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Exploring Best Practices in Teaching and Learning Home Economics and Clothing and Textiles when Disintegrated: A Case of Selected Malawian Secondary Schools

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Abstract: This paper analyses knowledge and skill acquisition in Home Economics (HEC) and Clothing and Textiles (CT) within the framework of the disintegrated curriculum in Malawian secondary schools. Grounded in the interpretive paradigm and constructivist theory, the study employs a mixed-method research design, leaning more towards qualitative approaches. The central research question investigates how the teaching and learning environment, along with educational policies, impacts the acquisition of knowledge and skills in these subjects. The study specifically examines the knowledge and skills taught in HEC and CT, as well as the methodologies employed in their delivery. Data collection involved five methods: document analysis, questionnaires, classroom observations, face-to-face interviews, and focus group discussions, with 162 participants across two educational divisions and six secondary schools. Findings reveal that students exhibit limited knowledge and skills in HEC and CT, with instruction primarily theoretical and minimal practical assessment. Both subjects face significant challenges, including inadequate resources, a lack of innovative teaching methods, and a predominance of the lecture-based approach. Teachers tend to follow curriculum documents closely, resulting in less challenging activities, while the integration of information and communication technology (ICT) remains rare. The study identified issues such as inadequate time allocation, a shortage of qualified teachers, and structural issues with the curriculum.

Keywords: Sensitive Decentralisation; Agricultural Governance; Polycentric Governance; Institutional Bricolage; Policy Reform; Regional Development; Agricultural Sector.

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1. Introduction

Home Economics is one of the elective science subjects taught in secondary schools in Malawi. Home Economics is a subject and a group of related disciplines that address the everyday world of individuals by focusing on the provision of food, shelter,

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and clothing within the domestic economy [9]. It is a skill-oriented subject designed to equip students with the skills necessary for self-reliance and self-employment. According to Agarwal and Malhotra [11], Home Economics encompasses the study of all aspects of our homes. This study focuses on family members and achieving satisfaction for every member through the thoughtful, effective, and constructive use of resources [2]. As a science subject, the proper teaching and learning of Home Economics in secondary schools facilitates students' enrollment in various professional disciplines, such as nutrition, environmental health, fashion and design, and food science, among others.

Further, Uwameiye [1] states that the knowledge and skills gained in Home Economics make a considerable contribution to young people's personal and social development, as well as preparing them for the world of work in a wide range of areas. It is believed that a strong background in the Home Economics curriculum is crucial for many careers and job opportunities in today's increasingly technological society. HEC provides learners with opportunities to develop knowledge in both the theoretical and practical aspects of livelihood [4]; [18]. Okorie and Effiong [17] have also emphasised the importance of effective Home Economics teaching. They state that skills acquired in the diverse areas of Home Economics education are beneficial, as students who are exposed to these courses can pursue careers or earn a living. For teaching and learning in Home Economics to be effective, the classroom learning environment and educational policies must be conducive to both teachers and students.

Any shortfall in that may inhibit students' interest in learning and their overall learning outcomes. This may also impact the country's social and economic development, as emphasised by Paas et al. [13], Aminga and Kitainga [18], and Okorie and Effiong [17]. Home Economics education in Malawi and globally was implemented to enhance the welfare of individuals, families, and society. However, government education policies often marginalise Home Economics, treating it as a lesser science subject. Wahome [7] noted the generally low status of Home Economics, which is linked to various factors, including insufficient teaching resources, poorly trained teachers, dilapidated facilities, ineffective teaching methods, inadequate government funding, and a challenging school culture and classroom environment [17]. Governments worldwide, including those in Malawi, have adapted their education systems by employing teachers from diverse fields and revising curricula to meet the needs of a changing world. In Malawi, this shift, particularly in the secondary school sector, led to a government-led curriculum review conducted between 2012 and 2013 in response to ongoing education challenges.

In response to the 2012-2013 curriculum review, the Ministry of Education, Science, and Technology implemented a revised secondary school curriculum for junior classes in 2015, replacing the previous curriculum that had been in place for over 10 years. This update addressed emerging issues that were previously overlooked or only partially included. The new curriculum incorporates contemporary knowledge and skills essential for students' survival and contributes to national development [7]. Notably, the inclusion of Home Economics and Clothing and Textiles is vital for fostering scientific knowledge and skills, particularly as technological advancements are reshaping the production and service delivery sectors [17]. The curriculum aims to ensure a smooth transition for students from primary to secondary education and higher learning, aligning Malawi with minimum educational standards in sub-Saharan Africa and globally. However, challenges persist, particularly the shortage of qualified science teachers in rural schools, which affects subjects like Home Economics and Clothing and Textiles (CT). Often, teachers from other disciplines are assigned to teach sciences, compromising the quality of education.

This lack of qualified educators and essential teaching resources threatens the successful implementation of the new secondary curriculum, particularly in HEC and CT, hindering students' acquisition of knowledge and skills. The current curriculum separates Home Economics (HEC) and Clothing and Textiles (CT) as distinct subjects, with CT having been recently removed from HEC. Paas et al. [13] and Eno-Obong [8] caution that both the integration and disintegration of these subjects require significant preparation in curriculum development and implementation to facilitate effective learning. It is against this background that Home Economics has been disintegrated into Home Economics and Clothing and Textiles in the secondary school curriculum, which raises a great concern as to whether or not the learning environment and education policies in the current multidisciplinary curriculum prepare the students with reasonable and desired knowledge, skills, and attitudes in Home Economics in the secondary schools in Malawi. Therefore, the study was conducted to examine knowledge and skills acquisition in Home Economics in its disintegrated form in the Malawian Secondary schools. Specifically targeting the type of knowledge acquired and the methodologies used to teach HEC and CT.

2. Theoretical Framework

The study emphasises the importance of active learner participation in a multidisciplinary curriculum, underscoring the need for students to comprehend the connections between various subject areas [8]. The research specifically examines whether learners are at the centre of the educational process, allowing for effective knowledge and skill acquisition in Home Economics (HEC) and Clothing and Textiles (CT) within an integrated secondary school framework. To support this investigation, the study draws on Ajzen's [10] constructivist theory, which emphasises that individuals construct meaning through their experiences and perspectives. This theory suggests that learners play an active role in processing information, reflecting on it,

and reaching logical conclusions [5]. This aspect guided this research in examining whether learners are being exposed to environmental and educational policies that can help them construct knowledge. This study involved observing classroom activities and teaching methods to ensure they effectively promote students' knowledge and skill acquisition.

Document analysis was conducted, and policy documents, such as timetables and instructional materials used in the curriculum, were cross-checked to determine whether the secondary curriculum provides learners with the desired knowledge and skills for learning HEC and CT in their disintegrated form, in relation to other science subjects in the secondary curriculum. In Constructivist Theory, the primary learning goals include heuristic problem-solving, meta-cognitive knowledge, motivation, creativity, and originality, which enhance effective learning. This approach values the uniqueness of each learner as a key element in the learning process [5]. During classroom observations, an analysis of strategies and activities was conducted to assess whether the content provided relevant knowledge and skills in HEC and CT. The goal was to determine whether the teaching methods could enhance problem-solving and critical thinking, enabling all learners to construct their knowledge in HEC and CT.

The responsibility of learning increasingly lies with the learner, as emphasised by Social Constructivism. Hein [5] suggests that learning involves constructing meaning and systems of meaning through investigation and assessment. Class observations were conducted to assess the learning environment and strategies that promote learner involvement, ensuring opportunities for knowledge construction through learner-centred approaches. These practices are essential for all students, including those with special educational needs and disabilities. While hands-on experiences are valuable for learning, mental engagement is crucial; activities should stimulate both the mind and the hands, as Dewey's concept of reflective activity highlights. In an integrated curriculum, students collaborate while teachers facilitate learning, promoting real-world connections. This method aligns with Constructivism Theory, which emphasises that teachers guide students in acquiring knowledge and skills through group work.

However, Harrigurus [9] and Ajzen [10] highlight a positive link between teachers' subject knowledge and their classroom effectiveness. A lack of understanding of their subject can hinder effective teaching. To investigate this, interviews were conducted with teachers about their experiences teaching HEC and CT, along with questionnaires to evaluate their preparedness to teach in a disintegrated manner. Additionally, focus group discussions (FGD) with learners provided insights into their experiences with HEC and CT in their disintegrated form. Liftoff [14] and Hein [5] assert that, from a social constructivist viewpoint, reality is created within a social context rather than existing independently. Through our collective actions, we shape our understanding of the world. In this regard, the study aimed to investigate the positions of HEC and CT on the construction of meaning in relation to knowledge and skill acquisition within the secondary school curriculum in Malawi. The study also aimed to highlight the impact of old Home Economics syllabi on classroom design by examining how they encouraged specific instructional practices to integrate Home Economics (HEC) and Clothing and Textiles (CT) as outlined by McLeod [19]. The syllabus was examined to identify gaps in the existing content of the HEC and CT syllabi that are not integrated.

3. Method

In May, pilot data collection was conducted in two schools to clarify and estimate the time required to use the study tools. The piloted schools did not participate in the study, but the same type of participants were involved in the main study. This phase helped in identifying ambiguities and redundancies in some questions. For instance, a question on qualifications was redundant because it appeared in both the interviews and the biodata, so it was removed from one of the sections. Actual data collection took place from May to July 2023. Five methods were used to collect data, which include: document analysis, questionnaires, classroom observations, face-to-face interviews, and FGDs. The research sites consisted of two education divisions, each with six secondary schools. The sites had a sample of 162 participants. One participant was from the Ministry of Education, who was the subject officer. In addition, each division had three secondary schools, with a population sample of 162 participants, including six head teachers and eight teachers from the six secondary schools in the two education divisions currently teaching HEC or CT.

Each secondary school had one teacher, except for one that offered both HEC and CT teachers, which were targeted separately. A population sample of 148 learners was drawn from the classes of eight teachers, constituting the target sample. The study sample size for the quantitative component was determined using Liftoff's [14] formula. Liftoff's [14] formula provides the researcher with an indication of the sample size required to ensure a reasonable level of accuracy in the results. This formula was chosen for this study because the research design is mixed, and data will be collected through various methods, including class observations, focus group discussions, and interviews. Data from students were collected through class observations and focus group discussions, and data from key informants were collected from head teachers, subject teachers, and representatives from the Ministry of Education. Liftoff's [14] formula is similar to other formulas, such as Joseph's [6] formula and Wahome's [7].

First, we use Liftoff's formula for an infinite population.

$$n_0 = \frac{z^2.p(1-p)}{e^2}$$

Where: n_0 is the sample size for an infinite population.

- Z is the Z-score (based on the confidence level; in this case, 1.96).
- p is the estimated proportion of the population with the characteristic of interest, in this case, 0.5.
- e is a margin of error at ±5%.

Therefore, $n_0 = \frac{1.96^2 \times 0.5(1-0.5)}{0.05^2}$ = 384.16

Then we adjust for the finite population.

$$n = \frac{n_0}{1 + \frac{n_0 - 1}{N}}$$

Where n is the adjusted sample size for a finite population

N is the population size in this case, 278

Therefore $n = \frac{384.16}{1+\frac{384.16-1}{278}}$
= 161.5
= 162

The names of the six secondary schools selected for the study are listed in Table 1. According to Liftoff's [14] formula, the total sample size for the proposed study was 162 respondents. Sample size distribution is illustrated in the table below.

Table 1: Distribution of sample size in selected secondary schools

School	Ministry of Education	Head Teacher	Teachers	Students	Total
CH1		1	1	9	11
CY2		1	1	17	19
BW3		1	2	14	17
KU4		1	1	20	22
LY5		1	1	28	30
LG6		1	2	59	62
MO 7	1				1
Total		6	8	148	162

For the qualitative segment of the research, the sample size was determined by data saturation, which occurred when further data collection no longer yielded novel insights or emergent themes. The study conducted interviews with six head teachers, representing each of the schools listed in Table 1. Additionally, eight teachers were interviewed, including two from each of LG6 School and BW3 Secondary School. Furthermore, an official from the ministry was also interviewed. In each school, students were organised into groups of at least eight, culminating in a total of 18 focus groups for the study. The observation checklist was used to assess content, pedagogical issues, learner interaction with the learning environment, and the type of environment. Permission was sought to photograph and record classroom activities.

This also formed part of my data. Each lesson was 35 minutes, except for two lessons, which were double periods of 70 minutes. We contacted head teachers to find teachers and secured follow-up details. We received permission from a ministry official to conduct the study in secondary schools. Participants signed written consent during my school visits. Focus group discussions (FGDs) with learners were conducted before classroom observations, facilitating data triangulation through the combination of document analysis and observations. This process offered valuable insights into the content learned, the learning methods, the environments, and students' experiences with the current curriculum.

Before the Focus Group Discussions (FGDs), participants were informed of the research aims and provided consent. All participants were over fifteen and signed the forms accordingly. Anonymity was assured through code numbers, and schools

and teachers were pseudonymized. Interviews, initially scheduled for 1 hour, often exceeded that time due to in-depth discussions, which benefited the research. FGDs included up to fifteen learners and were recorded with permission. Concurrent document analysis of policy reports, syllabi, schemes, and lesson plans aimed to understand the content and assessment of HEC and CT, focusing on the skills taught and the curriculum structure. To address the ethical issues of food and health:

> *I positioned myself as a co-teacher rather than an external observer, thereby fostering a collaborative environment that encouraged open dialogue. I shared my schedule with teachers, allowing them to suggest suitable visit times. Emphasising the interpretive paradigm, I engaged closely with the research, analysing the disintegrated HEC and CT syllabus, records, interviews, focus groups, and classroom observations.*

This involvement facilitated my interpretations, making me an insider in the research process and contributing to the co-construction of meaning. Adelson and McCoach [12] emphasise the effectiveness of mixed methods in the interpretive paradigm, which combines qualitative and quantitative approaches to provide deeper insights. In this study, document analysis and classroom observations employed quantitative methods, including frequency tables and graphs, while qualitative data were collected through interviews and field notes. Recordings were transcribed, and themes such as "HEC and CT are important subjects" were identified and categorised. Classroom observations summarised activities through figures and pictures. This triangulation of data enabled a clear analysis of the factors affecting the quality of knowledge and skills in Home Economics within the secondary school curriculum.

4. Results and Discussion

The study reveals that challenges in teaching HEC and CT outweigh the opportunities, negatively impacting knowledge and skill acquisition. Therefore, in this discussion, the researcher will ponder how the subjects have been affected. The findings suggest that teaching HEC and CT separately enables deeper learning, as each subject receives focused attention. This aligns with Paas et al. [13], who note that such a curriculum enhances skills and knowledge compared to the previous combined approach. Additionally, the Federal Government of Nigeria [4] supports the inclusion of more CT topics in the senior secondary syllabus.

> *"We send our teachers to the training, for example, there was another one in CT, one teacher from each division went during curriculum orientation in CT…..we also provide financial support when requested for practical work…..though not frequently because of limited resources… but we try (HTs Chawaza ss). It is good that the subjects have been separated. I feel I will learn more now-----. And will have enough time to do practical work (learner 16).*

The findings support Dewhurst and Pendergast [2], who argue that inadequate administrative support for teachers can hinder the effective implementation of curriculum, negatively impacting student performance. Increased support leads to better knowledge and skills acquisition in Home Economics (HEC) and Clothing and Textiles (CT). The study identified challenges in curriculum implementation, noting that practical work was infrequent due to busy schedules, while some teachers worked extra hours to complete the syllabus. Less challenging activities were conducted, and teachers and students rarely integrated ICT into teaching and learning. Innovative teaching methods are also often overlooked in most lessons. Our teacher fails to help us and is often alone, so Madam is always tired. He cannot make it. Tell the government to give us more teachers. We enjoy learning the subject. Imagine us, the form ones, who have done practical work once (Learner 1); us, the form threes, who have only done it twice in form two; and now, this term, we enjoy practical work because we learn how to cook good meals (Learner 14).

The findings of this study are similar to those of Jain [20], who found that increasing teacher workload negatively impacts teaching effectiveness. Studies by McLeod [19], Aminga and Kitainge [18], Mwampashi [15], and King'aru [16] also indicate that teachers often work beyond their paid hours, leading to fatigue, as observed in this study. This exhaustion hampers the teaching and learning process, contradicting the constructivist theory proposed by Liftoff [14], which emphasises the importance of mental engagement in learning. Consequently, the lack of a conducive learning environment results in diminished knowledge and skill acquisition among students. Observations during class revealed a restrictive learning environment with few, if any, challenging activities. Uwameiye [1] cautions that a highly structured learning environment makes it more difficult for learners to construct meaning based on their understanding. Research in educational literature has shown that education is not solely what the teacher imparts; rather, it is a natural process that occurs spontaneously within individuals.

Adelson and McCoach [12] assert that knowledge is derived from individual experiences and conjectures regarding the environment. In this setting, HEC and CT, which necessitate substantial practical engagement and exploration, seem to be insufficiently taught within the fragmented secondary school curriculum:

When it comes to finishing work, I need to rush less activity-based approaches., I also ensure that I follow the syllabus to avoid wasting time. Otherwise, I will not be able to finish on time. If HEC periods are only 4 per week, how can I cover all the content, including practical work? There is a discrepancy between the content of the official document and what we teach (Teacher Chabwera).

In the secondary school curriculum, there are too many subjects, so fitting them all within the required time allocation is impossible. Therefore, we try to allocate a portion to each (HT Kagwira SS). The approach allows very little acquisition of relevant knowledge and skills. This implies that learners are not frequently exposed to challenging tasks, which could hinder their development of inquisitive minds and a positive attitude towards the subject. In addition, teachers rarely used strategies such as demonstrations, practical exercises, and projects in their teaching and learning process. This is attributed to compounded professional and school pressures that mount on teachers.

Kumkwezu [3] concludes that although books may sometimes be available for teachers to read on how to teach HEC, CT, and other Science subjects, good training courses are almost always superior because they effectively drill concepts into a format that is easy to master. In this study, teachers faced challenges in articulating issues related to HEC and CT due to inadequate training and the lack of refresher courses to keep them up to date with new content. Therefore, there is a need for refresher courses, and training colleges must develop curricula that enable teachers to handle HEC and CT. When we meet as a team in training, we share ideas. However, finding a chance for a refresher course or training seems too selective. Those who have made a name for themselves always go.

Especially females, not us young males who just graduated, so how can one grow professionally (teacher Chabwera). Teaching colleges and secondary school administrators need to develop a mechanism that can bring together teachers from diverse backgrounds and share common knowledge to teach the integrated curriculum, including HEC and CT effectively. This suggestion is also supported by Joseph [6], who argues that understanding the important concepts of a subject depends on studying that subject. Alignment between the college and secondary school is also required to achieve specialisation in HEC and CT. Additionally, male teachers should be encouraged to serve as role models in teaching HEC and CT.

From the above discussions, it is evident that teachers face numerous challenges when teaching HEC while disengaged. From the responses, teachers reported that they were not adequately trained in HEC and CT, received inadequate in-service training, and had less interaction with colleagues during team teaching. The results demonstrate a lack of both content and pedagogical knowledge in HEC and CT. Teachers also stated that they face numerous challenges with new teaching content, especially in the context of CT. This CT subject is particularly challenging to teach:

I don't even know how I passed this on to the college. It was well taught, difficult ija ya ma slopper aaa (pattern development/block patterns). Hence, place teachers in fixed positions to deliver the content and allow for sufficient acquisition of knowledge and skills.

Lack of teaching and learning resources, such as books, laboratory facilities, and equipment, in particular CT, time factors, and curriculum structures, as well as policy issues such as national examination schedules, and involvement of HEC and CT in national projects, were highlighted as challenges for not effectively implementing the curriculum:

I use my pamphlets, which can be a challenge when sharing with learners. We tried to ask the publishers, but they are very scarce, especially the CT mmmm, a challenge (Teacher Chakhaza). Sometimes, due to inadequate facilities, HEC and CT equipment are stored in a borrowed office that also contains non-HEC or CT materials, such as bicycles intended for students in need. See (teacher opens a room)---- this is the room where we store our materials, but not for HEC and CT.

However, since we do not have the necessary laboratories, we will divide this task into two. Bicycles are available only during the holidays. In this case, the outside world could encroach on the otherwise isolated and protected HE and CT spaces, rendering them unsafe:

However, the AAA machine was not installed because it was awaiting contractors, and in HEC, no small equipment had been purchased.---- hope you can assist us on how we can buy this small equipment---- we discussed at length on the issue----- (CT teacher Chawaza CDSS).

Too much workload within a short timeframe can negatively impact learners' understanding and application of information [5]. Teachers often view covering topics without adequate resources or time as unproductive. This approach contradicts Ajzen's [10] constructivist theory, which advocates for substantial input of information and active engagement in challenging tasks to facilitate knowledge construction.

5. Conclusion and Recommendation

The findings indicate that the disintegrated curriculum in HEC and CT within the Malawian Secondary curriculum hampers learners' knowledge and skill acquisition. Key issues include: the curriculum structure, policy shortcomings, and teaching methods. The proposed solution from the study emphasises the need for specialised training in HEC and CT at university colleges, aligning teacher training with the needs of the secondary curriculum. Existing educators should undergo refresher courses to enhance their pedagogical skills, and additional laboratory facilities, along with improved funding, are essential. Integrating ICT into the teaching process is also crucial for modernising educational practices.

5.1. Notes

In Malawi, Home Economics and Clothing and Textiles are among the elective subjects offered in the science route at secondary schools. These subjects are taught from Forms 1 to 4. However, in some schools, they were only available in Form 1 at the time of the study. In the senior section, specifically in Form 3, learners can choose either Home Economics or Clothing and Textiles as an optional subject, subject to the guidelines specific to their school. Each learner is required to choose at least six subjects, including English, to sit for the Malawi School Certificate of Education (MSCE).

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