Improvisation of Instructional materials for the Teaching of Home Economics in Tertiary Institutions of Nigeria

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Abstract
The paper examined the improvisation of instructional materials for the teaching of Home Economics in tertiary institutions of Nigeria. The paper looked at tertiary institutions as post-secondary institutions. It considered Home Economics as a course taught in the tertiary institutions. To be effective in teaching the course however, instructional materials are necessary. The instructional materials that can be used to teach Home Economics were identified and discussed. However, literature suggested that the instructional materials were in short supply hence, the need for improvisation. The paper defined the term improvisation, argued on the necessity for its use, and discussed the types of improvisation, namely improvisation by substitution, improvisation by modification, and improvisation by construction. The paper also identified the steps to the preparation of instructional materials. Problems such as teachers' inadequate knowledge of improvisation and their unwillingness to improvise instructional materials in their near or total absence were identified. The paper suggested among others, that teachers of Home Economics should be willing to improvise, and school authorities should provide the enabling environment for teachers to improvise.

Keywords: Improvisation, Instructional materials, Home Economics, Tertiary Institutions

1. Introduction

Home Economics is one of the vocational courses taught in tertiary institutions in Nigeria. Teachers teaching the course often encounter problems in respect of the availability of standard instructional materials. To deal with this challenge, teachers are required to improvise the instructional materials. This paper looks at tertiary institutions, Home Economics as a course, instructional materials and their types. The paper also looks at improvisation, the types of improvisation, both in literature and in practice, and why improvisation of instructional materials for teaching Home Economics in tertiary institutions is necessary. Finally, the paper considers the steps to preparing locally produced instructional materials.

Tertiary institutions are post-secondary institutions which include polytechnics, monotechnics, colleges of education and universities. These institutions offer courses in various fields such as engineering, law, management, the sciences and education, among others. They are meant to produce middle and high level manpower who will be useful in managing various sectors of Nigeria's public and private enterprises for effective national development. They have the main objective to "educate the youth to become active and productive members of society, to meet and match industries' demand with a competent and globally competitive workforce" (Olofu, 2021). Buttressing this point, Wu (2015) posited that the goals of tertiary institutions are the development of relevant high level manpower, development of intellectual capability of individuals and acquisition of physical and intellectual skills

One of the educational courses which tertiary institutions run is Home Economics Education. Gamawa (2015) held that Home Economics offers multidisciplinary content and environment for students to apply and practice skills and knowledge from a variety of areas, in situations related to everyday life. It is a "multi-faceted discipline which connotes inter-disciplinary, multi-disciplinary, multi-dimensional and multi-cultural-cum-cross-cultural professions of life most of which have expanded vistas in their various distinct areas of ecological study" (Ehumadu, 2020). Erjavsek, 2021 posited that Home Economics also is concerned with individual, family, and societal needs related to healthy lifestyle, nutrition, dietetics, consumption, economics, design and technology." Kostanjevec and Kozina (2021) added that Home Economics "includes priority areas such as food, eating habits, healthy lifestyle, textile and clothing, home, consumerism, and personal and family economics. Therefore, Home Economics is a course of study undertaken in schools such tertiary

institutions which deals with the home, family and relationships. It considers the home environment, textiles and clothing, hospitality, food and nutrition, among others.

2. Instructional Materials

These refer to the teaching aids which a teacher normally sources for to develop and enrich the content delivery of his lesson so as to make concepts clearer and easier for learners to comprehend and enrich their knowledge and skills (Ibidike, 2021). They are the "materials of visual, audio and audio-visual category that help to make concepts, abstract ideas concrete in the teaching/learning process" (Olawole, 2013). Instructional materials are those items a teacher uses in his lesson delivery to enhance and enforce comprehension. They are those materials that appeal to the sense of vision, aural and audio-visual which assist pupils in their effort to comprehend the lesson. They are items that are required for the effective teaching and learning of Home Economics.

Types of Instructional Materials

Tukur (2012) classified instructional materials for the effective teaching and learning of Home Economics: These are:

1. Audio (deals with sound only), including such things as radio, record players, cassettes, grammar phone, CD plates, songs, poems. They aid teaching through the sense of hearing.
2. Visual - (deals with sight.). This category consists of maps, film steps, specimen, pictures, charts, blackboard, positions The category appeals to children through the sense of seeing.
3. Audio-visual (combination of audio and visual i.e. sound and vision). These refer to things like television, films DVD and projectors, computers, IPADs, etc. The use of these also aids learning greatly.
4. Print (deals with hardcopies). These refers to things like books, newspaper, journals, handout etc. which the use aids effective learning.
5. Static/display materials. These refer to things like chalkboard, flannel graph, flip charts magnetic board, etc.
6. Electronic materials. These refer to things like radio, computer, e-mail, multimedia, etc.

However, in teaching Home Economics practicum, Obidike (2021) identified the following instructional materials as inevitable:

1. Prints materials: These include textbooks, magazines, manuals, newspapers, workbooks, references books, handout dictionaries, encyclopedia, etc. The prints constitute a greater percentage and are most widely utilized instructional materials or media.
2. Non-print materials: These include all the instructional medias that are non-books which are normally classified into visual, audio, and audio-visual.
3. Visuals: Instructional materials in this group facilitate learning by appealing to the sense of vision. They can be grouped into boards such as chalkboard, bulletin board, notice board, magnetic board, hook/loop board, among others.
4. Dimensional: Such as models, specimens, real things (realia), mock up, among others

With concerted effort, most of the instructional materials identified in this paper can be improvised by teachers of Home Economics. Where an institution fails to provide the Home Economics Unit with a laboratory, teachers can set up a temporary laboratory, stock it with relevant locally produced or collected materials from homes members of staff. Again, certain pickings can be collected from the environment which can be modelled into instructional materials.In fact, Obidike (2021) identified the following as the sources of instructional materials:

1. Home: The teacher can identify materials in the home environment that can be used as instructional materials, such as old calendar, pictures, electronics
2. School: The school administration can also include the provision of instructional materials to be used by teachers. A resource room is usually provided where materials are kept e.g. maps, charts, physical & health materials, jigsaw puzzles, models, flash-cards work books, resource persons, building blocks, among others
3. Community: Within each community there are materials that can be sourced by the teacher and used in teaching, such as fruits, flowers, sticks, traditional instrument, storytelling by elders.
4. Teacher: The teacher can use his creative ability to do some carvings, sing songs, and recite poems.
5. Donations: These can come from concerned bodies like Parent-Teacher Association (PTA), State Government libraries, the British Council and other non-governmental organizations.

3. Improvisation

Teachers normally encounter difficulty delivering their lessons. They understand that instructional materials would assist them to effectively deliver those lessons. However, in

many schools in Nigeria, instructional materials for teaching are not available. Studies by Igbemi (2005) and Mbaegbuand others (2021) buttressed this point. Studies in other climes found that instructional materials in schools, especially at lower levels, are in short supply (Tuimur & Chemwei, 2015). Those available are inadequate. Where the materials are not available or are in short supply, teachers are required to improvise. Berk and Trieber in Kjellfrid and Espeland (2017) posited that improvisation in education is an applied, specific teaching skill developed in the profession of teaching where it can be learned and rehearsed. Speaking on improvisation, Ahmad, Abdul, Sani and Sabo (2019) held that it is the art of using materials or equipment obtained from local environment or produced by the teacher. Improvisation refers to the "the act of using alternative materials or equipment obtainable from the local environment or constructed by the teacher or with the help of local personnel to facilitate instruction" (Obodo, Ani & Thompson, 2020).

Improvisation of instructional materials for Home Economics is the art of locally producing from the environment the materials which are useful in enhancing the teaching/learning process, but are either in short supply or are not available. It is worth noting that other challenges associated with instructional materials for teaching Home Economics in tertiary institutions include lack of finance to purchase essential instructional materials, poorly equipped Home Economics laboratories, and poor management of the instructional materials, especially by students and laboratory attendants.

Why Improvisation

Teaching and learning are difficult to come by when there is no effective interaction between the teacher, students and instructional materials (Ahmad, Abdul, Sani & Sabo (2019). This effectively demonstrates the fact that for the teaching and learning of Home Economics to take place effectively, instructional materials are inevitable. The poor performance of students in examinations has been attributed to the non-provision and non-availability of instructional materials (Obidike, 2021). To buttress this, a study by Tetty (2016) found that instructional materials are the key to teachers and students' performance. Consequently, improvisation of instructional materials for the teaching and learning of Home Economics in Nigeria's tertiary institutions is an imperative.

Balogun., Barth and Tanko in Shaka et al. (2023), considered the importance of instructional materials. The authors identified the following areas where instructional materials are important, among others: arousing and sustaining learners' optimism and enthusiasm; staying informed of innovative development, interpreting research and statistical

data, aligning improvised materials with curriculum guidelines and timelines, and developing materials to cater for individual learner's needs in overcrowded classrooms. The authors added that using improvised materials in teaching makes the concepts being taught more practical and subsequently reduces abstractions. Speaking in the same vein, Jekayinfa (2012) argued that improvisation of instructional materials makes learning concrete and real and more teacher-student resource oriented

Types of improvisation

Certain literature discusses two types of improvisation. These are role substitution and role stimulation. Role substitution is when the original item generally requires little or no modification before it can be used to fulfill the new functions in an experimental setting. Examples of role substitution are using a kerosene stove as a burner, and a glass tumbler as a beaker. This will undoubtedly reduce the cost of production. In role stimulation, actual construction of the apparatus or equipment is undertaken as an emergency measure, either because the needed tool or equipment is too expensive or not really available (Igwe (2017,Anyakaorah, 2020)

In other literature, improvisation of instructional materials is categorized into three types, namely, improvisation by substitution, improvisation by modification, and improvisation by construction (Adu & Adu (2014).Improvisation by substitution involves collecting the materials from the locality and using them without any modification in size or shape. What this means is that in the absence of standard materials, available local resources can be modified to serve the same purpose. In the absence of a standard equipment, an empty carton, for instance, can easily be altered to serve the purpose of first aid box (Adu & Adu, 2014), Speaking on modification or duplication of instructional materials, Olotu and Adeyeye (2021) posited that with the aid of projection equipment, the teacher can produce cheap instructional materials in the shortest possible time. These materials include drawings, charts, pictures and graphs, among others. The method also involves the conversion of a burette to a pinchcock (clip) and a millimeter into a voltammeter. Instructional materials which are improvised by construction are those the teacher collects and compiled for use in the teaching/learning process. They include pictures from newspapers, magazines, and students' good quality works. They are normally constructed from low-cost materials obtained in the environment (Olofu & Adeyeye, 2021).

Preparation of Instructional Materials

Experts on instructional materials production have indicated various steps that need to be taken to prepare instructional materials. One notable work by Obidike (2021) listed the following as the steps to take to prepare instructional materials. In preparing instructional materials, there are some specific steps to follow:

1. Prepare a working outline (a syllabus): This should be based on the instructional strategy, the measurable, sequenced performance objectives, and the instructional events
2. Conduct research
3. Examine existing instructional materials
4. Arrange or modify existing materials
5. Select or prepare learner activities

These steps when conscientiously followed, will enhance the production of instructional materials. The steps are necessary so teachers do not just set out to produce items that will not only be able to arouse and sustain students' interest in the lesson but lead to the realization of the objectives of the lesson. It may be painstaking. However, the effort will be worth it at last.

There are challenges teachers of Home Economics are likely to face in their effort to improvise. There could be lack of support from the authorities of the institutions. As a result of this teachers could be unwilling to improvise. Again, teachers may have poor knowledge of improvisation. A study by Olibie, Nwabunwanne, & Ezenwanne (2015) buttressed this point. The study found the challenges which Home Economics teachers faced to include how to improvise the materials to arouse and sustain learners' optimism and enthusiasm; having access to expert assistance and technical support; being informed of innovative developments; aligning improvised materials with curriculum guidelines and timelines; and developing materials to cater for individual learner's needs in overcrowded classrooms.

4. Conclusion and Recommendations

Instructional materials are very useful in teaching Home Economics in tertiary institutions in Nigeria. One key challenge in their use lies in their availability and adequacy. To address this, teachers are required to improvise. Consequently, **i**mprovisation is part and parcel of students and teachers' academic activity. Based on the discussions, the following recommendations are hereby proffered:

1. Teachers of Home Economics need to consider that improvising instructional is a necessary thing to do, especially where such materials are grossly supplied
2. Heads of tertiary institutions need to provide the conducive environment and support teachers to undertake improvisation with ease.
3. Communities need to assist teachers in locating and collecting instructional materials in their localities.

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