



# INFLUENCE OF AUDIOVISUAL MATERIALS IN TEACHING AND LEARNING OF BIOLOGY AMONG SENIOR SECONDARY SCHOOL STUDENTS IN ENUGU NORTH LOCAL GOVERNMENT AREA, ENUGU STATE

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**Abstract:** *The study sought to examine the Influence Of Audiovisual Materials In Teaching And Learning Of Biology Among Secondary School Students In Enugu North Local Government Area Of Enugu State. In order to carry out this study, four (4) purposes of the study and four (4) research questions were formulated guided the study. The design used was survey design. The population of the study was 14, 266 students in Enugu North Local Government Area. Simple random sampling technique was used to select a sample of 325 students as respondents for the study. The instrument used for data collection was questionnaire which was validated by three experts. The reliability of the instrument was established using Cronbach techniques and value of 0.74 was obtained. Mean was used to answer the research questions. The finding among others revealed that Audiovisual materials influence students learning by making them to remember the concept for longer period of time, convey the same meaning as words but gives clear concepts thus, helping to bring effectiveness in learning, audiovisual also provide opportunities for effective communication between teacher and students, provide variety to teaching and provide interest and inspiration among students; Lack of qualified biology teachers with adequate knowledge of modern audio-visual materials use hinders effective use of audiovisual materials by the teachers, There are limited time allotted for each subject and so does not give room for the use of the available audiovisual materials in school. it was recommended among others that government should endeavour to make adequate provision of modern instructional materials in schools; Also, teachers should be retrained through seminars, workshops and conferences so as to enable them have adequate knowledge of how to use modern instructional materials .*

**Keywords:** *Audiovisual Materials, Teaching and Learning of Biology, Senior Secondary School Students*

## Introduction

Science is the bedrock on which modern day technological breakthrough is hinged. Different authors according to their own understanding have defined Science. Igwe (2013) defined science as a systematic study of the nature, behavior of the material and physical universe through observation, experimentation, measurement and recording. In addition, Esu (2014)

defined science as a systematic, precise, objective way to study the natural world. Science is often an exciting and satisfying enterprise that requires creativity, and insight based on fact. On this Fape (2011) defined science as rationally structured knowledge about nature, which embraces systematic methods of positive attitudes for its acquisition, teaching, learning and application.

Academic Journal of Current Research

An official Publication of Center for International Research Development

Double Blind Peer and Editorial Review International Referred Journal; Globally index

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The major goal of science education is to develop scientifically literate individuals that are concerned with high competence for rational thoughts and actions (National Policy on Education 2014). Science Education is an important area which shapes and molds the character of modern societies. Science education could be viewed as a process of teaching or training especially, within the school system to improve one's knowledge about the environment and to develop one's skill of systematic enquiry as well as natural attitudinal characteristics (Olalekan and Omosewo 2018). Science education could be recognized worldwide as a pre-requisite to technological advancement and involves the study of an in-depth science and in addition, educational knowledge and concepts (Pember & Humbe, 2019).

In recent times, countries all over the world, especially the developing ones like Nigeria, are striving hard to develop technologically and scientifically, since the world is turning Scientific and all proper functioning of lives depend greatly on Science. According to Ogunleye (2012), Science is a dynamic human activity concerned with understanding the workings of our world. This understanding helps man to know more about the universe. Without the application of science, it would have been difficult for man to explore the other planets of the universe. Science comprises the basic disciplines such as Physics, Chemistry, Mathematics and Biology.

Biology is one of the science subjects that senior secondary school students offer at the senior levels in the Nigerian secondary schools. Biology is a very important science subject and a requirement for further learning of a number of science-related professional courses like medicine, agriculture, pharmacy, etc. In contemporary Nigeria, greater emphasis is placed on science and technological development. As a result, students are being encouraged to take up science-related subjects. Today, Biology pervades literally every field of human

endeavour, and plays a fundamental role in educational advancement.

Biology is a natural science concerned with the study of life and living organism, including their structure, function, growth, evolution distribution and scientific exploration

([Hadjichambis,](#)

[Georgiou, Kyza, & Mappouras, 2015](#)).

The effective study of biology will contribute in the improvement of agriculture which is basically one of the 17 sustainable development goals to be achieved by the year 2030. Despite the importance of Biology to the individual and nation, reports have shown persistent poor students achievement in SSCE conducted by [WAEC \(Chief Examiners Report, 2015–2017\)](#).

This poor performance of students in biology has been traced to be as a result of lack of instructional materials in the teaching and learning of biology in Senior Secondary Schools. In our march towards scientific and technological advancement, we need nothing short of good achievement in biology at all levels of schooling. Unfortunately, achievement of students in biology at the end of the secondary school has not improved in the last decade (Umoinyang, 2014). Folorunso (2014) has linked poor achievement trend in biology particularly to the lack of instructional resources in schools due to poor funding of schools. The poor funding of schools has hindered the principals from providing the teachers with adequate instructional resources.

The National Policy on Education (FME, 2014) emphasizes the need for teaching and learning of science processes and principles. The policy recommends practical, exploratory and experimental methods of teaching. In this regards, Okebukola (2014) stated that the basic tools that science uses in the learning of science processes are the instructional materials. Studies have shown that the use of instructional materials have improved achievement (George, 2011).



Teaching materials are wide varieties of equipment and materials used for teaching and learning by teachers to stimulate self-activity on the part of the students. The teaching of Biology without instructional materials may certainly result in poor academic achievement. Poor academic achievement in Biology could also be attributed to many factors such as, low interest of students in biology, inadequate motivation from teacher, poor incentives to biology teachers, lack of adequate supply of instructional material, lack of qualified teachers, and use of teacher centered instructional strategies, inadequate use of instructional materials and use of abstract standardized materials. This implies that the mastery of Biology concepts might not be fully achieved without the use of instructional resources that the students are abreast with. The teaching of Biology without instructional materials may certainly result in poor academic achievement.

Folorunso (2014) observed that there is lack of adequate and appropriate instructional resources for effective teaching of Biology in schools. For Ibitoye and Fape (2011), the poor achievement in biology was traced to poor usage of instructional resources for biology teaching and learning, poor state of infrastructural facilities, large class size, poor teaching, use of faulty assessment practice, and inadequacy of quality teachers. According to Okebukola (2014), the poor state of laboratory facilities and inadequate use of instructional materials has constituted a cog in the wheel of students' achievement in Biology in the Senior School Examination. The verbal exposition does not promote skill acquisition, objectivity, and critical thinking abilities that will enable the child to function effectively in the society. Okebukola and Jegede (2012) stressed that a professionally qualified Biology teacher no matter how well trained, would be unable to put his ideas into practice if the school setting lacks the equipment and material resources necessary for him or her to translate his competence into reality.

Isola (2010) referred to instructional resources as objects or devices, which help the teacher to make a lesson much clearer to the learner. Instructional materials are also described as concrete or physical objects, which provide sound, visual, or both to the sense organs during teaching (Agina-Obu, 2015).

The teaching of Biology cannot be done effectively without interaction between the teacher, students and the environmental resources. The Biology curriculum is planned to enable the teacher use activity oriented, child-centred approach (guided inquiry) to teach (Nzewi & Nwosu, 2010). However, evidence from research has shown that instructional materials, resources and equipments for science, especially biology are either in short supply or are completely lacking in schools to the extent that most teachers end up with verbal exposition of scientific principles, facts and concepts. Studies have also revealed that the achievement of Nigerian students in Ordinary Level Biology was generally and consistently poor over the years. It is against this background that the need to investigate the influence of use of audio visual materials in teaching and learning of biology among secondary school students in Enugu North Local Government Area of Enugu State. Audio-visual media are those instructional devices which are used in the classroom to encourage learning and make it easier and interesting the instructional material includes charts, maps, modules, film strip, projector, radio, television etc are called instructional media (Rather 2014). Audio visual materials are effective tool that invest the past with an air of realistic experience, which capture their attention and help in the understanding of the historical phenomena. They appeal to the mind through the visual auditory senses.

Audio visual media are important in education system. Audio visual media are those devices which are used in classrooms to encourage teaching and learning process and make it easier and interesting. Audio visual media are



the best tool for making teaching effective and the best dissemination of knowledge, so there is no doubt that technical devices have greater impact and dynamic informative system. It is only by the use of audio visual resources that learners can be offered the opportunity to learn by doing. This is because attention, motivation, concentration and retention of facts are enhanced through the use of audiovisual materials. However, there has been no consensus on the workability or otherwise of the use of audiovisual resources in -teaching and learning of the numerous work done by researchers and authors of repute. On the contrary, there has been a surge in the number of people who feel worried about the negative aspects in the use of audiovisual resources. In fact, they saw the use of audiovisual resources in teaching and learning as an eccentric in totality. The pertinent question is, what is influence is the use of audiovisual material in the teaching and learning of biology among secondary school students in Enugu North Local Government Area?.

### **Statement of the Problem**

The act of teaching is fundamentally concerned with passing ideas, skills and attitude from the teacher to the learner. In Nigeria, for example experience has shown that spoken words alone in the communication of ideas are grossly ineffective and inefficient in producing desired learning outcomes. The reason for this could be ascribed to the fact that there are topics in biology that pose serious problem of comprehension to students. There are some topics that cannot be taught effectively without the use of relevant instructional materials like audiovisuals to make the learning practical. On the foregoing, scholars have emphasized the effect of audiovisual materials utilization on teaching and learning. According to them, we learn and remember 10% of what we hear 40% of what we discuss with others and as high as 80% of what we experience directly or practice. However, the question here is, what is the influence of

Audiovisual materials in the teaching and learning of biology in Enugu north local government area of Enugu state

### **Research Questions**

The following research questions guided the study:

1. What is the influence of audio visual materials in teaching and learning of biology?
2. What is the influence of audio visual materials on teacher's teaching?
3. Do teachers use audio visual materials to teach biology in Enugu North Local Government Area of Enugu State?
4. What are the challenges that face the use of audio visual materials in secondary schools in Enugu North Local Government?

### **Methodology**

The design of the study is survey design. According to Iketaku (2011), a survey research design is the collection of sample, attitudes, performance of feelings and in order to estimate the total or overall reaction of an entire group. In other words, survey research design is a method of studying a group of people by collecting information from a few regarded to be the representation of the entire group. The study focused on Secondary Schools in Enugu North Local Government Area of Enugu State. Enugu North is a Local Government Area of Enugu state, Nigeria, is headquarters are in the city of Enugu. The population of the study comprises nine (9) public Secondary Schools in Enugu North Local Government Area of Enugu State. As at the time of the study, it has the population of fourteen thousand, two hundred and sixty six (14, 266) Students. The sample size of the study was 325 Senior Secondary School Students which was selected from the total population of 14, 266. The researcher first sampled 5 school from the study area after which she selected 65 students each, thus, making it a total of 325 respondents used for the study. The sampling technique used in sampling the schools was simple



random sampling technique. The sample size was arrived at using the Yaro Yamane statistical formula. instrument for data collection was questionnaire. The instrument was examined for adequacy by three experts, two from Biology Education Department, and one from Measurement and Evaluation, all in Enugu State College of Education (Technical), Enugu. They assessed the instrument, gave corrections, and deemed it fit for use. To test for the reliability of the instrument, a test-retest method was used. The researcher administered the questionnaire to Secondary School Students in Enugu East Local Government Area and re-administered it to them two weeks later. Cronbach Alpha Method of correlation was used to obtain a reliability index of 0.74 which indicated that the instrument was reliable. 325 copies of the questionnaire were administered through direct visit to schools by the researcher with the aid of two research assistants and were collected at the spot to ensure optimum return. Frequency and mean score was used to determine the scaling statement in the questionnaire, nominal values were assigned to different scaling statements of 4-point Like as follow:

Strongly Agreed - - -4 points

Agreed - - - - -3 points

Disagreed - - - - - 2 points

Strongly Disagreed - -1 points

A cut-off was determined by finding the mean of the nominal values assigned to the options in each questionnaire items using the formula;

$$\bar{X} = \frac{\sum X}{N}$$

Where

$\bar{X}$  = mean score

X = the score

N = Number of items

Thus,

$$\bar{X} = \frac{4+3+2+1}{4} = \frac{10}{4} = 2.5$$

The decision rule was that responses with a mean score of 2.50 and above were agreed while responses below 2.50 were disagreed.

Results

**Research Question One:** What is the influence of audio visual materials in teaching and learning of biology?

**Table 1**

**Mean response of respondents on influence of audio visual materials in teaching and learning of biology?**

S/N	Items	SA	A	D	SD	N	$\sum fx$	X	Decision
1.	The use of audiovisual aids make the students to remember the concept for longer period of time	100	120	55	50	325	915	2.8	Agreed
2.	They convey the same meaning as words but it gives clear concepts thus help to bring effectiveness in learning	130	100	25	70	325	940	2.9	Agreed
3.	Audiovisual provides opportunities for effective communication between teacher and students in learning	190	90	20	15	325	1085	3.3	Agreed
4.	Provide variety to teaching	90	150	60	25	325	955	2.9	Agreed
5.	Provide interest and inspiration among students	190	90	20	15	325	1085	3.3	Agreed
6.	Makes students to lack focus during learning	15	50	150	110	325	620	1.9	Disagreed



In the research question one above which sought to know the influence of audiovisual materials teaching and learning, the respondents agreed in items 1-5 with mean values above the cutoff point of 2.5 that audiovisual materials influence teaching and learning by making them to remember the concept for longer period of time, convey the same meaning as words but gives clear concepts thus, helping to bring effectiveness in learning,

audiovisual also provide opportunities for effective communication between teacher and students, provide variety to teaching and provide interest and inspiration among students. The respondents also disagreed in item no. 6 with mean value below the cutoff point of 2.5. This implies that audiovisual materials does not make student to lack focus during learning.

**Research question two:** what is the influence of audio visual materials on teacher's teaching?

**Table 2**

**Mean response of respondents on influence of audio visual materials on teacher's teaching.**

S/N	Items	SA	A	D	SD	N	$\sum fx$	X	Decision
7.	Audio visual material provides variety to teaching	90	150	60	25	325	955	2.9	Agreed
8.	Makes teaching to be very easy for teacher	129	100	55	41	325	967	2.9	Agreed
9.	Audio visual materials saves time and energy for teacher	190	90	20	15	325	1085	3.3	Agreed
10.	Audio visual materials Help to avoid excessive, empty, and meaningless verbalization in teaching of biology	170	100	40	15	325	1070	3.3	Agree
11.	Audiovisual material make teachers to lose control of students during teaching	50	70	150	55	325	765	2.3	Disagree
12.	Audiovisual materials provides variety in teaching of biology concepts	105	129	50	41	325	948	2.9	Agree

Research question above was to ascertain the influence of audiovisual materials on teacher's teaching, it was discovered in items 7-10 and 12 with mean values above the cutoff point of 2.5 that audiovisual materials have influence on teachers performance in the sense that it provides variety in teaching, makes teaching to be very easy for teachers, saves time and energy for teachers, help

to avoid excessive, empty, and meaningless verbalization in biology teaching and provides variety in teaching of biology concepts. In item 11, it was disagreed by the respondents with mean value below the cutoff point of 2.5. This implies that audiovisual material does not make teachers to lose control of students during teaching



**Research Question three:** Do teachers use audio visual materials to teach biology in Enugu North Local Government Area of Enugu State?

**Table 3: Mean response of respondents on the teachers use of audio visual materials in teaching of biology**

S/N	Items	SA	A	D	SD	N	Σfx	X	Decision
13.	Teachers often over-look using audio-visual materials	95	150	30	50	325	940	2.9	Agree
14.	Most teachers believe that biology can still be understood theoretically without the use of audiovisual material	130	100	25	70	325	940	2.9	Agree
15.	Teachers only use audiovisual materials when they are explaining concepts students have not heard before	150	90	15	70	325	970	3.0	Agree
16.	Teachers use audio-visual materials often	50	70	150	55	325	765	2.3	Disagree

Research question three above was to know how often teachers use audio visual materials to teach biology in Enugu North Local Government Area of Enugu State, it was discovered in items 13-15 with mean values above the cutoff point 2.5 that teacher often overlook using audio-visual materials, most teachers believe that biology can still be understood theoretically without the use of audiovisual material, teachers only use audiovisual materials when they are explaining concepts students

have not heard before, teachers see audio-visual materials as what should be used mostly in pure sciences. The respondents disagreed in item 16 with mean values below the cutoff point of 2.5 that teachers use audio-visual materials often.

**Research Question Four:** What are the challenges that face the use of audio visual materials in secondary schools in Enugu North Local Government?

**Table 4: Mean response of respondents on the challenges that face the use of audio visual materials in secondary schools.**

s/n	Items	SA	A	D	SD	N	Σfx	X	Decision
17.	Lack of effective supervision of teachers during instructional process hinders effective use of audiovisual materials by the teachers	130	100	25	70	325	940	2.9	Agreed
18.	Lack of adequate fund for procurement of necessary audiovisual materials in biology hinders effective use of audio-visual by the teachers	170	100	40	15	325	1070	3.3	Agreed
19.	Lack of qualified biology teachers with adequate knowledge of modern audio-visual materials use hinders effective use of audiovisual materials by the teachers	105	129	50	41	325	948	2.9	Agreed
20.	The school management does not permit the use of audiovisual materials	16	49	151	109	325	622	1.9	Disagreed
21.	There are limited time allotted for each subject and so does not give room for the use of the available audiovisual materials in school	95	150	30	50	325	940	2.9	Agreed



in the research question four which sought to know the challenges that face the use of audio visual materials in secondary schools, the respondents agreed that the following are the challenges: Lack of effective supervision of teachers during instructional process hinders effective use of audiovisual materials by the teachers, Lack of adequate fund for procurement of necessary audiovisual materials in biology hinders effective use of audio-visual by the teachers, Lack of qualified biology teachers with adequate knowledge of modern audio-visual materials use hinders effective use of audiovisual materials by the teachers, There are limited time allotted for each course and so does not give room for the use of the available audiovisual materials in school. This is shown in items 17, 18, 19, and 21 .The respondents disagreed on item 20 that the school management does not permit the use of audiovisual materials.

### **Discussion of Findings**

The discussion of the findings was done based on the responses of the respondents as regard to the research questions which guided the study.

In table 1 the respondents agreed that audiovisual materials influence students performance by making them to remember the concept for longer period of time, convey the same meaning as words but gives clear concepts thus, helping to bring effectiveness in learning, audiovisual also provide opportunities for effective communication between teacher and students, provide variety to teaching and provide interest and inspiration among students. This is in line with findings of Gopal (2010) 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. Gopal (2010) further emphasized 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.

In of table 2, it was discovered that audiovisual materials have influence on teachers performance in the sense that it provides variety in teaching, makes teaching to be very easy for teachers, saves time and energy for teachers, help to avoid excessive, empty, and meaningless verbalization in biology teaching and provides variety in teaching of biology concepts. The finding is in line with Ezika (2012) findings that the use of instructional aides/technologies in the classroom has the potential to help the teacher explain new concepts clearly, resulting in better understanding of the concepts being taught.

In table 3 it was discovered that teacher often overlook using audio-visual materials, most teachers believe that biology can still be understood theoretically without the use of audiovisual material, teachers only use audiovisual materials when they are explaining concepts students have not heard before. The respondents disagreed that teachers use audio-visual materials often. The finding correlates with that of Priscilla (2016) that teachers are often unable to give students first-hand experiences and resort to the written and oral use of words. This is in line with the finding of Akolo (2008) who conducted a survey of audio-visual materials for eight Teacher Training Colleges in Kwara State and for twelve Teachers' Colleges in Plateau State of Nigeria. His study considered such elements as equipment and materials owned by each of the selected teachers colleges, utilization of equipments and materials owned, and the number of teachers that had some measure of audio-visual related training. The study revealed that there was under-utilization of instructional equipments in some areas and non-utilization in other areas where the research was conducted.



In table 4 the respondents agreed that the following are the challenges facing the use of audio visual materials are : Lack of effective supervision of teachers during instructional process, Lack of adequate fund for procurement of necessary audiovisual materials in biology , Lack of qualified biology teachers with adequate knowledge of modern audio-visual materials .There are limited time allotted for each course and so does not give room for the use of the available audiovisual materials in school. Folorunso (2014) has linked poor achievement trend in biology particularly to the lack of instructional resources in schools due to poor funding of schools. The poor funding of schools has hindered the principals from providing the teachers with adequate instructional resources. Folorunso (2014) observed that there is lack of adequate and appropriate instructional resources for effective teaching of Biology in schools

### **Conclusion**

From the findings of the study the following conclusions can be drawn:

1. Audiovisual materials influence students learning by making them to remember the concept for longer period of time, convey the same meaning as words but gives clear concepts thus, helping to bring effectiveness in learning, audiovisual also provide opportunities for effective communication between teacher and students provide variety to teaching and provide interest and inspiration among students.
2. Audiovisual materials have influence on teachers teaching in the sense that it provides variety in teaching, makes teaching to be very easy for teachers, saves time and energy for teachers, help to avoid excessive, empty, and meaningless verbalization in biology teaching and provides variety in teaching of biology concepts.

3. Teacher often overlook using audio-visual materials, most teachers believe that biology can still be understood theoretically without the use of audiovisual material, and teachers only use audiovisual materials when they are explaining concepts students have not heard before
4. Lack of effective supervision of teachers during instructional process hinders effective use of audiovisual materials by the teachers, Lack of adequate fund for procurement of necessary audiovisual materials in biology hinders effective use of audio-visual by the teachers, Lack of qualified biology teachers with adequate knowledge of modern audio-visual materials use hinders effective use of audiovisual materials by the teachers, There are limited time allotted for each course and so does not give room for the use of the available audiovisual materials in school.

### **Recommendations**

From the findings of the study, the following recommendations were made.

1. Government should endeavor to make adequate provision of modern instructional materials in schools in Nigeria.
2. Teachers and should always make adequate utilization of available instructional materials in teaching the students.
3. Teachers should be retrained through seminars, workshops and conferences so as to enable them have adequate knowledge of how to use modern instructional materials like projector and other.

### **References**

Agina-Obu, E. (2015). Improving Science Education in Nigeria: The Role of Key Stakeholders. *European Journal of Health and Biology Education*. 7, 2165-8722

Esu, N.C. (2014) Using Information Communication



- Technology (ICT) in Secondary Schools: Prospects and Challenges for 21<sup>st</sup> Century. *Multidisciplinary Journal of Research Development*. National Association for Research Development (NARD) 10(1) 178-182 July.
- Ezika, A.A. (2012) Availability of Educational Resources of Pre-vocational Agricultural science in secondary schools in Anambra state. *Journal of Research in Learning and Teaching* 1(1).
- Fape, F. (2011). Library Experts Speaks on Audio-Visual Material. A paper presented at the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Day for Audio-Visual Heritage. Lafia.
- Federal Republic of Nigeria (2014), National Policy on Education. Revised Federal Government Press.
- Folorunso, R. (2014) Audio-Visual Materials: Collection Development Policy, Rod Library University of Eastern Iowa.
- George, A (2011). Moving Images and Sound : Inclusive and Accessible. Moving Images Knowledge and access: The BUFVC Handbook edited by C. Grant and I. Mekere London: British Universities Film and Video Council pp. 29-33.
- Gopal Vinayak Patil. (2010). Importance of Audio-Visual in teaching methodology. Mahourashtra, India.
- Hadjichambis, V.P, Hadjichambis, V.U., Georgiou, O.D., Kyza, H.H and Mappouras, E.R. (2015). Importance of Audio-Visual in teaching methodology. Mahourashtra, India.
- Ibitoye, E.R. and Fabe, F. (2011). The Importance of Audio-Visual Materials in Teaching and Learning. [www.helium.com/channels/224-early-childhood-ed](http://www.helium.com/channels/224-early-childhood-ed).
- Igwe, M.E (2013). General Teaching Methods: School of Education *National Open University*, Nigeria.
- Isola, I (2010), Application for Information Technologies in Nigerian Libraries: Probles and Prospects in I.K : Nwalo (ed); *Information Technology in Library and Information Technology Education in Nigeria*. National Association of Library and Information Science Education NALISE
- Ngozi, T.N., Samuel, T.Y., and Isaac, G. (2012). The Relevance of Instructional Materials in Teaching and Learning in Robert-Okah. I and Uzoeshi, K.C. (Ed). *Theories and Practice of Teaching*, Port Harcourt: Harey Publication.
- Nzewi, C.C and Nwosu, J. (2010). Teaching Aids and resources Aids the best learning. retrieved online from <https://www.linkedin.com/pulse/teaching-aids-resources-best-learning-ms...25th> October, 2017
- Ogunleye, T.A (2012). *The Effect of Audio visual materials on Learning of History in Selected Primary Schools in Ogbomosh Local Government Area*: Unpublished B.ED Thesis.
- Okebukola, A. (2014). The use of Audio-Visual Aids in Education: Extracted from UNESCO Chronicles, Regional Seminar on the use of Audio-Visual Aids in Adult and School Education in Latin America at Mexico City from 28 September to 17 October 1959.
- Okebukola, A. and Jegede, H.G., (2012) , Motivating use of Audio-Visual in a Nigeria Technological University Library. *Journal of Edcation and Social Research Vol. 2(1) Jan*.
- Olalekan, V.W and Omosewo, E.R. (2018). Library Resources in Education , Enugu: *ABIC Publisher*.
- Pember, E.U. and Humbe, J.K. (2019). *Effect of Audio visual materials on the Acadmic Performance of*



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*Junior Secondary School Students in Social Studies*. Unpublished PGDE Thesis. Imo State University-Nigeria

Available at:  
<http://www.citejournal.org/vol3/iss3/socialstudies/article/.cfm>

Rather, W. (2014). Technology applications in Social Studies teacher education. A survey of Social Studies methods. *Contemporary issues in technology and teacher education* 3 (3). [Online]

Umuoinyang, T.L (2014), Teaching with Multimedia: Do Bells and Wishtles Help Students Learn. *Journal of Technology and Human Services* 24(2/3): 167-79