An Assessment of Teaching Constraints Experienced By Home Science Tutors in Primary Teacher Training Colleges in Central Province of Kenya

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ABSTRACT

There are social, political, economical, cultural and technological changes that affect the proper teaching of Home Science. The study aimed at unearthing the constraints that the Home Science tutors encountered in training Primary Home Science teachers. To be able to do this, the curriculum, methodology, tutors’ qualifications, teaching resources and facilities that were being used in teaching Home Science in Teachers Training College (TTC) were investigated. The four selected public primary TTCs selected for the study were Murang’a, Thogoto, Kamwenja and Kilimambogo. A survey research design was applied using three instruments of data collection, namely interview guide, classroom observation schedule and Home Science tutors’ questionnaire. The collected data was analyzed 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. From results and discussion of the study it was concluded that students enrolled in colleges lack sound Home Science background which hinders effective training as primary Home Science teachers. In addition, tutors teaching Home Science in colleges are qualified academically and professionally but are trained to teach in secondary schools and not in teacher training colleges. Tutors are also not given induction courses upon joining college and are not in-serviced in methodology of teaching of Home Science to teacher trainees. It was recommended that the Kenya Institute of Curriculum Development (KICD) 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. Moreover, the allocation of three periods of thirty-five minutes per week is inadequate to cover the TTC Home Science syllabus. The research further recommends four periods per week; two single periods and one double period.

**Keywords:** Constraints, Content, Curriculum, Home Science, Teacher Category

**INTRODUCTION**

Teacher education in general and pre-service training in particular have long been some of the areas of great concern to educational planners, policy makers, teacher educators and researchers all over the world. Many scholars agree that the renewed concern or emphasis on the preparation of teachers since the late 1950s has grown out of the recognition of the decisive role that teachers play in education. Teachers play a key role in the implementation and evaluation of curriculum changes and innovations. Home Science was introduced in schools with the aim of improving the welfare of individuals and the entire society. It is an art subject 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 as a subject 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 to take care of the compound, personal hygiene and 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 integrate them all and apply them in daily processes of making a healthy 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. It 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, namely subject matter, foundations of education, professional studies and teaching practice. Home Science is classified as a technical and vocational subject (Ministry of Education, 2003). Education in Kenya is controlled by the Ministry of Education Science and Technology (MoEST), which determines the content of the curriculum. The syllabi are produced by the Kenya Institute of Curriculum Development (KICD), a Government parastatal, and distributed to all institutions in the republic. Sadly, the curriculum to which primary school teachers are in Kenya exposed does not promote any meaningful or effective teaching.

It is a standardized curriculum handed down from the MoEST and much of the content is based on the urban situations. It is usually assumed that what works in one setting will automatically work in another. There is no regard for context. Nyangara, Indoshi and Othuon (2010) argue that the policy framework that governs Home Science at national level needs curriculum reforms and that the government needs to urgently implement the National Training Authority as pledged in 2004 under its policy framework for education training and research. The Home Science syllabus has also continually been overloaded and poorly sequenced (Sigot, 1987; Mwiria, 2002). Lau (2004) contends that inadequate technologies, lack of time and funding, poor curriculum planning, large classes and lack of human supports have affected the teaching of Home Economics. Black (2007) observes that Home Economics, being a practical intensive subject, needs the application of technologies for productivity, personal development and source of wealth. Otunga (2010) contends that the emphasis on technical and vocational subjects like Home Science has waned due to the academic workload and too much focus on passing written examinations. 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. This renders the content irrelevant to the local needs.

**Teacher Education in Kenya and Home Science Teacher Training**

Teacher education in Kenya is organized into three major phases, namely
foundation phase, laboratory phase and transfer phase.

**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.

**Laboratory Phase**
In the laboratory phase, the student is expected to demonstrate instructional and interpersonal competencies under simulated classroom conditions. In the teacher training colleges (TTCs), this phase is also known as microteaching.

**Transfer Phase**
Under this phase, the student is supposed 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) have designed a teacher training model which can clearly illustrate this concept in further five phases as follows:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Clarification and theoretical explanation of subject matter</td>
</tr>
<tr>
<td>2</td>
<td>Clarification of objectives and rationale of performance</td>
</tr>
<tr>
<td>3</td>
<td>Demonstration</td>
</tr>
<tr>
<td>4</td>
<td>Simulated practice</td>
</tr>
<tr>
<td>5</td>
<td>Training for transfer to a real world situation</td>
</tr>
</tbody>
</table>

*Source: Bruce and Marsha (1980, p. 64)*

The teaching of Home Science in TTCs has continued to experience major obstacles that Home Science tutors must endeavour to surmount. Indeed, tutors in TTCs continue to teach Home Science to teacher trainees even though the subject is no longer examined in primary schools. Home Science is taken as a compulsory subject at the teacher training colleges, regardless of whether the student teachers had background knowledge in Home Science or not. Home Science has also remained a female dominated field ever since it was introduced in Kenya. It is in this regard that the study sought to find out the constraints that home science tutors face at the TTCs in order to recommend ways to resolve them through policy and curriculum changes.
MATERIALS AND METHODS
This was 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 analysed to make a critical evaluation. Several glaring observations indicated that poor performance in Home Science by primary school pupils was due to inadequate preparation of teachers during training. The study dealt with a variety of themes which helped in revealing the possible constraints that tutors faced. These included: demographic and academic qualification of tutors and students, contest in Home Science syllabus, methodology, micro-teaching, teaching practice, evaluation of students' performance, resources and facilities and pedagogical problems in teaching Home Science. All these issues were investigated to give insight into the programme that prepares teachers for teaching Home Science in Primary Schools.

The study was limited to four colleges only. These were Thogoto, Kilimambogo, Kamwenja and Muranga. The sample was randomly selected by assigning a number to each of the six classes of second year P1 students in the participating colleges. The numbers were written on pieces of paper and put in a container. The authors then picked one paper at random and the number on the paper indicated the selected class for the study in each of the colleges. In all, 149 students and 11 tutors from the four colleges participated in the study. Data was collected using two questionnaires, one for the students and the other for the tutors. Additional data was obtained from resource and facility checklist and past examination papers set by the colleges and Kenya National Examination Council (KNEC). The data was then analyzed and the results presented using descriptive statistics.

RESULTS AND DISCUSSION
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. Moreover, the findings revealed that 57.1% of the Home Science tutors had a B.Ed. (Home Economics) degree, 21.4% had a Diploma in Education, 7.1% of them were SI teachers and 14.3% had attained a
postgraduate level 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 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 the selected TTCs have reasonably high academic and professional qualifications despite the fact that only 14.3% of the tutors were postgraduates. The research further found 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 PI teachers.

Engagement to Teach in the TTC
The study sought to establish how the Home Science tutors in the TTC were being recruited to teach Home Science in the TTCs. 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) says that most of the tutors in colleges were being recruited as TTC tutors from the university and as teachers from secondary schools. Indeed, the study 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 states that majority of the teachers in the TTCs emphasize the academic content to the neglect of the professional aspect of the teacher, something that is vital for the teacher training.

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). The study findings showed that majority of the Home Science tutors in the TTCs were qualified to teach. This is because three years is adequate for them to be prepared in all aspects of teacher education. However, there is a likelihood of the SI tutors who are trained for two years to have a problem because this period is not adequate for them to be sufficiently trained. Sifuna (1985, p. 48) states that two years are not adequate for the training of primary school teachers. It is even worse when these SI 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 are not prepared for the kind of work they are being entrusted to do.

**Years Taught Home Science in TTC**

From the research findings, 71.4% of the tutors had taught Home Science in a 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. From the interviews, it emerged that most of the tutors recruited from both the primary and secondary school levels had problems changing to teach in college. However, this was found be a problem because the college is a different level 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 both primary and secondary school levels. This was identified as a major constraint that tutors were encountering.

**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) states that the effectiveness of teachers depends on the initial and continued training so as to equip them with techniques, skills, attitudes and knowledge necessary to make them feel confident in their undertakings. In-service training is important for continuous preparation of the tutors, especially with the changing demands of the trainees alongside the
technological changes. The interviews revealed that the major reason some of the Home Science tutors had not been in-serviced was the limited time, teaching resources. It could also be attributed to ignorance among some of the Home Science tutors on the importance of continuous career formation. Nevertheless, 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. As revealed in the interviews, wherever in-service programmes were being undertaken, they were on irregular basis; besides, they were done generally for all TTC tutors, not specifically for the Home Science tutors.

It was further noted that there was little effort put in place on in-service training from the Ministry of Education. Very little was being done to improve the quality of the tutors. This simply shows that the training and professional enrichment of teacher trainees continue to be neglected. This was another constraint that the Home Science tutors were facing. Moreover, because they were not being regularly in-serviced to enable them cope with the changing times, the tutors continued using outmoded teaching approaches in training teachers (Gitobu 1991). This explains the slow development of Home Science as a discipline since its formal introduction in Kenya.

**Familiarity with the Primary Home Science syllabus**

This section sought to elicit information on whether or not the tutors were familiar the Primary school 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 said they were not familiar with it. Familiarity with the content of the syllabus is important because it gives them direction on what the trainees ought to know before they are sent to the field to teach. The primary school Home Science syllabus should be related to the Teacher Training College syllabus. The research further revealed that despite the fact that a majority (78.6%) of the tutors was familiar with the primary school Home Science syllabus, some were not. This ignorance denied them the opportunity to understand and equip the trainees with the skills they required to be able to implement the primary school Home Science objectives. They also seemed unaware about the content that trainees had to be conversant with to be able to competently teach once
they get posted to teach Home Science in primary school.

The fact that some Home Science tutors were unaware of content of the primary school Home Science syllabus made them teach without any direction. Subsequently, the trainees would also get to the field only to be estranged by new content. It is even worse for some trainees who may not have an initial background in Home Science since some topics may sound very strange to them. From the responses in the interviews, most tutors had not familiarized themselves with the primary school syllabus just because the booklets were not available in the TTCs. Another reason given was that they did not see the need because they were only concerned with the TTC Home Science syllabus.

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 per cent (60%) of them said that there was no marked difference between the two syllabi. Of the tutors who noticed the difference, only 37.8% could identify the topics they found to be different while the majority 62.2% did not respond to this item. The research 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 identify content that were different. In addition, it was observed that the layout of the teacher training college syllabus is haphazard compared to the primary school syllabus. There is a marked difference in the statement of objectives, sequential layout of the content and topics and suggested practical activities. Moreover, some topics are omitted on the TTC syllabus while they appear in the primary school Home Science syllabus. One of such topics is that on saleable foods. On comparing the two syllabi, it was found that primary Home Science syllabus was well thought out and organized unlike the TTC Home Science syllabus.

Over this issue, it was 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) posits that there is a gap between the teacher training college and primary school curricula. According to Fleck (ibid.), 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 research further noted that the absence 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 education. As a result, tutors are left with no choice but to implement an ineffective syllabus.

This study also revealed that there was a lot of fragmentation of the Home Science syllabus. This was another constraining factor to the Home Science tutors in the teacher training colleges because they had to present the information in bits. This necessitated the principle and practice 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.

**Rating the Home Science Syllabus**

The research further sought to assess the content of the TTC Home Science syllabus. It was found that the major aim of the TTC 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 2 below.

**Table 2: 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</td>
</tr>
<tr>
<td>Science related to the home</td>
<td>36 periods for three</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>

The study findings on the total time allocated for teaching Home Science in the two years of teacher training were as shown in the table below.

**Table 3: Total Time allocated for Teaching Home Science in the 2-Year 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 research further sought to establish the opinions of the tutors on the TTC Home Science syllabus. Of the tutors, 57.1% interviewed rated the Home Science syllabus as helpful in teaching the subject while 42.9% did not find it helpful.

The interviews revealed that the content 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). This contradicts the objectives of the TTC Home Science
The Home Science tutors explained that they always rearranged the syllabus to balance with the time allocated and they only taught topics they thought were necessary and important. This was an unprofessional practice.

**Time Allocated for Teaching Home Science**

The research also sought to ascertain whether or not the time allocated for teaching Home Science in the TTC was adequate. The tutors were asked to indicate the number of thirty-five minute durations they had for teaching Home Science per week. They were also asked to state whether or not the time allocated for teaching Home Science on the timetable was adequate to cover the syllabus. This was meant to elicit 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 each per week. From the analysis of the TTC Home Science syllabus, the research 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 PI 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, it can be concluded that the TTC Home Science curriculum is wide. This points to the possibility that the tutors do not cover some topics, which could definitely contribute to the teacher trainee’s incompetence when they are 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.

**The Home Science Teaching Staff**

The research findings showed that the TTCs were adequately staffed. Of the tutors, 92.9% said they were well staffed with only a minority (7.1%) them saying that they were not adequately staffed. This finding showed that the lack of enough Home Science tutors was not one of the constraining factors in colleges. The research 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.

**Home Science Content Coverage in TTC**

The item on content coverage sought 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 to state how well they covered the areas of Home Science during the training of primary school teachers. Their responses were as shown in the table below.

**Table 4: Home Science Content Coverage**

<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>

From the findings in the table above, 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. Of the tutors, 71.4% stated that the theory part was adequately covered compared to 28.6% of them who indicated that it was not adequately covered. 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 adequately taught 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 19.1% of the tutors adequately covered the practical work 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, it was established that the tutors organized to have practical sessions during the weekends. The tutors demonstrated some of the 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. Pauolcci (1961) asserts 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. Everything was done by the teacher while the whole class just observed and they were not given the opportunity to practice the required skills in home making.

The information obtained from the interviews and observations revealed that majority of the tutors adequately covered the theory and methodology because the trainees with limited supervision could do much of the work on their own. 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. The study further revealed that despite the fact that Home Science is a practical subject in which students are supposed to learn by doing, this was not the case with the TTCs. The research noted that large classes, owing to over-enrolment, and the subsequent 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 end result is an ill-prepared primary school Home Science teacher.

The Socio-Economic and Academic Background of the Students

The research further sought to ascertain whether or not 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. From the interviews with the tutors, the study found that the Home Science tutors got a hard time because they had to teach every topic from the scratch. This is because at times students were very ignorant of some basic topics. There was also a likelihood of the tutors overlooking some topics thinking that trainees already had prior training in, which may 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.

On the issue of cultural background, a few tutors (14%) said that because of culture, some male trainees were not co-operative when they were instructed to carry out some of the practical work, especially cooking. They believed that Home Science was meant for women and as such 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 & 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 research revealed that there was need for the trainees to get this information in the right perspective. The 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.

**Microteaching**

Patel and Mukwa (1993) define 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. Of the tutors, 92.9% stated they had microteaching in their colleges. Only 7.1% of them said they did not have. The research also sought to establish the people who organized microteaching in the TTC. Fifty per cent (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. The 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. From the study findings, 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 trainees to undergo microteaching in a
Home Science lessons. This also implies that the microteaching sessions are few due to limited time and the tutors can therefore hardly provide feedback to the trainee, which is vital for microteaching.

From the study findings, 57.1% of the tutors said that their microteaching group comprised more than twenty trainees. Twenty eight point six per cent of them further stated that their microteaching groups had twenty trainees while only 14.3% reported that their microteaching groups were comprised of ten trainees. No college had a microteaching group of five trainees. The study also 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 research 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 & Mukwa, 1993). 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 impart some skills on trainees before they left college. This was done mainly through teacher demonstration, which is not supposed to be the case since students should be given the opportunity to try out by themselves.

Teaching Practice

The tutors were asked to state the 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 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 which 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 research established that Home Science is not given priority during supervision while on teaching practice. Other subjects such as Mathematics, English and Science, which were considered more 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 research further noted that the chances of a teacher trainee being supervised while teaching Home Science were very minimal. This implies that teaching was inadequately done in the teacher trainee during teaching practice. The study also 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 the policies of training teachers in the TTC favoured other subjects against Home Science. Home Science was not given priority when it came to supervision during teaching practice. The research found that a majority of the trainees were not supervised while teaching Home Science in teaching practice. This was a constraint because the trainees also developed a negative attitude towards the subject since it was not given emphasis even during the teaching practice sessions. The research further sought to find out who supervised the trainees in Home Science during teaching practice exercise. This item sought information on the tutors
who gave trainees the teaching skills in specific subjects 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 or professional studies tutor.

It is clear that teaching practice, though crucial in teacher preparation, is not effectively carried out in colleges. The fact that any tutor conducted 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.

**CONCLUSION AND RECOMMENDATIONS**

From results and discussion of the study it was concluded that students enrol in colleges lack sound Home Science background which hinders effective training as primary Home Science teachers. In addition, tutors teaching Home Science in colleges are qualified academically and professionally but are trained to teach in secondary schools and not in teacher training colleges. Tutors are also not given induction courses upon joining college and are not in-serviced in methodology of teaching of Home Science to teacher trainees. Moreover, the teaching methods frequently used are the teacher-centred methods like lecture, assignment and demonstrations. Student-centred methods like the use of computerized instruction, guest-speakers, seminars and visits were rarely used.

The study further revealed that the methods of preparing students for teaching are inadequately prepared. Teaching Practice duration of three weeks per session is inadequate. Students are also not effectively supervised during Teaching Practice in order to overcome their difficulties in teaching Home Science. Supervision during Teaching Practice is also done by any tutor and not necessarily a Home Science tutor; therefore, specialized guidance in Home Science is not offered. Moreover, microteaching sessions are too few and too over-crowded to be effective. Home Science tutors never used the neighbouring primary schools for Home Science demonstration purposes. Assessment during teaching practice is also done on other subjects like Mathematics, English, Kiswahili and
Science and not Home Science because it is considered ‘non-academic’.

It was also concluded that evaluation in colleges is mainly done for obtaining grades for continuous assessment and not for diagnostic purposes. Practical aspect of Home Science is not adequately examined and was ignored during teaching. Resources and facilities in colleges are inadequate and often not available. The resource centres in colleges are not effective enough in guiding the students and tutors on methods of improvisation. It is recommended that the competencies required by all-round Home Science teachers should be explicit. This will form criteria for certification of qualified Home Science teachers. Tutors should be specifically trained to teach in colleges. As such, B.Ed. (primary option) should be expanded and M.Ed (PTE) programme reestablished. 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.

The Kenya Institute of Curriculum Development (KICD) 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. Moreover, the allocation of three periods of thirty-five minutes per week is inadequate to cover the TTC Home Science syllabus. The research further recommends four periods per week; two single periods and one double period.

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