

The Role of Instructional Media, in the Light of Contemporary Technological Advancement, To the Teaching and Learning at Senior Secondary Schools.

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ABSTRACT

This paper address the issue on the utilization of Instructional Media in Education, the need become necessary because of the growing concern by all stakeholders in Education, that the position of Instructional Media in Teaching and learning internationally acceptable. The study explains the concept of Instructional Media, distinguish between instructional media and teaching aids, instructional media why used it, important used of instructional media, meant mind in the role of teachers, concept of instructional media to Teacher Education, classification models of instructional media, factors to be consider when selecting instructional media in Teaching and learning, criteria for selecting of instructional media use in Teaching and Learning, factors that affect the quality of instructional media and finally the paper concluded that the study determine the role of Instructional Media in the light of contemporary Technological Advancement to the Teaching and Learning at Senior Secondary Schools as well as Recommendations on how to enhance teaching and learning using instructional Media as also forwarded.

Key words: Instructional Media, Technology, Advancement

I. INTRODUCTION

The secondary school curriculum of education is so enormous that it prepare youths for full adults lives in the complex and dynamic world development. This kind of preparation falls in line with national policy on Education (2014),

instructional media are tools that, teachers make use of it and they are aid in teaching-learning process. The teachers are meant on used it, which are basically providing the effectiveness on teaching and learning. While meant mind in role of Teaching, teachers may trying predicts unconscious from the conscious order to apply the reliable media to them on a proper instruction or facilitation in teaching and learning. Obara and Okoh (2005) regarded instructional strategies and materials as “all the things the teacher utilizes to interactively enhance, motivate and facilitate teaching and learning in an attempt to ensuring the achievement of a set objectives.” The effectiveness of instructional media and the strategies has depends on the manner apply, skills and degree to their approach for the needs of the teacher and students on achievement of command goals. An instructional strategies and media are selected based on the principles of provision on accurate media that will enrich and support the curriculum, taking into consideration the interest, abilities, availabilities of media and maturity levels of the students etc. They should (Teachers) be encouraged the intrinsic in order to strengths extrinsic through use of instructional strategies as it makes learning more concrete and meaningful. The teaching and learning, its most to be on mind, using media are compulsory to the Teaching and learning consider to the present world globalization of technology; it involves a teacher, a learner and subject matter as well as teaching media. Therefore to bring about learning, the teacher engages in certain activities such as talking, demonstration, and give instruction etc., all

these are the various strategies to bring about learning (Adediran 2014)

They are many instructional media strategies need to be used by teachers to ensure students centered method in the classroom for creativity, innovative and critical thinking to the students. It is therefore important that, the major implications of instructional strategies be reflected in classroom practice. In recent times, emerging research findings seem to show that oriented instructional strategies are becoming increasingly popular in the teaching of various subjects in the secondary school level of education in Nigeria (Osakwe 2009). These instructional strategies involve resolution of problems, active practice participations of learners in the teaching process. Some of these strategies and approaches according to Osakwe (2009) are categorized under conventional and innovative appraises, instructional strategies which are classified under conventional are mostly those routine, well-knowing ones which teachers use predominantly. They are usually teacher-centered with little or no activities for students. These include teaching method like lecture, story-telling, recitation, etc., on the other hand, the innovative strategies include those ones that are much more recent which are predominantly learner-centered. These include questioning, inquiry/problem solving, role-play and dramatization (Adediran 2014).

Concepts of Media

In common parlance, “media” and “mass media” are used almost interchangeably. The term “media” was first used with the advent of newspapers and magazines Felder & Bent (2004). There are a lot of definitions of media from different scholar and the word “media” according them, (2021) “One of the medium of communications that have brought the world into one single unit”. As the word media derives from the Latin medium that means in the middle. The media refers to traditional mass communication system and content generators as well as other technologies for mediated human speech. Hoag (2008) information and messages are transferred from the sender to the receiver through a certain channel, known as media. A number of Internets based such as newspapers, journals, and periodicals have already made their presence felt, therefore according to Kumar (2008). Mass media have helped in creating social awareness and have also provided people with an easy way of living life.

Scanlan (2002) states that instructional media encompasses all the materials and physical means an instructor and teacher might use to implement instruction and facilitate learners' achievement of instructional objectives. According to Richard (1992), in general term, media means for television, radio and newspapers considered as a whole and as ways of entertaining of spreading news or information to a large number of people.

Distinguish Between Instructional Media and Teaching Aids?

There are a lot of definitions of media. Gagne (1970) defines that media are various components in learners' environment which support the learner's learn. Briggs (1970) defines media are physical means which are used to send messages to the students and stimulate them to learn. A little beat differences from the opinions of the two experts, The National Education Association defines that media are the forms of communication either printed or audiovisual.

Scanlan (2002) states that instructional media encompasses all the materials and physical means an instructor and teacher might use to implement instruction and facilitate learners' achievement of instructional objectives. This may include traditional materials such as chalkboards, handouts, charts, slides, overheads, real objects, flash card and videotape or film, as well as newer materials and methods such as computers, DVDs, CD-ROMs, the Internet, and interactive video conferencing.

According to Richard (1992), in general term, media means for television, radio and newspapers considered as a whole and as ways of entertaining of spreading news or information to a large number of people. In a language teaching, teaching materials which involves the use of different kinds of media such as visual and printed media are sometimes known as multimedia or mixed media.

There are various kinds of media, but visual aids are the appropriate media for learners, particularly young learners. The visual aids which are commonly used for teaching English are pictures, really or real objects, drawings or teacher-made drawings charts, posters, cartoons, and flash cards.

Whatever the definitions of media are, there is a guideline which can be stated about media. Media is anything used to send message(s) from the sender(s) to the receiver(s), so it can be aroused the learners' thought, feeling, and interest to gear the

students' learn (Sadiman et al, 2002). On the other hand, teaching aids are used by teachers to impart and emphasize on information, stimulate interest, and facilitate the learning process. They range from simple to sophisticated ones and they can be aural, visual, or computerized. One of the earliest known teaching aids was the hornbook, which was used in English schools from the mid-1400s (and later in colonial America) through the early nineteenth century. It was a flat board on which a sheet of paper printed with the alphabet, the Lord's Prayer, and several simple words were pasted. A transparent piece of horns were covered the paper to protect it.

The blackboard probably evolved from the horn-book, and has traditionally been one of the most widely-used teaching aids. It was patented in 1823 by Samuel Read Hall of Concord, Vermont, a Congregational minister who founded the Concord Academy to train teachers in "school keeping." Hall's version was made of pine board, planed smooth and painted black. Today, the blackboard is often called a chalkboard; it may be green instead of black and made of slate, glass, or wood.

From the above description, there is nearly no differences between instructional media and teaching aids. Both, instructional media and teaching aids, have functions to make learners easily to understand the teaching materials. Furthermore the class will be more alive.

However, some experts still differentiate between instructional media and teaching aids. When we talk about a board, either whiteboard or blackboard, which is being used by a teacher to inform learners about what he/she is teaching, at the same time we also talk about instructional media and teaching aids. The board is teaching aids and what is on the board is instructional media. Here, we can say that teaching aids are the objects and the content of the objects is the instructional media. It is unnecessary for us to argue the both terms. We use the term of "instructional media" in this supplement.

Instructional Media, why used it.

As a good media is a window, it should not be called attention to itself; it should just have been let in the light. In general, teacher should use the media in his or her best judgment. It can be facilitated learning or increasing the understanding of materials. of course, communicating to facilitate learning can be a challenging process, and it is often required creative efforts to achieve a variety of implicit instructional

goals. Among the implicit goals that media can be helped by teachers to achieve are as follows: attracting attention, developing interest, adjusting the learning climate and promoting acceptance (of an idea). Media is very useful in learning the English language. Teacher's instructors and learners are helped by using media to achieve the learning goals. So also the teachers should apply the media in teaching - learning activities because:

1. Instructional media can be solved the lack of the learners' experiences. Learners have different background such as family life, society, social economic, etc. Learners who live at different areas will have different experiences, because they have different environment, society, social economic, etc.
2. Instructional media can be reached everything out of the class. There are so many things around the learners that cannot be reached by themselves, such as: bacteria virus, etc. To know and see those tiny things, we must use a microscope as a media. We use a picture to present things which cannot be brought into the classroom such as: markets, stations, harbors.
3. Instructional media are created the possible direct interaction between the learners and their environment.
4. Media are produced some observation. The learners' observation can be directed into the important things based on the teacher's aims.
5. Media can be kept the basic, concrete and real concepts of the teaching.
6. The learners' motivation are aroused by using media in learning.

IMPORTANCE OF INSTRUCTIONAL MEDIA

The importance's of instructional media are too obvious to be over emphasized by the scholars ongoing of the coming light: such as Richard, et, al (2001) emphasized the importance of instructional media in education:

1. **Visualization:** Instructional media such as diagrams, animations, and videos can help students visualize concepts and processes, leading to better understanding and retention of information.
2. **Engagement:** Interactive and engaging instructional media can motivate learners, increase their interest and attention, and foster learner autonomy.
3. **Learning outcomes:** The use of instructional media can enhance learning outcomes such as knowledge acquisition, transfer, and retention.

4. **Accessibility:** Instructional media can make educational resources more accessible to different types of learners, including those with disabilities or special needs.
5. **Efficiency:** Instructional media can enable more efficient and effective learning, allowing educators to cover more content in less time.

IMPORTANT OF INSTRUCTIONAL MEDIA TO TEACHER EDUCATION

The globalization of Technology on used instruction media to the teacher education has made the positive result exclusively to the special need environment which that, blended Learning with the advancements in technology, it result the instructional media has moved beyond traditional classrooms, up to blended learning technology environments. Briggs (1977) defines blended learning as "a combination of face-to-face learning and technology-mediated instruction." Teachers can use instructional media to deliver content online and then use classroom time for deeper learning activities, such as mobile Learning: Mobile devices such as smart phones and tablets have become a popular platform for instructional media. These devices can be used to deliver content and enable learning on-the-go. Sharples (2014) define mobile learning as "the use of mobile devices for learning, anywhere and anytime. Gamification: Another advance in instructional media is the use of ramification. Gamification refers to the use of game mechanics and design elements in non-game contexts to enhance motivation and engagement. Deterding (2011) define Gamification as "the use of game design elements in non-game contexts."

Adaptive Learning: uses instructional media to personalize learning according to the needs and preferences of individual learners. Nwachukwu (2006) define adaptive learning as "an approach to instruction that uses educational technology and

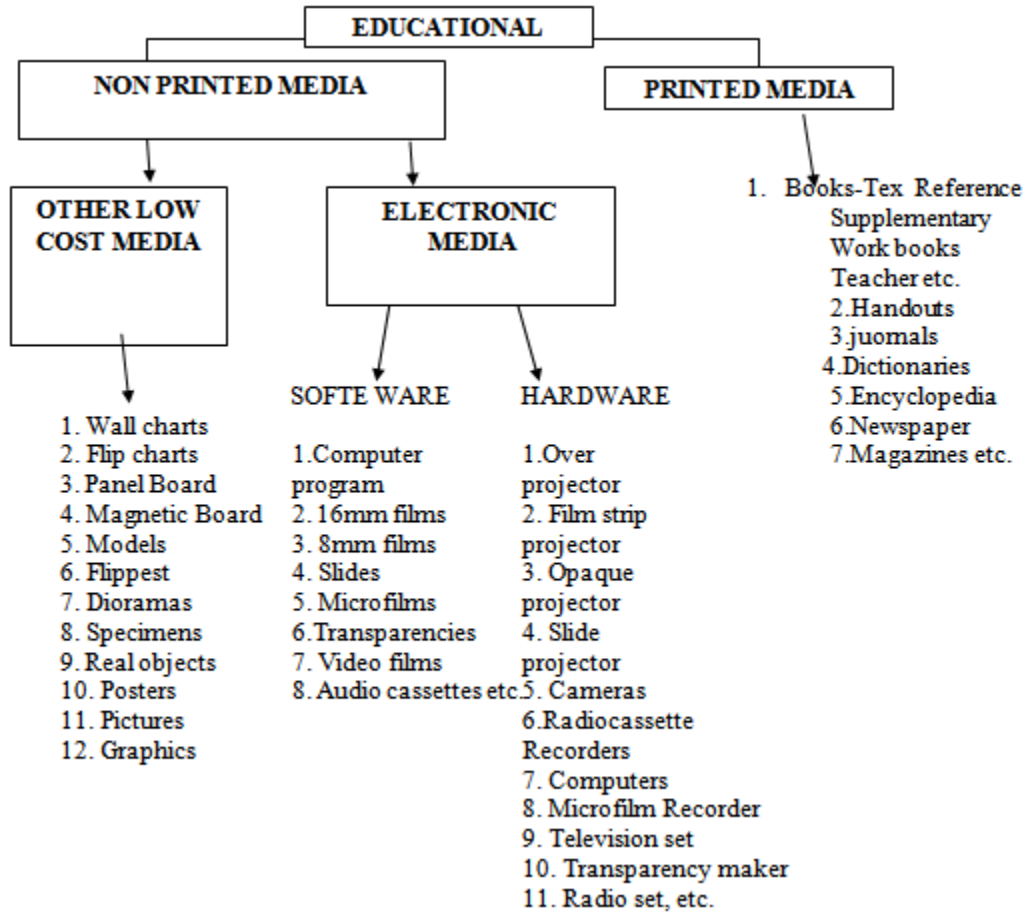
artificial intelligence to respond to the needs of individual learners." Surely, here are more advances of instructional media based on references from the scholars: He also stated that the "Multimedia Learning: Multimedia learning refers to the use of various types of media such as text, audio, video, graphics, and animation to convey information. Suggest that, multimedia learning can improve learning outcomes by facilitating cognitive processing and reducing cognitive overload".

CLASSIFICATION MODELS OF INSTRUCTIONAL MEDIA

These two terms has interchangeable of each other in meaning and interpretation between the scholars. Some are called types and others classification mentioned which all were relying on approach, objective and perspectives of the author. According to EDT 834: Instructional Television and Radio by Olagunju (2017) stated that: "there are many ways of classifying instructional materials. They may be perceived according to the levels of technology – low-level or high level technology materials". Also said "they may also be grouped according to the senses they stimulate – visual media, audio media and audio visual media or classified as projected and non-projected media. They can be further classified as printed and non-printed media etc. In fact, there is no rigid form of classification". Therefore base on the following review we may compare ideas and contrast the rational between they are following classification:

Model One

Ukoha (2017) in Curriculum Development and Educational Technology has presented two good examples of ways in which educational media may be classified.



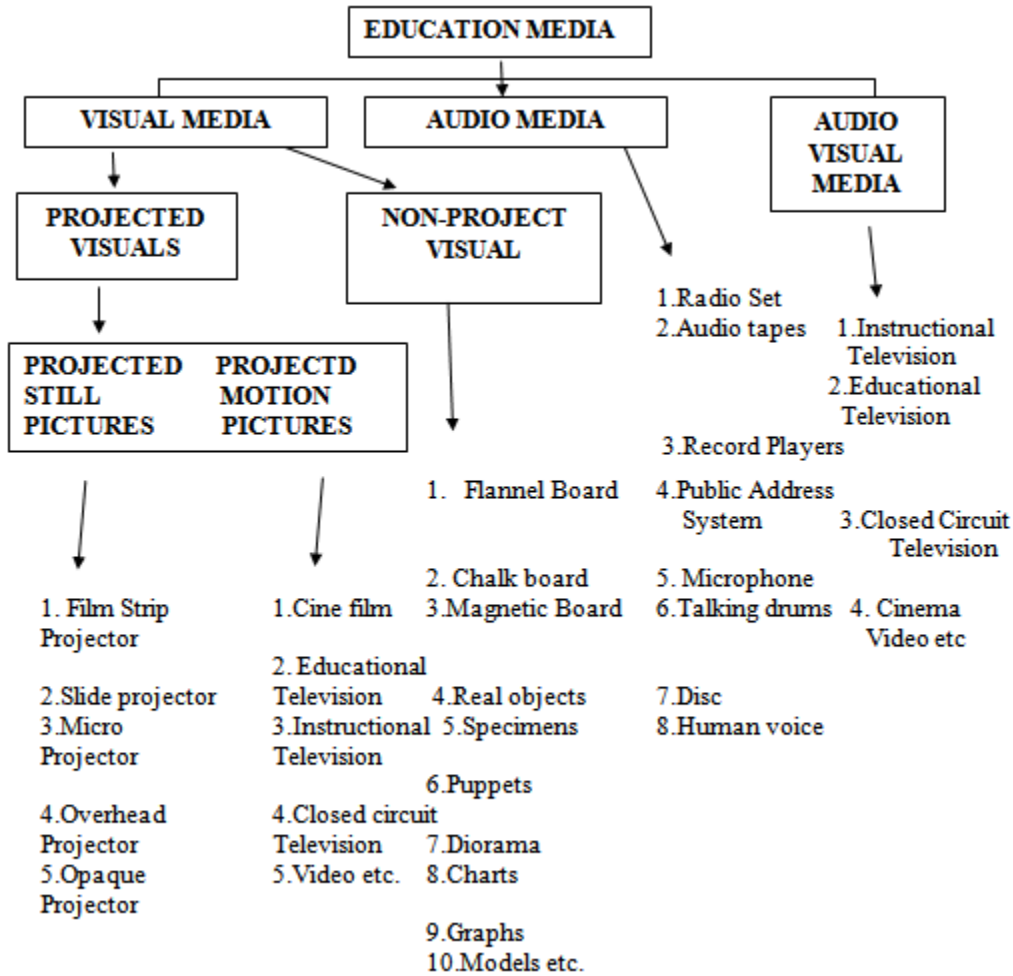
Therefore all above Right border where been under classification according to Ukoha (2017)

Model Two

An again the second classification based on human sense according to Ukoha (2017), they

stimulate –visual media, audio media and audio visual media.

Classification of Educational Media Base on Human Senses



Model Three

According to Ellington and Race (2017) also divided Educational Media into visual, Audio and Audio Visual into following Table.

Stated the Different Groups of Educational Media

VISUAL			AUDIO	AUDIO VISUAL		
i	ii	iii	iv	v	vi	vii
Printed and Duplicated Material	Non-projected Display Materials	Still Projected Display Materials	Audio Materials	Life Audio & still visual Materials	Video Materials	Computer-Mediated Materials

<p>+ Handouts</p> <p>+Assignment sheets</p> <p>+Individualized Study materials</p> <p>+ Resources materials for group exercise, books. Programmed instruction etc.</p>	<p>+ Chalkboard Displays</p> <p>+ Maker Board displays</p> <p>+Felt board displays</p> <p>+Hook and loop board displays</p> <p>+Magnetic board displays</p> <p>+ Flipchart displays</p> <p>+ Charts-and-well Charts.</p> <p>+ posters</p> <p>+ Photographics</p> <p>+prints</p> <p>+Mobiles</p> <p>+Models</p> <p>+Diorama</p>	<p>+ overhead Projector</p> <p>+ Transparencies and similar materials</p> <p>+ Slides</p> <p>+Filmstrips</p> <p>+ Microforms (Microfilms, Microdisc)</p>	<p>+ Radio Broadcasts</p> <p>+Audio discs</p> <p>+ Audio-tape (reel to reel, cassette, Discs)</p> <p>+ Compact</p>	<p>+ Tape-slide Programmes</p> <p>+Tape-Photographs Programme</p> <p>+Filmstrips With sound</p> <p>+ Radio-visual programmes</p> <p>+ Tape-text Tape-model</p> <p>+Tape-realia, Tape microscope, slide etc.</p>	<p>+Tape-film programmes</p> <p>+ Television broadcast</p> <p>+Video tape-recordings</p> <p>+video-disc recordings</p>	<p>+Number counting and data processing packages</p> <p>+Substitute Tutor packages</p> <p>+Substitute laboratory Packages</p> <p>+Data-base Systems</p>
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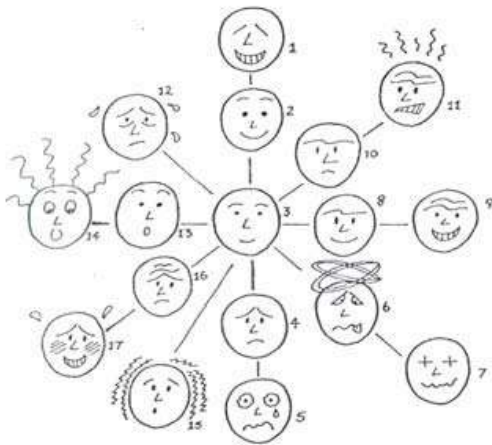
	+Realia					
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Therefore base on division of Table above the scholar has identified the array of instructional Media in Education. Ellington and Race stated that “the first step for any Media student is to identify and classify the instructional materials. All other thing will follow sequentially”.

Model four

According to Muhyidin (2009) stated the types through “Kinds of Media” as he said: There are so many Instructional Media, which are used in teaching that starting from the simplest or cheapest ones to the most complex ones, without the need of the electricity, up to the most expensive ones which needed the electricity”. Vernon (1997) states that there are six kinds of media;

1. Drawing or teacher mode drawings



This media can be constructed and supported the topic which is being taught. The teacher can prepare it at home and apply it easily in the class to achieve

the goals of the teaching and learning process according to Aisal (2009).

2. Still pictures



Aisal (2009), this media can be shown into the real objects or the events of outside the class. A still picture is a record or a copy of a real object or event which may be longer or smaller than the real object or events, for examples: photograph, bulletin board material, brochure, etc.

3. Audio recorder



Aisal (2009), Recording is a mode of magnetic, on disc, or on motion picture soundtracks. This is the reproduction of actual event of sound effects. Sound is presented in the sequence in which they actually happen unless the recording is edited. Audio recording may be used individually or displayed directly to the audience.

4. Motion picture and TV



Aisal (2009), the motion picture or video tape recording is a moving image on color or black and white produced from live action or from graphic presentation. Objects or events may be in normal motion and edited for abbreviating or high lighting. It can be silent or having sound. All types of audio-video electronic system can be appeared on a cathode ray tube or TV monitor.

5. Real object, simulation and models: Aisal (2009),



Real object

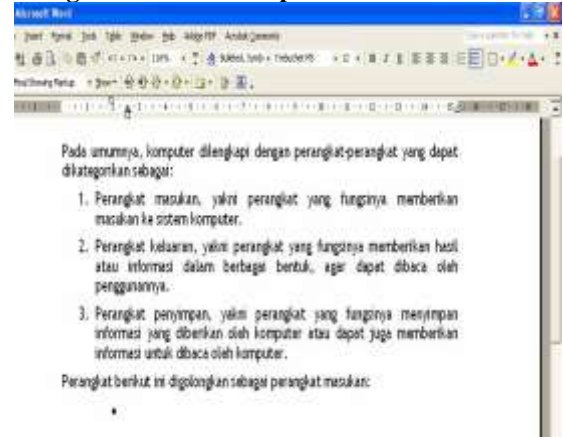
Model

Muhyidin (2009); this category includes people, events, objects and demonstration. Real objects as contrasted with other media are not substituted by the artificial objects or events. They

are, in fact, life, often in its natural setting. There are countless real objects in the immediate community. As long as they are readily and economically available, use them. Simulation is the replication of real situation which has been designed to be as near actual events or process as possible. A model is a replica or reality. It is often in scale and may be in miniature, exact side or an enlargement, Muhyidin (2009).



6. Programmed and computer-assisted Instruction



Muhyidin (2009) Programs: The example of a computer-assisted instruction is sequences of information which are designed to elicit predetermined response. The most common examples are programmed text books or instructional programs prepared for computers.

Model five

The media or “multimedia are characterized by the presence of text, pictures, sound, animation

and video; some are organized into some coherent program” Phillips, (1997). The Instructional media can be classified according to usage. Some are visual instructional media such as computer hardware, pictures, charts, diagrams, geo-boards, diaries block, flannel boards, overhead projectors, newspapers, magazines, maps, models etc. And some are audio-visual instructional media which include television, video tapes or CD, films, computer etc. While audio instructional media are include radio and cassettes (Phillips, 1997).

There are many types of instructional materials, as there are many scholars in the field of educational technology.

- a. Instructional media can be classified based on the time: - it comes into play, e.g. old media and new media.
- b. It may be classified bases of condition and utilization e.g. mediating media, obligation media, optioned media and criterion media.
- c. It can also be classified bases on operational techniques e.g. projected resources, non-projected resources and transmitted resources.

Therefore, this research has adopted the classification based on the senses with these media appeal too, e.g. audio resources, visual resources, and audio-visual resources.

1. Audio Resources

These media are rely extensively on the sense of hearing for teaching and learning. It is argued that most people learn by seeing, some persons still learn better through the sense of hearing. Educational media such as radio, compact disc, cassette, recorder, the recorder player, tape recorder among others, could be emphasized on by the teacher for the students to listen even at home (this programmes were been popular in 2019-2020 Covite19 period). This emphasis might be based on topical issues discussed in radio station by experts which students could listen to and retain this concept of the message. For instance, oral English, bank consolidation era of professor Soludo was highly discussed over the radio and this related topics on how central banks control commercial banks (2015).

2. Visual Resources

Based on the eye that has gate theory, we described the eye as the main gate into the human mind, Onyejekwe, (2006) they are educational media

that appeal to the sense of sight. The principle behind is the use of visual resources in teaching, that crying much more learned through the sense of sight than any other sense. It is also argued that mind tends to remember more of what the eyes saw than what the ear heard.

Real object as include: - naira note, coins cowries etc. could help in the teaching of topics related to money, and also, car toys, horse toy etc. can be used in teaching topic like transportation. These real objects help to make the lesson real. On the other hand, pictorial resources and graphic media such as drawing, cartoons, photographs, charts, tables, maps, diagrams etc. to a large extent helps to explain topics like the law of diminishing returns, balance of payment, population distribution, demand and supply etc..

3. Audio-Visual Resources

This is a multimedia system which appeals to both sense of sight and hearing simultaneously. The principle behind the adoption and utilization of these media is the fact that learners learn better when more senses are involved. Based on this note ancient Chinese proverb argued that ‘what I hear I forget, what I see, I remember but what I do I know’. To buttress this, Sounder in Okpala (2004) observed and advocated that people remember 10% of what they hear (what I hear I forget) remember 50% of what they see (what I see I remember) and remember 90% what they hear, see, and do (multiple senses utilized). However, audio, visual and audio-visual media are Tailoring base on need and profession of the teacher for effectiveness in Teaching and learning process

FACTORS TO BE CONSIDERED WHEN SELECTING INSTRUCTIONAL MEDIA IN TEACHING-LEARNING

The following are some factors to be considered when selecting media in teaching and learning situation which include: According to Aguokogbuo (2008)

1. Teacher’s capacity

The media to be selected should be such that the teacher has the capacity to use or operate. The Problem arises when the teacher does not have the basic skills that necessary to make fullest use of the available resources in classroom. In fact the greatest frustration to a teacher can face in the class, if that of not being able to use or operate instructional media,

the teacher bought for a lesson, the teacher should replace to the available resource in order to cover the absence of the previous one.

2. Learner

The learner's characteristic such as age, learner's ability, interest, maturity, learning styles, level of Education, etc. should be considered by the teacher when selecting instructional media used in teaching-learning of any vehicles of Educational Enterprises. Since each learner is distinct in terms of learning style, care should be taken to select media that meet the varying learning style.

3. Instructional objective

The objectives to be achieved at the end of the lesson should determine any kind of instructional media to be selected. If the objectives requires the learners to simply mention, list facts or principle etc. In cognitive domain, textbook or audio tapes make sure used it's adequate. Visuals synchronized with sound and practice to be selected when the objectives are in the area of affective and psychomotor domain.

4. The Size of the class

The numbers of students in the class is considered in the selection of instructional media. Media can used to teach small groups but not large groups, also the contemporary development has provided instructional media for large group of learners. The adjustable lenses of slides films, strips, and overhead projectors make them usable for small and large group.

5. Durability

The Media of Instruction in selection should be durable. It's should stand the wear and tear of environment and the carelessness of the users. Teachers should provide instructional media that are durable and whose accessories are easy to obtain and also easy to service.

6. Cost

The teacher should consider the financial implication of media to be selected for class use, because of inadequate funding has always been a serious challenge to educational enterprises.

7. Availability

The teacher should also consider the availability of the instructional media used in

teaching and learning in terms of any specialization. He or she should know whether the media can be produced locally and can be easily available or improvised; the compatibility of the media with relevant equipment should be considered.

CRITERIA FOR SELECTING OF INSTRUCTIONAL MEDIA USED IN TEACHING AND LEARNING

According to (LCISD) Lamar Consolidated Independent School District (2007) instructional media used in teaching and learning should be selected based on:

- a. Technical Quality
- b. Readability of Students
- c. Availability Media Used
- d. Accuracy of Teacher and Students
- e. Clarity of Media
- f. Absence of Gender Stereotyping,
- g. Ethnic Bias,
- h. Relevance of Media to The Topic
- i. Appropriateness of the Content And
- j. Presentation Relative to the Maturity and Comprehension Level of the Students

Meze (2008) pinioned that:

1. Objectives of the lesson
2. Suitability
3. Appropriateness
4. Availability and
5. Cost benefit analysis should be taken into

THE CHALLENGES IN THEUSED OF INSTRUCTIONAL MEDIA

There are many problems associated with instructional media used in teaching-learning in senior secondary school According to (UNESCO 2008),pointed out as follows: -

1. Inadequate Funding:

One of the problems associated with the instructional media used in teaching-learning is inadequate of fund. Some school cannot afford to buy those instructional media used in teaching-learning.

2. Inadequate of power supply

The power supply is another problem that hinders the use of instructional media in school. Most of the instructional media are used in order to function effectively and most of the schools in rural area are not provided with electricity, also this makes it difficult for them to use technological instructional

media in their areas. Even the schools in the cities are facing the same problem which makes the use of instructional media boring and inefficiency in teaching and learning,

3. Lack of skills

Many Teachers in primary and secondary schools do not know how to install, operate or use some of the instructional media in teaching and learning, For example some of them cannot operate computer, how can he or she use computer in teaching-learning to the students. The Technology to be used effectively in education, relevant searching skills is necessity. In this case, tutors were required to be equipped with information literacy skills to be able to benefit from the Internet and to teach their students accordingly. As Mapunda (2004) observes, when technology appears difficult to use and when the majority of potential users lack requisite skills, its application remains low, as users they away from using the technology they are not familiar with. (Nweke 2002) indicating that skills and training are variables that influence Internet use as a result, they tend to lose interest in using it, and this finding is in line with the finding of a study.

4. Unstable of network

There is no steady network when trying to use some of the instructional media like internet. This frustrates the teacher and the students as they will spend much time waiting for network before to reach it available.

5. High cost:

The Instructional Media used in Teaching and Learning are very Costly for Instance Projectors, Computers, the Public address System etc.

II. CONCLUSION

The study examine the Role of instructional Media in the Light of Contemporary Technological Advancement to the Teaching and Learning at "Senior Secondary School design, covering senior secondary schools, for qualitative education, and good performance outcome should be taking more adequate planning as regards to ensuring the effective performance in the use of instructional media for the teachers in teaching and learning environment, through quality assurance mechanism need to be put in place and implemented for continuous monitoring of each school's input, process and output. Though

the study use of instructional media portrays a favorable characteristic of the average Nigerian students toward the success of teaching and learning process in given classroom situation

III. RECOMMENDATIONS

The Role of instructional media in the light of contemporary technological advancement to the teaching and learning at senior secondary schools, this paper recommend the following suggested as:

- The Teacher used of instructional Media in Teaching and Learning should be encourage for further their Studies through Seminar setup by the Government Stakeholder's in Educational System, School Management from the Private Schools as well as community interference in Education for effectiveness and efficiencies.
- The Teachers whose area of Specialization in Educational Technology should be engage in each School at Local and Higher Level, order to encourage the Teachers' use of Instructional Media for guide, and they're responsibilities to strength power of Improvisation and Implementation to the Teaching and Learning Process.

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