of these tutors from each college teaching second year P1 trainees were purposively sampled for an interview and classroom observation schedule. This is because they had, had a longer time with the students and they had also covered most of the course work. Their experience therefore placed them at a better position to provide the required information.

3.5 RESEARCH INSTRUMENTS

The desired information was gathered by use of a questionnaire, interview guide and an observation schedule. This ensured that no useful information to the study was left out.

3.5.1 Questionnaire

The questionnaire is considered as the most appropriate instrument for drawing the respondents’ honest views and it yields detailed data within a short time. The researcher used a questionnaire for the Home Science tutors. The questionnaire had forty simple and structured questions and they were worded as clearly as possible.
The preliminaries of the questionnaire required the respondents to give their age, gender and marital status. Each of the other items in the questionnaire dealt with specific aspects of the objectives of the study. The researcher delivered the questionnaires personally to the Home Science tutors. (See appendix i). Out of the sixteen (16) questionnaires given out, only fourteen (14) questionnaires were received back. The researcher discovered that one of the Home Science tutors had gone for the maternity leave and the other one had transferred to another college.

3.5.2 Interview Guide

The Home Science tutors were interviewed to supplement the information obtained from the questionnaire and observation schedule. The personal interview schedule provided the Home Science tutors’ factual information, opinions, attitude and reasons for their behaviour. The interview provided the information on the adequacy of Home Science and their academic qualification. It clarified matters raised in the questionnaire and the observation schedule. It was also used to find out the tutors’ teaching load vis-a-vis the classes, the resources available and the methods used in teaching. (See appendix ii)

The interview guide elicited information about the problems the Home Science tutors were encountering in teaching Home Science in TTCS and how they were coping with them. It consisted of items, which the researcher asked the Home Science tutors, and their responses were recorded against each item.
3.5.2 Observation Schedule

This instrument was used to investigate the problems Home Science tutors encountered while teaching the subject. The observation schedule was very helpful because it provided data on how the teaching process was being carried out and the teaching resources/aids that were being used. The researcher employed a non-participant approach whereby she passively attended the lessons, watched and recorded the findings. This was important in this study because it provided first hand information.

The observation schedule was used to find out whether time, the teaching resources available, class size, gender, and teaching approaches had any impact on the achievement of the objectives of Home Science in the TTCs. The instrument also provided information on how tutors coped with the teaching constraints they encountered in the classroom situation. This assisted the researcher to know the type of methods that encouraged the applicability of the skills, knowledge gain and those that encouraged simple recall and reproduction of facts.

The eight tutors who were treated to the interview were the very ones who participated in the classroom observation. Observation was done twice for each tutor in each of the four colleges during the practical and theory lessons. The specific areas that were observed were the proficiency of the content, teaching method used, availability and use of resources and general observation.

(See appendix ii).
3.6 DATA COLLECTION PROCEDURE

The researcher obtained a research permit to carry out the study in Central and Nairobi Provinces from the Ministry of Education. Authorization letters to collect data in the four colleges from both the Nairobi and Central Provincial Directors of Education (PDE) were also sought. In the first week, the researcher approached the principals for permission to carry out research in their colleges. The Home Science tutors were also introduced and the questionnaires handed over to them. Arrangements for the classroom observations and interviews were made including the time and venue.

3.6.1 Pilot Study

A pilot study was carried out in Highridge Teachers Training College in Nairobi. This college was randomly sampled from the colleges that had not been selected for the study. The researcher found this college to be ideal for a pilot study because it has relatively similar characteristics with the colleges that were used in the study. This is in terms of funding, age of the college and the number of students. The pilot study facilitated the refining of data collection instruments before the researcher proceeded to the field to collect data. It also enabled the researcher to arrive at questions that elicited the kind of information required without ambiguity. The validity and reliability of the instruments were determined during the pilot study and necessary adjustment made.

3.6.2 Actual Data Collection

The data collection process took three months and the researcher spent four weeks in each college. During the first week, permission from the principal of the college was
sought and the Home Science tutors were also introduced. The questionaires were also issued to the tutors and appointment for the interview made. The researcher was issued with the time table and this is what formed the basis for further visits for the classroom observation. There wasn’t any disruption during the entire period of data collection and the researcher was through with data collection in time.

3.7 DATA ANALYSIS

The information gathered was analysed by use of descriptive statistics. Data was coded and tallies done to determine the number of respondents to each variable in the questionnaire. Ratings made during classroom observation, were converted into scores by assigning numerical values to each one of the options of the rating scales that is (5) for very adequate, (4) for adequate, (3) for average, (2) for inadequate and (1) for very inadequate. After these, values were assigned a total score for each individual tutor and calculated by summing all scores gained on each performance indicator. Since all the tutors were observed twice that is during the theory and practical lesson using the observation schedule, the calculation of the total scores were added together and divided by two to produce an average score. Based on the individual a mean was calculated for the sample.

3.7 CONCLUSION

The foregoing chapter presents the research design and methodology. It stated the conceptual structure within which the research was conducted. The sample design was presented and it facilitated the research and made it to be as efficient as possible in yielding maximal information. The data collection instruments for the survey study were
outlined and these were questionnaire, interview guide and observation schedule. Further to these, a description of actual data collection procedure and data analysis is given
CHAPTER FOUR:
ANALYSIS AND PRESENTATION OF DATA

4.0 INTRODUCTION

The main objective of this study was to identify the teaching constraints that Home Science tutors experience in Teacher Training Colleges in the Central Province of Kenya. To fulfil this objective, data was collected from Home Science tutors in the TTCs in the Central Province of Kenya. These TTCs were Murang’a, Thogoto, Kilimambogo and Kamwenja. The data collection instruments were a questionnaire to the tutors, an interview guide and a classroom observation schedule. A pilot study was carried out in Highridge TTC in Nairobi.

This chapter focuses on the data analysis, presentation and interpretation. The researcher presented the information obtained from the questionnaire using frequencies and percentages. The information obtained from the interview and the observation schedules supplemented this information, thus enabling the researcher to make the right interpretation. Out of the expected sixteen (16) Home Science tutors, only fourteen responded to the questionnaire giving a response rate of 87.5%.

Four Home Science tutors from each college were treated to a questionnaire and this gave a total of sixteen questionnaires. Out of the sixteen questionnaires given out, fourteen were received back giving a response rate of 87.5%. From the four tutors from each college who responded to the questionnaire, two tutors specifically teaching second year P1 trainees from each college were purposively sampled for the interview and they also participated in the classroom observation.
The data is discussed under the following topics: the demographic background of the tutors, factors contributing to the constraints that Home Science tutors in TTC are facing, the analysis of Home Science teaching resources in TTC and the frequency of use of different teaching techniques. The data is analysed using a number of closely related operations such as establishment of categories, application of these categories to raw data through coding and tabulations and then drawing of statistical inferences. However, the summary, suggestions and recommendations of this study were given in chapter five.

4.1 DEMOGRAPHIC BACKGROUND OF THE HOME SCIENCE TUTORS

4.1.1 Age:

The researcher sought to know the age of the Home Science tutors in the four colleges. The age factor was important in this study because the researcher wanted to know whether it had any impact to the constraints the tutors were facing in TTCs.

The findings were as represented on figure 4.1.1 on the next page.
It was observed that 50% of the tutors were between thirty-one and forty years of age while 35.7% of them were of ages between forty-one and fifty. Fourteen point three percent (14.3%) of the Home Science tutors were of age between twenty and thirty and the study established that there was no tutor above fifty years of age.

The determination of age of the tutors was important in this study because it enabled the researcher to understand the ease with which the tutors were able to handle the trainees who are of varied ages. The age factor could be a constraint especially if the tutors were of age below thirty years. The study revealed that majority of the tutors were old enough to deal with the trainees in college and there were limited chances for the tutors to be looked down upon by the trainees because of their age.
Farrant (1980:212), states that:

“Authority is power. The teacher starts with the scales of heavily weighted in his favour. First, because he is grown up and the pupils are immature children and secondly because his knowledge and experience surpass theirs.” This explains the need for the teacher to be able to exercise some sense of authority over her students, something that comes with age and experience.

4.1.2 Gender

This study revealed that all the Home Science tutors in the TTCs are female. The gender heritage of Home Science is a historical phenomenon that has remained unchallenged for a long time. Home Science is a discipline that was started in a gendered female role of women as nurturers and carers of the family and by extension of the society (Mc Fadden 1993).

Kithinji and Mburugu (1995) in their discussion paper on gender commented that:

because Home economics remains essentially identified with women’s work, it continues women’s reproductive roles and it is therefore faced with more deeply entrenched academic stigmatisation as a discipline.

All the Teacher Training Colleges in Kenya train both male and female trainees therefore, the researcher sought to know the relationship between the gender of the Home Science tutors and the attitude of the trainees. This item also elicited information on the issue of gender and Home Science in the TTC as a learning institution.
The fact that all Home Science tutors in the TTC were female showed that Home Science as a field is still dominated by women. From the interview, the researcher noted that this had really affected their teaching because the majority of the male trainees had developed a negative attitude towards the subject. This was found to be constraining because the Home Science tutors were forced to teach a mixed class of students with different interests and future aspirations yet they aimed at attaining the given objectives for study of the subject at the TTC.

In addition to this, the Home Science tutors explained that the male trainees concentrated on other subjects, which they considered to be more useful to their lives than Home Science. This was due to the fact that there was no male tutor teaching Home Science in the TTC. The male trainees neglected the subject and took it as a subject that was just there for examination purposes but had no use in their life.

### 4.1.3 Marital Status

The researcher sought to know the marital status of the Home Science tutors. It was noted from the questionnaire that the majority (85.7%) of the tutors were married. The remaining 14.3% were single. The researcher considered all divorcees, widowed, never married and the not yet married as single.

The knowledge of the marital status was important in this study because Home science is a subject that deals with family life. The marital status therefore had an impact on the performance of the tutor because it portrayed how one valued family life, something that forms the basis of the Home Science education. The researcher noted that Home Science
tutors who were married had an easier time to teach Home Science because of being able to teach what they go through in the family, how they carry out activities in the Home and thus being able to provide first-hand information. On the other hand, the single Home Science tutors were not role models because they taught whatever they knew and had learnt and not necessarily practised.

4.2 FACTORS CONTRIBUTING TO THE CONSTRAINTS EXPERIENCED BY HOME SCIENCE TUTORS IN TTCs.

4.2.1 The Academic and Professional Qualifications of the Home Science Tutors.

The findings of the study showed that 78.2% of the Home Science tutors were ‘O’ level holders while 26.4% of the remaining were ‘A’ level graduates On the question of the Home Science tutors’ professional qualifications the researcher illustrated the information obtained in figure 4.2.1 below.

Figure 4.2.1: The percentage of the Professional Qualification of Tutors.
The bar chart above shows clearly that 57.1% of the Home Science tutors had a B Ed. (Home Economics) degree, 21.4% had a Dip.Ed, 7.1% of them were S1 teachers and 14.3% had attained a postgraduate level of education. Teacher preparation is a crucial matter in any educational system and the quality of the teacher educator has an important part to play.

The success of any education endeavour depends on the quality of teachers. Farrant (1980) points out that, a poor teacher will, therefore, produce a poor student because there is no way the product can be better than the input. It can be deduced that the tutors teaching Home Science in TTC have reasonably high academic and professional qualifications despite the fact that only 14.3% of the tutors were postgraduates.

The researcher further noted that the majority of the Home Science tutors were prepared to teach in secondary school where the content area is emphasized and not the methodology. This study revealed that no single Home Science tutor in the colleges studied had a B Ed (Primary Education option) degree, which would be ideal for training the P1 teachers.

### 4.2.2 Engagement to teach in the TTC

The researcher wanted to know how the Home Science tutors in the TTC were being recruited to teach Home Science in the TTCs. Figure 4.2.2 on the next page shows the percentages of the Home Science tutors and the institutions from which they were being recruited.
The findings showed that 57.1% were recruited as teachers from secondary schools, 35.7% were recruited directly after graduating from the university while 7.1% as teachers from the Primary schools.

Toili (1987), said that most of the tutors in colleges were being recruited as TTC tutors from the university and as teachers from secondary schools. This is also the case where the researcher found that the tutors had previously been trained to teach the subjects of specialization in secondary schools and not in the TTC. Consequently, these tutors were not trained to prepare teachers by offering them the required skills to teach well.
It is, therefore, possible that the tutors concentrated more on the subject content, which they are well prepared to teach. This is further supported by the Report of Primary Teacher Upgrading Committee (1978). The report stated that majority of the teachers in the TTCs emphasized the academic content to the neglect of the professional aspect of the teacher, something that is vital for the teacher training.

4.2.3 Years of training as a Home Science teacher

Majority (85.7%), of the Home Science tutors had been trained as Home science teachers for three or more years. Only 14.3% were found to have trained for two years. To be good teachers, the tutors must be effectively trained to avoid any loopholes. The training should take at least three years and not one or two years (Sifuna, 1985). These findings showed that majority of the home science tutors in the TTC were qualified to teach. This is because three years is adequate for them to be prepared in all aspects of teacher education.

However, it is worth noting that there was a likelihood of the S1 tutors who are trained to teach for two years to have a problem because that time was not adequate for them to be trained efficiently. Sifuna (1985:48) explained that two years are not adequate for the training of Primary school teachers. It is even worse when these S1 teachers are promoted to teach in TTCs. One wonders to what extent such tutors can produce good quality and competent teachers to teach in Primary schools yet they were not prepared for the kind of work they were being entrusted to do.
4.2.4 Years taught Home science in TTC

The research findings pointed out that 71.4% of the tutors had taught Home Science in the Teacher Training College for more than five years. Only 14.3% had taught for three to five years while the rest had taught for two years or less. The fact that the majority of the tutors had taught Home Science in TTCs for more than three years shows that they had taught in the college long enough to give reliable information.

The researcher recorded from the interviews that most of the tutors recruited from both the Primary and secondary school levels had problem changing to teach in college. However, the researcher found this to be a problem because the college is a different learning institution and the trainees’ interests, academic backgrounds and their future aspirations are different from those of the learners in both Primary and secondary schools. The approaches of teaching and the objectives of learning home science in colleges are different from those of teaching in both Primary and secondary school levels. The researcher found this to be a constraint that tutors were encountering.

4.2.4 In-service training

The study found that 64.3% of the Home Science tutors in the TTCs had not been in-serviced. Only a small fraction (35.7%) of them said that they had been in-serviced. Maranga (1980), stated that the effectiveness of the teachers depended on the initial and continued training so as to provide them with techniques, skills, attitudes and knowledge necessary to make them feel confident in their undertaking.
In-service, training is important for continuous preparation of the tutors with the changing demands of the trainees alongside the technological changes. The researcher learnt from the interview that the major reason why some of Home Science tutors were not in-serviced was because of limited time, teaching resources and it could also be attributed to some of the Home Science tutors’ ignorance.

The fact that there was a fraction of the Home Science tutors in colleges who had been in-serviced showed that the in-servicing programmes were being organized for the Home Science tutors. The researcher gathered from the interview that despite the fact that there were in-service programmes, they were not being organized on a regular basis and they were general for all TTC tutors and not specifically for the Home Science tutors.

The study revealed that majority of the Home Science tutors were not in-serviced to give them necessary skills to train teachers. The in-service programmes would be vital for them because many of them were not trained to teach in TTC during their pre-service training. The researcher noted that there was little effort being put on in-service training by the Ministry of Education. There was very little that was being done on the improvement of the quality of the tutors. This simply shows that the training and professional enrichment of teacher trainees continues to be neglected. It was found that this was also a constraint that the Home Science tutors were facing.

The study also revealed that the majority of the Home Science tutors were not being in-serviced to enable them cope with the changing times. These tutors, therefore, continue using the traditional approaches in training teachers (Gitobu 1991). This in essence
explains why there has been a slow development of Home Science as a discipline since its formal introduction in Kenya.

4.2.5 Familiarity with the Primary Home Science syllabus

The majority (78.6%) of the Home Science tutors stated that they were familiar with the Primary Home Science syllabus. Only (21.4%) of them responded that they were not familiar with it. This section aimed at eliciting information on whether the tutors have any idea of the Primary school Home Science syllabus or not. This is important because it gives them direction on what the trainees ought to know before they are sent to the field to teach. There is great need for the Primary school Home Science syllabus to be related to the Teacher Training College syllabus.

The researcher discovered that despite the fact that the majority (78.6%) of the tutors were familiar with the Primary school Home Science syllabus, there were some who were not. This ignorance denied them the opportunity to understand and equip the trainees with the skills they required to be able to meet the Primary school Home Science objectives. They also had no idea about the content the trainees had to be prepared in to be competent enough when she/he is finally posted to teach Home Science in primary school.

The study revealed that the failure of some Home Science tutors to know what was in the primary school Home Science syllabus made them to teach without any direction only for the trainees to get to the field to find some topics to be different. It is even worse for
some trainees who did not have an initial background in Home Science since some topics may sound very strange to them.

On interviewing the Home Science tutors on this question of familiarity with the Primary school Home Science syllabus, the researcher gathered that most tutors had not familiarized themselves with the primary school syllabus just because the booklets were not available in the TTC. Another reason given was that they did not see the need because they were only concerned with the TTC Home Science syllabus.

4.2.6 Differences between the Primary and TTC syllabi.

Out of the Home Science tutors who admitted that they were familiar with the Primary school Home Science syllabus, only 40% of them stated that there were some differences in the structure and content. Sixty percent (60%) of them said that there was no marked difference between the two syllabi. Of the tutors who noticed the difference, only 37.8% of them indicated the topics they found to be different while the majority 62.2% did not respond to this item. The researcher noted that this item was not well answered because the tutors could not claim to be familiar with the Primary Home Science syllabus yet fail to notice topics that were related and those that were not related.

In addition to these, the researcher observed that the layout of the Teacher Training College syllabus is haphazard compared to the Primary school one. There is a marked difference in the statement of objectives, sequential layout of the content and topics and suggested practical activities. There is also omission of some topics on the TTC syllabus while they appear in the primary Home Science syllabus. One of these topics is saleable
foods. On comparing the two syllabi, the researcher found that primary Home Science syllabus was well thought out and organized unlike the TTC Home Science syllabus.

Over this issue, the researcher felt that there was need to harmonize the two syllabi and make them closely linked to ensure that they march in step to ensure easy implementation. Fleck (1968), found that there was a gap between the teacher training college and Primary school curricula. She pointed out that the main problem is lack of correlation between what trainees are expected to teach in Primary schools after graduation and what they were trained in while in college.

The researcher observed that lack of this correlation between the two curricula poses a big problem to the Home Science tutors because they cannot change what has already been stipulated on the syllabus to meet the demands of the primary school children. As a result, tutors are left with no choice but to present information just as it is on the syllabus.

This study also revealed that there was a lot of fragmentation of the Home Science syllabus. This turned out to be a constraining factor to the Home Science tutors in the Teacher Training Colleges because they had to present the information in bits. This called for the principle and practise of integrated approach, which requires the Home Science tutors and curriculum developers to work together towards the development and implementation of the Home Science curriculum.
4.2.7 Rating the Home Science syllabus

The researcher analysed the TTC Home Science syllabus and came up with the following findings. The major aim of the Teacher Training College Home Science course was to give the student teachers a good foundation in Home Science by going deeper into the areas of the subject. These areas are: Clothing and Textiles, Foods and Nutrition, Home Management, Childcare and Consumer Education.

The syllabus also included methodology and time allocation.

The methodology part consisted of:

a) General information on lesson plans for each subject area.
b) Schemes of work.
c) Record of work for each subject area.
d) Use of learning aids.
e) Microteaching.
f) Demonstration and observation.
g) Procedure in practical tests and assignments.
h) Record keeping in the departments.
i) Evaluation of both theory and practical work done by the student teachers.

The time allocation was as shown in table 4.2.1 in the next page.
Table 4.2.1: Time allocated to teach various areas of Home Science

<table>
<thead>
<tr>
<th>YEAR ONE</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clothing and Textiles</td>
<td>4 Hours per week</td>
</tr>
<tr>
<td>Foods and Nutrition</td>
<td>5 Hours per week</td>
</tr>
<tr>
<td>Home Management, Childcare and Consumer Education</td>
<td>6 Hours per week</td>
</tr>
<tr>
<td>Art related to the home</td>
<td>36 periods for three terms</td>
</tr>
<tr>
<td>Science related to the home</td>
<td>36 periods for three terms</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>YEAR TWO</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clothing and Textiles</td>
<td>7 Hours per week</td>
</tr>
<tr>
<td>Food and Nutrition</td>
<td>8 Hours per week</td>
</tr>
<tr>
<td>Care of the home, Childcare and Consumer Education</td>
<td>9 Hours per week</td>
</tr>
<tr>
<td>Methodology</td>
<td>44 Hours in term 5</td>
</tr>
</tbody>
</table>

SOURCE: 1981 TTC Home science syllabus pg 31

The total time allocation is stipulated in table 4.1.8.2 on the next page.
Table 4.2.2: The total time allocated for teaching Home Science in the two years of teacher training.

<table>
<thead>
<tr>
<th>TOTAL TIME ALLOCATION</th>
<th>480 HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clothing and Textiles</td>
<td>132 Hours</td>
</tr>
<tr>
<td>Food and Nutrition</td>
<td>132 Hours</td>
</tr>
<tr>
<td>Care of the home</td>
<td>60 Hours</td>
</tr>
<tr>
<td>Child care</td>
<td>40 Hours</td>
</tr>
<tr>
<td>Consumer Education</td>
<td>10 Hours</td>
</tr>
<tr>
<td>Methodology</td>
<td>44 Hours</td>
</tr>
<tr>
<td>Art related to Home science</td>
<td>36 Hours</td>
</tr>
<tr>
<td>Science related to Home science</td>
<td>36 Hours</td>
</tr>
</tbody>
</table>

The researcher further wanted to get the opinions of the tutors on the TTC Home Science syllabus. Fifty seven point one percent (57.1%) of the tutors interviewed rated the Home Science syllabus as helpful in teaching the subject while 42.9% did not find it to be helpful.

The interviews elicited information that the content to be covered in the TTC syllabus by the trainees was too much for the time allocated for each subject (three periods of 35 minutes per week) something that is contrary the TTC Home Science syllabus. The Home Science tutors explained that they always rearranged the syllabus to balance with the time allocated and they only taught topics that they thought were necessary and important something that was quite unprofessional.
4.2.8. Time allocated for teaching Home Science

The researcher sought to know whether the time allocated for teaching Home Science in the TTC was adequate or not. The tutors were asked to indicate the number of periods of thirty-five minutes they had in teaching Home Science per week. They were also asked to state whether the time allocated for teaching Home Science on the timetable was adequate to cover the syllabus. This item elicited information on the time factor and the scope of Home Science.

The findings showed that the time allocated for teaching Home Science in all the colleges was three periods of thirty-five minutes per week. From the analysis of the TTC Home Science syllabus, the researcher discovered that the time allocated for teaching Home Science on the syllabus was totally different from the actual time on the timetable. This is because twelve other subjects were supposed to be plotted on timetable as well.

None of the tutors stated that this time was adequate for teaching Home Science. The majority (63.7%) of the tutors stated that four periods would be adequate, while the rest 36.3% suggested that five periods would be adequate. It was apparent that the time allocated for teaching Home Science was not adequate for covering the syllabus and some of the tutors suggested five periods while the majority (63.7%), suggested that four periods would be adequate for them. Five periods would not be possible because the P1 course takes only two years yet the trainees are supposed to be prepared in thirteen subjects.
Since all the tutors said that the time allocated for teaching Home Science was not adequate for covering the syllabus, then it can be stated that the TTC Home Science curriculum is wide. This point at the possibility that the tutors do not cover some topics. This could definitely contribute to the teacher trainee’s incompetence when she/he was finally posted to the primary schools to teach.

All the tutors interviewed suggested that the TTC Home Science curriculum should be reviewed with the aim of reducing the content that is supposed to be covered at primary school level. The fact that 41.9% of the tutors stated that the syllabus was not helpful in their teaching indicates that it is a source of constraint to them. This is because they cannot plan their work well especially in terms of preparation of lesson plans and schemes of work since the workload does not tally with the time allocated for the subject.

4.2.9 The Home Science teaching staff

The research findings showed that the TTCs were adequately staffed because 92.9% of the tutors responded that they were well staffed with only a minority (7.1%) them saying that they were not adequately staffed. This finding showed that lack of enough Home Science tutors was not one of the constraining factors in colleges. The researcher also found that despite the fact that the government had not employed Home Science teachers since 1998, the TTCs, unlike the Primary and secondary schools, had not been affected so far.
4.2.10 Home Science content coverage in TTC

The item on content coverage provided information on how the syllabus was covered and the constraints the Home Science tutors encountered while teaching. The major areas of Home Science training include skills in teaching, theory and the practical aspect of Home Science. The tutors were asked how well they covered some areas of Home Science during the training of Primary school teachers. Their response is as shown on table 4.2.3 below.

<table>
<thead>
<tr>
<th>CONTENT AREA</th>
<th>ADEQUATELY</th>
<th>NOT ADEQUATELY</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHODOLOGY</td>
<td>94.1%</td>
<td>5.9%</td>
<td>100.00</td>
</tr>
<tr>
<td>THEORY</td>
<td>71.4%</td>
<td>28.6%</td>
<td>100.00</td>
</tr>
<tr>
<td>PRACTICALS</td>
<td>19.7%</td>
<td>80.3%</td>
<td>100.00</td>
</tr>
</tbody>
</table>

According to the table, 94.1% of the Home Science tutors stated that the methodological aspect of Home Science was covered while 5.9% said that it was not adequately covered. Seventy one point four percent (71.4) of the tutors stated that the theory part was adequately covered compared to 28.6% of them who indicated that it was not adequately cover. On the contrary, 80.3% of the tutors indicated that they did not cover the practical aspect and only 19.7% responded that it was covered adequately.

It is evident that the theory and methodology aspects of Home Science are taught adequately while the practical part is not. This implies that the tutors concentrate on factual knowledge when teaching and less emphasis is given to practical work. The tutors explained that the large classes and the limited resources they had in colleges could not allow them to carry out the practical component of the subject. The fact that 19.7% of the
tutors covered the practical work adequately, suggested that it was possible for the syllabus to be covered despite the presence of many constraining factors although this coverage does not guarantee quality teaching.

On interviewing the tutors who managed to carry out the practical work with the students, the researcher established that the tutors organised to have practical sessions during the weekends. The tutors illustrated how to perform certain skills in Home Science especially in Home Management, Foods and Nutrition using demonstration method. This practical work was carried out in congested Home Science laboratories and the method used was teacher demonstration.

The classroom observations revealed that the classes were so crowded that most of the trainees were not able to see what the tutors were doing. Paulocci (1961), assert that good learning should involve all the senses, however, in this case the trainees were denied the opportunity to touch and taste whatever they prepared like in the case of cookery where food was prepared. Everything was done by a teacher while the whole class just observed and they were not given the opportunity to practise the required skills in Home Making.

The information obtained from the interviews and observations revealed that majority of the tutors covered the theory and methodology adequately because the trainees on their own with limited supervision could do much of the work. This is because the trainees were given instructions to prepare notes for themselves prior the actual lesson. The tutors then applied the lecture method to teach and only main points were highlighted. This would then be followed by a written continuous assessment test (CAT).
It was also found that the improvisation of equipment and material, which is crucial in the 8:4:4 system of education was not being put into practice. This is because the majority of the Home Science tutors could not carry out practical work due to lack of material and equipment. This study further revealed that despite the fact that Home Science is a practical subject where students are supposed to learn by doing, this was not the case with the TTCs. The researcher noted that large classes due to over-enrolment, lack of adequate resources and facilities in the TTC were some of the common factors affecting the performance of the Home Science tutors. The effective training of the trainees is hampered and the product is an ill-prepared Primary school Home Science teacher.

4.2.11 The Socio-Economic and Academic Background of the Students

The researcher sought to know whether the socio-economic, cultural and academic background of the trainees had any impact on the teaching of Home Science in the TTC. The tutors were interviewed and the majority (76.9%) of them explained that the socio-economic and academic background of their trainees affected their teaching and even the performance of the students in the Home Science examination. The rest (23.1%) of the Home Science tutors commented that the economic part of the trainees’ background did not influence their teaching.

It is also evident from the findings that the Home Science background of the trainees had a part to play in performance of Home Science tutors in TTCs. On interviewing the tutors, the researcher learnt that the Home Science tutors got a hard time because they had to teach every topic from the scratch because there were students who were very
ignorant of some basic topics. There was also a likelihood of the tutors to overlook some topics, which they thought were obviously known already by the trainees, which might not have been the case.

The tutors further stated that some teacher trainees came from rich families while others came from poor families. Most of the trainees from poor families were not exposed to modern equipment and electrical appliances such as microwaves, refrigerators, cookers, and mixers. This therefore required the Home Science tutors to spend more time to introduce and show such trainees how to use these equipment before the actual teaching.

Over the issue of cultural background, a few tutors (14%), explained that because of culture, some male trainees were not co-operative when they were instructed to carry out some practical work especially cooking. They believed that Home Science was meant for women and due to this, they had a negative attitude towards the subject. This observation confirms the assertion of Paulocci (1961) that, “students from cultural diverse backgrounds need an understanding of the broad areas of Home Economics. They need to see how Home Economics can help them to achieve greater personal satisfaction and a higher level of living.”

The mission of Home Economics is to improve the living status of individuals and the society at large (Olaitan and Agusiobo 1981). This means that the subject is not just meant for a certain cultural group or gender but it is useful to everyone. The researcher noted that there was need for the trainees to get this information in the right perspective. This study found that it was due to the trainees’ perception, that the Home Science tutors
found it difficult to teach a mixed class of students with varied socio-economic and academic backgrounds because it called for a fresh beginning on every topic which was boring!

4.2.12 Microteaching

Patel and Mukwa (1993), defined microteaching as:

a scaled down version of actual teaching in which the teacher teaches for about 5-8 minutes concentrating on one skill at a time. It involves teaching one’s peers/colleagues and it is designed to improve teaching skills without the pressure of actual teaching situation

This is an important aspect of teacher preparation because it provides an opportunity for immediate feedback from the supervisor and the peers. It simulates a class situation before trainees are prepared to face a class in the real life situation. Ninety two point nine percent (92.9%) of the tutors stated they had microteaching in their colleges. Only 7.1% of them said that they did not have. The researcher also wanted to know the people who organized microteaching in the TTC. Fifty percent (50%) of the tutors reported that the microteaching committee organized it, 28.6% said that combined departments and the remaining 11.4% organized it by individual departments.

The findings showed that majority of the TTCs organized microteaching for their trainees before they went out to teach in a real life situation. It was also noted that some colleges (7.1%) could not organize microteaching for their students. This study also revealed that in most colleges, the microteaching committee organized microteaching and this was made up of tutors who were not necessarily specialized in Home Science.
Eighty-five point six percent (85.6%) of the tutors reported that microteaching in their college took less than one month while only a small proportion 14.2% said that it took one month. This showed that there was a limited opportunity for the teacher trainee to undergo microteaching in a Home Science lesson. This also implies that the microteaching sessions are few due to limited time and the tutors therefore can hardly provide feedback to the trainee, which is vital for microteaching.

This information is illustrated in figure 4.2.3 below.

**Figure 4.2.3 Number of trainees in each microteaching**

From figure 4.2.3, it is clearly shown that the majority (57.1%) of the tutors said that their microteaching group comprised more than twenty trainees. Twenty eight point six percent of them stated that their microteaching groups had twenty trainees while only 14.3% reported that their microteaching groups comprised ten trainees. There was no college that had a microteaching group of five trainees.
This study revealed that microteaching in the TTC was being done haphazardly and there was limited opportunity for all the trainees to practice. For those colleges that carried out microteaching, the classes were too crowded to be effective. Trainees need to have regular microteaching sessions to be able to practice the methods and skills in teaching Home Science. The larger the number of trainees in a microteaching class, the less they benefit from it. This reduces individual student participation.

The researcher also noted that even for the colleges that organized microteaching, the trainees learnt very little because the groups were too large. An ideal microteaching group should comprise five trainees (Patel and Mukwa1993). The exercise is, therefore, not effective at all because there is limited time for the tutor and the peers to give feedback to the participant, which is important in any microteaching. Most of the tutors, therefore, strained to give the trainees some skills they needed before they left the college. This was done mainly through teacher demonstration, which is not supposed to be the case because students are supposed to be given the opportunity to try out by themselves.

### 4.2.13 Teaching Practice

The tutors were asked to state patterns of teaching practice in their respective colleges. They were also asked to indicate the number of times a trainee was supervised while teaching Home Science. The findings are presented in table 4.2.4 below.

<table>
<thead>
<tr>
<th>DURATION OF TEACHING PRACTICE</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Weeks</td>
<td>42.9</td>
</tr>
</tbody>
</table>
The findings as indicated in the table showed that the majority (57.1%), of the tutors said that the duration of teaching practice in their colleges was four weeks. The rest (42.9%) stated that the duration of teaching practice in their colleges was three weeks. On the question of how many times a trainee was supervised while teaching Home Science, 92.9% of the tutors said that the number of times was not definite and it varied from student to student. The remaining 7.1% said that a trainee in their colleges was supervised four times.

Teaching practice is yet another important process in teacher preparation. It gives the student teacher a chance to apply the techniques he/she has learnt in an actual live class situation. It is a laboratory experience. The study found out that duration of teaching practice in many colleges was quite short and it therefore means that the trainees were not given enough attention to practice well. This contributed so much on the trainees’ incompetence. This is because a period of three or four weeks inclusive of the time required for orientation and winding up was not adequate. The pattern of teaching practice depicted by the findings was that there was no fixed number of times a trainee was supposed to be supervised since only 7.1% of them had a definite number of times a student was supervised while teaching Home Science.
On interviewing the Home Science tutors, the researcher learnt that Home Science is not given priority during supervision while on teaching practice. Other subjects such as Mathematics, English and Science, which were considered to be academic, were given the first priority. On the contrary, Home Science being a technical subject was ignored and the trainees were supervised in it only if there was more time left before the teaching practice session ended.

The researcher noted that the chances of a teacher trainee being supervised while teaching Home Science are very minimal. This implies that the art of imparting knowledge and skills is inadequately inculcated in the teacher trainee during teaching practice. The study revealed that the effort by the Home Science tutors in TTC to produce teachers of high quality to teach Home Science in primary schools is greatly hindered by the time factor.

The manner in which Home Science is rated among other subjects taught at the TTCs also posed a problem to the tutors. This is because of the policies of training teachers in the TTC favoured other subjects against Home Science. This is because Home Science was not given priority when it came to supervision during teaching practice. The researcher found out through the interview that majority of the trainees were not supervised while teaching Home Science in teaching practice. This formed a constraint because the trainees also developed a negative attitude towards the subject because the subject did not seem to be given any emphasis even during the teaching practice session.
The researcher further wanted to know who supervised the trainees in Home Science during teaching practice exercise. This item elicited information on the tutors that were giving the trainees the teaching skills in specific subjects that they were being trained to teach. The responses given by the tutors showed that in all the colleges, supervision of the trainees while teaching Home Science was done by any tutor and not necessarily a Home Science tutor or a professional studies tutor.

It is evident that teaching practice though crucial in teacher preparation, it is not effectively carried out in colleges. The fact that any tutor did the supervision of Home Science during teaching practice in all the colleges ignores the real essence of professionalism. The study found that trainees are not usually given the right guidance and feedback during teaching practice since the people supervising the students are not necessarily experts in the areas they are supervising the students.

4.3 THE TEACHING RESOURCES AND FACILITIES

Instructional resources and facilities refer to the whole range of facilitators of teaching and learning. They serve as promoters and they aid in achieving effective instructional outcomes. The items in this section derived information on the adequacy of resources and facilities for teaching Home Science in colleges. All the data collection instruments (questionnaire, interview guide and observation schedule) elicited information on the teaching resources and facilities available, their utilization and how they affect the teaching of Home Science in TTC. The researcher further sought to understand how the inadequacy of some resources and facilities affected the teaching of Home Science and the strategies the tutors employed in case of shortages.
The researcher wanted to know whether there were Home Science laboratories in the colleges and if they were equipped. All the tutors reported that there were Home Science laboratories in their colleges. On the question of whether they were equipped or not, 92.9% responded that they were not. Only a minority (7.1%) of the Home Science tutors indicated that they were fully equipped.

It was found that there were Home Science laboratories in all the colleges because this was one of the requirements of the college by the Ministry of Education. On further investigation, the researcher learnt that these laboratories were built and equipped when the colleges were starting. However, with time there were breakages due to mishandling and poor maintenance without replacement, hence, the laboratories remained almost empty. There were no qualified personnel employed to take care of the facilities and in addition to these and users kept no clear records to show what facilities were in the college Home Science laboratory for accountability.

The researcher noted the minority (7.1%) of the tutors who stated that their Home Science laboratories were equipped, were from the newly established colleges. This could be one of the reasons why their laboratories were equipped adequately. This explained why many Home Science tutors covered the theory and the methodological aspect of Home Science adequately but ignored the practical aspect.
4.3.1 The learning resource centre

On the question of the Learning Resource Centre (LRC), the information acquired was as shown on the figure 4.3.1 below.

**Figure 4.3.1: The frequency of the LRC.**

The researcher found out that majority 72.8% of the colleges made use of the Learning Resource Centre. Only 14.3 of Home Science tutors responded that their students often use the LRC. The history of the LRC in Kenya can be traced back in 1969 when UNESCO introduced it. The American approach towards LRCs was conceived in an educational technology context and this concept recognition of the role of people as a resource was more developed. It encouraged independent study and the student assumed the responsibility for his/her learning thus encouraging independent study. It was quite individualized and students could borrow and use the books without interference with others.
The British approach understood the LRC as a way of networking and it involved facilities and people. The LRCs were regionally planned and the idea of people as resources was less developed. The idea of LRCs expanded in Kenya when the World Bank decided to sponsor the training of the LRC personnel to take care of resources in colleges. This explains the importance of using the Learning Resource Centre to enhance learning something that was rarely practiced in the TTCs.

4.3.2 Availability of Specific Home Science Resources in the Teacher Training College

Table 4.3.1: Availability of specific Home Science resources in the TTC.

<table>
<thead>
<tr>
<th>TUTORS' RESPONSES</th>
<th>A</th>
<th>INA</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FREQ</td>
<td>%</td>
<td>FREQ</td>
</tr>
<tr>
<td><strong>Textbooks</strong></td>
<td>4</td>
<td>28.6</td>
<td>7</td>
</tr>
<tr>
<td>Teachers guide</td>
<td>6</td>
<td>42.8</td>
<td>6</td>
</tr>
<tr>
<td>Sewing machine</td>
<td>2</td>
<td>14.3</td>
<td>10</td>
</tr>
<tr>
<td>Kitchen utensils</td>
<td>2</td>
<td>14.3</td>
<td>5</td>
</tr>
<tr>
<td>Cookers</td>
<td>1</td>
<td>7.1</td>
<td>9</td>
</tr>
<tr>
<td>Laundry equipment</td>
<td>2</td>
<td>14.3</td>
<td>8</td>
</tr>
<tr>
<td>Reference materials</td>
<td>1</td>
<td>7.1</td>
<td>10</td>
</tr>
<tr>
<td>Teaching aids</td>
<td>3</td>
<td>21.4</td>
<td>8</td>
</tr>
</tbody>
</table>

**KEY:** A-Adequate; INA-Inadequate; NA-Not available

4.3.2.1 Textbooks and Reference Books

The study pointed out that the majority (50%), of the tutors had inadequate textbooks in their schools, 21.4% reported that there were no textbooks in their colleges while only 28.6% said that there were adequate textbooks in their college. On the issue of reference materials 71.4% of the tutors said that they were inadequate in their college while 21.4% said that they were not available. Only 7.1% of the tutors stated that reference materials in their college were adequate.
Textbooks and reference books provide a carefully organized, common core of experience for a class. Today’s texts are reasonably accurate, informative, interesting and even glamorous. Trainees need to be guided and assisted in evaluating the authenticity of information presented. They are important in any learning institution because they provide supplementary information for decision making to the learner. Textbooks provide new knowledge, encourage individual learning and can promote the trainees’ interest to learn. The Home Science tutors can also give assignments from the textbooks and the trainees can also have a chance of going through some topics before they are taught in class.

Reading information from the reference books is one of the areas that tend to be neglected in Home Science classes. Trainees, particularly those of average or less than average intelligence, usually benefit from visual presentations and from actual presentations in their laboratories. Although this method contributes significantly to students’ information and interest, they can never replace the benefits they would have derived from reading. However, it is important to note that they can never substitute or replace good teaching, Hall and Paulocci (1961)

The researcher found out that the Home Science tutors had a big problem because their learners did not have a secondary source of provision of information to facilitate their learning. The information provided by the tutors was not sufficient to cover the fundamental areas under consideration, which could be easily found in reference books.
It can be deduced from the findings that many colleges either lacked textbooks or they were inadequate. The researcher found that this was a problem Home Science tutors were facing in TTC. This is because they were unable to make use of some learning activities that would have improved their teaching. The opportunity for the learners to learn on their own is also limited and therefore they only look forward for the time when they will be taught officially in class by the tutors.

4.3.2.2 Teaching Aids

Fifty-seven point one percent (57.1%) of the Home Science tutors stated that teaching aids in their college were inadequate while 21.4% reported that they were not available and the rest said that they were adequate.

Paulocci (1961), describe teaching aids as:

A way of motivating and sustaining the interest of your students, clarify information, present new ideas, stimulate discussion, challenge independent thinking, influence attitudes that encourage transfer of knowledge and skills to new tasks.

The use of teaching materials does not necessarily ensure that students will learn more quickly or thoroughly than they would through traditional methods. The tutor needs to know how to select materials carefully, preview them and use them effectively.

In this study, many of the Home Science tutors (21.4%), did not have teaching aids in their colleges and a further 57.1% did not have adequate teaching aids in their colleges. The researcher through the classroom observation noted that many tutors did not plan their work. They did not seem to be receptive to information or ideas that would have
helped them to present the information in the new light. The tutors lacked the creativity to produce their own supplementary teaching aids.

Sifuna (1975) contends that, “whatever the wealth or poverty of a school and whatever the abundance or privatisation of experience the children bring to it, the quality of learning in any class depends to a larger extent on the initiative of the teacher.” He further stated that a good teacher could do a better job if she/he has appropriate materials and equipment.

The KIE (1986) Home Science syllabus contends that proper facilities and basic equipment are essential for effective coverage of the syllabus. It is therefore necessary that the tutors be creative in production of their own teaching aids. The concept of improvisation must also be thoroughly understood by the tutors and the student teachers. This can be made possible through the use of workshops, seminars and in-service courses.

The researcher thus noted that the majority of the tutors did not use the materials when and where they were feasible. When they were presented to the class a clear explanation or suggested study guide did not accompany them. This was thus a constraint that some of the Home Science tutors were facing.

4.3.2.3 Teacher Guides

From table 4.3.1 on page 64, it is shown that 42.8% of the tutors had adequate teaching guides in their college. Likewise, 42.9% stated that they had teacher guides but they were
inadequate and 14.3% responded that teacher guides were not available in their college. Teacher guides act as a source of information and direction to the tutors. They give the topics that are supposed to be covered, the learning activities to be employed during the lesson and also the ideal time that is supposed to be used to cover the topic. In addition to these, the teacher guide gives the tutor the kind of approach she is supposed to use when dealing with a certain topic as well as suggesting some assignments that the learners can be given to do during the lesson and even after.

It can be deduced from the findings that teacher guides were not such a big problem to the tutors. This because many of them indicated that the teacher guides in their college were either adequate (42.8%), or inadequate (42.9%). Only 14.3% of them said that they were not available. The researcher found out that although this was not a major constrain, the few tutors whose colleges did not have teachers’ guides had a problem in planning and execution of their work. This is because they took a long time to organize their work on their own yet they use the teacher guides which are already prepared and could therefore make their work easier. This therefore hampered the teaching of Home Science in the TTC.

4.3.2.4 Sewing Machines

It can be clearly seen from table 4.3.1 on page 64 that most (71.4%) of the Home Science tutors reported that their colleges did not have adequate sewing machines. Fourteen point three percent said that they had adequate sewing machines while 14.3% stated that there were no sewing machines in their colleges.
It is evident from the present research that there is a problem regarding sewing machines in the TTC. This is because the majority of the tutors (71.4%) indicated that sewing machines in their colleges were inadequate and 14.3% asserted that there were sewing machines in their colleges. It follows that the area of Clothing and Textiles is not taught well in the TTC.

The study has also revealed that majority of the teacher trainees do not practice skills in clothing and construction using the sewing machines. This has also contributed to the reasons why many qualifying Primary school Home Science teachers do not know how to use a sewing machine. The Home Science tutors also have a hard time to teach large classes some skills in clothing and textiles using very few or without sewing machines.

After interviewing the Home Science tutors, the researcher established that tutors are just forced to teach trainees the parts of the sewing machines, care and use without having them practising how to use them. This is because the trainees are too many to be given a chance to use these machines. Therefore, the tutors just use teacher-demonstrations for the learner to know how to operate a sewing machine yet this is a skill that can be learnt only through practice.

The Home Science tutors further explained that the learners did the sewing using their hands. Their coursework involved making an item using various stitches such as backstitches, tacking and hemming which are functional stitches and chain, satin, sateen, and herring bone stitches, which are decorative. The tutors explained that much of the work was done outside the classroom and there was likelihood that some of the trainees
used their classmates to do the work for them or they took the work to some tailors around the college to do for them. Other skills, which are important to be learnt in Clothing and Textiles such as seams, collars, pockets, openings and fastenings were just mentioned theoretically and were not done practically in class.

The study further revealed that despite the fact that Home Science is a practical subject, it was just taught theoretically in the TTCs. The Home Science tutors have no choice but to limit the amount of practical work because of lack of adequate sewing machines and the large classes. Their performance in teaching was also hindered so much since they could not teach the skills that they could have otherwise taught well if the colleges had adequate sewing machines.

4.3.2.5 Kitchen Utensils

This study found that many colleges did not have the kitchen utensils as illustrated by the 51% of the tutors who said that the utensils were not available in their colleges. Thirty five point seven percent (35.7%) of them stated that the utensils were inadequate while only 14.3% of them indicated that they had adequate utensils. This information is illustrated in figure 4.3.2.
Utensils are useful when teaching of Foods and Nutrition especially the cookery aspect. It was evident that many tutors were unable to teach trainees cookery skills due to lack of these items. On further investigation, the researcher learnt that the tutors were forced by the situation to carry their utensils from home to use for demonstration purposes. The tutors explained that because of lack of kitchen utensils, they simply used teacher demonstration of some skills in teaching Foods and Nutrition that they found to be necessary for the trainees. This was found to be a constraint to tutors because it is impossible for them to buy utensils to use at home and in college at the same time.

4.4 THE FREQUENCY OF USING DIFFERENT METHODS OF TEACHING

Although a teacher cannot do the learning for her/his students, she/he can set up an environment and structure in a situation to bring about desired reaction. She/he can manipulate the environment in an effort to change the student’s behaviour. To do this
successfully, she/he must determine the kind of situation that will bring out desired ends and how she can set the stage for achieving goals.

The research was interested in finding the methods that were frequently used by the Home Science tutors in teaching Home Science. The questionnaire and the interview guide were used to find out the frequency of use of some methods of teaching Home Science and the problems that they were encountering while using them. The observations are as shown in table 4.4.1

Table 4.4.1: The frequency of use of various teaching methods by the Home Science tutors.

<table>
<thead>
<tr>
<th>FREQUENCY OF USE</th>
<th>VERY FREQUENTLY</th>
<th>PERCENTAGE</th>
<th>FREQUENTLY</th>
<th>PERCENTAGE</th>
<th>NOT USED AT ALL</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHODS USED IN TEACHING HOME SCIENCE</td>
<td>PERCENTAGE</td>
<td>FREQ</td>
<td>PERCENTAGE</td>
<td>FREQ</td>
<td>PERCENTAGE</td>
<td>FREQ</td>
</tr>
<tr>
<td>LECTURE</td>
<td>71.4</td>
<td>10</td>
<td>28.6</td>
<td>4</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>DISCUSSION</td>
<td>42.9</td>
<td>6</td>
<td>57.1</td>
<td>8</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>SEMINAR</td>
<td>0.00</td>
<td>0</td>
<td>14.3</td>
<td>2</td>
<td>85.7</td>
<td>12</td>
</tr>
<tr>
<td>PROBLEM SOLVING</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>100</td>
<td>14</td>
</tr>
<tr>
<td>QUESTIONING</td>
<td>42.9</td>
<td>6</td>
<td>57.1</td>
<td>8</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>PROJECT WORK</td>
<td>35.7</td>
<td>5</td>
<td>42.9</td>
<td>6</td>
<td>21.4</td>
<td>3</td>
</tr>
<tr>
<td>ACTIVITY METHOD</td>
<td>14.3</td>
<td>2</td>
<td>15.4</td>
<td>2</td>
<td>62.2</td>
<td>9</td>
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<tr>
<td>ASSIGNMENTS</td>
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<td>2</td>
<td>78.6</td>
<td>11</td>
<td>7.1</td>
<td>1</td>
</tr>
<tr>
<td>VISITS</td>
<td>0.00</td>
<td>0</td>
<td>21.4</td>
<td>3</td>
<td>78.6</td>
<td>11</td>
</tr>
<tr>
<td>DEMONSTRATION</td>
<td>14.3</td>
<td>2</td>
<td>57.1</td>
<td>8</td>
<td>28.6</td>
<td>4</td>
</tr>
<tr>
<td>GUEST SPEAKERS</td>
<td>0.00</td>
<td>0</td>
<td>35.7</td>
<td>5</td>
<td>64.3</td>
<td>9</td>
</tr>
<tr>
<td>GROUP WORK</td>
<td>7.1</td>
<td>1</td>
<td>71.4</td>
<td>10</td>
<td>21.4</td>
<td>3</td>
</tr>
</tbody>
</table>

The majority (71.4%) of the Home Science tutors responded that they used the lecture method very frequently. The other methods that were used frequently were discussion, questioning and demonstration. The researcher noted that the tutors in the Teacher Training Colleges did not use guest speakers, visits, seminars and problem solving
methods. Seminar (85.7%) was ranked the first in the category of methods that were not used at all, followed by visits (78.6%) then problem solving (71.4%). This study identified some constraints Home Science tutors encountered in the use of various approaches of teaching. The researcher also wanted to know how different categories of teachers used various methods of teaching. Basing on this objective, the researcher outlined only the methods that were used frequently only. These findings were as provided below.

4.4.1 Discussion

Forty-two point nine percent (42.9%) of the tutors responded that they used discussion method very frequently and 57.1% of the remaining said that they used it frequently. The findings showed that all the S1 Home Science tutors used the discussion method frequently.

Discussion is one of the most effective techniques for stimulating the learning process. It involves group interactions in which an individual expresses herself/himself and listens to the opinion of others, thus forming the best ideas and judgment. It also enables one to develop tolerance, critical thinking and co-operative tendencies. In this study, the researcher found out that most of the discussions held were not well planned as the groups were quite large, thus all the members were not able to participate and it was also difficult for the Home Science tutor to come up with a seating arrangement where all the participants could face each other without any obstructions. The time for the discussion was also inadequate such that the trainees were not able to finish whatever they were discussing in good time.
Hatcher and Andrews (1963), assert that a more effective discussion procedure should involve the trainees interchanging ideas with each other rather than with the teacher something that was contrary to what is happening in the TTC’s studied. They further stated that discussion could only be effective for indoor instruction only if the number is small to ensure maximum participation by the members and it should be combined with others. Olaitan and Agusiobo (1981), suggested that a good discussion group should be made up of thirty or less members. The researcher found out that this number was still too large for an ideal discussion.

Due to limited time allocated for teaching and a large class the Home Science tutors had a problem in using discussion method of teaching. This is because it was not possible for the tutors to determine the extent to which the objectives were met, individual participation in the discussion and make appropriate plans and follow-up activities that were related to the lesson.

4.4.2 Lecture

This is an instructional technique by which the teacher seeks to create interest, influence, stimulate or mould opinion. It promotes activity by imparting information and developing critical thinking. Minimum number of related teaching aids or instructional materials are used in a lecture.

This study, like many others that have already been done, found that lecture method was used frequently in teaching in the TTC. Seventy one point four percent of the tutors interviewed said that they used the lecture method very frequently. The findings shown in
table 4.4.1 show that all the S1 tutors used it very frequently, 66.7% of the Dip. Ed tutors used it frequently while 33.3% of the remainder used it very frequently, 25% of the B Ed. (Home Economics) graduates holders said that they used it very frequently while 75% used it frequently. None of the postgraduate Home Science tutors used it frequently.

On interviewing the tutors, the researcher was told that all the tutors commonly used lecture method because ideally, it enabled them to cover a lot of work within a short period since the curriculum was too wide and this was the only sure way of trying to complete the syllabus. The tutors also reported that the lecture stimulated students to read further on their own. Many tutors, therefore, preferred it though the major problem was that they had to do too much talking all the time something that was quite tiring. On further investigation during the classroom observation, the researcher observed that during the lecture majority of the trainees seemed to be bored and this was due to their minimum participation.

4.4.3 Demonstration

The findings showed that majority of the tutors (57.1%) used demonstration method frequently, 14.3% used it very frequently while 28.6% did not use this method. The demonstration method, according to Hatcher and Andrews (1963), involves presentation of procedures and processes to be learned. In addition to providing concise information, demonstration is a means of exemplifying high standards for the process being presented. The researcher found that demonstration was frequently used in the TTCs though it had some limitations. These were large classes that some trainees were unable to view what
was being demonstrated by the tutor and materials and equipment used during the demonstration were inadequate.

4.4.4 Questioning

From the interview, the researcher found out that 57.1% of the tutors used questioning frequently while 42.9% used it very frequently. On further investigation about the frequency of using questioning method within different teacher categories, all the S1 and the Dip. Ed holders used it very frequently. Thirty seven point five percent of the B Ed. (Home Econ.) graduates used it frequently while 62.5% used it very frequently. Half of the postgraduate Home Science tutors used questioning method frequently.

The questioning technique is developed in a discussion type setting. It may be carried out by the class teacher, by students’ participation or be used in conjunction with other methods. The researcher found out that in the classroom observations that it was an ideal method to use in the TTC since it encouraged individual thinking and stimulated eagerness to obtain the right answer. It also kept the class lively with the exception of who looked dull because they could not contribute. However, majority of the tutors explained that sometimes the lesson turned out to be very tedious especially if the topic is one, which the students are not informed about at all.

4.4.5 General observation on the Methods used

This study found out that the tutors were using methods that were appropriate for the different topics that they were teaching. However, most of these methods (such as lecture and demonstration) could not motivate the students to find for themselves information,
apply and explain the links. The research established that there was no direct student participation as most of the methods used were teacher-initiated something that rendered students passive. These methods did not encourage and facilitate the development of practical skills since in the case of demonstration the trainees were reduced to mere events observers while tutors did everything.

The study has also revealed that the inadequacy of (materials and resources) contributed to failure of the Home Science tutors to use some approaches that would have been appropriate for the topics that they were teaching. The study also established that the higher the professional qualification of the tutors was, the more they were able to use varied methods in teaching the trainees. There was also a tendency of using methods that could not provide feedback to the learners. Becker (1961), tested the effects of feedback in two comparable groups of student teachers, the teacher who received feedback became significantly more learner centred. Patel and Mukwa (1993), assert that feedback is very important in any skill training which is provided during the coursework and also microteaching.

Some approaches such as visits or field trips, guest speakers, problem solving and seminars were not used at all. On interviewing the tutors, the researcher found that the major problem that they had, was the large classes they handled and the inadequate funding if field trips. It was also not possible for these tutors to use guest speakers as a way of making use of community learning resources because of the limited time they had, yet they were supposed to complete the syllabus. This was also the reason why they frequently used the lecture method.
4.4.6 Conclusion

The data analysed has revealed a number of constraints encountered by the Home Science tutors in the Teacher Training Colleges. The major constraints are the tutors' professional and academic qualification, trainees' academic, socio-economic and cultural background, inadequate resources, large classes and the wide scope of Home Science. These problems emerged from the tutors themselves, trainees, training policies and training environment. A summary of the findings, conclusions, and recommendation are given in chapter five.
CHAPTER FIVE:
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 INTRODUCTION

Chapter one gave the background of the study covering the statement of the problem, basic research questions, objectives of the study, the limitation and scope of the study. The assumptions of the study were also highlighted and the operational definition of terms was also done to indicate the meanings as they are used in the study. In chapter two literatures reviews related to teacher education in general and Home Science education in TTCs in particular were presented. Chapter three dealt with the design and methodology of the study, which included the research design, sample size and description, sampling techniques, administration of research instruments, pilot testing and explained how the data was analysed.

In chapter four, the data was analysed presented and discussed under the following themes: the demographic background of the Home Science tutors, factors contributing to teaching constraints experienced the Home Science tutors were experiencing, the analysis of the resources and facilities that are used in teaching of Home Science in the TTCs and the frequency of using different teaching techniques by the Home Science tutors. This present chapter contains the summary of the findings, conclusions, recommendations and suggestions for further research.
5.1 SUMMARY AND FINDINGS

The data analysis and discussions in chapter four followed certain themes derived from the basis of the study. The summary and findings of the study are also presented in the same format.

5.1.1 Demographic background of the Home Science Tutors.

The present research has established that Home Science tutors in the TTC are aged between twenty and fifty years. Most of these tutors were married. Further, all the Home Science tutors in the TTCs selected for this study were female. The gender factor contributed to the negative attitudes of the male trainees towards the subject.

5.1.2 Factors contributing to teaching constraints that the Home Science Tutors were Experiencing.

The present research came up with various factors that hinder the proper teaching of Home Science in the Teacher Training Colleges.

1. It was clear from the data that the majority of the tutors were well qualified academically and professionally. However, the majority were trained to teach in secondary schools and not in colleges. Only 14.3% of the Home Science tutors had attained a postgraduate degree and none of the tutors had B Ed (primary option) degree.

2. Very few of the tutors had attended in-service course to equip them with the necessary skills to train teachers. This was a limitation because the tutors were not
continually prepared to teach in the TTCs yet there is a great change in the trainees’ needs, societal and technological changes.

3. The Home Science content fell under the following three areas: skills in teaching, theory and practical aspects of Home Science. The study revealed that the theory aspect of Home Science was adequately covered while the practicals were inadequately covered. On specific areas of Home Science content, Foods and Nutrition and Clothing and Textiles were not well covered.

4. On coverage of the syllabus, the majority of the tutors indicated that they did not cover the syllabus. The factors that contributed to this were listed as; a wide scope, limited time, large classes, limited or lack of resources and interruption by other academic activities such as teaching practice and core curricular activities such as games and sports.

5. Lack of adequate staff members did not emerge as one of the constraints encountered by the Home Science tutors in the colleges.

6. It was clear that microteaching and teaching practice are not effectively carried out in colleges. Microteaching sessions were few and crowded and the chances for a trainee to be supervised while teaching Home Science during the teaching practice were also minimal. Supervision of trainees during teaching practice was also done by any tutor and not necessary a specialist in Home Science.

5.1.3 Resources and facilities used in teaching of Home Science in the TTCs.

1. The present study has established the resources and facilities were inadequate and not available in many colleges. There were learning resource centres (LRC’s) but
they were inadequately equipped, managed and they were also hardly used in teaching and training because of limited time and large classes.

2. Tutors lacked reference books and teachers’ guides. Laundry equipment was not available in all the colleges. Further, it was revealed that though improvisation was done, the items improvised were not sufficient for the large classes. All the colleges had learning resource centres (LRC), but they were underutilized in teaching and training. The initial purpose of putting up these resource centres in Teachers’ colleges has not been realized. This implies that due to lack resources, tutors have averted the practical aspect of Home Science and emphasized the theory aspect only.

5.1.4 Teaching techniques use in teaching Home Science tutors

The study has revealed that lecture method was the most frequently used followed by questioning and demonstration. The methods that were not used at all included seminars, visits, drama and guest speakers. It was evident that the methods commonly used by the tutors were not exposing students to a variety of teaching methods during training.

The tutors indicated that they had a hard time to teach Foods and Nutrition because it involved a lot of practical work, which required use of resources and facilities yet they were limited. The same thing applied to clothing and textiles. The tutors were, therefore, left with no choice but to teach theoretically even what should have been well taught if it was done practically. It is also evident that tutors taught theory part effectively but ignored the areas that required practical.
The research has established that most of the Home Science tutors did not have an idea of the content of the Primary school Home Science syllabus since only a few cited the related and non-related topics on the primary and TTCs’ Home Science curricula. The researcher also noted that there was lack of uniformity in the layout, statement of objectives, sequence of topics and suggested activities.

Apparently, microteaching is not done in some of the colleges and even in the colleges where it is done, the groups are said to be too large to be effective and time used is not adequate. This renders microteaching less effective. On teaching practice, the study found that the majority of the trainees went out thrice for practical teaching during the two-year course. Only 7.1% were supervised more than four times. The average number a student was supposed to be seen during teaching practice was six. However, Home Science was not given an equal opportunity as the other subjects, which were considered to be academic.

The researcher found that most tutors used end of term theory examinations to evaluate their trainees. They also evaluated practicals by assessing the finished articles and not the making process. Therefore, as to whether the trainees made the articles for themselves asked the fellow course mates to make for them or took to a tailor outside the college to make was not an issue. What matters was whether the trainee handed in a finished article or not for assessment. This shows that the skill learning of the trainees in colleges is not emphasized. Evaluation was done mainly to obtain CAT marks and the final grade. It was not diagnostic, as it did not check on the trainees’ mastery of knowledge and skill.
5.2 SUGGESTIONS AND RECOMMENDATIONS

From the data analysis, interpretation and subsequent findings, the researcher came up with the following recommendations regarding the teaching of Home Science in the TTCs. The success of teaching Home Science would require that students who enrolled have a minimum ‘O’ level knowledge of Home Science. It is commendable that the minimum average grade for TTC is C grade. This would ensure that the two-year course duration polished up the content and gave more emphasis to methodology and skill training aspects.

a. The competencies required by all-round Home Science teacher should be explicit. This will form criteria for certification of qualified Home Science teachers.

b. Tutors should be specifically trained to teach in colleges. Thus, B Ed. (primary option) should be expanded and M Ed (PTE) program re-established. Other tutors who may have been recruited from primary and secondary school schools should be in-serviced regularly to keep them abreast with changes in the subject. Such in-service courses should be organized by KIE in conjunction with the inspectorate.

c. KIE should review the Primary and TTC Home Science syllabus. This will ensure that there is a correlation between the two syllabi so that the trainees are adequately prepared to teach all that is contained in the primary syllabus.

d. The allocation of three periods of thirty-five minutes per week is inadequate to cover the TTC Home Science syllabus. The researcher
recommends four periods per week; two single periods and one double period.

e. Tutors should utilize a variety of methods when teaching so that students learn how and when to use them.

f. Home Science practicals should be examinable in colleges to ensure that students get basic skills.

g. The Kenya Home Economics Association should be revived to help support and address issues affecting the field of Home Science.

h. Methods of preparation of teacher should be given emphasis particularly microteaching and Teaching Practice. As it is now, the methodology and skill training aspect of Home Science is not adequately preparing the students to be effective teachers. There are even colleges which are not carrying out microteaching at all and as a result of this, the trainees are ill prepared to teach.

i. Resources and facilities must be availed for Home Science to be taught well since it is a practical subject. The entire college, the parents and the Ministry of Education should combine forces and buy materials and other facilities for the teacher training colleges. The subject should be made optional to reduce the stress the Home Science tutors has to undergo in preparing trainees using the limited resources. This will also eliminate the issue of the tutor having to teach trainees who have no interest in the subject at all and they even have a negative attitude towards the subject.

j. The learning resource centres should be revitalized and equipped. Trained personnel should be employed to keep the LRC and tutors and trainees
need to be encouraged to use the LRC. This can be done during seminars, workshops and also during the in-service training.

5.3 SUGGESTIONS FOR FURTHER RESEARCH

1. This study was confined to four colleges only. A similar research could be carried out to cover more colleges. This will give results that can be generalized to other colleges in the country.

2. A follow up study can be done on the performance of the students when they are finally posted in primary schools to teach Home Science.

3. A study can also be done to determine the effectiveness of the Primary TTCs in training Home Science teachers.

4. A study of TTC trainees’ attitude towards Home Science could also be done.

5.4 CONCLUSION
BIBLIOGRAPHY


APPENDIX I: TEACHER QUESTIONNAIRE

Dear Home Science tutor,
You have been identified among others to provide information that might help to improve Home Science teaching in our colleges. This questionnaire is designed to obtain information on the constraints Home science tutors face in teaching Home Science in Teacher Training Colleges and not for any other purpose. The information provided will be treated with maximum confidentiality. Your contribution towards the accomplishment of this goal by being honest and sincere in your responses will be of very great value and will be highly appreciated. Do not write your name anywhere on this questionnaire.

Please answer all the questions to the best of your ability by ticking the appropriate answer in the boxes provided [✓].

> COLLEGE: ________________________________

(A) PERSONAL DETAILS

1. Gender:
   Male [ ] Female [ ]

2. Age:
   a) 20-30 years [ ]
   b) 31-40 years [ ]
   c) 41-50 years [ ]
   d) 51 and above [ ]

3. Marital status:
   a) Married [ ]
   b) Single [ ]

(B) TRAINING

4. What is your academic qualification?
   a) ‘O’ level [ ]
   b) ‘A’ level [ ]

5. What is your professional qualification?
a) S1 [ ]
b) Dip Ed. [ ]
c) B. Ed. (Regular) [ ]
d) M. Ed./ MA [ ]
e) B. Ed (primary option) [ ]
f) Any other (specify) __________________________

6. For how long did you train as a Home Science teacher?
   a) One year [ ]
   b) Two years [ ]
   c) Three years [ ]
   d) Six years [ ]
   e) Eight years [ ]

7. For how long have you taught Home Science in a Teacher Training College?
   a) Less than one year [ ]
   b) Between one and two years [ ]
   c) Between three and five years [ ]
   d) Five years and above [ ]

8. Since you joined the Teacher Training College, have you attended any in-service course for Home Science?
   No [ ] Yes [ ]

(C) SYLLABUS AND CONTENT

9. Which areas of Home Science do you find difficult to teach?
   a) Clothing and Textile theory [ ]
   b) Clothing and Textile practical [ ]
   c) Food and Nutrition theory [ ]
   d) Foods and Nutrition practical [ ]
   e) Home Management theory [ ]
   f) Home Management practical [ ]
   g) None [ ]

10 a) Are you familiar with the primary school syllabus?
   No [ ] Yes [ ]
b) If yes, in what areas have you realized the differences between the primary school and the Teacher Training College Home Science syllabi?

a) Foods and Nutrition  [ ]
b) Clothing and Textiles  [ ]
c) Home Management  [ ]
d) Child Care  [ ]

Any other (specify) ____________________________________________________________

11. How many periods per week are allocated teaching Home Science in your college?

a) Two periods per week  [ ]
b) Three periods per week  [ ]
c) Four periods per week  [ ]

12. Is this time adequate for covering this work?

No [ ]  Yes [ ]

13. If the answer is no, how do you manage to cover the syllabus?

______________________________________________________________________________

______________________________________________________________________________

14. Apart from time, what other factors contribute to not completing the work?

______________________________________________________________________________

______________________________________________________________________________

15. How would you rate the Teacher Training College Home Science syllabus in terms of usefulness in helping you to teach the subject?

a) Very helpful  [ ]
b) Helpful  [ ]
c) Not helpful  [ ]

16. If not very helpful, what suggestions would you offer for the improvement?

______________________________________________________________________________

______________________________________________________________________________

17. Is the Home Science department in your college often adequately staffed?

No [ ]  Yes [ ]
(D) TRAINING EXPERIENCE

18. How much time is allocated to teach Home Science methodology in your college?
   (Insert the number of periods) -----------

19. How adequate is this time allocation in covering the methodology aspect of the syllabus?
   a) Very adequate [ ]
   b) Adequate [ ]
   c) Not adequate [ ]

20. Home Science is a practical subject and many processes and skills have to be learned during the course. (e.g. sewing process and cookery). How effective is your supervision of students when practising these skills?
   a) -----------------------------------------------------------------------
   b) -----------------------------------------------------------------------
   c) -----------------------------------------------------------------------

21. If not effective, what constraints make supervision inadequate?
   a) Lack of time [ ]
   b) Large classes [ ]
   c) Lack of facilities [ ]
   d) Any other (specify) ______________________________

22. How often do you use the following methods in the teaching of Home Science in your colleges?

<table>
<thead>
<tr>
<th></th>
<th>Very Frequently</th>
<th>Frequently</th>
<th>Not used at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discussion</td>
<td></td>
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<tr>
<td>Seminar</td>
<td></td>
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<tr>
<td>Problem solving</td>
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<td></td>
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<tr>
<td>Questioning</td>
<td></td>
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<td></td>
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<tr>
<td>Project work</td>
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<td></td>
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<tr>
<td>Activity method</td>
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<tr>
<td>Assignment</td>
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<tr>
<td>Visits</td>
<td></td>
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<tr>
<td>Demonstration</td>
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<tr>
<td>Visits</td>
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<td>Guest speakers</td>
<td></td>
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<td></td>
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<tr>
<td>Group work</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
23. Do you have microteaching in your college before students go for teaching practice?
   No [ ]    Yes [ ]

24. Who organizes microteaching in the college?
   a) Individual departments [ ]
   b) The microteaching committee? [ ]
   c) Combined departments [ ]
   d) Any other (specify)____________________

25. How long does microteaching class last if any?
   a) Less than a month [ ]
   b) Two months [ ]
   c) Three months [ ]
   d) Any other (specify) [ ]

26. How many students form a group of microteaching?
   a) Five [ ]
   b) Ten [ ]
   c) Twenty [ ]
   d) Over twenty [ ]

27. How soon after microteaching do your students go out for teaching practice?
   a) Immediately [ ]
   b) After two months [ ]
   c) After three months [ ]
   d) After four months [ ]

28. How long does teaching practice session last?
   a) Two weeks [ ]
   b) Three weeks [ ]
   c) Four weeks [ ]
   d) Six weeks [ ]

29. How many times is a student supervised in teaching of Home Science during teaching practice?
   a) Four times [ ]
   b) Five times [ ]
   c) Six times [ ]
d) Any other (specify) .................................................................

30. Who supervises the teaching of Home Science during teaching practice?
   a) Class tutor [ ]
   b) Professional studies tutor [ ]
   c) Home Science tutor [ ]
   d) Others (specify) ................................................................

(E) RESOURCE FACILITIES

31. Do you have a Home Science laboratory in your school?
   No [ ] Yes[ ]

32. If the answer is yes, is the laboratory well equipped?
   No [ ] Yes[ ]

33. How often do you use the resource centre in your college as a centre of teaching materials?
   a) Very often [ ]
   b) Often [ ]
   c) Rarely [ ]
   d) Never [ ]

34. Indicate the state of the following resources in your Home Science laboratory by ticking adequate, inadequate and not available.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Adequate</th>
<th>Inadequate</th>
<th>Not available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbooks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers’ guide</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sewing machines</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kitchen utensils</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cookers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laundry</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Reference books</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Teaching aids</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

(F) PROBLEMS IN TEACHING HOME SCIENCE

35 What are the major constraints facing the teaching of Home Science in your college?
36 How do you cope with some of the problems you have mentioned above?

37 What suggestions would you offer for their remedy?

38 What is your feeling about the issue of Home Science being non-examinable any more in primary schools?

39 Does this have any effect on your teaching of Home Science in Teacher Training College?

   No [ ]       Yes [ ]

40 a) Do you think the Primary Teacher Training College Home Science syllabus also needs to be revised?

   No [ ]       Yes [ ]

   b) Why?  

THANKS FOR YOUR CO-OPERATION

CAROLYNE N. TELEWA
# APPENDIX II: OBSERVATION SCHEDULE

<table>
<thead>
<tr>
<th>COLLEGE</th>
<th>CLASS</th>
<th>TOPIC</th>
<th>DATE</th>
</tr>
</thead>
</table>

**KEY:**
- VA - Very adequate
- A - Adequate
- AV - Average
- INA - Inadequate
- VINA - Very inadequate

## SPECIFIC AREAS THAT WERE COVERED IN THE CLASSROOM OBSERVATION SCHEDULE

<table>
<thead>
<tr>
<th>PROFICIENCY OF CONTENT</th>
<th>VA</th>
<th>A</th>
<th>AV</th>
<th>INA</th>
<th>VINA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutors' knowledge and understanding of all the content related to the lesson</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>His or her ability to answer most of the trainees' questions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appropriateness of teaching method based on the nature of the content</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Mastery of all the content to motivate learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coverage of content planned for that specific lesson</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>His or her mastery of the content well enough to facilitate motivated learning</td>
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<td></td>
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</tr>
</tbody>
</table>

## METHODS USED

<table>
<thead>
<tr>
<th></th>
<th>VA</th>
<th>A</th>
<th>AV</th>
<th>INA</th>
<th>VINA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using a method, which motivates trainees to find for themselves information, application and explanation links.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Trainees’ direct participation in the lesson.</td>
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<td></td>
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</tr>
<tr>
<td>Using of a method to encourage and facilitate the development of practical skills.</td>
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</tr>
<tr>
<td>Use of verbal reinforcement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of non-verbal reinforcement such as gestures, posture and facial expression effectively and systematically.</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>General appropriateness of the method chosen and used for this particular lesson.</td>
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<tr>
<td>Use of demonstration in the case practical.</td>
<td></td>
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<tr>
<td>His or her ability to decide on the appropriate method of teaching based on the nature of content.</td>
<td></td>
<td></td>
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</tbody>
</table>

## AVAILABILITY AND USE OF RESOURCES

<table>
<thead>
<tr>
<th></th>
<th>VA</th>
<th>A</th>
<th>AV</th>
<th>INA</th>
<th>VINA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of planned resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\text{Use of chalkboard.})</td>
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<td></td>
<td></td>
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<tr>
<td>(\text{Use of audio-visual teaching aids.})</td>
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</tr>
<tr>
<td>(\text{Use of self made teaching aids from locally available materials.})</td>
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<tr>
<td>(\text{Use of local environment as resources of his or her teaching aids.})</td>
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</tr>
<tr>
<td>(\text{Tutor’s effort to enrich his lesson by using self-made teaching aids from locally available materials.})</td>
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</tr>
<tr>
<td>(\text{Her readiness and ability to effectively use of the local environment as resources for her teaching.})</td>
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<tr>
<td>(\text{Trainees’ participation in the preparation of the teaching aids.})</td>
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<tr>
<td><strong>(\text{GENERAL OBSERVATION})</strong></td>
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<tr>
<td>(\text{Use of appropriate questioning techniques to gauge whether the class is catching on.})</td>
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<tr>
<td>(\text{Monitoring of class performance and individual performance by passing from desk to desk.})</td>
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<tr>
<td>(\text{Readiness to clarify or do remedial teaching where students show lack of grasp.})</td>
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<tr>
<td>(\text{Giving enough class work or homework to the students at the end of the lesson.})</td>
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<td></td>
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<tr>
<td>(\text{Giving feedback to students as about their performance by way of correcting the assignment.})</td>
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<td></td>
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<tr>
<td>(\text{Time allocation for each activity.})</td>
<td></td>
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<tr>
<td>(\text{Trainees’ participation in class.})</td>
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<tr>
<td>(\text{Class size.})</td>
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<tr>
<td>(\text{The behaviour of the students during the lesson.})</td>
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<tr>
<td>(\text{Tutor’s classroom control.})</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>(\text{Classroom arrangement and organization.})</td>
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<tr>
<td>(\text{Trainees’ attentiveness during the lesson.})</td>
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<tr>
<td>(\text{Trainees’ participation during the practical lesson.})</td>
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</tbody>
</table>
APPENDIX III: INTERVIEW GUIDE FOR HOME SCIENCE TUTORS

COLLEGE __________________________

Establishing a rapport

Background Information

1. Sex   Male [ ]   Female [ ]

2. Professional Qualification
   a) __________________________
   b) __________________________
   c) __________________________

3. Academic Qualification
   a) __________________________
   b) __________________________

4. Working Experience (Number of years) __________

5. Courses taught
   a) __________________________
   b) __________________________
   c) __________________________
   d) __________________________

6. How many lessons do you teach per week? __________

7. Do you have enough Home Science tutors in your college?
   Yes [ ]    No [ ]

8. a) Are Home Science resources and facilities in your college adequate? (probe)
   Yes [ ]    No [ ]

   b) If the answer is no, how do you cope with the problem of limited resources? __________________________
9. What is the total enrolment in your college in the
   a) First year
   b) Second year

10. What is the average size in each class?

11. Do you have any problem in implementing the home science curriculum? (probe).

12. If your answer is yes, what are some of these problems?
   a) 
   b) 
   c) 
   d) 

13. In your opinion, how can these problems be solved?
   a) 
   b) 
   c) 
   d) 

14 a) Do you think the trainees’ academic, social and economic background have any
     impact on the teaching and learning of home science in the TTC?
     c) Explain

15. Do you have any other comment on the teaching and learning of Home Science that
    you would wish to give?
Carolyne Naliaka Telewa  
Kenyatta University  
P.O. BOX 43844  
NAIROBI

Dear Madam

RE: RESEARCH AUTHORISATION

On the basis of your application for authority to conduct research on 'Teaching Constraints experienced by Home Science Tutors in selected primary Teachers Training Colleges in Kenya, I am pleased to inform you that you have been authorised to conduct research in Nairobi and Central Provinces for a period ending 30th April, 2003.

You are advised to report to the Provincial Commissioners and the Provincial Directors of Education Nairobi & Central Provinces before embarking on your research project.

You are further expected to avail two copies of your research findings to this Office upon completion of your research project.

Yours faithfully

A. G. KAARIA  
FOR: PERMANENT SECRETARY/EDUCATION

CC  
The Provincial Commissioner  
Central  
Nairobi  

The Provincial Director of Education  
Central  
Nairobi
MINISTRY OF EDUCATION

OFFICE OF THE PROVINCIAL DIRECTOR OF EDUCATION
CENTRAL PROVINCE
P.O. Box 80, NYERI.

The Principal,
Kilimambogo, Murang'a, Thogoto,
Kamwenja Teachers' Colleges.

RESEARCH AUTHORISATION
CAROLINE NALIAKA TEREWA

The above-named person is pursuing an M. Ed. Course at Kenyatta University.

She has been authorised to carry out research in areas which are covered by your college.

Please accord her all the necessary assistance and cooperation in her conduct of research

W. W. WANJAU, DSM
for: PROVINCIAL DIRECTOR OF EDUCATION
CENTRAL PROVINCE

The Permanent Secretary,
MOEST,
P.O. Box 30040,
NAIROBI. (Ref. yours MOEST 13/001/32C/283/2 OF 18/12/02)