



AUDIO ANIMATION INSTRUCTIONAL MEDIA: PANACEA TO SECONDARY SCHOOL STUDENTS' SOCIAL STUDIES TEST ANXIETY IN ENUGU STATE

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Abstract

This study was aimed at finding out the effects of audio animation instructional media on secondary school students' test anxiety in social studies in Enugu state. It was a quasi-experimental study, pretest-posttest, non-equivalent control group design was used. Two research questions and three hypotheses guided the study. The area covered in this study was Enugu State. A sample of 489 secondary school students was used in the study. The sample was made up of (245) students in audio animation class and (244) students in the non-animated class. Social Studies Test Anxiety Scale(SSTAS) was used for data collection. SSTAS was developed by the researcher. It was made up of 24 items (12 positively directed and 12 negatively directed items). SSTAS was validated by three research experts. A reliability coefficient of .83 was obtained for the instrument using Cronbach's Alpha method. Research questions were answered using mean statistics and standard deviation. Test of hypotheses was done with Analysis of Covariance (ANCOVA) at .05 level of significance. Major findings of the study revealed that Audio Animation Instructional Media could serve as panacea to secondary school students' social studies test anxiety in Enugu state because secondary school students showed lower social studies test-anxiety when taught with audio animation instructional media than their counterparts taught with non-animated instructional media in Enugu state. Also, secondary school students' test-anxiety in social studies when taught with audio animation instructional media in Enugu state do not depend on their gender. It was recommended among other things that audio animation instructional media should be used in teaching social studies in secondary schools.

Keywords:

Introduction

Animation refers to the art of making inanimate objects appear to move. According to Kim (2016) animation is the rapid display of a sequence of images of two dimensional (2-D) or three dimensional (3-D) artwork or model positions to create an illusion of movement. The effect is an optical illusion of motion due to the phenomenon of persistence of vision and can be created and demonstrated in several ways. Computer animation therefore involves generating animated images by using computer graphics. Stone (2017) added that computer animation is essentially a digital successor to the stop motion techniques used in traditional animation with 3-D models, and frame-by-frame animation of 2-D illustrations. Audio animations are animations with audible sounds. Stone classified audio animations into two



namely; programmed audio animations and repetitive audio animations. Programmed audio animations refer to animations already programmed to read aloud or say what has been recorded as directed by the user. Repetitive audio animations are those programmed to repeat or echo whatever the user says, (Stone, 2017). As an instructional media, the repetitive audio animation will assist the teacher inculcate into the learners the intended lessons.

Unfortunately, research evidences such as Buckie (2016) and Kennedy (2019) reported that audio animation instructional media distracted secondary school students and could not minimize their test anxiety in social studies. Conversely, Natshi (2016) and Ferdinand (2017) reported that audio animation instructional media reduced secondary school students test anxiety in social studies significantly. There is therefore need to carry out more investigations so as to fill the gap of no definitive conclusion on this issue. This study therefore became necessary as it attempted to find out the effects of audio animations instructional media on secondary school students' test anxiety in social studies in Enugu state.

According to Mbu (2012) social studies is an area of school curriculum designed specifically for the study of man and how his problems are solved. Mbu argued further that social studies is not geography; it is neither history nor government. It is not economics; it is not an amalgam of the social sciences rather social studies borrows ideas from all social science subjects to understand, analyze and react to situations. Social studies deals with how man can fit into the society by utilizing the necessary attitudes, values and skills. Social studies focuses on the use of critical and reflective thinking to solve man's problems. Njor (2013) advised that it is very necessary to include social studies in the school curriculum because of its general importance in the development of citizens. This according to Njor is because social studies is concerned with the development of skills with which man equips himself in solving problems in a rational manner. It also promotes the ability to think creatively and productively. Social studies by its nature caters for the training or teaching of concepts dealing, with citizenship education in schools.

Through citizenship education, a good citizen, expected to play his role for effective participation in the development of the society is made. Ika (2013) submitted that it is only innovative subjects such as social studies that can cater for the complexity and diversity of the Nigerian society with over 300 ethnic groups, multi-religious groups and over 180 million people. Social studies serve as a tool for fostering unity in diversity. Through social studies, students learn to be tolerant. As students are exposed to the learning of people far and near, they appreciate other people's cultures. This helps in minimizing the negative



feelings, misconceptions and prejudices about other people. Unfortunately, research evidences have reported an alarming social studies test anxiety among secondary school students. More worrisome are conflicting findings on influence of gender on secondary school students' social studies test anxiety when taught with audio animation instructional media and non-animated instructional media. These gaps form the major challenges addressed by this study.

Purpose of the Study

The purpose of this study was to find out the effects of audio animations instructional media on secondary school students' test anxiety in social studies in Enugu state. Specifically, the study sought to compare:

- i. the mean social studies test anxiety scores of secondary school students taught with audio animation instructional media and their counterparts taught with non-animated instructional media in Enugu state
- ii. the mean social studies test anxiety scores of male and female secondary school students taught with audio animation instructional media in Enugu state

Research Questions

The following research questions guided the study.

1. What are the mean social studies test anxiety scores of secondary school students taught with audio animation instructional media and their counterparts taught with non-animated instructional media in Enugu state?
2. What are the mean social studies test anxiety scores of male and female secondary school students taught with audio animation instructional media in Enugu state?

Hypotheses

The following hypotheses were tested at .05 level of significance;

1. There is no significant difference between the mean social studies test anxiety scores of secondary school students taught with audio animation instructional media and their counterparts taught with non-animated instructional media in Enugu state.
2. There is no significant difference between the mean social studies test anxiety scores of male and female secondary school students taught with audio animation instructional media in Enugu state.
3. There is no significant interaction between instructional media and students' gender on secondary school students' mean social studies test anxiety scores in Enugu state.

Methodology

Research Design

The research design adopted in the conduct of this investigation was quasi-experimental design. Specifically, the design was a pretest –posttest, non-equivalent control group design. The area covered in this study was Enugu State consisting of six education zones spread across the 17 Local Government Areas. The population for the study consisted of all the 72,109 secondary school students in Enugu zone as at the time of this study. A sample of 489 secondary school students was used in the study. The sample was made up of (245) students in audio animation class and (244) students in the non-animated class. This sample was obtained from twelve intact classes randomly drawn from six schools (one from each Education zone in Enugu state). Social Studies Test Anxiety Scale(SSTAS) was used for data collection. SSTAS was developed by the researcher. It was made up of 24 items (12 positively directed and 12 negatively directed items). SSTAS was validated by three research experts. After necessary corrections as directed by the experts, SSTAS was confirmed to be valid. Since the items of SSTAS were not dichotomously scored, Cronbach's' Alpha Method was used to determine the reliability. A reliability coefficient of .83 was obtained for the instrument. Research questions were answered using means statistics and standard deviation. Test of hypotheses was done with Analysis of Covariance (ANCOVA) at .05 level of significance.

Results

Research Question 1

What are the mean social studies test anxiety scores of secondary school students taught with audio animation instructional media and their counterparts taught with non-animated instructional media in Enugu state?

Table 1: Mean social studies test-anxiety scores and standard deviation of secondary school students in pretest and posttest.

Group	n	Pretest		Posttest	
		Mean	SD	Mean	SD
Audio Animation Class	245	61.40	2.63	19.31	0.01
Non-animated class	244	60.95	3.06	42.21	1.07

From table 1, the pretest mean social studies test-anxiety score and standard deviation of audio animation class were 61.40 and 2.63 respectively. In the posttest, their scores were 19.31 and 0.01 for mean social studies test-anxiety score and standard deviation respectively. For the non-animated class, the pretest mean social studies test-anxiety score and standard deviation were 60.95 and 3.06 respectively while their posttest scores were 42.21 and 1.07 for mean social studies test-anxiety score and standard deviation

respectively. There was not much difference (0.45) between the two groups in the pretest but there was an appreciable difference (-22.90) in the posttest. The audio animation class showed lower test-anxiety than their counterparts (non-animated class). The standard deviation values for both groups in the posttest were small indicating that the values actually represented their posttest mean social studies test-anxiety scores. Thus, audio animation seemed to have minimize the students' test anxiety.

Research Question 2

What are the mean social studies test anxiety scores of male and female secondary school students taught with audio animation instructional media in Enugu state?

Table 2: Mean social studies test-anxiety scores of male and female secondary school students in pretest and posttest.

Group	n	Pretest		Posttest	
		Mean	SD	Mean	SD
Male (Audio Animation Class)	114	61.50	2.71	19.11	0.11
Female (Audio Animation Class)	131	61.30	2.44	19.51	0.09

From table 2 above the posttest mean social studies test-anxiety score of the male students taught with audio animation instructional media was 19.11 while that of their female counterparts was 19.51. These results suggest that male and female students taught with audio animation instructional media seemed not to have differed much in their mean social studies test-anxiety scores. Hence, gender seemed not to have influenced the test anxiety scores of the students.

Hypothesis 1

There is no significant difference between the mean social studies test anxiety scores of secondary school students taught with audio animation instructional media and their counterparts taught with non-animated instructional media in Enugu state.

Hypothesis 2

There is no significant difference between the mean social studies test anxiety scores of male and female secondary school students taught with audio animation instructional media in Enugu state.

Hypothesis 3

There is no significant interaction between instructional media and students' gender on secondary school students' mean social studies test anxiety scores in Enugu state.

Table 3: ANCOVA analyses of the students’ mean social studies test-anxiety scores.

Source	Type III sum of squares	DF	Mean Square	F	Sig.	Decision
Corrected Model	10.101	3	3.367	6.055	.000	Significant (Reject Hypothesis) Not Significant (Do not Reject Hypothesis) Not Significant (Do not Reject Hypothesis)
Intercept	2901.003	1	2901.003	5217.631	.000	
Instructional media	8.711	1	8.711	15.667	.000	
Gender	0.504	1	0.504	0.906	3.001	
Instructional media *Gender	0.392	1	0.392	0.705	4.133	
Error	268.111	482	0.556			
Total	3188.822	489				

Table 3 shows ANCOVA analyses of the students’ mean social studies test-anxiety scores. For instructional media, the f-calculated value of 15.667 is significant at .000 significant level which is less than 0.05 level set for this study. Hence, instructional media had significant effect in the study. Consequently, hypothesis 1 is rejected as stated because there was significant difference between the mean social studies test anxiety scores of secondary school students taught with audio animation instructional media and their counterparts taught with non-animated instructional media in Enugu state. For Gender (male/female), the f-calculated value of 0.906 is significant at 3.001 significant level which is higher than 0.05 level set for this study. Hence, gender had no significant effect on students’ mean social studies test-anxiety scores in this study. Consequently, hypothesis 2 is not rejected as stated because there was no significant difference between the mean social studies test anxiety scores of male and female secondary school students taught with audio animation instructional media in Enugu state. For interaction effect (Instructional media*Gender), the f-calculated value of 0.705 is significant at 4.133 which is higher than 0.05 level of significance set for this research. Thus, interaction effect is not significant i.e. there was no significant interaction between instructional media and students’ gender on secondary school students’ mean social studies test anxiety scores in Enugu state. Hypothesis 3 is therefore not rejected as stated.

Summary of Findings

From the results presented above, findings of this study can be summarized thus:

1. Secondary school students taught with audio animation instructional media exhibited lower social studies test-anxiety than their counterparts taught with non-animated

instructional media in Enugu state, thus, audio animation minimized the students' test anxiety significantly.

2. Students gender did not significantly influence their mean social studies test-anxiety when taught with audio animation instructional media, hence, audio animation instructional media is gender friendly.
3. There was no significant interaction between instructional media and gender on secondary school students' mean social studies test anxiety scores in the study.

Discussion of Findings

Research question one sought to ascertain the mean social studies test anxiety scores of secondary school students taught with audio animation instructional media and their counterparts taught with non-animated instructional media in Enugu state. Hypothesis one sought to find out the significance of the difference between the mean social studies test anxiety scores of secondary school students taught with audio animation instructional media and their counterparts taught with non-animated instructional media in Enugu state. Findings of this study revealed that secondary school students taught with audio animation instructional media showed lower social studies test-anxiety than their counterparts taught with non-animated instructional media in Enugu state, thus, audio animation minimized the students' test anxiety significantly. Anxiety is the state of tension and apprehension, i.e. a response to perceived threat. Usually, anxiety occur as a diffuse, vague, very unpleasant feeling of fear and apprehension. Anxiety maybe initiated by internal feelings as a response to a perceived threat. Test-anxiety therefore is a feeling of uneasiness or nervousness brought about by evaluative or testing situation. Test-anxiety is capable of inhibiting students' achievement. This is because when the students (testees) have tension and apprehension or a perceived threat about the test items or test mode or test situations, it is likely that their best will not be shown. The findings of this study is therefore encouraging as it revealed audio animation instructional media reduces test-anxiety.

Research question two sought to determine the mean social studies test anxiety scores of male and female secondary school students taught with audio animation instructional media in Enugu state. Hypothesis two tested for significance in the difference between the mean social studies test anxiety scores of male and female secondary school students taught with audio animation instructional media in Enugu state. In this regard, it was found in this study that students gender did not significantly influence their mean social studies test-anxiety when taught with audio animation instructional media, hence, audio animation instructional media is gender friendly. According to Okeke (2013) gender or sex refers to those characteristics of males and females which are biologically determined such as possession of the male and female reproductive genital organs. Akan (2012) alleged that



in schools, males are more likely to take perceived difficult subjects, while the females take to careers that will not conflict with their marriage chances, marriage responsibilities and motherhood. This, according to Akan, should not be so because both male and female students are highly talented and naturally endowed. Gender should not constitute a hindrance to anybody's development. If audio animation instructional media has proved to be gender friendly as shown in this work, other variables needed to excel in schools can also be gender friendly. We therefore conclude that the differences found in this study with regard to student test-anxiety had nothing to do with the students' gender rather the differences were influenced by the instructional media used to teach the students.

Conclusions

Based on the findings of this study, the following conclusions were made;

1. Secondary school students showed lower social studies test-anxiety when taught with audio animation instructional media than their counterparts taught with non-animated instructional media in Enugu state. Thus, audio animation instructional media could serve as panacea to secondary school students' social studies test anxiety in Enugu state.
2. Secondary school students' test-anxiety in social studies when taught with audio animation instructional media in Enugu state do not depend on their gender.

Recommendations

Consequent upon the findings of this study, the following recommendations were deemed necessary;

1. Audio animation instructional media should be used in teaching social studies in secondary schools.
2. Social studies teachers should be trained through intensive seminars, workshops and in-service trainings on the use of audio animation instructional media.

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