**THE EFFECTIVENESS IN USING MULTI MEDIA IN PRESCHOOL EDUCATION**

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**ABSTRACT**

The study aimed at investigating the influence of Multi-media materials on preschool children’s learning achievement in number work in Little Angel Montessori. The use of Multi-media materials in teaching number work is minimal hence low achievement. The purpose of the study was to investigate whether the use of Multi-media materials influences their achievement of children in learning number work with special reference to the influence of Audio –Visual materials on children learning achievement in number work, the effect of printed materials in children’s learning achievement in number work and the effect of community resources on children is learning achievement in number work.

The literature reviewed on audio-Visual materials, Visual resources, printed resources and community resources in relation to academic achievement in number work. The study adopted descriptive survey. The population was 90 pre-school teachers and 850 pre-school children .The sample of the study included ,28 pre-school teachers and 255 pre-school children. Data was collected by using various instruments such as number work test was administered to children to determine the performance , questionnaires were used to collect data from pre-school teachers, observation schedules was used to establish types of Multi-media/ materials available and observation check list was used to a certain types of printed materials and how they were used. The data was analyzed using quantitative and qualitative method and was presented in table and graphs. The findings of this study revealed that in adequate Multi-media materials had an effect on children’s performance in number work in preschool. The schools that had Multi-media materials children were able to carry out different activities and had good mastery of the content. While the pre schools that lacked the Multi-media materials the performance was poor and children could not master the content easily.

**CHAPTER ONE**

**INTRODUCTION**

**1.1 Background to the Study**

UNESCO (1999) posits that the development of knowledge and skills in number work (mathematics) and science holds the key to Africa’s industrialization elevation and poverty eradication in the 21st century. Mathematics and science enhance learning of all other disciplines. Therefore there is need to put more Multi-media resources, in teaching and learning of mathematics. In Nigeria lack of information on what is happening in the ECD education sector has made it difficult to use lessons learnt from projects in planning and strategy formation.

According to the Ministry of Education, Science and technology MOEST (2006) the World is experiencing digital revolution where the economy is increasingly based on digital technology such as electronic computation. The education sector has no option other than to go digital so as to tap into the benefits of modernization. Shiundu and Omulando (1992) emphasized that such changes put tremendous pressure on the curriculum and Multi-media resources.

Waithaka (2005) posits that most Nigeria pre-school teachers are not well trained hence types of Multi-media resources seem not to be seen in number work (mathematics) lessons. Due to this factor there seems to be a poor foundation for pre-scholars in number work which leads to poor performance in this discipline at all levels right from pre-school to higher levels, of learning. Kli’banoff (2006) indicates the use of Multi-media materials has positive impact on children’s achievement in number work. Children handled with relevant and adequate Multi-media resources and qualified personnel have an advantage of acquiring number work (mathematics)

concepts and skills because teachers use relevant Multi-media materials which makes it easy to deliver the content and mastery of the concept without any difficult .

In the words of OLuwate (2010), Multi-media materials improve teachers’ creativity. As the teacher studies according to instruction he assimilates easily what knowledge to instil to learners, the best method to use to instil the skills and the best method to achieve this scope thus improving the teacher’s creativity hence leading the teacher to another level greater than where the teacher expects.

According to Fensham, P.J (1970) mathematical; teaching theory and practice, offers a range of experiences which introduce them to use mathematical concepts such as; singing number rhymes creating patterns with objects, sorting and grouping using a variety of objects. Children need to develop good mathematical understanding in order to function effectively as members of the society. To achieve the aim of functional numeric, children need to think flexibly and apply the knowledge to new situation; to solve practical problems and to experiment within mathematics itself so as to develop the ability to reason mathematically and communicate their reasoning to others. Maria Montessori (1870 – 1952) emphasized on the use of imaginative teaching materials. They lessen major weakness of verbalism, humanize and vitalize subject matter hence provide interesting approach to new topics and give initial correct impression.

**1.2 Statement of the Problem**

There are many factors that have contributed to low performance in mathematics and the use of Multi-media materials is one of the key factors among others. The use of Multi-media materials in number work is minimal that is why achievement in number work is very poor. Multi-media materials are very important in teaching number work since they help learners to master the concept so easily and help teachers to deliver the content with a lot of ease. Children learn by doing hence need materials that they can manipulate.

**1.3 Purpose of the Study**

The purpose of the study was to establish whether the use of Multi-media materials influenced the achievement of pre-school children in learning of number work.

**1.4 Research Objectives**

The study was guided by the following objectives:

* To explain the influence of Audio –Visual materials on pre-school children’s learning achievement in number work in Little Angel Montessori School
* To determine the influence of Visual materials on children’s learning achievement in number work in Little Angel Montessori School
* To examine the effects of printed materials on children’s learning achievement in number work in Little Angel Montessori School.
* To determine the effects of community resources on children’s learning achievement in number work in Little Angel Montessori School.

**1.5 Research Questions**

The study responded to the following questions:

* What is the influence of Audio -Visual materials on children’s achievement in learning number work in Liitle Angel Montessori school?
* How do the Visual materials influence children’s achievement in learning number work in Little Angel Montessori School?
* How do the printed materials influence children’s achievement in learning number work in Little Angel Montessori School?
* How do community resources influence children’s achievement in learning number work in Little Angel Montessori School?

**1.6 Significance of the Study**

It was hoped that the study of the effects of Multi-media materials on pre-school children’s achievement in learning number work generated information to education stakeholders and curriculum developers with basic information to stimulate further debate on the best approaches to stimulate the learning of mathematics in pre-schools and source of reference when researching on Multi-media materials.

**1.7 Limitation of the Study**

The results of the study were only generalized to the population involved in this study. The area of study was limited to Little Angel Montessori School.

The research instruments used did not bring out all aspects related to the topic under investigation.

**1.8 Delimitations of the Study**

The study was carried out among pre-school teachers and pre-school children of Little Angel Montessori School

**1.9 Basic Assumptions**

The study assumed that all Early Childhood centres had adequate and relevant resources for teaching number work and that the government and parents provided Multi-media materials for learning number work.

**1.10 Definition of Terms**

***Multimedia-*** is content that uses a combination of different content forms such as text, audio, images, animations, video and interactive content**.** Multi-media materials are the tools and equipments used to carry body of the information to learners and they improve the teachers’ creativeness. They carry information of knowledge, understand skills, values attitude and curriculum content which is important for desired change in learner’s behaviour

**Achievement**– refers to an accomplishment which is shown by scores

**Audio Visual Materials**-are educational materials directed at both the sense of hearing and the sense of sight

**Classification**is the ordering of number into sets called number system such as natural numbers and the real numbers

**County –**It is an administrative region headed by a governor

**Counting**is the action of finding the number of elements of a finite set of objects. The traditional way of counting consists of continually increasing numbers.

**District –**This is one of the areas in which a county is divided for the purpose of organization, with official boundaries.

**ECDE –**Early Childhood Development Education. This is a program and curriculum for children in pre-school

**Effect –**The influence that something or somebody has or the way one behaves or how something develops

**Influence  –**This  refers  to  anything  or  something  that  has  power  to  affect  positively  or

negatively.

**Learning –**It is a lifelong relative permanent change in behaviour resulting from practicing and experience accumulated knowledge skills altitudes and values.

**Number Recognition**can be defined as the ability to identify and name basic numerals**Number Sequence**-is an enumerated collection of objects in which repetitions are allowed or list of numbers in a special order

**Number work**– It is a science of numbers quality and their interrelationships

**Ordering**is a generalization of the concept of a natural number that is used to describe a way to arrange a collection of object in – order one after the other **Performance –**It is a sub-sequent production of learning process

**Printing Materials**-these are learning materials used to describe printed materials produced by

printers or publishers such as books

**Sub-county –**It is a sub-administrative region within a county

**Visual Materials-**these     are Multi-media devices such as charts that appeal   to vision

**CHAPTER TWO**

**REVIEW OF LITERATURE**

**INTRODUCTION**

Our focus in this chapter is to critically examine relevant literatures that would assist in explaining the research problem and furthermore recognize the efforts of scholars who had previously contributed immensely to similar research. The chapter intends to deepen the understanding of the study and close the perceived gaps.

Precisely, the chapter will be considered in three sub-headings:

* Conceptual Framework
* Theoretical Framework
* Empirical Review and

**2.1 CONCEPTUAL FRAMEWORK**

**Multi-Media**

Multimedia is a form of communication that combines different [content forms](https://en.wikipedia.org/wiki/Content_format" \o "Content format) such as text, audio, images, animations, or video into a single presentation, in contrast to traditional mass media, such as printed material or audio recordings. Popular examples of multimedia include video podcasts, audio slideshows, animated shows, and movies.

Multimedia can be recorded for playback on computers, laptops, smartphones, and other electronic devices, either on demand or in real time (streaming). In the early years of multimedia, the term "rich media" was synonymous with [interactive multimedia](https://en.wikipedia.org/wiki/Interactive_media" \o "Interactive media). Over time, [hypermedia](https://en.wikipedia.org/wiki/Hypermedia" \o "Hypermedia) extensions brought multimedia to the World Wide Web.

**Multi-Media in Education**

In [education](https://en.wikipedia.org/wiki/Education" \o "Education), multimedia is used to produce [computer-based training](https://en.wikipedia.org/wiki/Computer-based_training" \o "Computer-based training) courses (popularly called CBTs) and reference books like encyclopedia and almanacs. A CBT lets the user go through a series of presentations, text about a particular topic, and associated illustrations in various information formats. [Edutainment](https://en.wikipedia.org/wiki/Edutainment" \o "Edutainment) is the combination of education with entertainment, especially multimedia entertainment.

Learning theory in the past decade has expanded dramatically because of the introduction of multimedia. Several lines of research have evolved, e.g. [cognitive load](https://en.wikipedia.org/wiki/Cognitive_load" \o "Cognitive load) and [multimedia learning](https://en.wikipedia.org/wiki/Multimedia_learning" \o "Multimedia learning).

From multimedia learning (MML) theory, David Roberts has developed a large group lecture practice using PowerPoint and based on the use of full-slide images in conjunction with a reduction of visible text (all text can be placed in the notes view’ section of PowerPoint).[[7]](https://en.wikipedia.org/wiki/Multimedia" \l "cite_note-7) The method has been applied and evaluated in 9 disciplines. In each experiment, students’ engagement and active learning have been approximately 66% greater, than with the same material being delivered using bullet points, text, and speech, corroborating a range of theories presented by multimedia learning scholars like Sweller and Mayer.[[8]](https://en.wikipedia.org/wiki/Multimedia" \l "cite_note-8) The idea of media convergence is also becoming a major factor in education, particularly higher education. Defined as separate technologies such as voice (and telephony features), data (and productivity applications), and video that now share resources and interact with each other, media convergence is rapidly changing the curriculum in universities all over the world. Higher education has been implementing the use of social media applications such as Twitter, YouTube, Facebook, etc. to increase student collaboration and develop new processes in how information can be conveyed to students.[[9]](https://en.wikipedia.org/wiki/Multimedia" \l "cite_note-9)

**Educational Technology**

Multimedia provides students with an alternate means of acquiring knowledge designed to enhance teaching and learning through various mediums and platforms.[[10]](https://en.wikipedia.org/wiki/Multimedia" \l "cite_note-10) In the 1960s, technology began to expand into the classrooms through devices such as screens and telewriters.[[11]](https://en.wikipedia.org/wiki/Multimedia" \l "cite_note-11) This technology allows students to learn at their own pace and gives teachers the ability to observe the individual needs of each student. The capacity for multimedia to be used in [multi-disciplinary](https://en.wikipedia.org/wiki/Multi-disciplinary" \o "Multi-disciplinary) settings is structured around the idea of creating a hands-on learning environment through the use of technology.[[12]](https://en.wikipedia.org/wiki/Multimedia" \l "cite_note-:032-12) Lessons can be tailored to the subject matter as well as be personalized to the students' varying levels of knowledge on the topic. Learning content can be managed through activities that utilize and take advantage of multimedia platforms.[[12]](https://en.wikipedia.org/wiki/Multimedia" \l "cite_note-:032-12) This kind of learning encourages interactive communication between students and teachers and opens feedback channels, introducing an active learning process especially with the prevalence of [new media](https://en.wikipedia.org/wiki/New_media" \o "New media) and [social media](https://en.wikipedia.org/wiki/Social_media" \o "Social media).[[13]](https://en.wikipedia.org/wiki/Multimedia" \l "cite_note-13) Technology has impacted multimedia as it is largely associated with the use of computers or other electronic devices and [digital media](https://en.wikipedia.org/wiki/Digital_media" \o "Digital media) due to its capabilities concerning research, communication, problem-solving through simulations and feedback opportunities.[[14]](https://en.wikipedia.org/wiki/Multimedia" \l "cite_note-14) The innovation of technology in education through the use of multimedia allows for diversification among classrooms to enhance the overall learning experience for students.[[15]](https://en.wikipedia.org/wiki/Multimedia" \l "cite_note-15)

**Audio visual Aids**

“Audio” literally means hearing and “visual” means seeing. So, all such aids, which endeavour to make the knowledge clear to us through senses of hearing and seeing are called audio-visual aids. According to Oni (2004), audio visual aids are aids that appeal to the senses of hearing and sight at the same time.

Cooper (2002) states that a picture worths a thousand words. When the pictures have accompanying sound, they provide an even greater advantage of broadening the experiences of the learner. Audiovisual aids give us firsthand knowledge through the organs of hearing and seeing. The sight and sound the audio visual aids produce combine to make for excellent teaching and learning.

Audio visual education uses sight and hearing to stimulate and enhance a learning experience. The advancement of television and multimedia computer programmes has greatly affected audio visual education expanding its impact on many educational experiences at all levels. Educational television programmes and videos have been created to help supplement instructional time. Multimedia computer programmes have given students the opportunity to now take control of their learning by creating their own materials as well as learning programmes which they can utilize to enhance their education.

Audio visual is defined as the combination of various digital media types such as text, images, sound and video, into an integrated multi-sensory interactive application or presentation to convey a message or information. In other words, audio visual means “an individual or a small group using a computer to interact with information that is represented in several media, by repeatedly selecting what to see and hear next” (Agnew, Kellerman and Meyer,

Audio Visual aids can be a helpful tool in the language classroom as Mannan (2015) points out they ‘help the teacher to clarify, establish, correlate and coordinate accurate concepts, interpretations and appreciations, and enable him to make learning more concrete, effective, interesting, inspirational, meaningful and vivid’ (p.108).

Visual material or anything use to help the student see an immediate meaning in the language may benefit the student and the teacher by clarifying the message, if the visuals enhance or supplement the language point, as Canning-Wilson (2010) indicates in her work. These advantages suggest that visuals can help make a task or situation more authentic (Canning-Wilson, 2009).

Researchers as Kemp and Dayton (2009) claim that audio visuals aid in motivation and maintaining attention by adding variety and making the lesson more interesting (as cited in Bradshaw, 2013).

Watkins and Brobaker have collected in their paper several studies from different researches that conclude that visuals clarify and enhance students learning, and that this information is recognized and remembered for longer durations than verbal information alone. Moriarty (2014) also asserts that human beings develop their visual language skills before the verbal language development and severs as the foundation for the last one. This is a possible explanation for the need of pictorial information rather than textual among young students (Arif and Hashing 2009). Paivio (2009) had already explained this with his theory based on the idea that cognitive growth is stimulated by the balance between verbal and visual experiences in the early stages of learning. Arif and Hashim (2006) own research proves that pictures gained better attention than words, and among young learners, pictures became the main clue in interpreting the meaning of the words.

Research on effectiveness of the audio visuals used in the learning environment shows that they can improve learning (Anglin, Vaez and Cunningham, 2014). Visuals can help arising the readers interest, curiosity and motivation (Mayer and Moreno, 1998). Fang agrees with these benefits and adds others such as promoting creativity, serving as mental scaffolding and fostering aesthetic appreciation (as cited in Carney and Levin, 2012).

Studies carried out by Mukherjee and Roy (2013) have found that the use of audio visual aids to contextualized spoken speech it’s a great help for students, given that they can understand 30% more than without the visual support.

Brinton (2010) devoted the end of her article to summarize the rationale behind the use of audio visual aids in the language classroom:

“Use media materials when variety is called for, when they expedite your teaching task and serve as a source input, and/or when they help you to individualize instruction and appeal to the variety of cognitive styles in your classroom. But above all, use media to involve students more integrally in the learning process and to facilitate language learning by making it a more authentic, meaningful process.”(p. 130)

The Nigerian government, at all level has placed enormous emphasis on the use of instructional materials in shaping efforts and strategies aimed at improving students standard of learning in the country, but it is displeasing to know that, both the theoretical and empirical literature failed to captive the real factors, why the standard of education in the country still remain very low.

Okereke (2009) observed that many schools in state cannot boast of any instructional materials. He asserts that every government should be contending with the issue of making education her priority to help in improving the standard of learning by providing the necessary instructional materials to schools.

**Classification of Audio visual Aids**

Audio visual aids can be classified into the following types:

1. **Auditory aids**

**Radio**: This is a very useful aid in the teaching of English language; it brings the idea of realism and removes the dullness of the lesson. It arouses the minds of the students. It should be noted that the radio talk should be within the level of the students. English student can obtain great benefits from radio talks which comes direct from the native speaker of English language.

**Linguaphone:** Linguaphone is known as Gramophone; it is use to teach students the correct way of pronunciation. A linguaphone can be fitted with a recording device. In the case, a record of correct pronunciation can be reproduced at any time for the benefit of the students. It can also help the student to learner good grammar, poetry.

**Tape recorder:** This is an audio storage device that records and plays back sound, including articulated voices, usually magnetic tape, either wound on a reel or in a cassette, for storage. It can be used to record a talk, story from the radio.

1. **Visual aids**

**Black Board:** This is the cheapest and one of the most important aids for teaching, especially English language. It is used for writing lessons, practical lesson, for testing work, illustration and examples for better understanding.

**Flannel Board:**This is a rectangular, wooden ply board on which a piece of flannel is pasted. It is used for teaching and learning of English spellings, words, structure and giving pronunciations practices. It can be used for teaching composition and storytelling also.

**Flash card:** flash cards are useful device for teaching English language beginners. Flash cards are strips of this card board which are held before the class for a short interval of time. They may be used for reading practice, oral teaching, teaching spellings, sound etc. for instance, an English teacher writes the entire alphabet in a different flash card and compels the learner to identify the alphabets themselves, this helps to maintain the learners and wanting to know or identify the correct one.

**Pictures:** this plays a very important role in the teaching of English language. Picture helps in informing correct association of ideas in the mind of the students. We can show examples of winter in which everything looks desolate or joyless or sad, the dictionary meaning of winter cannot show what actually happens in winter time. How horrible winter time is in England can only be known with the of a picture

**Television**

Television is a system for converting visual images (with sound) into electrical signals, transmitting them by radio or other means and displaying them electronically on a screen. A television commonly referred to as T.V, Telly or the tube is a communication medium used for transmitting sound with moving images in monochrome (black and white) or in colour. Television is a mass medium for entertainment, education, news and advertising (Okpala, 2012).

Television is an electronic device that receives a visual and audible signal and plays it back to the viewer. Television is one of the most important inventions of science. Scientifically it is only a higher form of radio. In addition to its old function of passing on sounds, it transmits and receives visual images using electromagnetic radiation. Television offers vitality and newness, variety, versatility, concreteness, reinforcement of exciting ideas and information.

Television is widely used for educational purpose but it has still not achieved its fullest potential neither in developed nor in developing countries (Zechowski, 2010).

Television as a powerful medium of communication has literally captured the world. Television has become an important part of our life, so much that it is difficult to say whether it is a luxury or necessity. It is universal in its availability and it is still free at the point of use to its viewers. Palmer (2010) agrees with this by stating that, ‘television has the greatest impact of all media’ it is viewed by people for long periods, commonly between fourteen and twenty eight hours a week, it can convey quite complex and educational ideas in understandable ways; and because of its impact, it is influential among decision makers and government. Television is generally assumed to be an important environmental factor that influences child development. Television viewing even for very small children is considered an active interpretative process of meaning making.

Under favourable conditions, television is one of the best media to bring desirable change in the knowledge, understanding, attitude and behaviour of viewers.

Educational television or learning show is the use of television programmes in the filed of distance education. It may be in the form of individual television programmes dedicated to specialty channels that is often associated with cable television. There are also adult education programmes for an older audience, many children television series are educational. Lesson programmes are now available for watching on the screen via the video cassette and video disc.

There is a need to adequately prepare to watch television programme. All the physical factors should be adequately checked. These include selecting the type of television set and size of the screen. However, it is determined by the size and number of learners in the classroom. The larger the size of the screen of the television the better for a large number of learners to observe at one time.

You need to check lighting, ventilation, sitting arrangement and the television set before the group convenes. Enough light should be provided so that learners can take brief notes on the broadcast programme. The sitting arrangement should observe the rule of good vision. Leave approximately six feet between the screen and the first row of learners. Finally select the proper station or channel and make all necessary adjustments before the group meets.

Anderson (2010) points out the hints to be observed in order to obtain a satisfactory result in television programmes; they include the following:

Provide in advance the information from the programme manual about the background and objectives of educational programme.

Prepare the learners: The interest of the learners should be aroused so that they will get as much knowledge as possible out of the broadcast. Point out to the learners how they can benefit from the broadcast. Motivate the students to watch the programme critically and for specific details. Explain to them the important points to observe before presenting the television programmes.

Before the programme starts, make the necessary adjustments of colour, contrasts, brightness, volume, tone and tuning.

Present the television programmes: At the exact time of the broadcast, the television set should be switched on. Each learner should have been adequately prepared with necessary writing and drawing materials (if necessary). Learners should note the important points during the broadcast.

Follow up session: Immediately after the broadcast, follow up session should be carried out. And the topic should be discussed. Each learner should be allowed to clear any misunderstanding which he/she might have during the broadcast. The teacher should guide the discussion. Other instructional aids are used to reinforce learning and the teacher summarizes the lesson.

Test the learners: In order to discuss learners’ weaknesses and errors, there is a need to organize a test on the televised subject. Review the topic: Based on the result obtained from the test, there is a need to correct all weaknesses or errors. Therefore, it may be necessary to review the topic very briefly. If the television programme is recorded, you may re-play it.

**Advantages of television**

Anderson also states the advantages and disadvantages of television.

The advantages of television include the following: Television is a popular house hold gadget, thus, it is familiar to the teacher and students.

Television can help young people discover where they fit into the society, develop closer relationships with peers, family and teach them to understand complex social aspects of communication.

Dissemination of government’s policy views: It can be used to disseminate the government’s policy views to mass audiences.

Entertainment: In this busy, expensive life, television is an easy and cheap source of entertainment. It offers a variety of entertainment channels. We can choose from the series of plays, serials, movies and sports televised. Television offers entertainment for every one of us. For adults, there are movie-channels, news, serials etc. For small children, there are cartoon-networks, educational networks, etc. Television brings you news as it happens: For many of us the television is our first or only source of news and current events. Many channels have news updates up to four times a day and current affairs programmes which take a deeper look at the news that has affected the world that day or week. These news shows keep people up to date on the outside world, it is possible to know everything that happened in a day without even going outside. Live shows: There is no end to the pleasures. It caters for millions of peoples of all ages. They are thrilled as they witness live-cast shows of important games and incidents. We become very excited when we see the live matches of cricket, football, soccer, tennis, etc. Major international games such as Olympic games are shown live on the television. Live events of various music shows, award functions, etc. are telecasted live on television.

We are using more than one sense when viewing: we use atleast two senses to enjoy television. We use our eyes to watch the television screen, we also use our ears to listen to the dialogue and noise on the screen.

There are vast amount of educational programming available for viewing particularly on channels like discovery channel, etc which can educate and stimulate people and wet every audience members appetite. It is also the fastest way to improve your knowledge and help you learn something completely new. Many people who cannot afford university or night courses or simply just want a basic knowledge of one particular subject or event use documentaries to quench their thirst for learning. Television plays an important role in educating people about corruption going on in the social and political world. Various channels are available in different languages so you can see the channel or show of your choice in your regional language. You can also learn several languages and lots of other useful things by watching television.

Relief from anxiety and monotony: Artistic progammes including drama, song and dance give us relief from the anxieties and monotony of daily life and take us to the realm of imagination. We all get very tired when we return home after working outside for the entire day. We can watch television shows when relaxing in our rooms. It fills our life with vigor. It also refreshes our mood by watching shows we like the most.

Television is a good and effective way of advertising product or information media interviews: The media men and women have regular interviews with eminent writers, scholars, scientists and other celebrities. These extend our awareness of various subjects and sharpen our desire for knowledge and understanding. When we watch interviews of our celebrities, we understand how they overcame their early career difficulties. We get inspired by watching these interviews of great and successful personalities.

Moral lessons: Besides entertainment, many television shows are aimed at teaching moral lessons to the society. Through mass television campaigns, efforts are made to boost a sense of integrity and moral values among the people. Various documentaries are also made to raise the consciousness of the people so that the society can benefit from their actions. The harmful effects of drugs, alcohol, smoking, etc are displayed to encourage the viewers to stay away from these evils.

Do it yourself shows give us easy access to all kinds of information: Cooking channels offer new recipes and methods, home-improvement-shows introduce us to many money-saving tips, financial advisers give advice for managing finances and investing money.

Some shows can motivate people who are interested in that field and help them to pursue their dreams.

Television can expand your mind: Some shows let you travel vicariously and teach you about different people, cultures, ideas, and places you might never encounter in real life. Watching a variety of shows might give us a broader understanding of the world we live in and expose us to things we might otherwise never come across in our own lives.

Gathering around the television gives families, friends and strangers something to bond over. Even if you are not interested in the Olympics, watching the games with your family might bring you closer together, reminiscing about shows you have watched together gives you shared history and memories.

Television might be a free and easy source of sexual education. It can also help you feel less lonely; when people watch a favourite television show, they feel less lonely during the show.

Television influences the lives of those who watch it, it reaches large group of people simultaneously. It also reaches long distances. It also provides programmes that can be stored for retrieval, via video tapes, which retain a live broadcast feeling.

Television makes it possible for the talent of best teachers to be put at the disposal of all schools within range of the transmitter.

Television can employ all other audio and visual aids, and combine their effectiveness in one medium. Charts, pictures, boards, slides, overhead projectors, models, specimens, etc can be employed in the technique of teaching by television.

**Video set**

Video is an electronic medium for the recording, copying, playback, broadcasting and display of moving-visual images. Lasso (2010) defined it as a record on any medium, through which a moving image may by any means be produced. They are derivative works which are usually based on original literacy, dramatic, musical and artistic works. Video is a potential window that can expose the minds and hearts of many, to modern practices and environmental concepts, far more than what the traditional classroom teaching can achieve. Video materials provide a unique opportunities to present, teach and internalize authentic information.

Video is a very important example of teaching aids. Today, many training establishments and schools make use of video-tape recorders to record lessons and training sessions for later presentation. Video-tape recorders are used effectively in teaching-learning programmes for micro-teaching sessions.

Video recorder makes it possible to record classroom lessons and enables viewers see it on the screen at the same time. People who have video tape recorders can record programmes and later play it back at their leisure time.

Educational video resources are a great way to add visual stimuli in your lectures. They should always be used as an extension of the lecture and not as a replacement. When used properly, they can help to heighten the educational experience for students and raise the level of engagement and achievement during lectures. For video to be effective, it must be available, easy to use, well maintained, adequately funded and experts must be available. In a good production, the focus is on teaching-learning goals. Distracting information or irrelevances should be avoided. There should be a good vision, sound, etc so that the learners can respond to what they are learning. The teachers should be self-prepared.

Gordon (2004) notes the basic steps to be taken so as to achieve effective recording of an instructional video production:

One starts with an idea. One must have an idea of the subject matter to be produced or recorded on the video.

Express this idea in form of clearly stated instructional objectives, considering the activities and interest of the audience. Instructor should obtain a copy of the script and secure all related printed materials (e.g, manuals and leaflets) pertaining to the topic to be recorded. These materials will guide the instructor and also help the learners in the follow-up activities.

Before recording, arrange the seats, ensure that the environment is well lit. Equipments must be properly set up and tested before recording and viewing. Sockets, adapters and connecting cable must be provided. The recording crew (technicians and camera men) must be on ground to assist the instructor. Prepare and do the recording.

Presentation: The topic should be introduced and explanation made as to why the topic has been recorded for viewing. Briefly describe what the programme covers and stress what is important to be learnt from it. Motivate the learners to pay attention to materials that relate to instructional goals. Present the instruction on video. Let them watch and listen attentively. Test the students after the viewing. Review the teaching based on the feedback of your assessment.

**Advantages of video**

Gordon went further to mention advantages and disadvantages of video.

Advantages of video include the following:

Facilitating thinking and problem solving: The creative challenge of using moving images and sound to communicate a topic is indeed engaging and insightful. It also enables students to acquire a range of transferable skills in addition to film making itself. These include research skills, problem solving, technological and organizational skills.

Assisting with mastery learning: In some cases, video can be as good as an instructor in communicating facts or demonstrating procedures, to assist in mastery learning where a student can view complex clinical or mechanical procedures as many times as they need to. Furthermore, the interactive features of modern web-based media players can be used to promote active viewing approaches with students.

Instructor-quality lectures: Video lectures make available instructor-quality lectures that students can view and study as much as needed to meet their individual learning needs. They are detailed step-by-step explanation of materials used in the classroom-lectures and are presented at a delivery pace that is significantly slower than what can be accomplished in the limited time available in the classroom.

Students learn better with video lessons: Some students just learn better when viewing animated diagrams and other video lessons. A well balanced classroom spreads things out across different styles, creating short movies and lectures, reaching out to those with a more visual outlook

Video can help the teacher to work more closely with the students: Video can help the teacher to work more closely with the learner and reduce the need for repeated explanation. It also has the capacity to motivate the learners and difficult skills are better viewed especially with the slow motion. It produces authentic learning opportunities for students.

Videos are demonstration friendly: Students who are good visual learners will be having lot of advantages studying from videos. They can store information easily. The training time is reduced to a great extent by using video. It may be easier to schedule time for videos, as it is known how long it will take.

Video is a flexible teaching medium: It provides a means of interactive instruction and it is a very flexible medium. Having the ability to stop, start and rewind is absolutely invaluable. It provides the option to stop each video and challenge the students to predict the outcome of a demonstration, and elaborate on, or debate a point of historical reference. You also have the option to rewind a section of the video to review a segment to ensure that children understand a key concept. You can ensure to add further interactivity by copying activities, conducting discussion or repeating demonstration and experiments in your classroom.

Students can retain and remember information: Incorporating videos into lessons offers a viable method for students to retain and remember information. The medium made for one more way to ensure all learners enjoy access to educational materials that meet their specific requirements. Video stimulates both visual and auditory sense organs. Colour on the video adds realism to pictures.

Archiving: Teachers who require their students to shoot videos might want to keep a digital archive of their work to show off to future classes. Or, of course, tracking their own creations for online, open source or hybrid classrooms. A video strategy ensures these materials make the transition from generation to generation of learners.

Video addresses absences: No matter who has to stay at home - teacher or student. Prerecording lectures, instructions or assignments helps close up any gap in lessons that results from absences. Learners experiencing prolonged illness or other situations requiring home-bound-education will especially appreciate not being left behind.

**Computer**

Computer is one of the inventions that have placed man at another level of capacity. Opkala (2012) sees computer as an electronic device that manipulates information or data. It has the ability to store, retrieve and process data. It can be used to type documents, send e-mail, play game and browse the web. It can also be used to edit or create videos. Macgregor (2010) also refers to computer as a general purpose machine commonly consisting of digital circuitry that accepts (inputs), stores, manipulates and generates (outputs) data as numbers, text, graphics, voice, or electrical signals in accordance with instructions called programmes. Okpala (2012) also agreed that educational computer application comes in two main forms; these are computer managed instruction and computer assisted instruction.

**Computer managed instruction:** Here, the computer stores and retrieves information about each student, directs students learning, records and reports attendance and even offers suggestion for evaluation.

**Computer assisted instruction:** Here, the learner interacts with the computer as he will do with a human teacher. The software instructs a learner, providing information and testing knowledge or skills. The computer assisted instruction comes in the form of tutorial, drill and practice, demonstration, games, etc.

**Tutorial:** During tutorial, computer is used to teach a series of concepts, they are often developed like a programmed instruction lesson.

**Drill and practice:** It provides the student with drill and practice exercises on content the student has previously learned but not yet mastered. E.g, the computer displays the names of various arteries in the body and the student is expected to provide answers to where those arteries are found in the body. This will help the student to learn very well the arteries of the body.

**Demonstration:** The computer allows for a better degree of interaction between the student and the media for example, a demonstration programme could be designed for teaching bed making.

**Games:** Programmes on games could be played between two or more students who compete among themselves or by one student and the competition would be against the student’s performance. Games will be a good instructional tool only if it is content-base. The world is witnessing a wonderful global transformation with the introduction of the computer and internet. The internet is a worldwide network of computers which allows people to share information, programmes, pictures and music. Internet is an international network of millions of computers linked together for communication purposes, that is, it allows the computers to exchange information with each other. This is why it is called the network of networks (Mbonu, 2007).

Internet is an abbreviation for international network for communication. It is an information super high-way. The mass media have succeeded in welding people and nation into a global village, in other words, millions of people scattered all over the globe can communicate with one another through the radio, television, newspaper and internet without necessarily being in physical contact.

**Uses of computer in various fields of life**

Computer can be used in business, for example, marketing, stock exchange, banking, etc.

Computer can be used in e-commerce, video-conferencing, electronic shopping, etc.

Computers can be used in banks - handling trading in multiple currencies, automatic teller machine, facsimile (Fax), electronic mail (E- mail), etc. Computers can be used in industry - Robots, machinery status and running, observance of temperature and pressure accurately and precisely. Computer is used in medics, for example, patient monitoring, patient records, diagnosis, hospital administration, life-support system, etc.

Computer’s role in airline: Record of passengers, navigation system, connects pilot with service station.

Weather forcasting. For example, weather stations, airport satellites, humidity measurement, metrological studies.

Home uses of a computer - kids play games, music collection, micro processor, technology aid in baking, like microwave oven.

Computer in tourism keeps records of the tourists, information about visits, etc.

Computer in travels: Most new cars use computer chips to control the engine and other functions, for example, the engine microprocessor instructs the engine to mix a suitable ratio of air and fuel for combustion. The computer chip also controls the timing of the spark plugs. Microprocessors control airbag release, cruise control, automatic transmission, traction control and the anti-lock breaking system. In addition, the car can contain a DVD player or a satellite navigation system, which also uses computer chips.

Computers are the reasons why software industries developed and flourished. Computer can also be used in architectural designs, engineering, publishing, etc.

Over the years, computers have changed the way the world works. They have also taken over the field of education, this is why the education system has made computer education a part of school curriculum.

Today, computers have touched the lives of several students living in the remotest part of our planet, there is no denying, the fact that computers completely rule the life of an average student in any corner of the world. Computers as used in education allow the learners to learn modern tools and knowledge that will make them ready for the possible technological changes in the future. Computers are commonly used in education for applications such as communication, distributing education materials, etc. In some cases, computer use may even be an educational requirement; for instance, some graduate and professional schools require students to have laptop computers.

When talking about the use of computers in everyday life, we talk about the direct as well as indirect uses, for example, when we use the computer for working or gaming, we have its direct uses, while using an Automatic Teller Machine (ATM), we are actually making an indirect use of computer based technology. You wake up in the morning, switch on your computer and check mails or update your Face book status. You go to work, switch on your computer and work. You come back from work and re-check your mails, make entries in your account folder, check your bank balance, etc. you watch a movie or play computer game and end your day.

**Advantages of computer**

Okpala (2012) narrated advantages and disadvantages of computer.

Advantages of computer include the following:

Access to the internet:

The internet is now being used as a library. It is easier to access, along with being a convenient and fairly reliable source of information on different subjects. Both teachers and students can benefit from internet .Teachers can refer to it for additional information and references on the topic to be taught. Students can refer to web sources for additional information on subjects of their interest. The internet helps teachers set test papers, frame questions for home assignments and decide project topics, teachers can also use web sources for ideas on sports competitions, extra-curricular activities, picnics, parties, etc. Students can search for the concepts or things which they wish to know by referring to relevant websites. The internet is an ocean of information and surfing daily will increase the knowledge of these students.

Storage of information: Computers enable storage of data in the electronic format, thereby saving paper. Memory capacities of computer storage devices are in gigabytes. This enables them to store huge chunks of data. Moreover, these devices are compact. They occupy very less space, yet store large amount of data. Presentations, notes, test papers, videos, games applications, documents, etc can be stored and transferred easily over computer storage devices. Similarly, students can submit home work and assignments as soft copies. Electronically erasable memory devices can be used repeatedly.

Better yet, access to the stored information is supper-fast. It takes micro-seconds for data to be transferred from storage to memory in the computer.

Nurses can use computers to take down and store notes of the patients, as they examine the patients while taking rounds. As the supervised rounds involve a lot of patients, and a lot of information, using a “Personal Digital Assistant” (PDA) makes it easier to access the right medical information at the right time; instead of carrying a bunch of paperwork and then taking time to search the piece of paper you need, PDA helps the nurses to save time when they need to access the information as quickly as possible. These make the work quick, efficient and accurate.

Better presentation of information:

We all would agree that power point presentations are more efficient and have more impact on the receiver when it comes to presenting data. Computers help the teachers and students to present the large and complicated data in a very simplified and effective format. Computers facilitate effective presentation of information. Teachers hardly use white boards and markers today. They bring presentations on a flash drive, plug it into a computer in the classroom, and the teaching begins. There is colour, sound and movement –the same old information comes forth in a different way. Due to the computer aided teaching, difficult subjects can be explained in better ways. Things become easier to follow.

Computer programmes can help you complete your school work in a neat and organized manner, if you have poor Penmanship or find it tedious to write multiple pages out by hand, you can type that information and format it to your teacher’s specifications. Typing a work assignment may make it easier for the teacher to read and grade.

Social networking and gaming:

Computers are shrinking our world, and from what we are seeing, it appears to be a mixed bag. Social networking is a boom for those who wish to use it to expand their academic horizons. Very few of us would actually spend a day without Facebook or Twitter. Networking bonds people around the world, helping students reach out to scholars and vice versa, making connectivity worthwhile. The computer industry generates billions in revenue every year because of popularity of computer games all over the world.

Speed up work efficiency:

Computers have replaced the use of manpower in carrying out tedious and repetitive work. Work that can take days to complete manually can be done in a few minutes using a computer. This is made possible by the fact that data, instructions and information move very fast in the electric circuits of computers. They process trillions of instructions within a second.

Making knowledge interesting:

Computers have made education interesting. As communication systems enhance, education will change for better, computers will make our children more curious, knowing that the answers to their questions are at hand.

Presenting creative options:

With all the creative software at hand, it has become easy for students to Jazz up their assignments and projects. Basically, assignments have become activities that students look forward to, from their earlier mundane form. The usage of computers in aiding learning is prominent in almost every field.

Students today “Speak Computer” and their interest level arises instantly and appreciably when they are allowed to work on the computer. Students learn best by doing instead of listening, and using computers in instruction is hands-on for them, requiring active involvement and participation.

Active and engaging learning:

Personal computers can capture your attention and facilitate fun learning. For example, educational games and programmes can be used in schools and at home. You can play educational games that cover topics on research, sciences, computer, statistics, etc. Many games and computer activities use repetition to help you commit information to memory. These games and programmes help you learn a subject, and some computer games regularly check your retention and understanding of subject.

Self-evaluation:

Computers also contribute and help the students know their strengths and weaknesses. There are many instructional programmes that give the students the opportunity to answer a question or work a problem and receive immediate feedback that can help the students to develope facts. When the queries are solved, the child knows the answers, he or she also knows his or her stand. A regular use of such computer applications definitely grants the students the autonomy and makes them more equipped and well researched for their field.

Computers have given impetus to distance education:

Without computers, learning would be restricted within the walls of institutions. Distance learning programmes or online programmes provide education at much affordable costs than the costs incurred on fulltime training. The working professionals, stay - at -home parents, senior citizens, even the curious minds benefit from online-education. Also, students living far off in remote areas, need not travel several kilometers and come to the city, as they can now learn from the comforts of their home provided they own a computer with an internet connection.

Reducing paper work:

Computers have more or less eliminated paper work in the administration section of education. Thanks to Websites, we can do away with printing brochures, application forms, admission and other administrative documents, resulting in procedures that are cost-effective and environment friendly. Tests have also become online, making assessment procedures easy for teachers and professors. The use of computers in education has completely revolutionized the way education is imparted, received, communicated and processed. In the years to come, more changes are expected, changes that will further refine the field of education.

Researching made easy:

Computers can help you properly present and format your research. Using the internet will also give you a wider horizon to find relevant study materials. Government, education and organization websites offer a wealth of information related to practically any topic you could be studying in school. We find that long gone are the days when we used note books to write down our research paper or actually used the library for research. Today, you simply need to “Google” to find any information you want.

Telework or working from home is possible because of the computer. Therefore, we can say that the computer is also a source of income for a considerable number of people all over the world.

Consistency:

You always get the same result for the same process when using a computer, for example, if you create a document on one computer, you can open it on another without making any special adjustments. This consistency makes it possible to save and edit document from different computers in different parts of the world. Collaboration is therefore easier.

**Uses and importance of Multi-Media aids in teaching**

Bajah, (2015) outlined some of the following reasons for using audio visual aids in teaching.

1. For motivational values that develop the interest of the students
2. To simplify and clarify what is complex and difficult to express in words
3. To supplement spoken and written words
4. To bring the teaching into real life
5. To moderate the teaching and learning processes.
6. To promote retention as we can understand from the Chines proverb that says “what I hear I forget, what I see I remember, what I do, I understand”.

As scholars have always argued, in order to make the acquisition of the language more meaningful for the students, teachers must bring the real world into the classroom. Visual materials work as a powerful tool in this aspect, as far as they give teachers the opportunity to show the culture of the target language, the habits and the body language that lie behind the language transactions. All this makes students understand that the use of the target language has a purpose: the real purpose of real communication.

Section Ten in the National Policy of Education stated that the objectives learning materials such like audio visual aids are to:

* Enhance teaching and improve the learners competence
* Make learning more meaningful for the students
* Develop and promote the effective use of innovative materials in schools

Aajayi, et al (2010) observed that audio visual aids are versatile tools that are used in different ways for effective teaching and learning of English language. These aids convey facts and idea in all forms of communication. They offer quite an easy way of presenting information. Ajayi, et al (2010) further outlined some of the importance of audio visual aids if carefully selected, they should:

1. Speed learning processes
2. Help to give correct initial concept
3. Provide experiences which are not known before
4. Motivate, develop and change attitude
5. Build and sustain interest
6. Clarify and give definite meaning to words and the combat verbalism
7. Intensive expressions
8. Help student to learn more
9. Vitalize instruction and provide varieties in teaching
10. Supplement other learning and serves reminder.

Ibrahim (2015) stated that audio visual aids assist English language teachers in the achievement of stated objective and also help them to make lesson explicit to the students. It aids the achievement of any one of the following in the teaching process: attention and motivation; orderliness in the classroom; lesson presentation; recall and remembering; guidance, active participation and response, feedback, assessment of performance and evaluation.

In summary, it could be noted that the improvement of classroom instructions largely depend on the competence of the teacher to use various kind of instructional materials in the actualization of teaching and learning objectives.

**Audio visual aids and the teacher’s competence**

The incompetence of a teacher to improvise instructional material like audio visual has been said to be one of the factors responsible for poor performance of the learner.

Teacher’s competence is an underlined characteristic of an individual that is usually related to effective or superior performance of the students. These characteristics include: enduring motives, self-concepts, value, knowledge and skills that can assessed and differentiate. To be precise, teacher’s competence is an appropriate prior knowledge, skills, attitude and abilities of the teacher in a given context to adjust and develop with time and need in order to effectively and efficiently accomplish a task that are measure against a minimum standard.

As scholars have always argued, in order to make the acquisition of the language more meaningful for the students; teachers must bring the real world into the classroom. Visual materials work as apowerful tool in this aspect, as far as they give teachers the opportunity to show the culture of the target language, the habits and the body language that lie behind the language transactions. All this makes students understand that the use of the target language has a purpose: the real purpose of real communication. The students involved in this research are the SS1 group. Being among the youngest in the high school, their level of English is quite low.This kind of student is the one that is being benefited most from the visual aids integrated into the lesson plan (Boucheix, 2015). However, before a competence teacher selects the instructional materials, the teacher should consider the following which will serve as the criteria for selection:

**Availability**

Instructional materials like audio visual aid should be made available, the teacher should ensure that the materials are in good state by testing ascertaining that everything is working perfectly, this should be done before bringing the material to the class.

**Accessibility**

It is the duty of the teacher to ensure that the materials are not only available but also accessible. The materials should be within the reach of the teacher before the time of the class in order to set or place everything definitely. There should be no excuse that the materials are not accessible because they are being locked in the store or because of malfunctioning in the material.

**Affordability**

The instructional material to be use should not be expensive, the cost had better be such that either the school or the teacher can afford. The school should endeavor to make budget for instruction materials especially audio visual aids, and when this is done, the cost should not be outrageous; it should be within the budget of the school.

**Simplicity**

The, instructional materials to be used should be simple to operate or manipulate. The teacher should test the material to ensure the working ability before the time of use. There should not be any technical problems and where the electricity is to be used, provision should be made for an alternative power. No teacher should use electric failure as an excuse for non-performance. In a situation where an instrument demands the work of a technician, he should be on the work and the teacher should have an insight into the operation of the instrument in case of emergency.

**Qualitative**

The quality of the instructional materials should be of good quality. Schools should avoid the idea of “managing” with poor quality material with that, the school will not achieve the desired aim. Furthermore, the materials should be the best or nearest to the best, it should not be outdated. The instructional materials should reflect current and original thought.

**Suitability**

The teacher using the instructional materials should ensure the appropriateness of the material for the intended learners. The materials should be suitable for the age of the learner, their experience and intelligence. The legal, safety and ethnical aspects of the materials to be use should be considered and must not portray any anti-social attitude. They should also be free from any bias, distortion or prejudice. If the material would need electric power the alternative should be made available to avoid disappointment of any kind.

In summary, it could be noted that, the improvement of classroom instructions largely depend on the competence of the teacher to use various kinds of instructional materials in the actualization of the teaching and learning objectives.

**Factors that affect the use of audio visual aid in Teaching**

In determining the type of audio visual aids to be used for the conveyance of information in English language, the following factors were outlined by Bakare (2009)

1. **The number of students in a class:** There is a concern that multitude of students in a class will have a negative impact in the student because most of them will not be able to see or hear what the teacher is teacher. The class may be noisy and rowdy, it would be more logical and efficient to use microphone in this kind of situation for the presentation of information.
2. **Nature of the subject and the objective to be attained:** If the subject matter is such that is diversified, it may involve the use of more than one audio visual aid in order to achieve its objective. The topic of the subject must be considered in order to determine the kind of material to use.
3. **The space of time available:** Time is always limited and has its effect upon the kind of material to be used, if there should be ample time, the teacher is more likely to use other techniques that encourage maximum participation of the students. But when there no time, the teacher is limited from the strategies and would engrave to talking and the use of chalkboard only.
4. **Facilities and materials available:** The kind and extent of physical facilities and the instructional materials available will determine the effectiveness of the teacher. This is one of the major factors that affect the use of audio visual aids in teaching.
5. **Interest and the ability of the teacher:** Most teachers have personal reference and more security conscious in using some of the selected materials. Nevertheless, the teacher should use the method that which is suitable for her. This does not mean that she should not be sensitive to other development that supplement or improve upon the instructional materials she frequently uses.

Balogun (2009) explained school environment as the physical and material resources, otherwise known as infrastructural facilities available to teaching and learning processes. Fakomogbon (2015) also observed that one of the causes of failure in Nigerian secondary school is inadequate school resources. He further explained that it cannot be over-emphasized that the provision of adequate performance in schools. Most of our schools lack necessary infrastructural facilities required for effective teaching and learning.

**Usage of Audio-Visual Aids/Instructional Materials and Academic Achievement in School Subjects**

Obanya (2004) informed that a study by Owolabi (2004) revealed that the performance of Nigerian Students in ordinary Level physics was generally poor and this was attributed by the author to the teaching strategy. Obanya (2004) informed that researches carried out in some areas in Nigeria indicated that the results of Senior School Certificate Examinations were completely bad in nearly all subjects offered by the students. He stressed further that only about 10% of candidates ‘meaningfully passed’ the examination. It was observed that students usually fail in examinations owing to improper teaching methods and lack of essential teaching aids for instructional delivery (Afolabi, 2009).

The use of instructional aids/technologies in the classroom has the potential to help the teacher explain new concepts clearly, resulting in better understanding of the concepts being taught. Earlier on, in a survey to find factors that facilitate teacher skill, teacher morale, and perceived student learning in technology-using classrooms, Baylor and Ritchie (2002) found that teachers valued the use of technologies in class and that it had an impact on student’s content acquisition as the use of technology added to class performance.

Isola (2010) conducted a research on the effects of instructional resources on students’ performance in West Africa School Certificate Examinations (WASCE) in Kwara State. The researcher correlated material resources with academic achievements of students in ten subjects. Data was collected from the subject teachers in relation to the resources employed in teaching, hence achievements of students in WASCE for the past five years were related to the resources available for teaching each of the subjects. The researcher concluded that material resources have a significant effect on student’s achievement in each of the subjects. A study by Davis (2008), focused on the use of instructional technology and its effects on student achievement for fifth grade science and mathematics instruction. The data collected was subjected to an independent sample t-test to measure the mean difference between the experimental and control groups. The results showed that the use of technology in instruction did not increase student academic achievement. Contrarily, Okoboli in Isola, (2010) studied the use of instructional materials on gender difference in academic achievement of primary school pupils in English language and mathematics, the researcher observed that there was a significant difference in academic achievement among the male and female students in he two subjects and the difference was in favour of using instructional materials.

Oladejo, Olosunde, Ojebisi and Isola (2011) worked on instructional materials and students’ academic achievement in physics. They observed that instructional materials perform such functions as the extension of the range of experience available to learners, supplement and complement the teachers verbal explanations thereby making learning experience richer and providing the teacher with a wide variety of learning activities. This buttresses an earlier assertion by Omosewo (1999) who had informed that in modern science curriculum, students need to be encouraged to learn not only through their eyes or ears but should be able to use their hands and head to manipulate apparatus. In the same vein, a study by Onasanya and Omosewo (2011) examined the effect of using standard instructional materials and improvised instructional materials on secondary school students’ academic achievement in physics in Ilorin, Nigeria. The sample consisted of selected secondary schools in Ilorin metropolis of Kwara State. The researcher employed a quasi- experimental design of the pre-test-post-test non-randomized control group design. Two hypotheses were formulated and tested at a 0.05 level of significance. From the analysis, it was revealed that there was a significant difference in academic performance of the experimental and control groups.

A study by Mbah (2013) examined the use of instructional materials and educational performance of students in Integrated Science in unity schools in Jalingo, Taraba state. The population consisted of 249 students in the junior section of Federal Science and Technical College, Jalingo. The researcher used experimental design of the pre-test and posttest sessions. The post –tests mean scores were compared using a Z-test statistical analysis and findings revealed a statistically significant difference in the mean scores, as the experimental group were observed to have achieved better academically as juxtaposed with the control group.

Osuala (2010) investigated on the benefits of instructional materials on students learning ability. Four research questions were formulated to guide the study. The descriptive statistical method was employed so as to determine the impact of teacher’s effectiveness. Five (5) comparable secondary schools were selected to represent the population of the study. The data collected were analysed using simple percentage method to verify the research questions formulated for the study. The result of the findings show that instructional materials does not only help to motivate and develop interest on the part of the student, but also help to bring about an enhance respect for teachers’ knowledge of the subject. The researcher also said instructional materials does not only help to motivate and develop interest on the part of the student, but also help to bring about an enhanced respect for teachers’ knowledge of the subject. The researcher recommended that government make available to schools the basic instructional materials as this will enhance an effective teaching and learning process.

Similarly, a study by Awolaju (2016), investigated the use of instructional materials as it correlates with the academic performance of students in Senior Secondary Schools in Osun State. The sample used for the study consisted of 40 students who were randomly selected from two different secondary schools in Ilesa East local government area in Osun State. 20 Students were used for experimental group while the other 20 students were under the control group. Research instrument used for the study was a Biology Achievement Test (BAT) which consisted of 50 multiple choice items. A reliability coefficient of 0.82 was obtained for BAT, using test-retest method. Data collected was analysed by using mean score, standard deviation and t-test distribution. Findings revealed that students taught with instructional materials performed better than those taught without instructional materials. Dike (1989) investigated the strategies for producing instructional materials. The study adopted a survey design aimed at investigating the extent to which AVs were used in teaching and learning and their impact on teaching and learning in some selected private Secondary Schools in Enugu. Two research questions were stated and subsumed in a hypothesis and a total of one hundred and twenty respondents participated in the study.

The instrument for data collection was questionnaire. Data collected was analysed using simple percentages and frequencies while the hypothesis was tested using t-test statistics technique at 0.05 level of significance. The result revealed that the use of audio-visual aids have significant impact on the teaching and learning in secondary schools. The researcher also opined that audio-visual aids do not only increase the motivation of the teachers and learners, they add clarity to the topic taught and make learning more interesting. The findings also revealed that AVAs solve educational problems as they are a source of information on every kind of learning thereby removing abstraction in teaching and learning.

**The Importance of Audio-Visual Aids (AVA) in Teaching**

Some importance can be ascribed to the usage of AVA in the teaching/learning experience in schools, they include:

**i. Eases Learning of difficult Concepts:** A research conducted by Gopal (2010) on the importance of audio-visual in teaching methodology stressed that audio-visual materials help the teacher to overcome physical difficulties of presenting subject matter since with audio-visual materials, the barrier of communication and distance is broken. The culture and climatic conditions of other countries can be brought into the classroom with the aid of slides, films, filmstrips and projectors. Gopal (2010) further emphasised that audio-visual resources can play a major role of making learning permanent. He concluded that audio-visual methods seem to facilitate the acquisition, retention and the recall of lessons learned, because, they evoke the maximum response of the whole organism to the situations in which learning is done. And perceptual materials readily associate themselves with the unique experiential background of each individual. This is important as earlier pointed out by Dike (2003) who had informed that once a phenomenon is visualized, the picture and knowledge becomes very clear and permanent.

**ii. Encourages Collaborative Learning:** Audio-visual materials provide rich opportunities for students to develop communication skills while actively engaged in solving meaningful problems. This was affirmed by Natoli (2011) in a study on the importance of audio-visual materials in teaching and learning as findings of the study revealed that students certainly like it more and learn better if they are engaged in important and appealing activities.

**iii. Stimulating Interest**: Audio-visual material helps stimulate interests of students to learn. In a study by Katherine (2009) on the benefits of audio-visual aids to users, it was observed that learning takes place effectively when the teacher sets out to provide learning situation in which a child will learn because of his interaction with the provided materials. This it was reiterated, helps in capturing the attention of the learner and also winning his interest thereby making the learner ready to learn.

**iv. Individualise Instruction:** Lestage (2009) researched on the use of audio-visual aids in education and findings from the study revealed that audio-visual materials provide a means of individualizing instruction. The researcher concluded by asserting that this is possible through programmed learning and tapes which enable the learner to learn at his pace and also to work on his own.

The advent of computer assisted instruction (CAI) and educational games has further emphasized the primary function of audio/visual resources, which is to improve the efficiency and effectiveness of the teaching and learning process. In modern times, the value of instructional materials has been realized of late in this country and attempts are being made by all organs connected with education to see that audio-visual materials are used in teaching and learning situations. For example, University of Nigeria, Nsukka has established Curriculum Development and Instructional Materials Centre (CUDIMAC) to promote the utilization of various types of audio-visual resources and media in the school also National Open University of Nigeria (NOUN) has various instructional materials in form of audio aids to assist their disabled students especially those that are visually impaired.

**Hindrances to the use of Audio-Visual Resources**

**Cyber Security and Poor Maintenance Culture:** Inasmuch as there are a lot of benefits ascribable to the use of AVAs in the teaching learning scenario, some oddities to it include the availability of an enormous content on the internet, which would include large amounts of junks and obscene sites which may cause moral corruption if not regulated. Observably, a sizeable number of instructors lack adequate professional training and this is major problem militating against the effective use of instructional materials, where available. Yet another major constraint is that most equipment in Nigerian schools are either obsolete or in a state of disrepair and decay due to poor maintenance culture and this is a major setback to the effective use of instructional resources in teaching (Nnaji & Bagudu , 2012).

**Policy Issues:** Issues relating to policy formulation and implementation are a major albatross to the provision of instructional facilities especially ICT teaching and learning materials. Goshit (2006) investigated on the need for an ICT/Technology policy in Nigeria and came up with the fact that there is lack of well-articulated educational policy on ICT and technology by the Nigerian government.

**Corruption:** Diversion of funds, bribery and falsification of unverifiable projects to the personal gains of individuals and to the detriment of education in Nigeria has crippled the provision of educational materials to a sorry level that some government owned institutions do not have the necessary materials for effective teaching and learning. Laboratories and classroom are empty, no befitting office accommodation and furniture for teachers. This indeed is affecting teaching and learning in our secondary schools. This coupled with the belief that government property is nobody’s property has led to total teaching materials/infrastructural collapse.

**2.2 THEORETICAL FRAMEWORK**

The theoretical framework of this research hinges on dual code theory of learning as described by cognitive psychologist.

**Dual**-**codingTheory** is developed by Allan Paivio in 1960s; dual-coding theory is a theory of cognition according to which humans process and represent verbal and non-verbal information in separate, related systems. For example, the brain uses a different kind of representation for the word "tree" than it does for the image of a tree. Something verbal can trigger a thought of something nonverbal and vice versa. For example, the image of a circle can bring to mind the word "circle," and "circle" can prompt one to visualize a circle. Paivio argued that all cognition involves associations between verbal and non-verbal systems. Some psychologists believe dual-coding theory explains phenomena such as intelligence and memory. Critics argue that the brain processes information using only one kind of representation.

Dual code theory of learning denotes different approaches which bring the real world to the language classroom through audio visuals.

Probably, the Direct Approach was the first one to give importance to the use of audio visual aids in the language classroom. This teaching method, which became popular at the 20s 30s of the last century, enhanced the use of the target language. Teachers used direct reference to objects or concepts in order to avoid the mother tongue. The use of tape recordings and picture slides gained special importance in the 1950s 1960s with the rise of the Audio-lingual method in the USA. Based on Skinner´s behaviorist theory, it claimed to provide students´ with best models to imitate native speakers.

The Oral-Situational Approach, dominating in Britain in the middle of the last century, insisted on learning language situation. Concrete objects, pictures, charts and flashcards were widely used in the classroom to promote real life contexts. The teacher made use of several visual aids: colored wooden rods, set of wall charts containing useful vocabulary, color coded phonetic charts, tapes or discs, film drawings and pictures, worksheets and transparencies.

Another method, the Total Physical Response, involved a lot of physical manipulation and action in order to imitate the way 1L is acquired. Teacher’s words followed by actions served as visual aid, as well as large pictures.

The Natural Approach developed by Krashen was based on his Monitor theory. Students were not expected to produce output immediately; they should go through a period of understanding first. Magazine pictures and other visual and kinesthetic aids were used as an elicitation device in the listening comprehension and early production stages.

Video tapes were considered the most appropriate visual aid when the teachers were not native, as the Comprehension-based Approach claimed. This method was also based on the idea the 2L learning was similar to 1L acquisition, so students received a lot of audiovisual input in the first stages of the learning.

These approaches have pointed the importance of bringing the real world into the classroom to make the learning more meaningful for the students.

**2.3 EMPIRICAL STUDIES**

In this notion, the researcher compared the past related researches conducted by the experts in the field, and the present research.

Barlo (2014) carried out a research study entitled: “The availability and utilization of audio visual aids in teaching English language in selected secondary schools in Lagos State” the target population was two hundred and fifty (250) secondary schools out of which, twenty five (25) secondary schools were selected as the sample using systematic sampling. The instrument used in collecting the data was questionnaire. Five (5) null hypotheses were stated which were tested using the learners of English language. He finds out that the instructional material (audio visual) has negative relationship in the teaching and learning of English language in the selected secondary schools in Lagos State.

Oshadumi, (2013) also carried out a research study entitled: “impact of audio visual aids on students, and the Academic Achievement in English language at secondary schools in Okene LGA, Kogi State”. The population was Seventeen (17) secondary schools out of which Ten (10) were selected as the sample by sample randomized. The instrument for data collection was questionnaire. Four (4) null hypotheses were stated which were tested using correlative coefficient test statistics at 1.00 level of significant. All the four hypotheses were rejected. The result showed that about 65% of the respondents made use of audio visual aids effectively which had positive impact on the students, but also bring about an enhance respect for the teachers knowledge of the subject. Audio visual aids are also described as concrete or both to the sense organ during teaching (Aginna-Obu, 2010)

In the present study, emphasizes are laid on the use and importance of audio visual aids in any learning environment. For any learning to take place, the teacher must make of instructional material that would enable her to teach effectively.

Most of the English language teachers seem to agree that the use of audio visual aids can enhance language teaching. As they help teachers to bring the real world into the classroom, they make learning more meaningful and more exciting (Brinton, 2000). According to Bamford (2003), it must be taken in to account that visual literacy is the key to obtain information, construct knowledge and build successful educational outcomes. He asserts that this is due to the increase of the number of images in the world (as cited in Harif and Hashim, 2009). It is important to point that students bring to the classroom their own background, that nowadays is associated with images provided by mass media, videogames etc. Santas (2009) reflects on how teachers ask students to think without any of this help, what seems to require convincing them to give up what they have experienced in their lives.

**CHAPTER THREE**

**RESEARCH METHODOLOGY**

**3.1 RESEARCH DESIGN**

Research designs are perceived to be an overall strategy adopted by the researcher whereby different components of the study are integrated in a logical manner to effectively address a research problem. In this study, the researcher employed the survey research design. This is due to the nature of the study whereby the opinion and views of people are sampled.

**3.2 POPULATION OF THE STUDY**

According to Udoyen (2019), a study population is a group of elements or individuals as the case may be, who share similar characteristics. These similar features can include location, gender, age, sex or specific interest. The emphasis on study population is that it constitute of individuals or elements that are homogeneous in description.

This study was carried out to examine the effectiveness in using multi-media in preschool education using Little Angel Montessori School as case study. The teachers and the pupils of the sample school form the population of the study.

**3.4 SAMPLE SIZE DETERMINATION**

A study sample is simply a systematic selected part of a population that infers its result on the population. In essence, it is that part of a whole that represents the whole and its members share characteristics in like similitude (Udoyen, 2019). In this study, the researcher adopted the simple random sampling (srs.) method to determine the sample size.

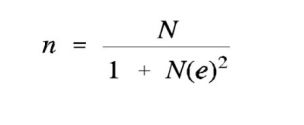
**3.5 SAMPLE SIZE SELECTION TECHNIQUE AND PROCEDURE**

The Taro Yamane (1967:886) provides a simplified formula to calculate sample sizes.

**Assumption**

95% confidence level

P = .5



n= 2,200/1+2,200 (0.05)2

n= 2,200/1+2,200 (0.0025)

n= 2,200/1+5.5

**n=283**

Therefore, for this study, the sample size is 282

**3.6 SOURCES OF DATA COLLECTION**

The research instrument used in this study is the questionnaire. A 10 minutes survey containing 19 questions were administered to the enrolled participants. The questionnaire was divided into two sections, the first section enquired about the responses demographic or personal data while the second sections were in line with the study objectives, aimed at providing answers to the research questions.

**3.7 METHOD OF DATA ANALYSIS**

The responses were analysed using the frequency tables, which provided answers to the research questions.

**3.8 VALIDITY AND RELIABILITY OF THE STUDY**

The reliability and validity of the research instrument was determined. The Pearson Correlation Coefficient was used to determine the reliability of the instrument. A co-efficient value of 0.68 indicated that the research instrument was relatively reliable. According to (Taber, 2017) the range of a reasonable reliability is between 0.67 and 0.87.

**CHAPTER FOUR**

**DATA PRESENTATION AND ANALYSIS**

**4.1 DATA PRESENTATION**

**Table 4.1: Demographic data of respondents**

|  |  |  |
| --- | --- | --- |
| **Demographic information** | **Frequency** | **percent** |
| Gender  Male |  |  |
| 101 | 44% |
| Female | 129 | 56% |
| Religion |  |  |
| Christian | 200 | 45% |
| Muslim | 83 | 55% |
| Age |  |  |
| 20-25 | 79 | 34% |
| 25-30 | 112 | 48% |
| 30+ | 39 | 17% |

**Source: Field Survey, 2020**

**4.2 ANSWERING RESEARCH QUESTIONS**

**Question 1:** Do you agree that audio-visual materials influence children’s achievement in learning number work in Little Angel Montessori School?

**Table 4.2:** Respondent on question 1

|  |  |  |
| --- | --- | --- |
| **Options** | **Frequency** | **Percentage** |
| Yes | 283 | 100 |
| No | 00 | 00 |
| Undecided | 00 | 00 |
| **Total** | **283** | **100** |

**Field Survey, 2020**

From the responses obtained as expressed in the table 4.2 above, all the respondents constituting 100% agree that audio-visual materials influence children’s achievement in learning number work in Little Angel Montessori School. There was no record of no.

**Question 2:** Do you agree that visual materials influence children’s achievement in learning number work in Little Angel Montessori School?

**Table 4.3:** Respondent on question 2

|  |  |  |
| --- | --- | --- |
| **Options** | **Frequency** | **Percentage** |
| Yes | 283 | 100 |
| No | 00 | 00 |
| Undecided | 00 | 00 |
| **Total** | **283** | **100** |

**Field Survey, 2020**

From the responses obtained as expressed in the table 4.3 above, all the respondents constituting 100% agree that visual materials influence children’s achievement in learning number work in Little Angel Montessori School. There was no record of no.

**Question 3:** Do you agree that printed materials influence children’s achievement in learning number work in Little Angel Montessori School?

**Table 4.4:** Respondent on question 3

|  |  |  |
| --- | --- | --- |
| **Options** | **Frequency** | **Percentage** |
| Yes | 283 | 100 |
| No | 00 | 00 |
| Undecided | 0 | 00 |
| **Total** | **283** | **100** |

**Field Survey, 2020**

From the responses obtained as expressed in the table 4.4 above, all the respondents constituting 100% agree that printed materials influence children’s achievement in learning number work in Little Angel Montessori School. There was no record of no.

**Question 4:** Do you agree that community resources influence children’s achievement in learning number work in Little Angel Montessori School?

**Table 4.5:** Respondent on question 4

|  |  |  |
| --- | --- | --- |
| **Options** | **Frequency** | **Percentage** |
| Yes | 283 | 100 |
| No | 00 | 00 |
| Undecided | 00 | 00 |
| **Total** | **283** | **100** |

**Field Survey, 2020**

From the responses obtained as expressed in the table 4.5 above, all the respondents constituting 100% agree that community resources influence children’s achievement in learning number work in Little Angel Montessori School. There was no record of no.

**CHAPTER FIVE**

**CONCLUSION AND RECOMMENDATION**

**5.1 CONCLUSION**

In this study, our focus was to examine the effectiveness in using multi-media in preschool education using Little Angel Montessori as a case study**.** The study specifically was aimed at ascertaining if the use of multi-media such as audio-visual and visual aids have any influence on the pupils achievement.

The study adopted the survey research design and randomly enrolled participants in the study. A total of 283 responses were validated from the enrolled participants where all respondent are teachers and pupils in Little Angel Montessori School.

The findings of this study revealed that in adequate Multi-media materials had an effect on children’s performance in number work in preschool. The schools that had Multi-media materials children were able to carry out different activities and had good mastery of the content. While the pre schools that lacked the Multi-media materials the performance was poor and children could not master the content easily.

**5.2 RECOMMENDATION**

Based on the responses obtained, the researcher proffers the following recommendations:

* Curriculum planners should encourage the use of audio-visual materials by inculcating them in the educational syllabus of all levels of education.
* States school management boards should ensure adequate funding of libraries and audio-visual aids in school.
* Pupils and teachers should be actively involved in the improvisation and utilization of audio-visual resources when necessary.
* Workshop/seminar should be organized for chemistry teachers on the effective use of audio-visual aids in dissemination of knowledge.
* Government should make audio-visual aids and instructional packages readily available for teachers.

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**APPENDIX**

QUESTIONNAIRE

PLEASE TICK [√] YOUR MOST PREFERRED CHOICE (s) ON A QUESTION

SECTION A

PERSONAL INFORMATION

Gender

Male [ ] Female [ ]

Age

18-25 [ ]

20-30 [ ]

31-40 [ ]

41 and above [ ]

Educational level

WAEC [ ]

BSC/HND [ ]

MSC/PGDE [ ]

PHD [ ]

Others……………………………………………….. (please indicate)

Position

Position 1 [ ]

Position2 [ ]

Position3 [ ]

Position4 [ ]

Marital Status

Single [ ]

Married [ ]

Separated [ ]

Widowed [ ]

Duration of Service

0-2 years [ ]

* 1. years [ ]

5 and above [ ]

Section B

Do you agree that audio-visual materials influence children’s achievement in learning number work in Little Angel Montessori School?

|  |  |
| --- | --- |
| Options | Frequency |
| Yes |  |
| No |  |
| Undecided |  |

Do you agree that visual materials influence children’s achievement in learning number work in Little Angel Montessori School?

|  |  |
| --- | --- |
| Options | Frequency |
| Yes |  |
| No |  |
| Undecided |  |

Do you agree that printed materials influence children’s achievement in learning number work in Little Angel Montessori School?

|  |  |
| --- | --- |
| Options | Frequency |
| Yes |  |
| No |  |
| Undecided |  |

Do you agree that community resources influence children’s achievement in learning number work in Little Angel Montessori School?

|  |  |
| --- | --- |
| Options | Frequency |
| Yes |  |
| No |  |
| Undecided |  |