



Instructional Media Provisions and Utilization for Teaching-Effectiveness in Classrooms

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Abstract. The paper examined instructional media provision and utilization for the effective teaching-learning process the concept, types and methods of provision were also examined. The instructional media were categorized into the audio, visual and audio – visual aids. From the study, the available audio-visual aids were illustrated and categorized into projected and non-projected media. Both projected and non-projected media were also illustrated with relevant examples. The study identified the methods of making improvisation of the unavailable education media and their modes of utilization are also explored. It was therefore concluded that there is the need to make improvisation of the unavailable instructional media for the effective teaching-learning processes. It was however recommended that the teachers should be motivated to make adequate improvisation of instructional media in the interest of teaching. Learning process in Nigerian classrooms

Keywords: Educational, media, teaching effectiveness and classroom.

1. Introduction

For centuries, the teacher's chief job has been that of presenting information and testing students to see whether they can remember it-on cue. But now it is clear that the assignment of lists of nonfunctional facts to be studied and remembered is out of place in schools today. Instead, teachers have come more and more to understand that learning is an active process and that their chief classroom tasks are to serve as diagnosticians and organizers, or managers, of functionally varied learning experiences.

The emphasis should be place in the ways in which teachers may develop essential skills and knowledge to meet these many changing requirements. The particular attention should be given to the creation, selection and use of audio visual and other instructional materials and techniques and to their management as individual media as related collections, and as integrated, correlated systems of materials geared to the achievement of clearly specified teaching-learning objective

1.1 Concept of instructional Media

Instructional media as a concept has been defined in various ways. Educational media are a broad-range of resources which can be used to facilitate effective and efficient communication in the teaching and learning process.

Media are also all educational resources whether graphic, photographic, electronic or mechanized means of arresting processing or restructuring visual or verbal information or a combination of both.

Nsofor (2010) see instructional media as projected and non-projected information carrying technologies that constitute an integral part of the instructional process used for the dissemination of educational information very quickly, widely and effectively.

Educational media are information carrying technologies used for the dissemination of information very quickly, widely and effectively. When educational media are used for instructional purposes, they are called instructional materials (Nsofor & Bello, 2015). Agun and Imogie(1988) refer to instructional materials if use properly, it will help the learners to learn faster and better. Akudolu (2002) called instructional materials as didactic materials which are supposed to make learning and teaching possible. As for Efebo (2002) defined materials and equipment as the things that to communicate his or her ideas effectively to the learners so that learners can achieve the goal at the educational end of instruction.

1.2 Instructional Resources in schools

Resources could be collective means possessed by an individual, group or country with which human needs and aspirations are satisfied. It is also what a country or a person have and can use especially to increase their wealth. Resources can be money, financially, human and non-human resources. Resources can be money use to update things like computer, software, information and Technology Communication section or room. Financial resources can provide money for equipment needed in the schools.

Human resources can be used to help to achieve an aim especially books, equipment etc that provides information for teachers and students in the class. Human resources can also be individuals who as a result of their experiences or expertise professions are considered knowledgeable enough to be useful to the school.

Instructional resources are the materials that can be used in equipping the teachers and the learners for effective classroom teaching and learning to take place. It can resort to the polling of different type of resources at their disposal. Everything and anything in and around a learner can be used to enhance knowledge.

According to Hanson (1975), anything used to meet an educational need might be called a resource for example buildings, staff, equipment iideas and materials and anything used to enhance intellectual development are resources. Since those resources are found in the community, they are called community resources.

According to Bassey and Ibanga (2009), exploring community resources to enhance knowledge that educational institutions are set up by the community exist within the community for the good of the community. The benefits of the school and the community juxtapose and the two have impact over the other. The school is created by the society for the transmission of skills, knowledge and values to its young ones.

Community resources are learning resources, the learner requires for the enhancement of his knowledge of any learning task of his interest. Community resources are those facilities found outside the school which can be harnessed and use effectively to facilitate the study of some specified subject areas. They are to be used to expand and enrich the learning experiences of learners.

Anikpo, Mohammed, Ezegebe and Salau(1999). categorized resources into three, natural, human and capital resources:

Natural Resources are natural endowments to communities and good sources of knowledge. These includes, vegetation, rock formations, high lands, waterfalls, cliffs, raw materials deposits such as clay latent, petroleum etc. kinds of animals, insects, birds, reptiles etc.

Human Resources are individuals who as a result of their experiences or expertise in the various fields of endeavour or professions are considered knowledgeable enough to be useful to the school.

Capital Resources are those things made by man for example, factories, railways, motor vehicles, electric power generators, houses etc. these resources are not only useful for satisfying human wants but of equally benefit to the teaching and learning process. These are good resources that the teacher can implore in the teaching and learning process to make concepts and ideas clearer and explicit.

Material resources: They are the physical technological products of the professional such as buildings, bridges, roads, cars, ships, artifacts, aeroplane etc. are found in numbers, around the communities in which we live e.g. agricultural products factories and industries (Bassey & Ibanga, 2009).

Non-Human resources: are print, such as textbooks, magazines, journals, bulletin, workbooks, manuscripts etc.

Non Print: The software; they carry instructional contents such as audio –tapes, radio, video tapes, transparencies, films etc they can be locally or commercially produced.

Hardware: They are tools, machines, equipments or gadgets through which the software facilities can be made functional or transmitted. They include audio tapes recorders, video tape recorders, projectors, computer, Central Process Unit (CPU) and monitor, duplicating machines, printing press etc.

a) Physical Facilities: includes such structures as auditoria, gymnasias, laboratories, library, ICT centre etc.

b) furniture such as tables, slides sorters etc.

1.3 Classification of Instructional Media

Instructional media can be viewed as acts of giving help normally by the teachers to provide encouragement to students or pupils in learning

activities. Instructional materials refer to all tools, which can easily be used by a teacher to correct wrong impressions and to illustrate things that learners cannot forget easily. It is the principle and method, which bring together men and materials in a systematic cooperation to effectively solve educational problems because instructional problems we have in our educational system in Nigeria (Ema & Ajayi, 2011).

For using instructional materials in teaching is to achieve excellence in educations (Ema & Ajayi, 2011 pg .18)

Instructional materials are commonly known as audio, visual and audio-visual aids.

Audio Aids – are materials that students can listen to but cannot see e.g. radio, tape recorder programme where the learners can only listen and hear the programme.

Visual aids – are the materials you only see but no sound accompanies the action e.g. posters, charts, maps, still pictures etc.

Audio Visual Aids – are the materials you listen to and see e.g. television, computer etc.

These materials can also be group into two non projected visual media and projected visual media.

Non Projected Visual Media

These are pictorial materials which appeal to the sense of sight and do not require light sources for showing them. These teaching aids enhance understanding in learning. They are also available and easily appealing and cheap to make. Some of these which we may produce, collect or buy may include:

- Specimens
- Models, real things
- Wall charts, charts, posters, bill board,
- Still pictures, motion pictures
- Textbooks, magazines
- Maps, atlases, globes
- Chalk boards, felt boards, magnetic boards, soft boards.

Projected Visual Media

These are the media that uses electricity and battery for operation. Most pictures from books and magazines are often too small for class viewing at the same time and when enlarged may contain too much materials. The technique

or projection is essentially designed to enable a larger number of people to see an illustration at the same time.

1.4 Criteria for Selection of Instructional Materials

In selecting instructional materials for teaching and learning process in the classroom to in order to solve educational problem, teachers should be systematic in designing, carrying out and evaluating the total process of teaching and learning in terms of specific objectives to be achieved which are best upon research in human learning and communication to bring about more effective instruction in the learning process. These are criteria for selection of instructional materials for effective teaching include:

- Behavioural objectives and the structure of subject matter what to be achieve by selecting a particular instructional materials should be consider. The questions lead to identify the educational needs, the problems, and highlight the objectives and analyse the subject matter. This analysis may involve a detailed analysis of psychomotor skills the teacher wants the students to acquire.
- Learning style of each learner is an important factor in the ultimate achievement so the teacher must take the pains to examine the various learning styles of the students in the class. Moreso, some are fast learners while other may be slow learners.
- Practicability of the material is also to be considered, how instructional materials can be used in the classroom. How practical a medium is in the application of practical experiences on the life of the students, can both the teachers and the learners use the materials without hitches? Whatever materials to be selected have to be user friendly.
- Availability of the materials, is relate to how much instructional materials are on hand, to which teachers and learners have access to and must be sufficiently

available in the environment which they are to be used.

- Teachers' capability, certain materials may be available in the school but the teacher may not have the knowledge of how to use them for teaching students or technical know-how or expertise knowledge of maintaining it from time to time.
- Durability should also be considered, the materials should not be so fragile to the extent that they will be prone to constant damage. They should be items that can last longer for several years.
- Portability should be considered, they should be items that can be moveable from one place to another within the classroom and outside the classroom with no problem.
- Technical quality and appropriateness of media should be considered like the colour combination should be harmonious, visual image and sound well synchronized, the recorded sound should be audible enough and technical quality should be thoroughly examined.
- Instructional materials should not be outdated but should be latest model.
- Learning tasks and learning activities should also be considered which the learners are to be engaged in.
- Target audience should be considered, the age, level interest and the background of the learners.
- Cost (financial implications) should be considered, that is the issues of availability of adequate fund for procurement and cost effectiveness for production should be settled before selection is made.
- Dynamic factors, these include the concentration and size of target audience, the desire level of learners' participation and available time (Ema & Ajayi 2011) and (Nsofor & Bello, 2015).

2. Improvisation of teaching materials

In line with the today's teaching and learning and instructional delivery system, instructional

materials is a sine-quo-non, if the educational goals are to be achieved by the educators. Here we are in a situation where we cannot be sure of the basic tools that we need to carry out the teacher instructional functions, following government's bureaucratic bottle neck, which directly affects the provision of instructional materials to schools. In a situation like this, a serious minded and goal-oriented teacher, cannot wait for government, but to adopt improvisation strategy to fill missing link. The raw materials for improvisation are all around the environment.

Improvisation is the act of using alternative resources to facilitate instruction when there is lack of real teaching aids for teaching. To improve, the use of local resources in our immediate environment can be used to build, construct, mold or to make instructional materials for effective teaching and learning.

National Teachers' Institute (1990) describes improvisation as the process of devising an alternative equivalent of something which incidentally is no available for use in order to carry out an intended activity without interruption.

There are three types of improvisation namely: substitution, modification and construction. In substitute, where you want to show a film in rural area, where there is no electricity, car battery can be used to substitute electricity. For modification, there are changes in standard apparatus to make it more suitable example the conversion of millimeter to voltmeter and voltmeter to ammeter because modification requires specialized skills in cutting welding sawing. (in construction, imported weigh balance in science class can be constructed with wood to made weigh balance

The teacher should be skillful in the use of improvised instructional media and whatever improvisation that is made should be a replica of the original media

3. The Functions of Instructional Materials in Classrooms

The instructional materials can make a definite contribution towards upgrading the quality of teaching in our educational system.

When instructional materials are used they reduce the burden of teacher and clarify abstract concepts. Akpan (1992) stated that, instructional materials cause sparks at the sensory receptors of the learners. And that the bigger the sparks the deeper the impressions made on the mind. Those who receive big sparks learn better. This is to further affirm the tendencies of instructional materials to stimulate sensory organs.

Instructional materials helps to make learning more permanent because the learner has a physical and practical impression of the subject matter.

Instructional materials are a good alternative to conceptual thinking and bring to concrete form, excessive word responses.

Instructional materials are realistic in nature, make learning more individualistic by the learner.

They give a sense of continuity and encourages "over learning" which makes learning more permanent.

They increase meaning – ability of a learning task and add to vocabulary development.

They help in effective communication in the classroom situation etc.

4. Types of Instructional Media Production Technique

There are three basic techniques of instruction media production. These include:

- Imitative production technique
- Adaptive production technique
- Creative invention.

Imitative is adopting and using models and techniques which other producers have used for producing and testing of their own products.

Adaptive is the creation of new forms of product from an already produced product. The producer works out the objectives and uses his/her initiative to change the already existing product to suit his own new purpose and operations.

Creative invention is the use of creativity, initiative and originality to develop new products with new functions or ideas which no

one else has ever produced, though they may use other people's ideas and experience Abifarin (2015).

Materials for production of a wall charts

The materials for production of a wall charts are follows:

Cardboard papers of different colours
Used calendars, newsprint papers, magazines
Strowboards, cement papers
Pencils, colour markers, poster colours, water colours, ruler, brushes of different sizes
Scissors, razor blades, cleaner, stencils of either lettering and symbols of different shapes or objects etc (Ema & Ajayi, 2011).

Production of a wall chart planning

The teacher should gather and select relevant information for the chart
Plan the layout of the chart first in a small-scale rough draft
Make a rough draft in pencil which can be amended before the final one is produced.
Change or re-arrange any necessary parts, draft and then ink in the final neat chart.

Production of Charts

In preparing or designing a chart, the teacher essentially considers: -

- The information on the chart to convey should be made on a sheet of paper (layout).
- The size of the class whom the chart is being prepared for.
- The level of the students (intelligent) should be consider as this will help to know the level of language to be used on the chart in addition to the amount of information.

The chart production should be simple legible, durable, accuracy, portable, manageable and not complicated.

The title on the chart should be simple and short. The lettering or its headings should be at least one inch in height and bold so that it can be read with ease by the learners in the class.

The words in the chart should be horizontal, and not diagonal; so that the students do not have to turn their heads sideways before reading the words.

Appropriate colours should be introduced to make it more attractive.

Reading the above list, it is required that the teacher should plan the chart carefully. (Ema & Ajayi, 2011).

5. Utilization of Instructional Materials

We believe it is vitally important that teachers keep in mind the purposes for which materials and used, the characteristics and special needs of students to be served by them and the bases for selecting the material most likely to help students achieve the objectives of their studies. Teachers must know when to use a film to clarify important concepts presented verbally in a textbook, when to use a discussion alone: when to follow a fieldtrip with the showing and discussion of a related filmstrip, when to assign outside viewing of a television programme.

Teachers must be equipped to make the expert decisions of when to use, what to use with whom for what purpose and with what effect.

No one teacher can or should propose to use every instructional materials or device invented. The measure of good teaching is not necessarily determined by the frequency or range of use instructional resources. Rather, the goal is selection of the most appropriate available resource that has high probability of helping a student toward his learning objectives.

The use of instructional materials is effected by their availability and ease of access.

The use of instructional materials reveals the poor skills of Nigerian teachers in using instructional materials for teaching.

Effective production/selection of instructional material does not entail effective utilization although instructional materials come in a wide range of types and vary greatly in format, layout and function; it has been found that it is possible to adopt a standard basic procedure on their utilization. The procedure are as follows: -

- Prepare the learning environment to ensure that equipment, facilities, electricity, ventilation and temperature are suitable.
- State clearly your instructional objective(s)
- Select the suitable content

- Select the appropriate materials
- Tryout the materials to ensure they are in good condition
- Ensure that the class is well arranged, students must be well arranged, well seated and free from all hindrances so that everybody benefit, motivate the students enough to guarantee their readiness.
- Use the materials only when and where necessary and put them aside immediately after use so that it does not cause distractions.
- Allow sometime for interpersonal interactions and reactions from students.
- Evaluate the session on the effectiveness of the materials in relation to the instructional objectives this might lead to necessary modification.

6. Conclusion

Educational media are essential for teaching learning process. Adequate provision and improvisation of the educational media should be made available in the schools. It is therefore important to note that the availability, provision and improvisation are not tenable without adequate utilization of the educational media. It is therefore concluded that effective utilization of educational media will and effective teaching-learning process especially in the schools.

7. Recommendations

- Centre for educational technology should be established in every local government by the Federal Government of Nigeria in order to develop all the necessary educational media to be used during-the teaching- learning processes in the schools.
- Environmental resources should be used by governments at all levels to develop local materials for educational media which can be used for teaching-learning processes.
- The school based management committee should be charged with the responsibility of making provision, improvisation and developing the

necessary instructional facilities for effective teaching-learning process in the schools.

- The students should be encourage some instructional materials in order to develop in the students the basic skills acquisition which will enhance self-sufficiency.

Finally, quality and durable educational media should be supplied proprietors in the schools.

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