



APPLICATION OF IMPROVISED INSTRUCTIONAL MATERIALS IN ADULT EDUCATION DELIVERY IN NIGERIA IN ECONOMIC CHALLENGING TIMES

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ABSTRACT

This paper examines the place of locally improvised materials in effective delivery of adult and non-formal education lessons. This is against the back drop of low funding of the education sector in Nigeria occasioned by global economic recession which has in turn negatively impacted on the provision of instructional materials in Nigerian schools especially adult education programmes. The paper argues in favour of the tremendous benefits of locally-produced instructional materials as substitutes for standardized and costly imported ones and considers them beneficial not only to the teacher/ facilitator but also to the learners and the society at large. Strategies for use and recommendation are advanced.

Keywords: Adult education, Teaching, Education, Nigeria.

1. INTRODUCTION

Adult education is a worthwhile enterprise in which every individual must engage to be alert, alive and participate meaningfully in their daily life activities. The adult therefore requires some specific type of education in order to lift them out of complacency and get going for individual and societal well-being. Effective lesson delivery in adult education, irrespective of the programme requires utilization of appropriate instructional materials. Some of these materials are externally made while others may be internally or locally produced to enhance service delivery.

Besides the ready-made instructional materials which are readily available in developed nations of the world, Vikoo (2013) rightly observed that the situation is quite different in the developing nations where resources are scarce accompanied with a pitiable low level of technology. As a result, proper facilitation of adults suffers, a paucity/dearth of ready-made sophisticated instructional materials; hence some facilitators tend to avoid some topics in the scheme with the flimsy excuse of lack of materials or adopt teaching methods that do not rely very much on the use of instructional materials. In order to ameliorate this situation, improvisation of instructional materials readily comes to mind.

Adult education is a specialized, versatile discipline that covers the total man and all forms of learning available for an individual from cradle to grave. It is much more relevant in contemporary world with its constant evolution and application of new wake of knowledge. Thus,

young adults teach older ones manipulation of new technology such as cell phones, computer, etc. Life-long education caters for those regarded as adults who are willing to develop their abilities, enrich their knowledge and improve their skills or professional qualifications or turn them in a new direction to meet their felt needs and those of their society. (5th International Conference on Adult Education (CONFINTEAV), 1997, in Nzeneri, 2010).

Over the years, adult education has been viewed by scholars and authors in the light of the educational opportunities for those identified as adults by their societies. However, the concept is still prone to a wide range of interpretations. For instance, Nzeneri (2010:10), submitted that “Adult education is an essential tool for resolving life’s problems and as such it is indispensable to all. It involves all of us directly or indirectly because we all participate and benefit from it formally, informally or non-formally”.

2. THE SCOPE OF CLIENTELE OF ADULT EDUCATION

The scope and clientele of adult education in Nigeria is clearly stated in the National Policy on Education as essentially functional, remedial, vocational, aesthetic, civic, cultural and continuing education designed for youths and adults outside the school system. However, in order to avoid over-simplification of the concept, Ezimah (2004:10), described adult education as “a coat of many colours” and viewed from the perspective of coverage, it has the capacity to “accommodate the homogenous and heterogeneous nature of its programmes and clientele. In sum, it can be defined as all forms of educational activities undertaken by learners within and outside the formal school system for which the curriculum or content is designed for specific skills or knowledge, which must have immediacy of application and direct individual and societal needs.

2.1 Characteristics of Adult Learners

The characteristics of adult learners bear significant influence in their enrolment, active involvement, success or otherwise in the learning programme. Ihejirika (2010) citing Cole, identified three major characteristics of adult learners as sociological, physiological and psychological.

Physiological changes occur in adults as they advance in age. These can be noticed in the eyes, ears, muscles and other tissues and organs. Psychological changes affect the sense of reasoning, feeling, attitude and mental alertness due to the aging process. From the sociological perspective, adult learners are mature learners with an array of responsibilities and experiences acquired over the years. The diverse social roles include parent, wife, husband, friend, breadwinner, leader, etc, and as such they expect to be accorded due respect and recognition wherever they find themselves.

The adult educator therefore needs to apply humanistic approach in dealing with them. Selection of appropriate instructional materials with the above factors in mind will enhance sustained participation and achievement of goals

Instructional materials. For effective teaching/learning in the education enterprise in general and adult education specifically, the teacher/facilitator should employ a wide range of materials. The term instructional materials enjoy various definitions, by many scholars based on their own perception. While some conceive it as teaching aids, educational devices, mass media, audio-visual materials, others describe it as learning tools, curriculum materials, educational technology, among others. For instance, Vikoo (2013), defined instructional materials to include tools and devices for obtaining or transmitting stimuli. They are materials that can be used to record, store, preserve, transmit or retrieve information. Vikoo (2013), succinctly described them as information carriers.

Nzeneri’s (2012) perspective of instructional materials include whatever is used to satisfy the educational requirement of learners (human efforts, hardware, software, improvised materials). It may include devices, resource persons or techniques brought into the teaching/learning interaction to facilitate sharing of experiences, attitudes and values. The above definition implies that whatever available human and material resources that appeal to human senses of hearing

seeing, smelling, tasting, touching or feeling that are used to facilitate teaching and learning are known as instructional materials.

This is so because as Imhabekhai (2009), earlier stated, teaching and learning are more profitable when learning materials used appeal to two or more of the senses. Also, Agina-Obu (2005) submits that learning materials are concrete physical objects which provide both sound and visual aids to the sense organs during lesson delivery. In adult education, the concept can be used to describe the deliberate organization of experience within the learning domain--classroom, laboratory, work-shop, library etc, designed for the learner's quick achievement in changes in behaviour or performance (Adekola, 2009). Furthermore, Onyeozu (2007), said that learning materials in adult literacy are items or devices or anything that is considered usable in bringing about effective teaching and learning.

Whatever the conception, instructional materials are teaching/learning enhancers. They are basic and essential items in the hand of the teacher or instructor to make teaching and learning interesting, easy and effective. It is broad-based because it comprises all materials utilized in the business of teaching and learning.

3. CLASSIFICATION OF INSTRUCTIONAL MATERIALS

Instructional materials can be classified variously. As pointed out by Nzeneri (2012), there is no generally accepted method of doing this. Hence, we are free to adopt any convenient method bearing in mind the vital role they play in the process of teaching and learning Nzeneri (2012) listed five broad groups of instructional materials as:

- Durable and non-durable materials
- Audio-visual materials
- Printed and non-printed materials
- Projected and non-projected materials
- Mass media, print media and sound media.

Durable materials have long life span and include all materials transmitting instructional messages. Examples include projectors, tape recorders, public address system, etc. Non-durable materials have short life span. They include chalkboard, bulletin board, papers, posters, diagrams, maps, charts. Others are auditory materials, like tapes, radio broadcasts, record, films trips, motion pictures and relief display materials like models, objects, specimens, paintings, drawings, among others. Audio-visual materials are those that appeal to both, the visual and auditory senses of learners at the same time. Examples include video, television, computer, motion pictures, etc. The advantage of being heard and seen renders them more effective in imparting and receiving knowledge and skills (Imhabekhai, 2009; Agina-Obu, 2005). Print and non-print materials include books, journals, newspapers, magazines, charts, posters, maps, graphs, three-dimensional materials like models, mock ups and cartoons, etc. Projected materials are those that require other equipment to project their content onto a screen or wall to access the content (Vikoo, 2013). Examples include film strips, video cassettes, transparencies, computers softwares, motion pictures and others. Non-print instructional materials do not require the use of electricity. In this category are posters, flash cards, charts, chalkboard, adhesive aids among others (Nzeneri, 2012; Adekola, 2008; Imhabekhai, 2009). Utilization of locally available raw materials is an important factor in the production of learning devices.

3.1 *Improvised (locally-produced) instructional materials*

As noted above, poor funding of the education sector is a factor in the paucity of ready-made, sophisticated commercial instructional materials in Nigeria. Nevertheless, for effective lesson delivery, Vikoo (2013) observed a pressing need for teachers to have two aptitudinal dispositions to confront this problems--resourcefulness and improvisation.

Resourcefulness refers to the ability of an individual to choose the most appropriate option from a variety of solutions available when faced with a problem. In the context of this discourse therefore, it is the ability of the teacher or facilitator to explore the learning environment and apply all possible available resources in order to provide needed materials for effective lesson delivery. For instance, a teacher, realizing there is a lack of audio-visual materials, can provide a make shift alternative to serve same purpose of achieving same objectives. According to Yaaka¹ digital learning

“The initial efforts made on improvisation by teachers was mainly focused on finding an alternative to highly expensive instructional media. This eventually led to the discovery and invention of certain local materials which have been used in producing a lot of local improvised instructional materials in place of the expensive and very scarce foreign instructional media”²

Improvisation means the ability to produce alternative “local materials in place of standard ready-made materials, which are either scarce or short in supply” (Vikoo 2013:187). Improvisation is also conceptualized as selection or provision of substitutes for something not readily available. According to Yaaka digital (n.d) “it is the process by which educational materials can be designed and developed using locally available materials to meet specific educational needs”. In this wise, teachers earnestly attempt to solve the problem of non-availability of materials in order to move the system forward and achieve set goals. This had led to the improvisation of media-like human body parts like the eye, heart, skeleton, dresses, vehicles, flutes, among others.³ Improvisation is also conceptualized as an element of resourcefulness and creativity. It involves the use of local resources, which lie dormant within the immediate environment to build, construct, mould or make instructional teaching and learning materials suitable for smooth dissemination and transfer of knowledge from teachers to students. An improviser is a resourceful, creative and innovative person both in his thoughts and action (Lawan, 2005). In the same vein, Ihegbulem (2006) submits that improvised materials are substitutes sourced from local surrounding to fill the gap of the actual or real ones in the event of scarcity. This involves selection of relevant materials on teaching and learning where there is scarcity and wisely utilizing them for realization of specific educational goals (Ikwuas & Onwiodiket, in Ogundu, 2012).

All the above definitions point to the obvious fact that where a real instructional material is scarce or not available, alternatives or replica could be produced using local and cheaper materials which are in abundant supply within the Nigerian environment. As observed by Gbamanja (1991), several ingenious cultural tools and practices abound in Nigeria that can serve as explanation for certain scientific concepts. Some are as presented in Table 1: In addition, in cookery, sand and pot can be used in the absence of commercial oven. Sea shell can be ground and mixed with sand and ashes and used for scrubbing dirty pots to replace commercial vim.

Petrol can be mixed with white plastic packer (used to package items in cartons) and stirred with a stick to produce adhesive for mounting diagrams or pictures in the absence of imported gum. Locally generated materials for teaching adults include local proverbs, traditional songs, poems, cultural activities, relics, social life activities. According to Patrick (2013), these may be recorded and reproduced by instructors for learners to use in reading and writing on the chalk boards for learners to copy into their own books and read. Thus, they are made to read their own words. Similarly, indigenous communication systems could be incorporated and improvised to serve as audio-visual materials. Such communication materials as local gongs, flutes, drums, town criers and ballad singers can serve this purpose. More so, as Ezimah (2004) pointed out indigenous belief system like market days and moon-phase can boost adult education programmes such as literacy classes, agricultural demonstration and family planning. This is necessary because rural populace

¹ See: www.yaaka.cc/unit/instructional-media-improvisation#sthash... accessed 8 March 2017

² Ibid, p.2

³ ibid

hold these beliefs in high esteem and will positively respond to development programmes aligned with local beliefs.

Improvisation of instructional materials from immediate environment could be very rewarding to teachers and learner’s alike Agina-Obu (2005), observed that some learners may find it difficult to grasp/figure out abstract concepts. The need therefore arises for provision of either a real object or a replica to facilitate teachers’ efforts and learners’ understanding of concepts. Such materials as drawings, posters, pictures, metallic scraps, among others, could be improvised for effective teaching/learning process. It is a make-shift, quickly provided for in time of need with available stuff in order to achieve the set goal of teaching (Okala, 2005). It is required to keep the system going rather than abandoning or skipping topics due to paucity of materials. To achieve success in this regard, Vikoo (2013), said that teachers could approach local artisans like carpenters, black smiths, electricians, etc, for assistance.

Table 1: Strategies for using improvised local materials in Nigeria

	Materials	Possible uses
1.	Catapult	To explain elasticity, direction and force in physics. Also explains properties of rubber
2.	Bow and arrow	As above
3.	Garri production	To explain properties of cassava; removal of cyanine and other poisonous substances.
4.	Preparation of black soap	To explain industrial saponification
5.	Canoe building	To explain mass (volume relationship in physics; properties of wood.
6.	Clay Use	To explain texture of materials construction of models and pottery.
7.	Dyes	To explain how to get different colours from various plant sap and juices; the technology of mixing colours.
8.	Distillation of illicit gin (kaikai) from palm wine	To explain industrial distillation using different boiling points of liquids; usefulness of condensation.
9.	Herbs	To explain pharmacognosy (study of medicinal use of herbs); taxonomy of plants
10.	Talking drum and other musical instruments.	To explain the physics of sound and vibration
11.	Salting, drying, and steaming of food	To explain the process of food preservation or control of food spoilage.
12.	Hoe	To explain forming implements, subsistence farming and mechanized farming
13.	Use of clay pot in cooking things	To explain the principle of refrigeration; porous property of clay and evaporation to cause cooking
14.	Wood carving	To explain properties of wood
15.	FUFU (Loi Loi) making	To explain fermentation process

Source: Adapted from Vikoo, 2013

4. THE ADVANTAGES AND DISADVANTAGES OF IMPROVISED OF INSTRUCTIONAL MATERIALS

Some of the advantages are as listed below:

- It is cost-effective and readily available in the present economic decline in purchasing power. It encourages self-reliance.
- It can serve as a source of inquiry as fresh knowledge unfolds in the process thereby unfolding new possibilities, release individual’s native knowledge and provide avenues for innovation.
- It develops cognitive, affective, and psychomotor skills of learners.

- It assists in the introduction of new skills, develop understanding including how to do things appropriately (Iji, et al, 2014).
- Motivates achievement of set goals.
- They are often up to date in content and the content is subject to constant review and updating in line with changing situations in the locality.
- They are often produced according to specification. This is due to the proximity of producer and users, close supervision and understanding within them (Vikoo, 2013).
- An unlimited quantity of materials can be produced at short notice
- The current national economic policy in Nigeria actually favours locally made goods from locally-generated materials.
- It reduces transportation and other bureaucratic bottlenecks and ensure lesson continuity.
- Promotes creativity in resourceful teachers and students. This may translate into opportunities for resourceful students, upon graduation
- They bring learning home wards (i.e learners have a feeling that their course of study is relevant to the day-to-day activities in their locality.
- They are often better suited to the climatic conditions of the local environment (Vikoo, 2013:19-192).
- The skills of improvisation can apply to many different abilities or forms of communication and expression across board--music, cookery, academic, non-academic, psychotherapy, speech presentation and other disciplines

According to Ogunniyi (in Vikoo, 2013), Improvisation of instructional materials is, however, prone to some constraints irrespective of its numerous advantages. There is lack of professional skills in production due to lack of training in the art of improvisation. Furthermore, many teachers/facilitators are unaware of available local resources within the immediate local environment. Coupled with this is lack of confidence in teachers in their ability to design teaching materials. As a result, some important topics in the scheme of work are carefully avoided. Also, many employers/principals are reluctant to sponsor employees for workshops since they never attended any themselves. Hence, teachers lack motivation to improvise. It is time consuming. Finally, the issue of the degree of accuracy, precision, low life span are associated challenges.

5. CONCLUSION

The term improvisation implies that there are alternatives to teaching resources which needs to be provided and appropriately designed to meet specific learning situations. The current economic down-turn has adversely impacted on the allocation of funds to the education sector in Nigeria especially adult education. An ingenious facilitator is one with the ability to survey the learning environment and harness relevant and available cost-effective local resources into useful teaching/learning materials in place of expensive imported standardized materials.

In the field of adult education, the facilitator should consider the various characteristics of adult learners. Adults come into learning programmes with a wide range of experiences acquired over the years within their environment. These can be tapped and channeled towards promotion of rewarding teaching and learning.

6. RECOMMENDATIONS

We therefore, recommend that:

- Improvised instructional materials should be well-planned and carefully developed and bear relevance to the lesson topic.
- Regular works shops for teachers/facilitators is necessary for up-dating, retraining, re-tooling and skills of improvisation.

- Teachers should be granted soft loans by governments as encouragement to enable them purchase low-cost materials for improvisation.
- Local crafts should be incorporated into school curriculum.
- There is the need for active involvement of learners in improvisation skills as some may likely fall back on it as a means of livelihood after graduation.
- Government should encourage competitive exhibition of improvised instructional materials by schools to serve as motivation and incentive where prize would be awarded.
- Professionally trained adult educators should be engaged at all levels to handle adult education programmes to ensure effective and efficient delivery system for sustainability and goal achievement.

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