

Challenges of Using Home Economics Laboratory Facilities in Teaching and Learning of Home Economics in Junior Secondary Schools in Delta State

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Received: 10.06.2026 | Accepted: 25.07.2026 | Published: 31.07.2026

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DOI: [10.5281/zenodo.21718911](https://doi.org/10.5281/zenodo.21718911)

Abstract

Original Research Article

This study examined the Challenges of using Home Economics laboratory facilities in teaching and learning Home Economics in Junior Secondary Schools in Delta State. One research question was raised and answered. A sample size of 382 Junior Secondary Three Students in Delta State was used for the study. The determination of the sample size of 382 was attained using the sample size determination of Yamane's formula at a 95% level of confidence; this formula helped the researcher to obtain a controllable sample from the entire population of 8604 Junior Secondary Three Students in Delta State. This was computed using the Yamane formula at a 95% level of confidence. The research instrument for the study was the questionnaire tagged "Challenges of Using Home Economics Laboratory Facilities in Teaching and Learning Questionnaire". (CUHELFTLQ). The reliability was estimated using the test-retest reliability method, which analysis gave a value of 0.73. The descriptive statistics of frequency count, percentage, mean, and standard deviation were used to answer the research questions. After the analysis of data, the following result/finding was recorded: There were many Challenges of using Home Economics laboratory facilities in teaching and learning. Conclusively, this study underscores a widespread deficiency in the availability and quality of Home Economics teaching facilities in secondary schools. This issue poses a significant barrier to effective instruction, especially in public and rural schools. Based on the following findings, these recommendations were made: The government should increase budgetary allocation for vocational education facilities. The government should carry out periodic facility audits to assess and address gaps.

Keywords: Challenges, Home Economics Laboratory Facilities, Teaching and Learning.

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Introduction

Home Economics is one of the subjects that is taught in secondary schools. Home Economics subject is said to be a skill-oriented course, which possesses the capacity of equipping individuals with saleable skills that make for self-employment, hence contributing greatly to the reduction of unemployment problems in the country (Adebayo et al., 2024). Home

Economics also provides chances for the learner to directly practice the theoretical knowledge gained, and putting theoretical knowledge into practice to increase the mastery of knowledge acquired is very important. This can only be done through adequate utilization of the Home Economics laboratory as an integral part of the instructional process adopted by teachers. Home Economics laboratory is considered one of the



Emefe, R. O., & Arubayi, D. O. (2026). Challenges of using home economics laboratory facilities in teaching and learning of home economics in junior secondary schools in Delta State. *SSR Journal of Multidisciplinary (SSRJM)*, 3(7), 41-45.

resources in supporting the teaching and learning process. The laboratory can be used as a facility to deepen concepts, learning methods, and enrich students' knowledge and skills (Okafor, 2012). Utilizing the Home Economics laboratory facilities helps the students in grasping the concept easily, constructing the learned concepts, and developing thinking skills, resulting in the improvement of students' academic performance

The Laboratory is seen as the focal point for science-oriented subjects like Home Economics. According to (Okon & Etokakpan, 2019), the realities of school laboratories in this country have been that there are either no laboratories or the few available are ill-equipped. This problem is also applicable to the Home Economics subject. Most Secondary Schools in Nigeria, particularly in Delta State, which offers Home Economics, have an acute shortage of laboratories. In some schools, there are no specified Home Economics Laboratories. All that one sees is a common classroom labeled as Home Economics Laboratory. There is no specific laboratory assigned for Clothing and Textiles, Food and Nutrition, Home Management and Child Development.

Due to this inadequacy or lack of laboratories, the majority of these schools have a problem of inadequate equipment, no good water supply, and instructional materials. This is because, if a school lacks a laboratory for such a vocational subject as Home Economics, how then would such challenges be solved in the department? How and where would such equipment be installed for use and safety? This fact corroborates with a research carried out by Okon and Etokakpan (2019), which showed that the realities of the situation of inadequate infrastructure range from no science laboratories at all to one microscopic science laboratory. They observed that what obtained was the existence of 'well-equipped laboratories', only on paper.

In most institutions, the Home Economics laboratories have not been designed primarily for the subject. Even where this is, the building used for teaching Home Economics is small in size, and also the arrangement of the numerous equipment as well as the provision of seating for

students becomes a problem (Suara & Dairo, 2021). To ensure maximum use of facilities and provision of meaningful teaching experience, it is important to have a separate block set aside for the Home Economics Department, and all partitioning should be suited to the needs of each course area with enough room for students and teachers to move around. The following are some challenges when it comes to the use of the laboratory:

Finance

- i. Inadequacy of funds for the purchase of consumables.
- ii. Absence of special government subsidy under the Science Subject Funds.

The running of the Home Economics Department oftentimes includes making a budget, keeping the account, checking inventory, buying weekly consumables, and making financial reports and returns to school authorities. Hitherto, Home Economics enjoyed additional funding from the government like other science subjects, but in recent times dwindling financial resources have made the government abandon such moves (Suara & Dairo, 2021). In recent times, in order to ensure continuity of laboratory experience for students, the students themselves have had to bear the burden. Due to the inadequacy (or sometimes lack) of funds to purchase consumables for practical use in the department, students are levied various sums of money.

In some other instances, the Department itself branches out into revenue-generating ventures such as commercial baking & catering, large-scale sewing, among others. All these extra activities make the teachers and students prioritize money-making ventures at the expense of crucial educational activities. Inadequacy or lack of funds limits the types and quality of practical experiences that can be given to students, which is also linked to the lack of laboratory space to accommodate the number of students to be taught (Ogbonnaya et al., 2022). It also limits the students' knowledge, as in the use of outdated or improvised equipment and other instructional materials.

This is an important issue that has

discouraged both the teachers and students of Home Economics over the years. There is, therefore, a need for better financial commitment by the government or other school proprietors in order to enhance effective teaching and learning in the Home Economics Department.

Tools and Equipment

- i. Non-availability
- ii. Prohibitive cost
- iii. Limited funds -only a few can be purchased
- iv. Lack of expertise to maintain or the recognition of tools and equipment.

The number of students in a class, the amount of space available, and the objectives of the course will determine the kind of tools and equipment. However, in each course area, there are minimal functional levels of tools and equipment that must be provided to facilitate teaching and learning. For example, in a Clothing and Textiles laboratory, minimal functional items will include cutting-out tables, sewing machines, ironing boards, dress forms, mirrors, different types of scissors, and sewing machines. In the Home Management Residence, the need to provide the basic equipment found in a home cannot be overemphasized, but most times, functional items like a bed, bedding, and a child cot are borrowed from other school staff when the need to use them arises. Obviously, this is not a neat arrangement. It is important to state that no department, albeit Home Economics, can be ideal; however, every teacher and school must strive to have a minimal functional level of tools and equipment at their disposal.

Purpose of Study

The key Purpose of this study was to examine the challenges of using Home Economics laboratory facilities in teaching and learning

Research Questions

To guide this study, this research question was raised:

1. What are the challenges of using Home Economics laboratory facilities in teaching and learning?

Material and Method

The study employed the *ex post facto* research design. The population involved eight thousand six hundred and four (8604) Home Economics Junior Secondary Students in Delta State in the 2023/2024 session. A sample size of 382 Junior Secondary Three Students in Delta State was used for the study. The determination of the sample size of 382 was attained using the sample size determination of Yamane's formula at a 95% level of confidence; this formula helped the researcher to obtain a controllable sample from the entire population of 8604 Junior Secondary Three Students in Delta State. The research instrument for the study was the questionnaire tagged "Challenges of using Home Economics laboratory facilities in teaching and learning questionnaire". (CUHELFTLQ). The reliability was estimated using the test-retest reliability method, which analysis gave a value of 0.73.

Result

Data Presentation

A total number of 382 copies of the questionnaire were distributed, and 250 (65%) copies were returned, filled, and found useful for conducting the study, from which generalization can be made. What happened was that 37% of the questionnaires were not properly filled, and any questionnaire not properly filled was considered a waste. Therefore, a response rate of 65% is considered adequate for the study

Research Question 1: What are the challenges of using Home Economics laboratory facilities in teaching and learning?

Table 1. Mean scores and standard deviation on the Challenges of using Home Economics laboratory facilities in teaching and learning.

S/N	CHALLENGES OF USING HOME ECONOMICS LABORATORY FACILITIES	M	SD	D
1.	The equipment in my school Home Economics laboratory is obsolete	3.596	.492	Agreed
2.	Teaching and learning in the Home Economics laboratory is time-consuming	3.596	.492	Agreed
3.	Teaching and learning of Home Economics using the laboratory is financially draining	3.196	.737	Agreed
4.	The use of Home Economics laboratory improves academic performance	2.808	.395	Agreed
5.	Insufficient functional laboratory hinders teaching and learning of Home Economics.	3.180	.384	Agreed
6.	The equipment in the school Home Economics Laboratory is adequate	3.596	.492	Agreed
7.	The laboratory space is not adequate for practical exercise	3.596	.492	Agreed
AVERAGE SCORE		3.367	.498	Agreed

Keys: M = Mean, SD = Standard Deviation, D= Decision,

Information in Table 1 shows the mean score and standard deviation on the Challenges of using Home Economics laboratory facilities in teaching and learning. The result revealed that respondents agree on all the items with a mean score above 2.50. From the responses, it could be concluded that the challenges of using Home Economics laboratory facilities in teaching and learning include: obsolete equipment, time-consuming nature of Home Economics, problem of funding, insufficient functional laboratory, and inadequate equipment and space for practical exposure.

Discussion

Challenges of using Home Economics laboratory facilities in teaching and learning.

The result shows a mean of 3.367, SD = .498 and this indicates that respondents agree on all the items with a mean score above 2.50. From the responses, it could be concluded that

Challenges of using Home Economics laboratory facilities in teaching and learning include; The equipment in my school Home Economics laboratory are obsolete, Teaching and learning in Home Economics laboratory is time consuming, Teaching and learning of Home Economics using laboratory is financially draining, Insufficient functional laboratory hinders teaching and learning of Home Economics, The equipment in the school Home Economics Laboratory are not adequate and The laboratory space is not adequate for practical exercise. This finding is in line with the studies carried out by Ogbonnaya et al. (2022); the authors found that facilities in most schools were obsolete, poorly maintained, or insufficient for the number of students enrolled.

Conclusion

Conclusively, this study underscores a widespread deficiency in the availability and

quality of Home Economics teaching facilities in secondary schools. This issue poses a significant barrier to effective instruction, especially in public and rural schools. Addressing this requires deliberate investments in infrastructure, monitoring mechanisms, and stakeholder collaboration.

Recommendations

- i. The government should increase budgetary allocation for vocational education facilities
- ii. The government should carry out periodic facility audits to assess and address gaps.

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