

Improvisation of 3-Dimensional Instructional Model to Enhance the Learning Process in Fine Arts

BABATUNDE, Christopher Femi

Usmanu Danfodio University, Sokoto, Nigeria

Abstract: The paper examined the improvisation of three-dimensional instructional model to enhance the learning process in Fine Arts. It reviews the concept of improvisation and possible goals of improvisation in teaching and learning processes. Furthermore, it looks into the reason for 3-D instructional materials and the two categories of media, primarily three dimensional, models and puppets and other kinds of three dimensional instructional models such as Dioramas, mock-ups, Television, Radio, Computer, Overhead projectors etc. the study went ahead to explain the importance of three dimensional instructional model in teaching and learning fine arts, such as arousal of interest, retention of knowledge and power, saves time and Improvement of quality of instruction. Also, the source of this paper was secondary source such as, journals, articles, books and internet browsing. The study concluded that Fine Art teachers should adopt the use of improvisation to complement the standard materials in the teaching of Fine Art; Learners should be engaged in the process of improvising instructional materials; Students should be encouraged with the help of the teacher to assembly locally made materials resources which should be used in the teaching of Fine Art. This will help to reduce the abstract nature of the subject as some of the suggestions given in this paper.

Keywords: Improvisation, Three –dimensional object, instructional models, Fine Arts.

I. INTRODUCTION

As a Fine Arts teacher, you need not to rely on factory made or foreign instructional materials/models for your instruction. Almost, all works of Fine Art are based on practical, and there is no way to teach a practical work without using instructional media. As a result of this, the teacher should look for a way of improvising his own three-dimensional instructional models using locally available materials around him to aid his teaching. This brings about the improvisation of three-dimensional instructional model to enhance learning process in Fine Art. Improvisation is the use of alternative of materials that cannot be reach or unaffordable to aid the learning process.

Teachers need materials and equipment daily in order to teach effectively, but provision of such materials is grossly inadequate or no-existent. Reason been that the government are not providing materials for instruction and most teachers are not vast or didn't know much improvisation. Improvisation of such model become necessary to the teacher if he cannot obtain the commercially or factory produced ones. In the classroom situation, since the authorities can no longer provide the teacher with the needed materials and the

teacher can no longer wait, then it became imperative for them to look for substitute from everyday materials in the environment. Teachers can equally produce instructional models that can operate like the factory manufactured ones, or very close to them. There is no limit to the materials that can be improvised for effective teaching and learning. Commercially made items are usually of high quality and operate exactly according to design and specification and possibly precision, but they are hard to come by. Improvised home-made items satisfactorily enable the child to explore and extract the basic concepts or skills (Dalhatu, 2014).

The importance of teaching Fine-Arts cannot be overemphasized. Fine Art is a subject that has the capacity of dealing with culture and artistic creation of the past, present and future. It also explains the significance of art works to humanity, taking into consideration the style of execution, time and period of production (Bada, Bello, Ijisakin & Fajuyigbe, 2014). Artists in every age express themselves intelligently and creatively through drawing. It was observed that, Art generally involves making marks on a surface by moving a tool across a surface using dry media such as pencils, pen and ink, brushes, crayon, charcoals or pastels. Fine Art is a practical work that lacks materials such as 3 dimensional visual objects, display boards, slides, video and other materials that could help in learning. And the school where these materials are available, they are hardly used (Bada & Bello, 2014).

As a result of lack of enough number of certain real objects, non-availability in the immediate environment and in situation where such objects are not accessible or too large to be brought to the class for uses as instructional materials, models are used in place of them (Olumorin, Yusuf, Ajidagba & Jekayinfa, 2010). Other reasons that account for the use of models instead of real objects for instruction are when the object or figures are immovable or too expensive to purchase just for the purpose of instruction in class. To successful use 3- dimensional instruction models for instruction, the user (teacher) must be conversant with the general features and component of the instructional model. It must be verified by an expert in the area of the subject (Fine Art) content and the usability should be verified by a qualified educational technologist or artist. If all these steps are strictly adhered to there is tendency to inform the learner through the use of such instructional models. Three dimensional instructional models

are direct, replica, image or copy of real, original or natural object or figure (Olumorin & Yusuf, 2010).

This paper however was designed to assess the improvisation of 3- Dimensional instructional model towards enhancing learning process in Fine Arts as well as identifying the possible or likely challenges acting as a menace towards actualizing these objectives.

Conceptual Framework

In order for this paper to have a meaning, some concepts are hereby explained.

II. CONCEPT OF IMPROVISATION

Improvisation is an alternative of a material that is not available at the moment. It allows the teachers and students to have a good rapport. Improvisation means to make or do hastily without extensive preparation and using those materials that are locally available and do not involve high cost as substitute to the factory made or imported ones (Azubuike 2004). Improvisation helps to clear the unavailability of the materials in the school system thereby helping the teacher to use the local available materials to assist the existing one. Abdu-Raheem and Oluwagbohunmi, (2015) corroborated the idea that resourceful and skillful teachers should improvise necessary instructional materials to promote academic standard in Nigerian schools. Oso, (2011) in Abdu- Raheem, (2016) agreed that the best way for teachers to make use of their manipulative skills is to improvise so as to achieve their lessons objectives at least to a reasonable extent. As a result of that improvisation allows teachers and learners to display their skills in teaching and learning activities for better understanding of concept being taught. It is an alternative of a material that is not available at the moment. It is all about serious thinking, creative ability, communication and coming together of different opinions. According to Tukur, (2012) improvisation is therefore, the making of substitutes from local materials found at home or school premises when the real or original materials/equipment is not available. The improvised materials should be able to convey special instructional messages just as the original materials. Improvisation of instructional materials cannot be overemphasizing as far as teaching and learning is concern. It is a must where there is absence of enough instructional materials for learning process. For teaching and learning to have meaning there must be adequate materials for the process. According to Hornby (2010), improvisation means to make or do something by using whatever is available, usually because you do not have what you really need. It is the provision of alternatives to all things. It can be defined as an alternative of creative arts materials to be used for different function for the purpose of instruction to be achieved. It can be seen as the act of providing teaching materials from our locality when there is shortage or lack of the standard ones (Mbot, 2011). Any material improvised along with the learners/students gives more understanding during learning

process and simplify teacher's effort and the intended objectives would be achieved.

Concept of 3-Dimensional Object

3-Dimensional object are materials that has the length, breath and width that can be seen in the round as far as fine art is concern. The materials are almost complete in shape. 3-dimensional objects are those that can be represented on the X, Y and Z axis unlike flats (2 dimensional shapes). In this case we are dealing with objects. In order to fully concretize these learning experiences and encourages active participation of your learners you should bring to class some objects of various shapes (Tukur, 2012). These objects will help to arouse learners feeling and attention, whereby they will be fully encouraged and eager to learn as it will make learning easier.

III. CONCEPT OF INSTRUCTIONAL MODEL/MATERIALS

A model is a representation of real object; they can be varied in size depending on the size of what you want to improvise, they can be shrinking, enlarge or represent it in its normal size. Car can be shrinking in the size of a sandal and ant can be enlarging to the size of rat. Any materials that can be manipulated such as clay, plastic, paper are used to demonstrate the model (Tukur, 2012). An instructional material/model provide a room for concrete understanding of what is been taught. Olumorin et.al (2010) observed that instructional materials help teachers to teach conveniently and the learners to learn easily without any problem. They asserted that instructional materials have direct contact with all sense organs. Kochhar, (2012) supported that instructional materials are very significant learning and teaching tools. He suggested the needs for teachers to find necessary materials for instruction to supplement what textbooks provide in order to broaden concepts and arouse students' interests in the subject. One of the important of instructional material is that they tends to be very cheaper to improvised and come by and very interested in teaching large number of students at the same time. It also encourages the students to be focus and give total attention to enhance their interest.

The lack of available instructional materials in post-primary schools in Nigeria is a serious problem despite the fact that the rapid change in technology and the new techniques of instruction have made it necessary for schools to be adequately equipped with different types of materials (Abdullahi, 2010). The availability of instructional materials in our schools is inadequate, that is the reason why teachers should be up and doing in improvising instructional materials which is easier and cheaper to produce for effective teaching and learning. Instructional materials are the gathering of materials, equipment depending on your topic or subject to aid or facilitate the learning process for easier understanding. It goes a long way to helping the teacher reach his/her goal in teaching and also giving the learners concrete understanding. These materials can be sourced for locally and used to

enhance learning process. Paper-Mache can be used to mould object like firing oven used in firing clay work that cannot be brought to the class for instruction.

Concept of Fine Art

Fine Art is an expression of the inner mind. A language of communication through which one speaks about himself (feeling, ideas, skills or thought) and things going on around him, Fine Art according to (Gombrich, 2005) as charged during the Romantic period when art came to be seen as “special Faculty of the human mind”. It is important because it has to do with the creativity from thoughts, feeling of an individual in drawing, painting and so on. It is also refers to as art work whose visual products serve decorative purposes. It’s a language of feeling and emotional sense that is appeals to beauty such as painting, architecture, drawing and ceramic/sculpture. Fine Art on its own is a state of appreciation of the aesthetic which also give meaning to the branch of art and appeal to man’s sense of beauty and emotion. Drawing, ceramics and drama/music are part of branches of art. Fine Art is a means of self-expression of what exist inside a person such as feelings, ideas or thought about what is going on around him generally. It has to do with visual and non-visual representation of human feeling and a skillful use of materials to produce things for human use and pleasure.

In a summary, art is a universal language of self-expression of man in his cultural and natural environment with the aids of some materials, involving skills, creativity and techniques to aim for aesthetic purposes.

IV. GOALS OF IMPROVISATION IN TEACHING AND LEARNING PROCESSES

Learners generally remember fifty percent (50%) of what they see and hear, ninety percent (90%) of what they see and do (Osho, 2011). This illustration is more evident in our learners today where their mode of analyzing football matches or films to their colleagues shows how powerful and effective their visual experience are to their verbal experience (Osho, 2011). This should have been an advantage to their academic but the opposite is the case, there is the need, therefore, in tapping and building upon this gain of visual experience through the world of improvisation. Improvisation can be described as substituting: To make a substitute for an item, out of the materials that can easily be sourced for or available at the time. Through improvisation, learners’ attention are captured and retained for the better part of the lesson. Since they serve as educational media, students’ interest in Fine Art and Technology Education is stimulated, meaningful and interesting. Learning is more permanent and there is development of skill in the psychomotor domain. The need for improvisation becomes essential where there is inadequate capital to procure the real media and equipment. It is also necessary when population outweighs what is available because of the insufficient funding in education (Azzara, 2002).

The basis for success in classroom teaching is resourcefulness. To be able to improvise requires being resourceful and creative. Certain steps to be followed for effective improvisation of materials include:

- Identify the item to be improvised
- Understanding the basic principles involved in its working
- Design and draw a rough sketch of the items
- Make a list of the materials needed
- Construct the item according to the given procedure to produce the prototype
- Test and evaluate through use
- Re-Design if need be and Mass-production if possible and necessary (Berk & Trieber, 2009).

For learners and teachers to derive maximum benefits from improvisation media and equipment the teacher must have adequate knowledge of the particular subject matter (Fine Art). It is equally important for the teacher to have a thorough understanding of the learning process in addition to improvised media and equipment. The environment is richly endowed with materials resources that could be utilized for improvisation (Koppett, 2001). An improvised apparatus is often more effective as a teaching tool as it is easier to see and understand the principle involved when the parts that make use of the apparatus are exposed and not hidden (Osho, 2011). Improvisation in teaching and learning cannot be overemphasized, because it plays a major goal in disseminating instruction whereby making it more concrete and permanent in learners

Reasons for Improvised 3-D Instructional Models/Materials

- It will be useful where the real model/materials are not possible to be brought in the classroom to further enhance students with purposeful teaching experiences.
- They are also constructed to allow students to handle them, except those that are fragile, costly, or too large.
- To give the learners an opportunities to play or manipulate the materials so that they can be able to consider process and concepts on their own.
- When learners are involve in the process of preparation or construction of the materials (improvisation), they will have a concrete learning experiences that the real object cannot provide.
- When what you want to use is unavailable, improvisation gives you the room to bridge the gap. E.g. To fetch clay for modeling may be impossible during school hours, papier-mâché can be improvised as a replacement.

Three Dimensional Model/Materials

- Objects and specimens
- Models and mock-ups
- Dioramas

- Puppets
- Resource person

Two categories of media, primarily three dimensional are *models* and *puppets*:

Models: These are direct replica, image or copy of real, original or natural objects; they are made in place of the original objects. The uses are for teaching and learning. Naturally no model can do all that the original object can do hence, in teaching and learning, it is only when the original is not available that the option of using models is considered (Olumorin, et.al, 2010).

Models are defined as representations of real objects; they can be shrinking, enlarge or represent it in its true size. For example, a kiln use for firing clay and glazing can be shrunk to a reasonable size that can be brought to the classroom for instruction or a mosquito can be enlarged to the size of grasshopper. Some model has removable parts, the human body for example models are particularly useful in teaching because they can provide tactile experiences, and those with removable parts provides manipulation experiences as well. They are called mock-ups. Many simple models can be made by teachers; they can be constructed from wood, metal, paper, cardboard, papier-mâché clay, plaster of paris and many other materials.

To teach fine art, many different kinds of improvised models can be used such as:

- Papier-mâché can be used to make an improvised model of any material used in fine art to disseminate instruction depending on the topic. E.g. when teaching carving.
- Models of boxes, shapes, these can easily be made of sticks, cardboard or other materials.

Puppets: Children and adult alike are fascinated by puppets that wear local clothing and speak the vernacular of the audience. Puppets can range from simple sticks figures to complex marionettes, which will not be discussed here as they require considerable skill to make and to use. Stick puppets are drawn on cardboard by using a simple drawing style and bright colours to attract attention. These are then cut out and mounted on a stick with glue, tape or staples. Hand puppets, simpler puppet costume and satisfactory puppet stage were part of puppeting.

V. IMPORTANCE OF 3-D INSTRUCTIONAL MODEL TO FINE AND APPLIED ARTS

1. *Arousal of Interest*: -3-dimensional instructional models usage in teaching among students to enjoy an instruction (Onasanya, 2004). 3-dimensional instructional model are used in learning process to focus attention of students to reduce boredom in the classroom and to make the learning process more effective, exciting and lively (Wathore, 2012). Igbo and Omeje (2014) adds that the use of 3-dimensional instructional model attracts the attention of

learners and enables them to participate in the topic being taught by using the models as references to illustrate their thought and ideas in fine art. Mostly, Fine and Applied Art is embedded in the use of colour which tends to attract the interest of learners when use with 3- dimensional models.

2. *Assimilation of Ideas and Knowledge*: Since students get to observe instructional model than mere words, they are effective in helping learners assimilate ideas and knowledge in the teaching and learning context. Teaching materials reinforce the processes of learning by stimulating, motivating and arresting the attention of learners (Okobia, 2011).
3. *Improvement of Quality of Instruction*: A 3-dimensional instructional model helps a teacher in presenting a lesson effectively before student. It makes delivery of instruction to be much more standardized as learners with varying abilities can receive the same message from an instruction and their individual differences catered for.
4. *Saves Teaching Time*: the systematic utilization of 3-dimensional instruction models in the classroom significantly saves teaching time as their use requires short time to explain concepts and present large information. This benefit can make manifest in the time spent on task by both the teacher and students (Olawale, 2013; Wathore, 2012; & Onasanya, 2004).
5. *Retention of Knowledge and Power*: Using 3-dimensional instructional model in teaching and learning as assist learning by helping students of Fine and Applied Arts visualize lesson and transfer abstract concept into concrete easier to remember objects which enable student to learn more and retain better what was taught.

In summary, 3-dimensional instructional model stimulate and enhance the lesson, give room for better concentration for learners, enhance teacher-students' relationship, help students become more familiar with the object and they condense large qualities of information. They also give visual access to something which may be inaccessible to clarify abstract information which may be difficult to communicate verbally.

VI. CONSTRAINTS IN IMPROVISATION OF 3 - DIMENSIONAL INSTRUCTIONAL MODELS IN FINE ARTS

These are some of the limitations of Improvised 3-D instructional model in Fine Arts, according to Anyasode (2010) in Bada (2013) include the following: -

- Too much emphasis on foreign instructional materials at the expense of home-made ones.
- Inadequate of available finance by the teachers
- Non-recognition of Fine Arts by the parents and government.
- Lack of financial support from the government
- Poor attitude of principals in secondary schools towards the subject and fine arts students.
- Inaccessibility to the raw materials
- Lack of raw materials

- Failure of policy-making organs of the government to give Fine Arts prominence in the educational system, 3-Dimensional instructional model can actually enhance learning in Fine Art when applied.

VII. CONCLUSION

3-Dimensional instructional models are materials employed by the teachers, lecturers to enhance the effectiveness of instruction, they are information carriers specifically designed to draw out the desired behavioral change in the learner. However, this paper looked at instructional resources in the context of 3 dimensional instructional models which consist of length, height and width, such as puppet, model and mock-ups, object and specimen, Dioramas, Television, Radio, Computer and Overhead Projector (OHP) etc.

VIII. SUGGESTIONS

- Fine Art teacher should adopt the use of improvisation to complement the standard/manufactured materials in the teaching of fine arts.
- Students should be encouraged with the help of the teacher to assembly locally made materials resources which should be used in the teaching of fine art. This will help to reduce the abstract nature of the subject
- Regular workshop should be organized for serving teachers to broaden their knowledge on improvisation. Such workshops should be able to make the fine art teachers resourceful in knowing where and how he/she can obtain materials for improvisation to suit the concept in question.
- Learners should be engaged in the process of improvising instructional materials.

REFERENCES

- [1] Abdullahi, M. (2010). Designing and Developing Instructional Materials by School Teachers. A leader paper presented at the Annual Conference and Convention, Organized by the Nigeria Association for Educational Media and Technology (NAEMT). C.O.E Minna 20th – 26th September, 2010.
- [2] Abdu-Raheem, B. O. (2016). Effects of Instructional Materials on Secondary Schools Students' Academic Achievement in Social Studies in Ekiti State, Nigeria. *World Journal of Education*, Vol. 6, No. 1 (ISSN 1925-0746), 32-39.
- [3] Abdu-Raheem, B. O., & Oluwagbohunmi, M. F. (2015). Pre-service teachers' problems of improvisation of instructional materials in social studies in Ekiti State University. *Journal of Education and Practice*, 6(3), 160-163.
- [4] Anyasode, B. A. (2010). Religion on the Society. *Journal of Society*, 11, 75-90.
- [5] Azubuike, A. (2004) Principle and Practice of Educational Technology: Ibadan International Publisher Ltd.
- [6] Azzara, C. D. (2002). *Improvisation in Colwel*, Richard (ed), The New Handbook of Research on Music Teaching and Learning: A Project of the Music Educators National Conference, Oxford: University Press.
- [7] Bada, T. A. (2013). Towards Effective Utilization of the Mass Media to Improve the Quality of Instruction in Schools. *Nigeria Journal of Social Sciences*, 3, 148-159.
- [8] Bada, T. A., Bello, I, Ijisakin, Y. O., & Fajuyigbe, M. O. (2014). Effects of Two and Three- Dimensional Visual Objects on the Acquisition of Drawing Skills. *World Journal of Education*. Vol. 4, No. 1:2014. Published by sciedu Press.
- [9] Berk, R. A. & Trieber, R. H. (2009) whose classroom is it, anyway? *Improvisation as a tool*. *Journal on Excellence in College Teaching*, 20 (3), 29-60.
- [10] Dalhatu I.I. (2014). *Improvisation: An Essential Requirement for Effective Teaching and Learning*. Sokoto Educational Review Vol. 13 (2): October 2012. Published by: Faculty of Education and Extension Services, Sokoto, Nigeria.
- [11] Gombrich, T. P. (2005). *Techniques of Drawing in Nigeria Secondary Schools*. Lagos: Macmillan.
- [12] Hornby, A. S. (2010). *Oxford Advanced Dictionary of Current English. Improvisation in Physics Class: Implications for Teaching and Learning*. *Journal of Research and Method in Education*, Vol. 2 no. 5, Pp. 38-42 <http://www.creativityatwork.com>
- [13] Igbo, J. N & Omeje, J.C 2014, Perceived Efficacy of Teacher-made Instructional Materials in Promoting Learning Among Mathematics-disabled children, *SAGE Open* 1-6 Retrieved 11 February 2011, <http://sgo.sagepub.com/content/4/2/2158244014538431.full-text.pdf+html>.
- [14] Kochhar, S. K. (2012). *The Teaching of Social Studies*. New Delhi, India. Sterling Publishers Private Limited.
- [15] Koppett, K. (2001). *Training to Imagine: Practical Improvisation Theater Techniques to Enhance Creativity, Teamwork, Leadership and Learning*. Sterling, VA: Stylus.
- [16] Mboti, F. A. (2011). Effects of Improvised Materials on Student' Achievement and Retention of the Concept of Radioactivity. *An International Multi-Disciplinary Journal, Ethiopia*. Vol.5 (1), Serial No. 18, January, 2011. Department of Curriculum and Instruction, Cross River University of Technology, Calabar - Cross River State, Nigeria.
- [17] Okobia, E. O. (2011). Availability and Teachers' Use of Instructional Materials and Resources in the Implementation of Social Studies in Junior Secondary School in Edo State, Nigeria, *Journal of Canadian Center of Science and Education*, Vol. 3 no. 2, pp. 90-97.
- [18] Olawale, S. K (2013). The Use of Instructional Materials for Effective learning of Islamic Studies, *Journal of Jihad at-Islam*, Vol. 6 no. 2 pp. 29-40.
- [19] Olumoriin C. O., Yusuf A., Ajidagba U. A & Jekayinfa A. A. (2010). Development of Instructional Materials from Local Resources for Art-based Courses. *Asian Journal of information Technology*, 9 (2) 107-110. Available online at www.medwelljournals.com/ref.php?doi=ajit
- [20] Onasanya, S. A (2004). Selection and Utilization of Instructional Media for Effective Practice Teaching, *Institute Journal of Studies in Education*, Vol. 2 No.1, Pp. 127-133.
- [21] Osho, L. (2011). Need for Improvisation in Classroom Teaching. Lagos: Retrieved from: <http://odili.net/news/source/2011/june/20/802.html> on 29/6/13
- [22] Tukur, A. K. (2012). *Teachers Guide to Improvisation and Utilization of Instructional Materials*. Ahmadu Bello University Press Limited, Zaria, Kaduna State, Nigeria. Pp. 13 & 81.
- [23] Wathore N. G (2012). Utility of Instructional Materials in the Teaching of Geography at Higher Secondary Level, *International*