

## **Effects of Videotape Mediated Instruction on Secondary School Students' Achievement and Retention in Social Studies**

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**ABSTRACT :** *This study investigated effects of videotape mediated instruction on secondary school students' achievement and retention in social studies. The study employed the quasi-experimental, pre – test, post- test, control group design. The sample consisted 200 Junior Secondary School two (JSS II) students randomly selected from four schools in chanchaga Local Government Area of Niger State. Fifty 50 students of intact class were assigned to each groups. The research materials used includes videotape mediated instructional Packages, the instrument used was the Social Studies Achievement Test (SOSAT) which was developed by the researcher. The reliability coefficient of 0.82 was obtained. Data analyses were done using Analysis of covariance, Post – hoc analysis was all used were necessary. These showed that the videotape mediated instruction package tested were effective in the learning of Social Studies and had great improvement on the student's performance after exposed to this media packages it is therefore recommended that teachers should try to get this package to make their teaching more effective.*

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### **I. INTRODUCTION**

Social study being one of the core subject in the Junior Secondary School and also, as a compulsory subject that in preparing the youth into the wider world both in character and civic responsibilities to participation in the daily affairs of the society is the concern of the research. Social studies in meant to correct some social problem that are arising in the community. Taking Niger state as an example where our young youth found with dangerous drugs are found in them Although many educationist are aware of the role social studies play in the development of the culture of the Nation the poor strategies that has been in existence by teacher of social studies is amatter that needs closed examination so as to improve the life style of the citizens. We observe today that many of our youths are trying to copy the foreign culture. One of the main objectives of social studies as a subject that has gone through difficult times in time of instructional manpower, textbook and instructional materials that could have equipped the citizens of the nation and so make them function as effectively in the era of technological advancement. This research therefore sought for the foundation to improve the intended changes in pupils which cannot be realized unless there are interactions, planned and controlled activities between the teacher, students and the environment in which these activities will take place. It is believed that when pupils interact with teachers as they interact with their fellow students information will definitely be exchanged, which in most times is expected to effect the desired in the behaviours of the students. Therefore communication has a vital and major tool employed to accomplish the intentions of the curriculum.

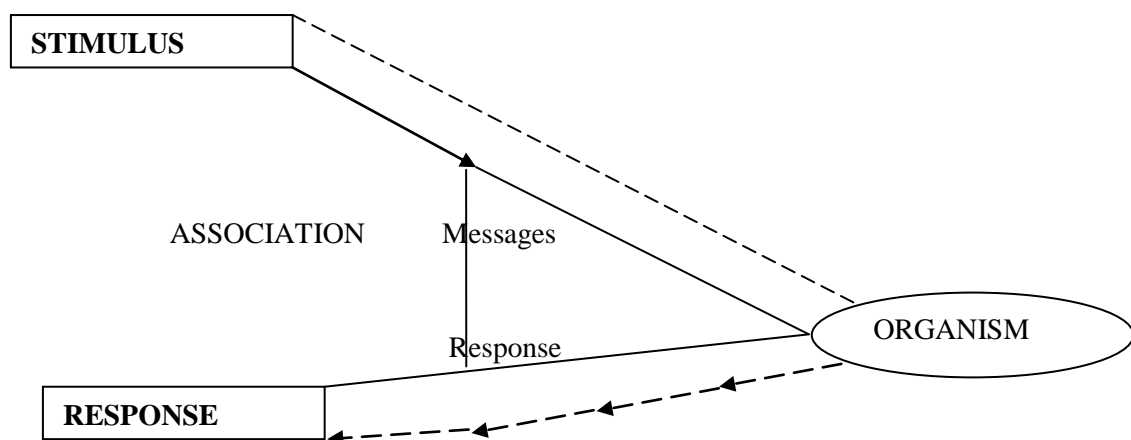
Adeniran (2002) agreed that information communication technology plays vital roles in teaching and learning processes. Thus this paper detected a gap that it want to fill and employ new strategies in teaching and learning during their experience in the classroom noting the alarming increase in population, the on – caring attitudes of the youths and the non – availability of the new improved instructional materials that will enhance the teaching and learning of social studies. It is however, worthy of note that social studies is an eclectic discipline which integrates various concepts in the various fields of the social sciences, although going beyond the factual knowledge of the social science discipline. Social studies are therefore as aspect of general education programme of schools which aims at preparing the individual for active participation in all the socially acceptable activities of the society. However as the years roll by societies changes, new roles and realities emerge and therefore warrant a necessary acclimatization to the new challenges and, hence, new things to learn. Existing material must be specially adapted or new ones developed to meet the challenges of technology it becomes expedient therefore to make instructional materials developed to achieve technological challenges that are relevant and appropriate for the students learning environment. Although it is clear that there seems to be more development in the design of instructional materials and resources available for the teaching of social studies,

many of the new instructional materials comes in form of simulations and computer-based educational games while many of the educational institutions use in our local areas cannot use them due to irregular poor electricity supply which makes this instructional materials useless in many schools in the rural areas. This apathy is understandable in the sense that apart from the imposing power of attraction and volume of experience which the new technologies present over the local materials in use by our teachers, where they exist, a lot of them are mutilated due to poor storage facilities, there is the need for curriculum developers, teacher and principals to desire and look forward to the use of the computer – based instructional materials in social studies that will enhance teaching and learning. The problem with the desire for computer – based materials cannot be overlooked apart from that these new instruction materials are not derived locally as they make use of software, and their contents are not locally based but rather foreign culture. Thus the use will not match our local problem/challenges; this has long been agitated for based on the technological situation in the world of education so an appropriate educational technology strategy would be regime to match with an local problem/challenges because so many schools presently are looking for sufficient material for their classroom which are not readily available. With the new technologies in instructional materials teaching and learning of social studies will be easier for both teacher and students. If the foreign instructional materials are used it will negate the intentions of the social studies education programme. Videotape is another instruction machine that will enhance the teaching and learning of social studies it is believed that what students see, hear and feel remain permanent in their mind/heart.

Alabi (2013) videotape instructional package would teach effectively in the large populated classroom successful and with students understanding the lesson better. For instance a close circuit television could assist the teacher teach a large population of students subject effectively not necessarily Social studies, it is also believed that with the use of this package it will motivate the students the more in what they see and hear will remain permanent in them since the paper is also considering the students retention ability. Alabi 2012 in Dale 1969, states that pictures are effective but not as effective as motion pictures, this study believed that youth of today love watching football than reading their books, infact a number of them have allowed the television to become impediment to the studies some could forget their lecture for watching football or their interesting programme. With the introduction of Television/Videotape frequently in Nigeria, it may be potent because it with attract the attention of the students. The research is based on Trait – Treatment Interaction Theory (TTTT) which in itself can be regarded as an advance form of the stimulus response theory which was developed by Skinner and Thorndike.

This explains that in any activities there is a situation called stimulus which affects in individual (organism) and there is a response. A particular stimulus which therefore becomes connected with its responses by the “S – R” bond so that on future occasions a repetition of the stimulus (S) will produce the response (R).

**MODEL OF (S – R) LEARNING THEORY (Abimbade A 1999)**



In relation to the educational media, the stimulus therefore is the element of the learners environment which is specially designed and manipulated as much as possible and presented to the learner like videotape and photographs. The organism is the learner who perceives the stimulus and produces responses based on his experiences while the response is the action ordination to the learner based on his interaction with the stimulus, this perception and experience. The Trait – Treatment Interaction Theory (TTTT) belongs to differential psychology as it could be found in the works of Branch 1970 Berlinor and Cohen 1973 and others. All these authors have explained that there is a connection between personality traits of the learner on one hand and

variable of the instructional situation on the other. Hence the effect of learning must be instructional treatment and specific characteristic of the individual learners.

- [1] That personality traits and environmental factors are interactively related.
- [2] That behaviour in general and learning results in particular can only be explained and understood by asking this interactive relation into consideration.
- [3] That the behaviour of individuals can be deliberately influenced through a manipulation of environmental factors.
- [4] That different personality trait regimes, different environmental factors if the same results are to be achieved.
- [5] That the personality traits under consideration must at least have a certain degree of stability and generality.
- [6] That a different cognitive process are held responsible for the different learning result, the process features of learning is emphasized against the product aspect.

The Trait – Treatment Interaction Theory (TTTT) is therefore concerned with the treatment features of the learning environment which are either methodical or media – specific especially the introduction of the modern media into teaching and learning which actually takes into account individuals difference between learners to an extent as to permit flexible design of the learning situation tailored to the needs of the individuals learners. Another theory relevant to this research is the theory of retention and forgetting as seen in the work of Ebbinghaus, Ekstrand and Senkins and Dallenbach in Adesun (2002). That retention is the ability to respond to a new stimulus using the previously learnt responses. It involves recall recognition and re – training. However, after learning memories of the learnt materials will fade away with this is referred to as forgetting, it is the decrease in retention over time. It has been said that forgetting is rapid in the first hour after learning and slows later and these can be measured and graphically represented through the retention curve. Two theories that relevant to this study have been explained. The Trait – Treatment Interaction Theory (TTTT) which is concerned with methodical or media – specific treatment feature of environment via videotape mediated instruction and the theory of retention and forgetting. These are the theory relevant to the study tested the effects of media – specific treatment on students achievement and retention.

## **II. STATEMENT OF THE PROBLEM**

The foundation for the use of videotape mediated instruction was brought out from the problem faced by teachers of social studies in the overcrowded classroom. This has resulted in poor internalization of social studies concepts in crime, indiscipline, trancy, collapsed moral values, drug abuse and related vices. Thus this research observes that the strategies used by teacher do not conform to the trend of technology growth in the educational settings. As a solution to this problem better method need to be tested and employed to fill the gap this problem has created. Looking at the recurrent population in school the acts of communicating contents and the readily available space for the learner conveniences in learning situations cannot be overemphasized. Then this research believing that with the use of videotape mediated instruction there will be effective teaching and learning of social studies. This in turn brought about these questions.

- [1] What is the level of performance of students in social studies?
- [2] Will the use of educational television as videotape mediated instruction packages enhance student's achievement in social studies?
- [3] Will the use of Educational Television and Videotape mediated instruction enhance student retention in social studies?

The research examined the effects of videotape mediated instructional packages on student's achievement and retention in social studies. The purpose was to find out the level of performance of students in social study and to check whether or not videotape mediated instructional packages would enhance student's achievement in social study. It will also check if videotape mediated instruction will improve student's retention in social studies in secondary schools. The study also found out whether gender would affect the effectiveness of these packages on secondary schools students' achievement and retention in social studies. This was intended to determine that any of the packages could be regarded as better for learning social studies irrespective of learner's sex.

## **III. RESEARCH QUESTIONS**

- Will there be any difference between the pretest and posttest mean scores and the achievement mean scores of each of the experimental and control group
- Will there be any difference between the pretest retention mean scores of the experimental and control group?
- Will there be any difference between the gender in the experimental and control group?

- Will there be any difference between the retention mean score of both gender in experimental and control group?

**RESEARCH HYPOTHESIS**

- [1] There is no difference between the pretest mean scores and the posttest achievement mean scores of the experimental and control group
- [2] There is no significant difference between the pretest retention mean scores of the experimental and control groups
- [3] There is no significant difference between gender in the experimental and control groups.
- [4] There is no significant difference between both gender in pretest and posttest experimental and control groups.

**IV. SIGNIFICANCE OF THE STUDY**

The significance shows that the findings from this research could be valuable to students, government, stakeholders and curriculum planners as it will promote cultural transformation. Also it would enhance better teaching and learning in an overcrowded classroom and policy designers in their bid to design well-structured educational technology usage of instructional media. Finally this studies may engender further empirical studies on specific variables examined in the present study with respect to subject of the curriculum learners’ variable like sex, types of school location thus leading to finding based on established learning conditions in Nigeria and her cultural contest. Some literatures were reviewed that are relevant to this study like the relevance of media in social studies instruction, utilization of television and videotape instruction in education. The research design adopted for this research is the quasi – experimental pretest, posttest, control group, a three way 4 X 2 X 3, single factor; multiple treatment factorial design was employed in this study. Four levels of independent primary variables (two treatment and control) two levels of gender (male and female) was investigated including the students achievement and retention in social studies. This type of design permitted the establishment of causal relationship between each of the independent variables and dependent variables which in the academic performance. It also permitted the determination of how the primary and secondary dependent variables interacted to influence the dependent variable. Both experimental and control groups were given the pretest and posttest and retention test was administered four weeks after the posttest had been administered. The experimental groups was subjected to the treatment using the Social Studies Achievement Test (SOSAT) experimental instrument while group 2 was given videotape mediated instruction (recorded programme) while the control group was taught with the chalk and talk method of teaching.

Below is the schematic representation of the research layout

O <sub>1</sub>	X <sub>1</sub>	O <sub>2</sub>	O <sub>rt</sub>
O <sub>3</sub>	X <sub>2</sub>	O <sub>4</sub>	O <sub>rt</sub>
O <sub>5</sub>	X <sub>3</sub>	O <sub>6</sub>	O <sub>rt</sub>
O <sub>7</sub>	-	O <sub>8</sub>	O <sub>rt</sub>

**Key of the above schematic representation**

Where O<sub>1</sub> O<sub>3</sub> O<sub>5</sub> = Pretest observation

Where X<sub>1</sub> treatment based on the use of conventional method

Where X<sub>2</sub> treatment based on the use of Video – Tape mediated instruction 1

Where X<sub>3</sub> treatment based on the use of Video – Tape mediated instruction 2

Where O<sub>2</sub> O<sub>4</sub> O<sub>6</sub> O<sub>8</sub> = Post – test observation

Where O<sub>rt</sub> = Retention.

The population of this research was made of the entire Junior Secondary School students in Niger state totaling five thousand eight hundred and thirty made up of two thousand three hundred and fifty males and female three thousand four hundred and eight six a received from Niger state Ministry of Education test and measurement unit. Based on the nature of the research a three stages sampling technique was adopted. Firstly a purposive random sampling was adopted to obtain four Junior Secondary Schools in Niger state based on the availability of equipment found in their school. Secondly the four selected schools were co – educational institutions randomly assigned to each of the three experimental and control groups using random sampling technique. Stratified random sampling techniques were used to select the male and female groups. One school into experimental groups. The instrument use was the Social Studies Achievement Test SOSAT design by the researcher in collaboration with the researchers supervisor and social studies experts. The instrument contains two sections. ‘A’ consists of biodata of the students while ‘B’ contains forty multiple choice questions of four options each. The SOSAT instrument was used to test students mental ability, retention and achievement in social studies, the test items covers the topic on drug and related topics on drug from the scheme of work designed for Junior Secondary Schools. The production of the package was effected through a team of

professionals and specialist including the instructional designer (the researcher). Social Studies Achievement Test (SOSAT) is a package drawn from students note books given to expert in social studies at the College of Education in Minna, one staff of NECO and Test Measurement in Federal University of Technology Minna to estimate the validity of the instrument for Junior Secondary School students. The response subjected to an internal consistency reliability using Kinder – Richardson (K – R 21) formula. The researcher also was subjected to a pilot test on a sample of 100 students. Appropriate statistical techniques were employed to analyze the score obtained from the sample in SOSAT (Pretest, Posttest and retention test) for the study. These Analyses of covariance (ANOVA) mean value and Post – hoc, t – test analysis using Turkeys test and graphical representation.

## **V. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

This research presents detailed discussions of findings, conclusions and recommendation based on the findings of the study. This study investigated the effects of Videotape mediated instruction secondary school students, Achievement and Retention in Social Studies as effective for inculcating social studies in the secondary schools. The sample consisted of four hundred and eighty Junior Secondary Class (JSS2) in the three senatorial districts of Niger State among Nine hundred and sixty students were selected for the sample used for the study. The instrument used for the study were the Social Studies Achievement Test (SOSAT) (which was a 40 item multiple choice objective test), which was designed and validated by collaboration of some other professionals and based on the Drugs, uses and Abuse used for the study. The test was administered to the students immediately after exposing them to the packages except for the Control group that were not exposed to the treatment. The responses of the students from the treatment were scored and the scores were subjected to statistical analysis such as mean, t-test, covariance analysis. The analyses of the results were presented fewer than two major headings – Investigative analysis and testing of hypothesis. From the analysis of the pretest scores, the students were found homogeneous in their achievement and retention. It could therefore be concluded that any observed difference between the groups after the introduction of treatment could be attributed to effect of the instructional methods used in the course of this research. However, after the treatment performance level increased across the treatment groups. Videotape mediated instruction and Educational Television had the highest achievement and Retention mean scores than the normal classroom instruction.

## **VI. CONCLUSION**

The findings of this study has revealed that instructional media tested were effective in the teaching and learning of social studies as each group had a significant improvement in their performance after been exposed to this treatment i.e. videotape mediated instruction and Educational Television. Hence this research recommends the usage of these packages for the learning of Social Studies. The use of Videotape mediated instruction was found to produce significant effect on the learners. When the effect of this Educational media on the sex of learner was investigated, it was discovered that using the two media did not produce much significant difference on either the male or female students for both students – posttest and retention test. Thus both sexes benefited from the use of these packages. Videotape mediated instruction effect on the achievement levels of students tested their posttest and retention test using and analysis of covariance (ANCOVA) reveled that significant difference existed while post-hoc t-test analysis of the posttest scores of students that used the treatment existed a difference between the high, medium and low level and between medium and low achievement levels. Therefore due to clamour for ICT all over the world, it is pertinent for teachers to improve their teaching with the use of this instructional Medias, thereby providing much attention on the trends of this research in the area of instructional education television and the strategies had been used by the teachers. Since we all know that students of today are more interested in Television, Video, Satellite and the likes. It is important for well educational technologists to design educational television and videotape mediated programmes which would motivate students conscientiously and thereby stem the tide of poor performance in Social Studies and youth involvement in social vices which are evidences of the current instructional strategies used to teach Social Studies in schools.

## **VII. SUMMARY OF FINDINGS**

Below is the summary of the major findings of this study

- [1] There was a significant difference in the Posttest, retention test; mean scores of students taught using videotape mediated instruction; Videotape mediated instruction 1 via educational Television and conventional method.
- [2] There was no significant difference in the Posttest, retention test, mean scores of students who were taught using the videotape mediated instruction and Videotape mediated 1 via educational Television in Social Studies instruction. However, students taught with either of the educational media in videotape mediated

instruction 2 or Videotape mediated instruction 1 via educational Television achieved significantly better than those who received instruction using the normal chalk and talk method.

- [3] The use of videotape mediated instruction does not really shows any significant difference in the Posttest and retention mean scores in gender students (Male and Female).
- [4] Videotape mediated instruction used for the teaching of social studies instructions established a significant difference in the Posttest mean scores of students at the three achievement levels in High, medium and low levels. Post-hoc t-test analysis showed that the difference was between High achievement level and low achievement level students. The retention scores of the three levels also indicated significant difference. Post-hoc analysis showed that the high achievement levels students.
- [5] At both post and retention tests, there was no significant difference between students of medium and low achievement levels.
- [6] When Educational Television was used for Social Studies instruction, significant difference was seen and established in the posttest and retention test mean scores of the three levels. Post-hoc t-test analysis for the posttest and retention test showed that the differences were between students of high achievement level and those of the medium achievement level; and between the high achievement level and low achievement level students. This showed that the high achievement level student benefited more through the list of videotape mediated instruction in Social Studies instruction. Conclusively, there was no difference established between the medium and the low levels students at both posttest and retention test.

### **RECOMMENDATIONS**

Based on the major findings of this study, the following recommendations were proffered.

- [1] Teachers of Social Studies and other secondary school teachers should use Educational Television and Videotape mediated instruction to enhance their classroom instruction. Their use would enhance teaching and well facilitate students' acquisition of knowledge due to the clamour for Information and Communication Technology (ICT) and the interest of students in ICT. This would allow students to optimize the use of their senses for learning purpose, students emotion can be through appropriate visual which will motivate students to participate actively in the classroom.
- [2] Curriculum planers to plan a more effective curriculum putting in mind the studios of educational technology to enhance a better teaching and learning studies for the students' achievement and retention in Social Studies and other subjects.
- [3] To provide data on the potency of educational Television and Videotape mediated instruction in the learning of Social Studies in secondary schools.
- [4] The stakeholders in Education i.e. Federal, State, Local Government, private individuals and organization should endeavour as a matter of commitment to provide schools with electronic media need to teach students. Funds should be provided to purchase accompanying soft ware's to motivate the teachers in the teachers in the use of educational media.
- [5] The National Educational Technology center should liaise with State Resource Centers, Television stations to produce relevant materials on subjects taught in Nigerian secondary schools not only social studies.
- [6] Workshops, seminars, symposium should be organized for teachers to upgrade their knowledge about the technology that are evolving in the developing nations. This would assist teacher's competencies and ability to improvise simple instructional materials to be used in the classroom. Example of the Millennium Development goals programmes initiated by governments (MDGS).
- [7] Institutions, schools, training centers should harness their resources through the use of Educational Television and Videotape mediated instruction. Media would provide distance learners the opportunities to many sensory modalities to acquire knowledge.
- [8] Government should provide enough instructional equipment to schools and also provide storage facilities for the equipment.

### **SUGGESTIONS FOR FURTHER STUDIES**

Based on the experience gathered during the course of this study the following are suggested for future research on the use of Educational Television and Videotape mediated instruction programmes. Researchers may wish to work on:

- a. Other aspect of instructional media like transparencies etc.
- b. Replicate the study by conducting study on other areas of Social Studies
- c. Other topics within Social Studies can also be treated using Educational Television and Videotape mediated instruction.
- d. Junior secondary school was used in this research. Other classes could be used like primary, senior secondary schools and students from tertiary institutions.
- e. Dependent variables forgiveness and remembering may be researched upon by other researchers.

- f. Finally, the independent variables like school location, students' socio economic background, learners' age and other motivational factors may be research upon.

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