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FIELDTRIP, VIDEO TECHNOLOGY AND STUDENTS ACHIEVEMENT IN SOCIAL STUDIES

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ABSTRACT: *The study investigated the impact of fieldtrips and video-technology on students' achievement in Social studies in Port Harcourt Local Government Area of Rivers state. Two research questions and two hypotheses guided the study. The research design adopted for this study was a quasi-experimental design which made use of pre-test, post-test, non-randomized, non-equivalent, control group design. From a population of 6, 240 Social Studies students which are made up of 2, 467 males and 3, 773 females of 13 schools in Port Harcourt LGA, 195 JSS II Social Studies students of three intact classes randomly drawn from three Government co-educational Secondary Schools constituted the sample for the study. The instrument for data collection was an achievement test constructed by the researcher, titled, "Social Studies Achievement Test (SSAT)". The Social studies Achievement Test (SSAT) is a multiple choice objective test consisting of twenty five (25) items with five options (A-E). The test instrument was validated and had a reliability coefficient of 0.87 through Kuder-Richardson 20 (KR20) formula as a measure of the instrument internal consistency. The study was conducted for seven (7) weeks. The second week for obtaining the pre-test score while the 7th week for posttest scores. The main instruction lasted for four (4) weeks. Mean, standard deviation and analysis of covariance (ANCOVA) were the statistical tools used for analyses. The hypotheses were tested at 0.05 level of significance. The results of the study revealed that the achievement of students taught with field trip was higher than those taught with video technology; however the difference was not significant. Also, it was found out that the combined effect of fieldtrips and video technology on students' mean achievement was statistically significantly different from the conventional method of teaching Social Studies. Consequently, it was recommended among others that Fieldtrips and Video technology Instructional strategies could be used together by teachers since the finding from this study showed that they could be combined and impact positively on the academic performance of students.*

Key Words: fieldtrip, video technology, instructional strategy, social studies.

INTRODUCTION

Fieldtrips or field-studies are outdoor learning exercises undertaken by teachers and students in certain aspects of subjects such as Social Studies, so as to give the students the opportunity to acquire knowledge. It is a kind of learning that is based on experiences which take students out of

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their usual classroom setting to a new type of learning environment. Ajaja (2010) defined fieldtrips as trips arranged by the school and undertaken for educational purpose in which the students go to places where materials for instruction may be observed and studied directly in their functional setting. The use of the term field work/fieldtrip emphasizes some of the formal exercises, which are done outside the classroom usually in Humanities, Sciences and Social Sciences. Fieldtrip is one of the fundamental methods of instruction adopted for teaching and learning in social studies education (Mezieobi, Fubara & Mezieobi, 2008). For instance the works of Orion and Hoystein (1994); Miehie (1998) indicated the providing of firsthand experience, stimulating interest and motivation in students; giving meaning to learning and interrelationship, observation and perception skills among others are the driving forces for conducting fieldtrips. All these culminate in influencing student's attitude in terms of interest in a hands-on real world experiences, positive attitude towards the subject and improvement of socialization between students, and development of rapport between teachers and students among others.

Behrendt and Franklin (2014) posit that fieldtrip are very important for students because it provide opportunities for looking and exploring historical places and various institutions. Similarly, Kuh, Palmer and Kish (2003) noted that purposeful educational fieldtrip exercises increases students' enthusiasm and persistence to graduation. The most important usefulness of fieldtrips lies in the basic fact that they provide the most realistic means for meeting organisms in their actual environments. This enables students gain firsthand information, and provides opportunities for them to see and possibly touch and feel what they have heard and read about in books.

Orion and Hoystein (1994), cited in Ajaja (2010) offered a three-part model that can be used for integrating fieldtrips into the curriculum. The three parts include: preparatory, fieldtrip and summary. Each part serves as a bridge to the next part of the model. The first part, the preparatory unit uses concrete learning activities, to prepare students for the fieldtrips. This exposes students to materials and equipment that will be used during fieldtrip. The second part is the fieldtrip which is the central part of the model; it serves as a concrete bridge towards more abstract learning levels. It adds in the concretization necessary for higher levels of cognitive learning following the fieldtrip. The third part is the summary unit. This includes more complex and abstract concepts aimed towards the application and transfer of fieldtrip learning. This model indicated a significant improvement in all aspects of learning from the typical stand-alone fieldtrip. By including pre and post-trip elements, the teachers become involved in the instruction of the field studies concepts and connecting them to other topics in the curriculum. Fieldtrips influences learning mostly when they are related to classroom activities.

Studies have shown that there is less transfer of learning and less meaning when a fieldtrip is not related to classroom teaching. It is strongly recommended that fieldtrips should be integrated into the broader instructional programme and be used only when they are the most effective and efficient procedures for fulfilling learning and curriculum objectives (Ajaja, 2010). On the other hand, for effective teaching to take place, a good method must be adopted by the teacher. Teachers are aware that students learn in different ways and have different ways of absorbing information

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and of demonstrating their knowledge. Teachers should employ varieties of teaching strategies and methods to ensure that learners have equal opportunities to learn. It must however be stated that teaching methodology in education is not a new concept in the teaching and learning process. New methods and techniques evolve almost every day to supplement existing ones. Notable among them is technology-supported ones.

Technology has been successfully introduced in the field of education to make education more productive and more individual. Learning is an activity that starts at birth and continue for a lifetime in classrooms and training centers, effective learning takes place in a well-organized way. Facilities and personnel are employed to provide this learning and education designed for classroom learning, with aims to prepare all the students to work and participate in the society which they live. Video as a media in education comes as the invention of educational technology. They are termed as Video technology or instructional video and are created for use in classrooms or in other educational settings. Agommuoh and Nzewi. (2003) reported that video-technology instruction has the qualities of providing a semi-permanent, complete and audio's visual record of event. Osokoya (2006) highlighted both at school and college levels the advantages of video technology instructional strategy over the conventional or traditional method.

Empirical studies in Nigeria involving video-technology instructional strategy have been limited to the teaching and learning in primary school. (Aiyelagbe, 1998; Ibode, 2004). Literature has established that video-technology instruction has greatly improved the performance of students with special needs and slow learning abilities (Okwo 1994; Mitchell & Surprise, 1994). If this is possible then it should produce better results in students with normal learning abilities which are the target of this study at the Junior Secondary School (JSS) level.

Social studies teachers are supposed to facilitate the learning process of learners and must be professional who will make use of any available resources to enhance teaching and learning thus improve the academic performance of students. The use of Video-technology in education has been found to be an effective way of communicating ideas and concepts to students. Some teachers find it quite complex to use Video-technology to complement the traditional lecture method while others perceive the use of it as waste of time. Teaching and learning with audio-visual resources play an important role in the teaching-learning process. Students often benefit from the visual/sound appeal of Video-technology material because it tends to focus their attention on the topic. When teachers present materials in various manners such as providing students with both a summary statement and a chart on a given topic, the visual material enhances the written materials.

Literature is however, replete with studies that revealed the impact of fieldtrip and the use of video technology in various form on students achievement in various field and places. Some of such studies included those of Ajaja (2004); American Institutes for Research (2005); Barnett, Lord, Strauss, Rosca, Langfor, Chavez, and Deni (2006); Lehrer and Schauble (1999); Orion and Holfstein (1994); The National Education Research Council (NERC) (2010); Yousra, et al (2012);

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Garba (2015); Ifte (2011); Sara (2012); Jose, et al (2012); Willmot, Bramhall, and Radley, (2012) and the host of others. Consequently, it is against the brief introduction that the researcher deems it necessary to investigate the impact of fieldtrips and video-technology on Social studies students' achievement in Port Harcourt Local Government Area of Rivers state by using the following research questions and their corresponding hypotheses as a guide for the study.

Research Questions

1. What is the effect of fieldtrips and video technology on students' mean achievement score in social studies?
2. What is the combined effect of field trip and video technology on students' mean achievement score in social studies?

Hypotheses

1. There is no significant difference in the mean achievement scores of students taught with fieldtrips and those taught with video technology.
2. There is no significant combined effect of the teaching methods on mean achievement scores of students in social studies.

METHODOLOGY

The research design for this study was a quasi-experimental design which made use of pre-test, post-test non-randomized, non-equivalent control group (intact classes). There were two experimental groups and they were taught using fieldtrip and video technology respectively, and one control group which was taught using lecture method
A graphical representation of the design is presented below:

Group	**Pre-Test**	**Treatment**	**Post-Test**
Experimental (E_1)	O_1	X_1	O_2
Experimental (E_2)	O_1	X_2	O_2
Control (C)	O_1	-	O_2

Where: E_1 = Experimental group 1= Fieldtrip = FDT
E_2 = Experimental group 2 = Video technology = VDT
C = Control group
O_1 = Pre-test; O_2 = Posttest; X_1 = Treatment 1 = FDT; X_2 = Treatment 2 = VDT
- = No treatment; ----- = Intact class

From a population of 6, 240 Social Studies students which are made up of 2, 467 males and 3, 773 females of 13 schools in Port Harcourt LGA, 195 JSS II Social Studies students of three intact classes randomly drawn from three Government co-educational Secondary Schools constituted the sample for the study. The instrument for data collection was an achievement test constructed by

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the researcher, titled, **"**Social Studies Achievement Test (SSAT)". The Social studies Achievement Test (SSAT) is a multiple choice objective test consisting of twenty five (25) items with five options (A-E). This was constructed using Rivers State Junior Secondary School Social Studies syllabus and Junior Secondary School Certificate Examination (JSSCE) past questions. The test instrument covered social studies topics selected for this study namely vegetation and transportation system in Nigeria. Four marks were awarded to every correct answer. The maximum and minimum scores for the instrument were 100 and 0 respectively. The SSAT was administered before the treatment to obtain the pre-test scores. The reshuffled version of the social studies achievement test (SSAT) was thereafter administered to the students after the treatment. The scores so obtained constituted the posttest scores.

However, before administering the instrument to the students, the test instrument was subjected to validity and reliability test. For validity, the instrument was given to four experts, two in Educational Measurement and Evaluation from the University of Port Harcourt, one Social studies education expert also of University of Port Harcourt and one Social studies Junior Secondary School teacher. To aid the activities of the experts, the title of the study, objectives of the study, research questions and hypotheses of the study were also presented to the experts. Comments, observations and errors pointed out by the experts were used to modify the instruments before subjecting the instruments to field work. In the case of reliability, a reliability coefficient of 0.87 was obtained through Kuder-Richardson 20 (KR20) formula as a measure of the instrument internal consistency.

The study was conducted for seven (7) weeks. During the first week, the teachers for the experimental groups received training designed to equip them with the necessary instructional techniques for implementation of treatment and they were given the lesson format, while the teacher for the control group used lesson note format based on the conventional method. In the second week SSAT was administered to obtain the pre-test score. The main instruction lasted for four (4) weeks. The last week, was the 7^{th} week, and was used for the post-test. The results obtained from the administration of the post-test were collected by the researcher personally. Mean and standard deviation were used to analyze and answer the research questions, while the hypotheses were analyzed with analysis of covariance (ANCOVA) and tested at 0.05 level of significance.

RESULTS

Research question 1: What is the effect of fieldtrips and video technology on students' mean achievement score in social studies?
Hypothesis 1: There is no significant difference between the mean achievement scores of students taught with fieldtrips and those taught with video technology.

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Table 1: Summary of ANCOVA on the difference between the mean achievement scores of students taught with fieldtrips and those taught with video technology

		Pretest		Posttest		Gain	
Group	**N**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
FDT	70	48.51	9.16	66.00	12.52	17.49	12.03
VDT	65	57.60	6.24	74.40	7.64	16.80	8.07

Dependent Variable: POST-TEST

Source	**Type III Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
PRE-TEST	2269.215	1	2269.215	24.399	.000
GROUP	334.844	1	334.844	3.600	.060
Error	12276.385	132	93.003		
Total	679264.000	135			
Corrected Total	16923.733	134			

a. R Squared = .275 (Adjusted R Squared = .264)

Key: FDT=Fieldtrip; VDT=Video Technology

Table 1 showed the Mean and standard deviation of fieldtrips and video technology on students' mean achievement score in social studies. It showed that students taught with fieldtrip had a mean gain of 17.49, SD = 12.03 while students taught with video technology had a mean gain of 16.80, SD = 8.07. This implies that the achievement of students taught with field trip is higher than those taught with video technology, since the mean gain of the former was higher than the latter. However, on further statistical analysis through ANCOVA, the result showed that there is no significant difference between the mean achievement scores of students taught with fieldtrips and those taught with video technology ($F_{(1,132)} = 3.600$, $p = .060$). The null hypothesis was retained at .05 Alpha level.

Research question 2: What is the combined effect of field trip and video technology on students' mean achievement score in social studies?

Hypothesis 2: There is no significant combined effect of the teaching methods on mean achievement score of students in social studies.

Table 2 showed the Mean and standard deviation on the combined effect of field trip and video technology on students' mean achievement score. It showed that the combined effect of fieldtrip and video technology on students' mean gain achievement score was 17.16, SD = 10.28 while the

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effect of conventional method was 10.67, SD = 15.03. This showed a high combined effect of fieldtrips and video technology on students' mean achievement.

On further statistical analysis, the ANCOVA result revealed that there is a significant difference between the combined effect of the teaching methods and the conventional method ($F_{(1,192)}$ = 26.067, p = .000). The null hypothesis was rejected at 0.05 level of significance.

Table 2: Summary of ANCOVA on the difference between the combined effects of the teaching methods used on the two experimental groups and one control group

		Pre-test		Post-test		Gain	
Group	**N**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
FDT/VDT	135	52.89	9.09	70.04	11.24	17.16	10.28
CVM	60	43.00	15.48	53.67	18.12	10.67	15.03

Source	**Type III Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
PRE-TEST	11458.696	1	11458.696	88.590	.000
GROUPS	3371.658	1	3371.658	26.067*	.000
Error	24834.370	192	129.346		
Total	871440.000	195			
Corrected Total	47434.995	194			

* Significant at 0.05 level of significance

a. R Squared = .476 (Adjusted R Squared = .471)

DISCUSSION

The result of findings from this study showed that there is no significant difference between the mean achievement scores of students taught with fieldtrips and those taught with video technology. This is consistence with the view of Willmot, Bramhall, and Radley, (2012), who opined that videos can be used to increase student motivation, enhance learning experiences, improve performance, and provides learning for future classes as these videos can be stored for reuse. Stanic (2014) stated that videos stimulates two senses out of the 5 senses humans possess and this is highly supported by cognitive theorists in dual-coding and by Lei, (2010) who stated that interacting with what they see will aid the students' retention of concepts that are not readily available in the classroom. He also noted that field studies offer students the opportunity to encounter and explore novel things in an authentic setting.

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A second result of the findings indicated significant difference between the combined effect of the teaching methods used on the two experimental groups and one control group. The result showed that students taught with both fieldtrips and video technology outperformed their counterparts that were taught using the conventional lecture method and is in line with the view of Ajaja (2004) who conducted a study on the effects of field studies and video technology on learning outcome in biology. The study discovered a great significance in the test scores between the students that had participated in the fieldtrip experiences/video technology and those who were in the control group (conventional lecture method). The study then concluded that fieldtrips/video technology experiences significantly improve students' understanding of science and also improve their motivation/attitude towards the subject and subsequently influenced and increased their overall achievement in the subject. Also the outcome of this study collaborated earlier study by, Barnett, Lord, Strauss, Rosca, Langfor, Chavez, and Deni (2006).

CONCLUSION AND RECOMMENDATIONS

In line with the findings of this study it could be concluded that fieldtrips and video technology whether independently or in combined mode have positive impact on the academic performance of Social studies students in Junior secondary schools in Port Harcourt LGA of Rivers State. Consequently, the following are recommended based on the findings:

1. Fieldtrips Instructional strategy should be encouraged among schools as it have a way of making the students be in charge of their own learning and at their own pace with high level of retention and recall.
2. Video technology instructional strategy should be encouraged in school since it has the capacity of stimulating the two senses of hearing and vision.
3. Fieldtrips and Video technology Instructional strategies could be used together by teachers since the finding from this study showed that they could be combined and impact positively on the academic performance of students.
4. Managements of our social, economic and political environments should endeavour to make their facilities available for schools which seek to bring their students for fieldtrip visits.

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