

EFFECTS OF AUDIO-VISUAL INSTRUCTIONAL RESOURCES ON ACADEMIC PERFORMANCE OF UPPER BASIC STUDENTS IN ZARIA EDUCATION ZONE, KADUNA STATE, NIGERIA

BY

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Abstract

The study is titled Effects of Audio-Visual Instructional Resources on Academic Performance of Upper Basic Students in Zaria Education Zone, Kaduna State, Nigeria. The study was guided by two null hypotheses. The design of the study was the non-equivalent pre-test and posttest comparison group. The population of the study consisted of 26322 JSS students in Zaria Education Zone, Kaduna State, Nigeria. The study purposively used 120 JSSIII students from GJSS, Aminu and GJSS Tudun-Jukun, Zaria as experimental and control groups respectively. This study used teacher-made test known as 'Social Studies Achievement Test (SOSSAT) as data collection instrument. The instrument was duly validated by experts and has reliability coefficient of 0.87 obtained using Guttman split half method. The arithmetic mean and standard deviation were used to answer the questions by the study while independent sample t-test statistic was used to test the study's null hypotheses at 0.05 alpha. The researchers found that JSS III students taught with lecture technique supplemented by audio-visuals out-performed their counterparts taught with lecture technique only and that lecture technique aided by television (audio-visual) has shown to be gender friendly. In the light of the findings it is recommended among others the need for Social Studies teachers to use audio-visual aids in their classrooms for their students for optimum academic performance.

Keywords: Academic performance, Audio-Visual, Resources and Social Studies

Introduction

Instructional materials and resources are indispensable ingredients in promoting effective transaction and communication between teacher and students in Social Studies classroom. Effective teaching of Social Studies will not only stimulates students' interest in the subject but also enhance their achievement in the examination. To achieve effective teaching and learning process in Social Studies, there is the need for use of relevant instructional materials and resources. Audio-visual resources are instructional materials that appeal to the senses of sound and sight. They assist the teacher to teach and help students to learn effectively. Audio-visual resources form a very important part of the method of teaching in our secondary schools. In the light of the foregoing, Kochhar (2004), observes that the most outstanding development in modern education is the increase in the use of supplementary devices by which the teacher through the use of one sensory channel helps to clarify, establish and correlate accuracy, concepts, interpretation and appreciation, increase knowledge, rouses interest and even evokes worthy emotions and enriches the imagination of students. In this regard, (Dale 1996) and Fillmore, (2008) recommend that in education we should appeal to mind chiefly through the visual and auditory sense organs since it is possible that 85% of our learning is absorbed through these senses.

Social Studies in school curriculum should help students at all levels to develop the ability to adapt to the ever changing environment. Falade (2007) assert that social studies enable man learn about the problems of survival in their environment. He argues further that it enable man to be a functional member of the society and useful to

himself or herself as well as community at large. Adelekan (2010) stated that several measures have been recommended to improve student's attitude and academic achievement in secondary school subject. Among the measures recommended are appropriate use of teaching methods, instructional media (audio-visual aids) and resources. Also, Oyedeji (2002) stressed that research has proved the facilitative potentials of instructional media in enhancing students' academic achievement and also enriching classroom instruction. In spite of the audible objectives and benefit of social studies in the school curriculum, the teaching of the subject is characterized with conventional method of teaching which always lead to ineffective learning and negative attitude of students toward the subject which leads to poor academic performance. Studies have shown the facilitative effects of instructional audio-visual media in learning, but most of these studies are in other school subject apart from social studies. In the light of the foregoing, this study examined the effects of audio-visual resources on academic performance of upper basic students in Zaria Education Zone, Kaduna State, Nigeria.

Objectives of the Study

The main objective of this study was to examine the effects of audio-visual instructional resources on academic performance of upper basic students in Zaria Education Zone, Kaduna State, Nigeria.

Research Hypotheses

Based on the research questions posed, the following null hypotheses were formulated and tested at 0.05 level of significance:

H₀₁: There is no significant difference between the mean academic performance scores of junior secondary school students taught using lecture technique aided by television and those taught through lecture technique alone;

H₀₂: There is no significant difference between the mean academic performance scores of male and female junior secondary school students taught using lecture technique aided by television.

Methodology

This study employed the non-equivalent pre-test and post-test comparison group design. The population of the study consists of junior secondary school students numbering 26322. The study utilized purposive sampling technique to choose the participating schools for the Quasi-experiment. Purposive sampling opines is a form of non-probability sampling in which decisions concerning the individuals to be included in the sample are taken by the researcher, based upon a variety of criteria which may include specialist knowledge of the research issue, or capacity and willingness to participate in the research. However, Olayiwola (2007) stated that 30 participants for each group (treatment and control) are considered adequate for this kind of study. It is based on Olayiwola's suggestions that this study utilized 120 Upper-Basic students; 60 students as experimental group and the other 60 as comparison group respectively. Therefore, GJSS, Aminu was utilized as experimental group while GJSS Tudun-Jukun, was used as comparison group.

This study utilized teacher-made test known as 'Social Studies Achievement Test (SOSSAT) as data collection instrument. The data for the study was the scores of the teacher made-test obtained from the pre-test and post-test administered on the control and experimental. The study's research questions were answered using mean and standard deviation. However the independent samples t-test was used to analyse the null hypotheses at 0.05 level of significance.

Results

Test of Null Hypotheses

H₀₁: There is no significant difference between the mean academic performance scores of junior secondary school students taught using lecture technique aided by television and those taught using lecture technique alone;

Table 1: Summary of Independent t-test samples Statistics on Hypothesis One

Groups	N	Mean	std.dev	Df	t-cal	t-Crit	Sig (p)
Experimental	60	29.25	8.57	118	8.71	1.96	0.00
Control	60	18.02	5.14				

Calculated p < 0.05, calculated t > 1.96 at Df 118

Results of the Independent t-test samples statistics in Table 1 reveals that significant difference exist between the mean academic performance scores of junior secondary school students taught using lecture technique aided by television and those taught using lecture technique only. This was due to the fact that the calculated significance (p) value of 0.00 was found to be lower than the 0.05 alpha level of significance while the calculated t value of 8.71 was higher than the 1.96 critical t value at Df 118. Their computed mean academic performance scores were 29.25 and 18.02 for experimental and control groups respectively. This indicates that students taught using lecture technique aided by television had significantly higher mean academic performance scores than those taught using lecture technique only. Therefore, the null hypothesis was rejected.

H0₂: There is no significant difference between the mean academic performance scores of male and female junior secondary school students taught using lecture technique aided by television.

Table 2: Summary of Independent t-test sample Statistics on Hypothesis Two

Gender	N	Mean	Std. Dev	Df	t-cal	t-crit	Sig (p)
Male	30	30.27	8.26	58	.92	1.96	0.36
Female	30	28.23	8.89				

Calculated p > 0.05, calculated t < 1.96 at Df 58

Detail of the independent sample t-test statistics in Table 2 reveals that there was no significant difference between the mean academic performance scores of male and female junior secondary school students taught using lecture technique aided by television. Reason being that the calculated significance (p) value of 0.36 was higher than the 0.05 alpha level of significance while the calculated t value of 0.92 was lower than the 1.96 critical t values at Df 58. Their computed mean academic performance scores were 30.27 and 28.23 for male and female students respectively. This indicates that gender does not significantly affects the mean academic performance scores of junior secondary school students when taught using lecture technique aided by television. Consequently, the null hypothesis was retained.

Discussions

The findings from the study indicate that students taught using lecture technique aided by television outperformed those taught using lecture technique only and that gender does not significantly affects the mean academic performance scores of junior secondary school students when taught using lecture technique aided by television. The findings of this study corroborate those of Kozma (1991); Wetzel, Radtke & Stern (1994); Mitchell & Surprise (1994); Okwo (1994); Le Doux (1997); Olagunju (2000); Osokoya (2007); Money, Appiah, & Wilmot (2010); Oladajo, Olosunde, Ojebisi, & Isola (2011); Owusu, Nwike and Onyejebu (2013); Quarcoo-nelson, Buabeng & Osafo (2012); Salihu, Abdullahi, Alfa, & Muhammed (2015). For instance, Le Doux (1997) found that students learn better when audio-visual aids are used in the instructional segment to give reality to abstract thinking thereby making them more concrete. In the same vein, Wetzel, Radtke & Stern (1994) found that adding sound to still pictures results in greater learning than merely adding motion. That is, the combination of sound and either still or moving images is more effective than just making still images move. Similarly, Kozma (1991) found that television’s combination of multiple symbol systems — that is, its mix of spoken language, text, still images, and moving images yields greater learning gains than media that rely primarily on one symbol system. Moreover, Olagunju (2000) found that there was a remarkable difference in the achievement scores of students taught with various instructional materials and those not exposed to use of instructional materials.

Similarly, Nwike and Onyejebu (2013) in their related study found that students taught with instructional materials performed better than those taught without instructional materials and that there was no significant

difference in the mean achievement scores of male and female students. Implying that the use of instructional materials is gender-friendly as found by the current study. In a related development, Salihu, Abdullahi, Alfa, & Muhammed (2015) also found that junior secondary school students who were taught using interactive multimedia instruction (IMI) outperformed those who were taught using conventional lecture method (CLM) and that the use of interactive multimedia instruction (IMI) was found to be gender-friendly. Furthermore, Quarcoo-nelson, Buabeng and Osafo (2012) study shows that SHS students taught with audio-visual aided instruction performed better than those taught with traditional method and that the mean achievement scores of both male and female students improved significantly by the use of the audio-visual aided instruction.

Conclusion

In the light of the foregoing, it is concluded that: the use of audio-visual resources during Social Studies instructional delivery in junior secondary schools in Zaria Education Zone, Kaduna State, Nigeria enhances students' academic performance and that the use audio-visuals resources during Social Studies instructional delivery is gender-friendly.

Recommendations

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

- i. Social Studies teachers should be encouraged to use audio-visual resources during Social Studies instructional delivery as they enhance students' academic performance in junior secondary schools in Zaria Education Zone, Kaduna State,
- ii. The use of audio-visual resources should be encouraged in co-educational settings as they were found to be gender-friendly.

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