

## Improvisation of Instructional Materials for Innovative Second Language Teaching in the 21<sup>st</sup> Century

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### Abstract

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The use of local materials to supplement learning process has been found effective in different disciplines. This paper aims to look at the place of improvisation for innovative second language teaching in the 21<sup>st</sup> Century. The paper explores on the concepts, importance and problems associated to improvisation. It gives a detailed explanation on the modes of production of instructional materials. It also explains how some technologies can be improvised for effective second language teaching. The paper concluded that resourceful and skillful teachers including the pre-service teachers are encouraged to improvise necessary instructional materials to improve the quality of teaching and learning and also promote academic standard in Nigerian schools.

**Keywords:** *Improvisation, Local materials, Learning process*

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### **Background to the Study**

Effective teaching of any subject will not only stimulate students' interest in the subject, but also enhances applicability of the concept in real life situations. To achieve effective teaching and learning process especially in nursery and primary schools where students assimilate based on what they see, there is the need for the use of relevant instructional materials. Instructional materials are teaching aids which teacher employs to facilitate his or her teaching for the attainment of objectives. Now that the economy and general academic performance in schools of most of the African and developing countries of the world is falling drastically, it is obvious that learning English as a subject is the yard stick for comprehending other school subjects and also the language of instruction which is a second language to the learners too may be posing a problem in their comprehension of other subjects and also government cannot provide all it takes to improve the quality of education in their countries to meet the labour market standard. As a result, teachers of English as a second language and other subjects' area teachers, should endeavour to make use of locally available resources (improvised instructional materials) to motivate and enhance students' academic performance in English language which will in turn pave way for easier comprehension of all other subjects' areas.

### **Instructional Materials**

Instructional materials are materials or tools locally made or imported that could have made magnificent enhancement of lesson impact if intelligently used (Isola, 2010). They are objects or devices, which help the teacher to make a lesson much clearer to the learner. Instructional materials can also be defined as materials or tools locally made or imported that could make tremendous improvement of a lesson if judiciously utilized (Wambui, 2013). Instructional materials are tools used by teachers to aid explanations and make learning of subject matter understandable to students during teaching learning process (Oluwagbohunmi & Abdu-Raheem, 2014). Instructional materials play the role of a stimulant in the teaching and learning process. They introduce a learner to first-hand materials and convey a precious quality of intimacy (Amadi, 2002). In furtherance, they help the mind of the learner on what is taught apart from being aids to memory. Moreover, they make learning and teaching more understandable and real. Instructional materials boost teaching and learning as they stimulate thinking and concretize learning (Ige, 2004). Successful implementation of any curriculum is almost fully dependent on the quality and quantity of instructional materials available to teachers and students for use in schools (Usman, & Adewunmi, 2006). Instructional Materials are used as checks to the teachers' knowledge and means of transmission. They give teachers the air of guidance, co-ordination, supervision and more time for correction in the class lesson (Stephen, 2015). Provision of high quality learning materials and facilities such as conducive classroom, furniture, teaching aids, such as periodicals, slides, film strips, computer, office accommodation, log books chairs, tables, libraries and good working space are very essential for quality education (Kolawole, & Arikpo, 2001).

### **Definition of Improvised Instructional Materials**

Improvised instructional materials are those teaching and learning materials produced using locally available resources with the help of experts (Ahmed, 2011). Improvised instructional materials are teaching materials designed and produced from the available local materials in order to promote effective teaching and learning in schools. They are materials that are used in the absence of the original or the ideal objects to bring about the same learning effect that the standard materials would have brought (Ahmed, 2008). The idea of making use of available local resources for the shortfall to ensure that teaching and learning progress simultaneously without hinges is referred to as improvisation (Eze, 2017). Improvisation is the use of local resources in our environment to assist in the smooth dissemination and transfer of knowledge from teachers to students. Eze (2012) defines improvisation as making of substances from local material found at home or school premises when the real or original materials are not available. Improvisation is the act of using alternative materials and resources due to lack or insufficiency of some specific first-hand teaching aids to facilitate instruction (Bajah, 2000). Improvisation is an act of using materials and equipment obtainable from local environment, or designed by the teacher or with the help of local resource personnel (local art and crafts experts) to enhance effective instruction. Improvisation appeals to the three educational domains (cognitive, affective and psychomotor) (Bromide, 1982). Improvisation could be regarded as the act of using alternative materials or equipment accessible from the local environment or created by the teacher or with the help of local personnel to simplify instruction (Shodeind, 2015). Improvisation demands adventures, creativity, curiosity and perseverance on the part of the teacher. Such skills are only realizable through well-planned training programme on improvisation (Onasanya, & Omosewo, 2011).

### **Purpose of Improvising Instructional Materials**

Instructional materials are the relevant materials utilized by a teacher during instructional process to facilitate teaching and learning and for the purpose of making the contents of the instructions more practical and less vague. Improvised instructional materials according to NTI (Module Two) are of paramount importance in the teaching and learning because of the following functions they perform:

1. They increase the rate of learning and at the same time allow the teacher to use more time on other gainful activities.
2. They effect a reality of experience that stimulates self-activity on the part of the learners.
3. They provide learning experience which are not within the immediate classroom environment.
4. They discourage rote learning by emphasizing realistic learning.
5. They make abstract term, concepts and generalizations more practical and realistic.
6. They help the learners to focus their attention during teaching-learning process.

7. They provide teacher with the means of guiding and controlling the desirable responses of the learners in relation to stimulus materials of the learning situations.
8. They develop in the learners, awareness of problem, open up possibilities for exploration, present meaningful interactions which naturally lead to provision of solutions to learning problems.
9. They help to stimulate purposeful and utilized self-activity and this is much more preferable educationally than a more or less passive and often bored listening.
10. They improve the classroom communication process between the teacher and the learners, with this, the expected improvement in learning output will be accomplished.

### **Importance of Improvisation**

Improvised materials help to arouse and sustain learners' optimism and enthusiasm; access expert assistance and technical support; stay informed of innovative developments; have confidence to share ideas with other teachers; interpret research and statistical data; diplomatically handle students' resistance; align improvised materials with curriculum guidelines and timelines; and develop materials to cater for individual learner's needs in overcrowded classrooms. The use of improvisation in teaching makes the concept more practical and subsequently reduces abstractions. Locally produced instructional materials encourage creative expression and foster experimentation, sensitive to tactile and visual experience (Balogun., Barth & Tanko, 2000). Again, they are cost effective, because they could be obtained from the local environment. They are generally very safe to use during demonstrations and experiments; it might not be capable of inflicting injuries, which means it could be hazard free. Improvised instructional materials give teacher/students the pride of using their talents, allows a teacher to reproduce his potentials, in concrete form and increase teacher's knowledge of the subject matter (Shodeind, 2015).

In addition, they serve as a motivation to learners in as much as they participate in the activities during the production of the materials and also arouse learners' interest. Moreover, the use of these materials minimizes concerns about breakage, repair and loss since they are readily available in the environment. It informs both students and teachers that alternatives for some of the conventional science teaching materials are possible. It also shows that people can do scientific experiments with the materials around them. It could lead to the discovery of new knowledge, and students' talents may be discovered. Using improvised instructional materials assist teachers economically and may make students more interactive. Beyond these, it makes students make use of their intellectual ability in the process of teaching and learning (Onasanya, & Omesewo, 2011).

### **Problems Associated with Improvisation**

The problems attached to improvisation can be attributed to a number of factors such as lack of financial support from the school principals, lack of skills and strategies for improvisation and large class size arising from free and compulsory secondary

education. Other factors include time constraint, school location where most secondary schools are located in rural areas, unavailability of experts and sometime inability to identify local materials (Aina, 2013). Sometimes the cost involved in designing these materials may be more expensive than buying the original ones. Again, the available material may not be suitable or appropriate for the lesson and can subsequently yield unexpected results; this can make learning more difficult and frustrating.

According to Stephen (2015) problems associated to improvisation include: lack of financial support from the school principals, lack of skills and strategies for improvisation and large class size arising from free and compulsory Secondary education, school location where most Secondary Schools are located in rural areas, time constraint, unavailability of producer goods or tools, inability to identify local materials and lack of exposure on improvisation on the part of teachers. Inadequate training, poor funding, lack of functional workshops, lack of regular supervision of teachers, poor motivation are among the factors hindering effective production and utilization of teacher-made instructional materials (Achimugu & Onojah, 2017).

### **Types of Improvisation**

Locally produced instructional materials can be of three types namely; Improvisation by substitution, modification and construction (Adu & Adu, 2014).

#### **Improvisation by Substitution/Miscellaneous Materials**

A creative teacher dedicates his time to producing materials that best benefit effective learning process. Miscellaneous/substitutes are available local materials that can be used just as they are collected without any modification in size or shape.

#### **Improvisation by Modification/Duplicated Materials**

In the absence of standard materials, available local resources can be modified to serve the same purpose. For instance, empty carton can easily be altered to serve the purpose of first aid box. In the process of adjusting local resources to serve a particular purpose, some alteration will be made against its normal shape and size.

#### **Improvisation by Construction/Collected Materials**

Construction is a process of bringing different components together to form a meaningful whole. As the name implies, a teacher will have to gather different resources, cuts, joins, pastes, and sometime copy to produce an effective improvised instructional material. Example, if a teacher wants to teach students some components of a car, empty carton can be used as body of the car, bottle tops as tires, and so on.

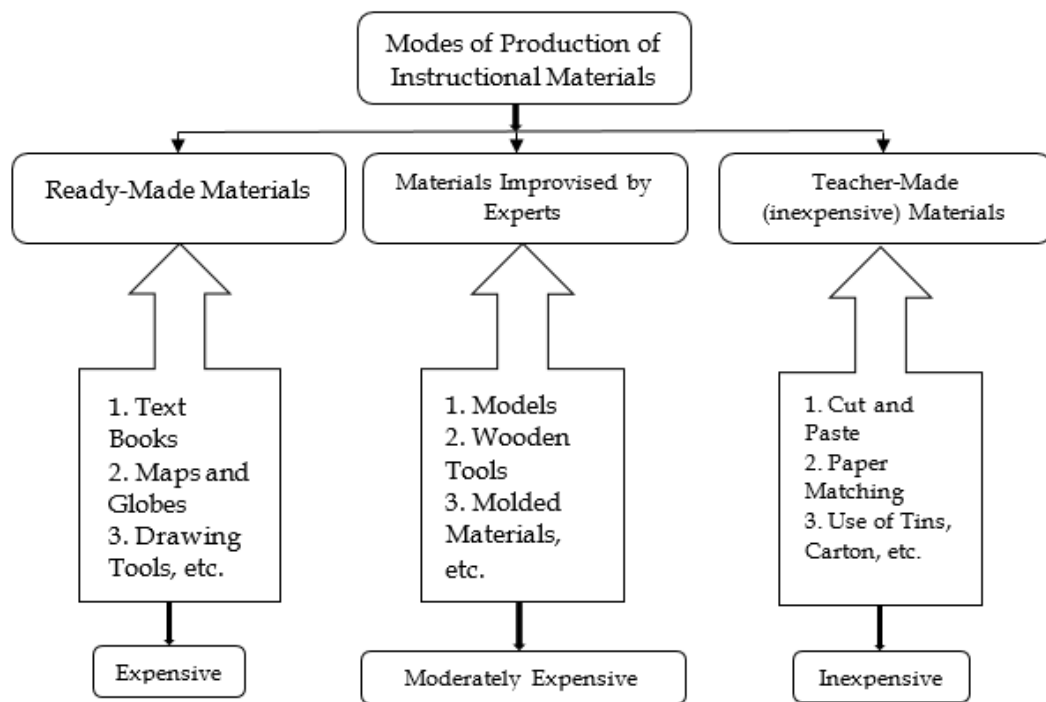
### **Modes of Production of Instructional Materials**

Instructional materials can be categorized based on their modes of production. The modes include:

1. Ready-made materials (packages) from companies.
2. Material improvised by experts in visual literacy.
3. Teacher-made (inexpensive) materials.

Ready-made instructional materials are usually being produced by companies (private and public) such as McMillan, Longman, etc. These kind of materials are expensive owing to the fact that, the primary purpose of establishing any business organization is to make profit. On the second part, the materials made by experts in visual literacy using local resources are moderately expensive. This is for the fact that the resources being used for the production are usually found in the immediate environment. Lastly, when a teacher could not lay hands on any of the two options (Ready-made instructional materials and materials made by experts in visual literacy), then, there is need to look at the resources available, modify (improvise) them to serve the same purpose. Improvised products are inexpensive compared to buying ready-made instructional materials. This has been diagrammatically explained in figure 1.

**Fig. 1:** A Diagram Depicting Modes of Production of Instructional Materials



**Source:** Adapted from Olumorin, Yusuf, Ajidagba, and Jekayinfa, (2010).

For any teacher to produce effective instructional materials using available local resources, he/she needs to undergo expert training, workshops and seminars on improvisation. The teacher most also has knowledge of the basic principles and elements of design. Some of the basic skills include:

1. Pen lettering skill
2. Modelling technique
3. Free-hand writing
4. Calligraphy skill
5. Use of color in graphics

6. Weaving and other crafts
7. Painting, etc.

### **Pen Lettering Skills**

Lettering can be simply defined as the art of drawing letters with an impressive typographical structure. Priority has not been given to learning lettering skills in the modern days. This is for the fact that, most of the typography needed are already there on computers as typefaces. Example, Times New Roman, Comic Sans MS, Algerian, Calibri, and so on. As a teacher, lettering skill is needed, the need may arise when a teacher is teaching.

### **Modelling Technique**

Model is a three-dimensional representation of instructional material or a proposed structure, typically on a smaller scale than the original. On the other hand, modelling can be seen as all the processes involved in producing/creating a model. Usually, modelling is defined as the process of representing a real-world object or phenomenon. More specifically, the term is often used to describe the process of representing 3-dimensional objects using computer or writing pen. Modelling is a scientific activity, the aim of which is to make a particular part or feature of the world easier to understand, define, quantify, visualize, or simulate by referencing it to existing and usually commonly accepted knowledge (Encyclopedia, 2017). It requires selecting and identifying relevant aspects of a situation in the real world and then using different types of models for different aims, such as conceptual models to better understand, operational models to operationalize, mathematical models to quantify, and graphical models to visualize the subject. Though it is a bit complex, constant training and practice will help teacher becomes expert in modelling.

### **Free-Hand Writing (Quick Sketch)**

Free-hand writing is any form of writing done without mechanical aids or devices. Free-hand writing skills help teacher manipulate letters during class instruction to achieve desired learning goal. Free-hand writing is any kind of writing characterized by the use of hands and pen or pencil for easy manipulation of letters. Hand-writing skill is required to enable a teacher puts letters in different shapes, this helps effective delivery in the learning process. One major importance of this skill is, quick sketch allows teacher to teach time consciously (Johnson, Do, Gross, & Hong, 2014).

### **Calligraphy Skills**

Calligraphy is a visual talent connected to writing. It is the design and manipulation of letters with a broad tip instrument, dip pen, pencils, brush, among other writing instruments. A contemporary calligraphic practice can be defined as the ability to give shape to letters in an expressive, harmonious, and skillful manner (Smith, 2014). The principal tools for a calligrapher are the pen and the brush. Calligrapher writes with nibs that may be flat, round, or pointed. For some decorative purposes, multi-nib pens steel brushes can be used. Basically, calligraphy is a visual art that makes use of linguistic signs

to create an aesthetic experience that transcends or complements the literal embodied meaning. Calligraphy may thus be seen as an extension of writing wherein the artist or author subjects the form of linguistic signs to aesthetic modulation. Calligraphic skills help teacher uses sign to motivate students' learning process especially in nursery and primary schools (Shabiralyani, Hasan, Hamad & Iqbal, 2015).

### **Use of Colour**

Colour is one of the important components of visual instructional materials production, thus, its skill is a complement to visual literacy. Applying colour on object/image/table makes it looks beautiful, meaningful, motivating and real. Colour is being categorized as primary, secondary and tertiary. As the name implies, no colour can be manipulated to form primary/raw color because they are foundation to all other colours/hues. These colours include yellow, blue and red. Secondary colour is any colour derived from the combination of two primary/raw colours. It could be the combination of yellow + red = orange; yellow + blue = green; red + blue = purple. The combinations can only become meaningful if equal proportions of any of the two primary/raw colours are mixed. Tertiary colour is the combination of three or more colours, this could be combination of primary/raw and secondary colour, or mixing more than two secondary colours. Example, Red-Purple, Yellow-Green, Red-Orange. The use of tertiary colours rest on expertise. To be able to use colour appropriately, one needs to understand the principles and elements of design such as rhythm, harmony, balance, contrast, and so on.

### **Weaving and other Crafts**

Weaving is a technique of textile production in which two different sets of threads/yarns are interlaced/knitted at right angles to form a structure/fabric such as mat, carpet, cloth, and so on. Other crafts include; knitting, and braiding/decorating or plaiting. In knitting, the longitudinal threads are called the warp and the lateral threads are the weft or filling (Smith, 2014).

### **Painting**

Painting is a component of creative arts which has to do with the use of brush to apply paints of different tones to create momentous impression on surfaces to represent objects/figures/table. The mastery of the therapy of colour helps the instructional materials producer (teacher) to manipulate brush and paint in a way that gives accurate resemblance of the intended object/figure/table. Painting could be sprayed/rubbed on walls, cardboards, plywood, canvas, strawboard, papers and so on.

### **Maintenance of Instructional Materials**

Instructional materials, ready-made or otherwise have been found very effective in the process of teaching and learning. Thus, instructional materials need to be handled with care and professionalism. In many instances, especially in public (Government) schools, these materials are abandoned or not properly managed even where resource room desk officers are employed. Poor attitude to maintenance of instructional materials has led to misplacement, loss of spare parts, breakage and expiration of many improvised and



government provided materials in schools and resource centres. Measures need to be taken to prevent the occurrence of the aforementioned problems, according to Chijioke and Allagoa(2014) the measures include:

1. Proper storage
2. Cover after use
3. Handle with care
4. Repair and replace damaged parts
5. Keep out of reach of children after use
6. Keep them away from sun
7. Keep them away from water or anything wet
8. Provide enough ventilation

**Proper storage:** helps to keep instructional materials safe and clean, some of these materials are fragile and cannot withstand pressure, thus, need to be protected.

**Cover after use:** to keep instructional materials clean, cover shall always be provided. This helps in keeping them safe and ready for use at all times.

**Handle with care:** nature of the resources used in the production of instructional materials needs to be considered in handling them. This helps to prevent breakage and damage of parts.

**Repair and replace damaged part:** in most of our primary schools, instructional materials are not in use for a simple fact that a component/ part of it is misplaced or spoiled. Teacher needs to become creative and dynamic to be able to repair and replace damaged parts of the teaching aids where and when necessary.

**Keep out of reach of children after use:** use of instructional materials is of paramount importance in the teaching of nursery, primary and secondary schools students. This does not mean children shall be allowed free entry and exit in/out of resource rooms. Some students may not be mindful of fragility of some instructional materials.

**Keep them away from sun:** most of improvised instructional materials are sensitive to sunlight and heat. Sun fades and dismantles anything joined with gum or masking tape, thus, instructional materials should be kept away from sun.

**Provide enough ventilation:** looking at the nature of our environment, ventilation is required for the survival of both human and non-human resources. Computer is the only instructional material but the most commonly found aid in our resources rooms. To avoid damage, computer and other electronic devices need proper ventilation and spacing.

### **Improvisation in Second Language Teaching**

The use of television, radio, multimedia projectors, handheld devices, mirror, flashcards, pictures, etc to support second language teaching have been found effective. Television and multimedia projector for instance, can be used to support teaching of reading,

writing, speaking and listening skills of second language (Proaño, 2012). This is for the fact that both television and multimedia projector appeal to senses of seeing and hearing. In the teaching of spoken (Oral) English for example, even in the absence of English expert who might have better ways to pronounce and teach, these technologies can suffice. The ubiquitous nature of handheld devices and their flexibilities have made them the most frequently used technologies for second language teaching. This is because handheld devices are portable, context sensitive and can be used for the teaching and learning of both oral and aural aspects of second language. In some countries of the world where there are no enough teachers of second language, radio was found effective especially in the teaching and learning of spoken English and other second languages (Akintunde & Angulu, 2015). One may ask how mirror can be used for innovative teaching of second language. Especially for learners, mirror is very effective. When learning oral English for instance, learner can use mirror to study how mouth moves when pronouncing words/sounds (vowels and consonants). In this regard, improvisation does not necessarily mean the use of local materials only, but using one equipment/material is lieu of another.

### **Conclusion**

One needs to be pragmatic to be able to adopt changes in life and situations, improvisation defines one of the dynamic nature of educational process. It could be understood that improvised instructional materials have the same effect as standard instructional material; therefore, there should be cordial relationship and effective communication among policy maker, parents and teachers. This helps in making financial contribution, consultation of experts and teacher re-training as regard to the utilization of instructional materials. Improvisation of instructional materials in Nigerian schools is essential because of the financial constraints battling education sector and the country at large, which makes it impossible for the government to provide instructional materials in all schools. Resourceful and skillful teachers including the pre-service teachers are encouraged to improvise necessary instructional materials to improve the quality of teaching and learning and also promote academic standard in Nigerian schools.

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