

## **EFFECT OF PICTURES SUPPORTED WITH AUDIO – TAPED INSTRUCTION ON STUDENTS' ACHIEVEMENT IN HISTORY**

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### **ABSTRACT**

*This study examined the effect of pictures supported with audio taped instruction on students' achievement in selected History contents. Students taught using pictures supported with audio-taped instruction were compared with their counterparts taught conventionally, to ascertain whether differences exist in their mean achievement scores. A simple random sampling technique was used to draw two intact classes of SSI history students from two co-educational schools and randomly assigned to the experimental and control groups. History Achievement test (HAT) was used to elicit responses from the treatment and control groups. The result showed that experimental group produced higher mean achievement score than the control group taught conventionally. The female students taught using pictures supported with audio tapes had higher posttest mean score when compared to male students taught using the same approach. An important conclusion emanating from the study is that pictures supported with audio taped are plausible strategy for teaching history at the secondary school level in Nigeria.*

### **BACKGROUND OF THE STUDY**

In the past, there were little or no conscious effort by teachers to develop and make use of instructional media in teaching and learning in secondary schools. As a matter of fact, greater percentage of teachers prefers to teach the way they were taught, that is, talk and chalk. Akpa and Chukwuka (1998:12), observes that "... at the secondary school level no strong emphasis was placed by teachers on the use of teaching aids". But gradually over the time the relevance of instructional media became widely recognized. The transition from none use to use of instructional media is what Kay, Dodd, and Sime (1968), refer to as the silent revolution in teaching and learning.

In any teaching and learning situation, instructional media are considered very important because they serve as media for effective communication between the teacher and the students. They simplify concepts and ideas such that students learn faster and retain longer. Through the use of instructional media, students are able to form an opinion of the amount, value or quality of an event, issue and historical evidence. They are able to provide evidence or information that supports a statement or theory and to combine separate ideas; multiple and contradicting historical evidence and sources.

The major problem particularly in this day of increased emphasis for the quality of education is the unsystematic planning and non – integrated use of variety of instructional media in enhancing the quality of teaching and learning. It appears that emphasis for improving teaching and learning is mainly on the use of one medium in the instructional process. Ogunranti (1981) states that "in order to learn, one has to perceive events or objects by the sense organs of hearing, seeing, touching, smelling and tasting". Gagne (1977) observes that the more these senses are activated in the instructional process the greater the effectiveness of the lesson. Therefore, no one medium is best to stimulate all these organs of the learner rather; it is only by a variety of media and their integrated use.

The use of pictures supported with audio – taped instruction appears to offer more conceivable promise of stimulating many sense organs thereby improving students' involvement in teaching and learning process. Pictures are used in instruction to arouse interest, introduce new ideas, and illustrate specific steps in a problem, and to develop appreciation. They can also be used to give background knowledge of a subject matter and if left stay as long as the lesson lasts. They make the lesson more memorable thereby enhancing retention.

Audio – taped instruction materials appeal to the sense of hearing. Of special importance is the fact that audio– taped instruction as a medium of mass communication can be used in the presence or absence of the teacher. Also, since audio– taped instruction uses special techniques like the use of light background music, student listeners tend to pay more attention and absorb the lesson more than the routine classroom presentation by the teacher.

A good picture when used alone or with other instructional materials like audio – taped instruction can help make learning an interesting adventure. The involvement of the organs of sight and hearing can cause excitation along neural channels, which reach mental centres where the impressions produced fuse with previous acquisitions. They make learning more permanent and offer a reality of experience which stimulates self – activity on the part of the students.

History is a subject that needs to be really taught with as many instructional media as possible in order to drive home the points to students and make it possible for them to apply what they have learnt to real life situation. Unfortunately, the teaching and learning of history in secondary schools is mainly by rote learning. Rote learning in this context means learning by exercising of memory only regardless of understanding (UNESCO, 1984). This sterile talk and chalk approach of teaching and learning of history usually may lead to ineffective learning, misunderstanding and misapplication of historical concepts by students. It is when there is clear understanding of concepts that an effective transfer of what is learnt to real life situation is made possible. This may be responsible for low enrolment and poor performance of students in history. According to WAEC Chief Examiner's reports (2008 and 2009) the students' achievement in history has continued to decline.

There is an acknowledged problem of female underachievement when compared with their male counterparts apparently under equivalent conditions (Alonge and Ojorinde, 1987). According to Maccoby (1975), female achievements in history are inferior to those of their male counterparts. Researchers have advocated the use of learning style which favours females and these are the cooperative learning style. Females tend to understand through looking at connections, Okeke (2001). Female students enjoy sharing their views and they require it in order to feel that learning has occurred. Balenky (1986) stated that when females are "recipient but not source of knowledge", confusion and lack of confidence result. It is against this background that this study is designed to investigate the effect of pictures supported with audio – taped instructions on student's achievement in history.

#### **STATEMENT OF THE PROBLEM**

How to make teaching and learning of history more efficient and effective at the secondary school level has been a problem confronting history educators and researchers. The teaching and learning of history in secondary schools is mainly through the use of talk and chalk, otherwise referred to as Chalkboard approach to teaching. Such an approach tends to become more of teacher – centered and subject matter oriented. It does not stimulate many sense organs. The active person in the class becomes the teacher whereas the students are forced into passive recipients in the instructional process. With this approach, the chances of the students to become physically and mentally involved in the teaching and learning process are greatly affected.

There has been low enrolment and poor performance of students in history in recent times (WAEC Chief Examiners' reports 2008 and 2009). This was attributed to students' inability to describe major historical events, which puts to question how history teachers maximize the use of instructional media in instructional process. Therefore, the problem of this study is: what is the effect of pictures supported with audio – taped instruction on students' achievement in history?

#### **RESEARCH QUESTIONS**

The following questions sguided the study.

1. What is the effect of pictures supported with audio – taped instructions on student's achievement in history?
2. What is the effect of pictures supported with audio- taped instruction on gender achievement in history?

#### **Hypotheses**

The following hypotheses were formulated and tested at the probability level of 0.05.

1. There is no significance difference in the mean achievement scores of the students exposed to pictures supported with audio – taped instruction and those exposed to conventional method as measured by history achievement test.
2. There is no significant difference in the mean achievement scores of male and female students exposed to pictures supported with audio – taped instruction.

**RESEARCH METHODS****Design of the study**

The study adopted the quasi experimental research design. Specifically, the study used pre – test and post – test control group design. The design is illustrated as follows:

E	:	O <sub>1</sub>	XP	O <sub>2</sub>
C	:	O <sub>1</sub>	XC	O <sub>2</sub>

Where, E = Experimental group

C = Control group

O<sub>1</sub> = Pre – test

XP = Picture – Audio – tapes

XC = Chalkboard

O<sub>2</sub> = post – test

**AREA OF THE STUDY**

The study was conducted in Nsukka Urban of Enugu State, Nigeria. The choice of this area was determined after due consideration of the statistics on entries and performance of students on history. According to the information received from the statistics department of the Post Primary School Management Board (PPSMB) Nsukka L.G.A; from 2008 to 2009, few students from this zone who registered for history had poor results.

**POPULATION OF THE STUDY**

The population of this study comprised of the entire senior secondary class one (SS I) students offering history in public secondary schools in Nsukka Urban of Enugu State. The population figure was estimated to be 350 and there are 24 secondary schools in Nsukka Urban (Statistics unit PPSMB, Nsukka).

**SAMPLE AND SAMPLING TECHNIQUES**

The researchers used a sample size of 60 (sixty) students, 30 (thirty) students in each class and one class from each school. Two (2) coeducational schools in Nsukka Urban were purposively selected for this study and the classes involved were randomly assigned to the experimental and control groups.

**INSTRUMENT FOR DATA COLLECTION**

The instrument for data collection for this study was the History Achievement Test (HAT). The HAT and the lesson plans were developed by the researchers. The HAT consisted of 20 items multiple choice objective test designed to measure students' understanding of contents chosen for the study after treatment.

**DEVELOPMENT AND VALIDATION OF INSTRUCTIONAL MATERIALS**

The instructional materials were recorded audio – instruction, pictures, and lesson plans. The topics taught were selected from the SS I History syllabus. The pictures were adopted from a history text book titled "A History of Nigeria" and made into a picture book while the lesson plans were prepared by the researchers. The audio – instructions were recorded at the Mass Communication studio of the University of Nigerian, Nsukka. Experts in History Education and Educational Technology validated the lesson plans, pictures and audio-tapes. Corrections made by the validators were used to improve on the instrument and the instructional materials.

**EXPERIMENTAL PROCEDURES**

The experimental and control groups were pre – tested. While the experimental group was instructed with the recorded audio – cassette supported with pictures, the control group was taught conventionally using the lesson notes. The normal history lesson periods were used in both schools. The experiment lasted for four weeks of three periods per week.

### CONTROL OF EXTRANEIOUS VARIABLES

In order to make sure that the observed differences on the dependent variables were due to the influence of the independent variables only, the researchers took the following measures to control some of the extraneous variables in the study.

Prior to the commencement of the treatment, the experimental and control groups were pre – tested in order to establish their knowledge base. The researchers equally made every effort to ensure the homogeneity of instructional situation between the groups by making use of the same contents except in the use of instructional media, which varied.

One researcher taught both groups to remove differentials arising from teacher factor. The schools from where the treatment and control groups were drawn are far removed from each other, so chances of contaminations are remote.

### METHOD OF DATA ANALYSIS

The mean scores were used in answering the research questions. The hypotheses were analyzed using analysis of covariance (ANCOVA), with the pre- test scores used as a covariate to the post – test scores. The use of analysis of covariance for testing the hypotheses was due to the inability of the researchers to achieve the accurate equivalence of the subjects as intact classes were used.

### RESULTS

The results were presented based on the research questions and hypotheses.

Research question 1

What is the effect of pictures supported with audio- taped instruction on students' achievement in history?

Table 1: Effect of pictures supported with audio-taped instruction on students' achievement in history.

	Pretest	Posttest	Mean gain/less
Students taught with P.A.T	14.100	13.63	0.47
Students taught conventionally.	12.07	11.70	0.37

From table 1, it is observed that students taught with pictures supported with audio- taped instructions has a higher posttest mean scores of 13.63 than those taught with lecture method (conventionally) who has a posttest mean score of 11.70.

Research question II

What is the effect of pictures supported with audio tape instruction on gender achievement in history?

Table II: Effect of pictures supported with audio tape instruction on gender achievement in history.

Gender	Pretest	Posttest
Male	13.39	12.53
Female	12.89	12.76

Table II shows that female students performed slightly better (12.76) than male students (12.52) when taught with pictures supported with audio- taped instruction.

Hypotheses

1. There is no significant difference in the mean achievement scores of the students exposed to pictures supported with audio-taped instruction and those exposed to conventional method as measured by history achievement test (HAT)
2. There is no significant different in the mean achievement scores of male and female students exposed to pictures supported with audio- taped instruction.

Table III: Summary of ANCOVA table on the effect of HAT on Group and Gender

Source	Type III sum of squares	df	Mean square	F	Sig	Decision
Correct model	285.236	4	71.309	7.002	.000	
Intercept	29.884	1	29.884	2.935	.92	
Pretest	216.262	1	216.262	21.236	.000	
Group	7.317	1	7.317	.718	.400	NS
Gender	8.400	1	8.400	.825	.368	NS
Group *Gender	1.769	1	1.769	.174	.678	
Error	560.098	55	10.184			
Total	10472.000	60				
Corrected total	845.333	59				

Table III shows that there is no significant difference in the mean achievement scores of the students exposed to pictures supported with audio tapes and those exposed to conventional method as measured by HAT.

The table also shows that significant difference does not exist in the mean achievement scores of male and female students exposed to pictures supported with audio-tape instruction.

## DISCUSSION

The results from this study showed that students taught using picture supported with audio tape instruction performed better than those taught conventionally. However, no significant difference exists between the achievements of the two groups. The results of this study are in agreement with findings of Branch, Ledford (1987) and Leonard (1992). Their results showed no significant difference in the level of achievement scores of students taught with the lecture method and those exposed to audio- taped instruction synchronized with pictures. It must be mentioned that the findings of this study failed to support the views of previous researchers like Mamah (1998), Phair (1986) which indicated that students taught using audio-taped instruction significantly outperformed those taught conventionally.

The results of the study indicated that female students have higher mean score than male students when exposed to the same pictures supported with audio-taped instruction as measured by the HAT. (See table II). However, this was not statistically significant. In other words, gender had no significant effect on students' achievement in history (see table III).

The research findings are in disagreement with Barrik as cited in Okeke (1994). The researcher observed that gender had significant effect on achievement in favour of females than males when exposed to audio-visual presentations. The research findings of this study are in agreement with Onyegegbu (1995), and Mammah (1995). These researchers observed that gender had no significant effect on students' achievement in Biology when taught with audio- visual presentations.

## CONCLUSION

The achievement in history contents can be increased by using pictures supported with audio-taped instruction. The use of pictures supported with audio-taped instruction can be used to effectively teach both genders.

## RECOMMENDATIONS

Based on the findings of this study the following recommendations are made:

- 1 History teachers should employ pictures supported with audio-taped in their teaching since this study has shown that more desired knowledge is acquired through this strategy.
- 2 State and Federal Governments should establish and fund Educational technology centres in educational zones where teachers can borrow instructional materials.
- 3 Governments should sponsor in-service educational opportunities for history and other teachers to learn the basic skills in production of pictures, audio tapes and other instructional materials.

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