

Test Anxiety and Students Learning Outcomes in Upper Basic Social Studies

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Abstract

This study examined test anxiety and Social Studies students' learning outcomes in upper basic schools using 380 students as the sample. The study examined whether test anxiety correlates with students' learning outcomes. Besides, it looked at the correlation between gender and students' learning outcomes. The ex-post facto research design was adopted. Two research instruments of a questionnaire and students' test scores were employed for data collection. Regression was applied for data analysis. The results revealed a significant correlation between test anxiety and students' learning outcomes; showed no significant correlation between gender and students' learning outcome. Understanding the significance of variables examined, male and female students studying Social Studies should be encouraged for full participation, utilisation and development of their potentials.

Keywords

Test Anxiety; Gender; Social Studies; Social Studies Students; Students' Learning Outcomes; Upper Basic Education.

Introduction

Education has highly campaigned as a tool for bringing about peace awareness in individuals, inculcating in students' values, outlook and attitudes required for global contribution; secular and democratic culture propagation and strengthening social justice, etc. One of the subjects in schools' curriculum that can assist in these aspects is Social Studies. Social Studies is a subject and discipline of study that focuses on human beings—man's development, growth and behaviour, interactions, resources used and the numerous institutions required to function efficiently and effectively in society in which he belongs. Social Studies is planned to produce and develop citizens that are responsible, intelligent and self-directed. Citizens who are expected to positively exploit opportunities to create their skills and potentials and put in their maximum effort to advance group living within the nation's social structure (Okam & Chukwu, 2005).

However, it is common knowledge that despite the relevance of Social Studies to the advancement of human society, still present, is a low level of performance in internal and external examinations such as Basic Education Certificate examination in social studies (Okobia, 2012; Dania, 2014). The record made available by Basic and Secondary Education Ministry Examinations Department (2018) in Delta State, shows that out

of the 76,112 registered candidates in 2016; 77,295 in 2017; 47,190 and 48,373 respectively were asked to re-sit Social Studies. Over the years, this depressing situation informed so many research efforts that have been directed towards identifying the factors responsible for the repeated failures and what steps are to be made to improve the situation. Studies revealed that several variables interact to influence students' learning outcome. Among others, these variables include socio-economic status, school environment, poor teaching strategies, gender, and test anxiety. Of all the factors, two are of concern in the study. These are test anxiety and gender of students.

Gender of students is one of the furthestmost cited factors with considerable effects on students' learning outcome. Udousoro (2011) posits that gender is a cultural and societal construct that differentiates females and males' roles, mental, behaviour, and emotional features by society. Okeke (2008) asserted that gender is socio-culturally fashioned qualities and responsibilities attributed to females and males. For Okeke (2008) boys or males, characteristics are economical usage of words, boldness, aggressiveness, tactfulness, while the females or girls are submissive, gentle, talkative, fearful, and timid. For this reason, Umoh (2003) opined that boys take on challenging tasks or works earmarked for them, while girls are seen as womanly and take on less complex tasks in a traditional setting. Thus,

boys are likely or probable to offer school subjects seen as complex, such as Science subjects, the girls, alternatively, fancy careers or professions that are less incompatible with marriage opportunities, motherhood and task.

Gender responsibilities and role differences are heartened in most textbooks pictorial and graphic drawings and illustrations that habitually depict males as lawyers, medical doctors, engineers. Similarly, the females are portrayed as mothers, teachers, cooks, nurses, etc., this generates a mental image in the readers' mind of the societal expected roles (Babayide, 2010). Fabunmi (2004), established that gender composition influence students' performance. Alongside this, inconsistent research reports have been found on gender disparity and students' learning outcomes (Yaki, 2006; Olowe, 2010; Dania, 2014). These demonstrate that the issue of gender in Social Studies is unresolved. Thus, the necessity for more study is essential.

One more factor that influences individuals satisfactory or unsatisfactory learning outcome is test anxiety. Since Western education in Nigeria, an examination has been one of the powerful instruments adopted to test or evaluate students' learning outcome. Irrespective of gender, students undertake several evaluation process and tests in the course of their study. All the outcomes or result of such tests are vital for decisions making about students, educational process and programmes as well as ascertaining grade level promotions, the levels of curriculum implementation, mastery, graduation, honours, and so on (Yousefi, Mansor, Mansor, Juhari & Marof, 2020). Perhaps due to pressure to perform and have positive learning outcomes, students in most cases experience intense anxiety and tension during tests. Therefore, test anxiety has become a persistent problem and poser over the years (Lawson, 2006).

Test anxiety is a condition of uneasiness, apprehension or uncertainty about the imminent and incessant evaluation of programme, examination/test (Okorodudu & Ossai, 2014). Ojediran and Oludipe, (2016) stated that test anxiety is essentially a form of learning outcome anxiety- a feeling or emotion one might have in a

state where achievement matters counts or when there is pressure to perform. Test anxiety is typified by panic, nervousness, and pondering thoughts of possible failure or unsatisfactory learning outcomes or performance experienced in an examination situation. As stated by Eysenck (2012), test anxiety might incinerate cognitive creativity, thus distracting students examination attentiveness. For Linnenbrink (2007), anxiety may well affect students' interest and motivation and hinder efficient instructional strategies.

The preceding discussion demonstrated that the issue of gender and test anxiety are related to students' performance. Upon this premise, the present study looked into the association between test anxiety, students gender, and their performance in Social Studies.

The problem of Learning Outcome

Social Studies as a subject is faced with numerous challenges that can hinder the full attainment and implementation of its objectives. One of such challenges is the continuous decline in students' learning outcome in the subject. The unsatisfactory learning outcomes in Social Studies were demonstrated by many students re-seating. The lowest percentage pass at the Basic Education Certificate Examination (BECE) for the previous three years (2015-2017). Records show that for the past three academic sessions (2015-2017) out of the 76,112 registered candidates in 2016; 77,295 in 2017; 47190 and 48373 respectively were asked to re-seat Social Studies (Ministry of Basic and Secondary Education Examinations Department, 2018). There are always differences in students' learning outcomes in the same class, even when taught by the same teacher. This implies that the rate of performance varies due to certain factors like gender and test anxiety. Thus, gaps or disparities in students' learning outcomes may exist based on the influences of these two variables – gender and test anxiety.

Research Questions

The following research questions guided the study:

1. What is the correlation between test anxiety and students learning outcomes in Social Studies?
2. What is the correlation between gender and students learning outcomes in Social Studies?
3. What is the correlation among test anxiety, gender and students learning outcomes in Social Studies?

Hypotheses

These hypotheses were tested.

1. There is no statistically significant correlation between test anxiety and students learning outcomes in social studies.
2. There is no statistically significant correlation between gender and students learning outcomes in Social Studies?
3. There is no statistically significant correlation among test anxiety, gender, and students learning outcomes in Social Studies.

Literature Review

Theoretical Framework

The theory adopted for this study is the psychoanalytic theory Sigmund Freud propounded in the late 19th century. Freud's psychoanalytic theory of anxiety states that the significant determinants of anxiety or pressure disorder such as test anxiety are internal conflicts and unconscious motives. According to the theory, anxiety results from conflicts involving the id, ego, super-ego and the environment. Since Freud's initial explanation of anxiety neurosis in 1894, the study of anxiety has evolved, and research has uncovered various types of anxiety. Test anxiety crops up when there is a worry or fear of suffering or a reduction of the self-image, particularly among peers. The psychoanalytic theory is relevant to this study because it sees test anxiety like that which originates from the threatening of impulses and ego defences mechanism. Test anxiety takes place when the ego is overwhelmed and explodes into action. The theory of anxiety believed that the victims of test anxiety burden themselves with task-irrelevant cognitions.

Concept of Test Anxiety

The word test anxiety, which is also termed as "examination anxiety" in research literature, is a state of uneasiness, worry or feeling of uncertainty about an impending or ongoing curriculum evaluation. Test anxiety has been viewed as a general problem among students. It refers to a situation where students lack the needed confidence in their abilities and skills, reflected mainly in their learning outcome or test results (Mohammed, Halilu & Muhammadi, 2017). Chapell, Blanding, Takahashi, Silverstein, Newman, Gubi and McCann (2015) posit that test anxiety is a multi-dimensional phenomenon that involves worry, emotionality, and behavioural that is being preoccupied with the possible negative outcome of test scores. Thus, test anxiety serves as stress, tension and strain that interfere with the proper functioning of an individual's body and mind during the test.

Test anxiety is encountered before, during, or after a test and is commonly attributed to concern, worry, or fear. Test anxiety can lead to tension and headache. Some people feel shaky, sweaty, or feel quick heartbeat as they wait for the test to be given (Lawson, 2006). Test anxiety is different from poor or unsatisfactory learning outcome on a particular test, for the individual's mind is distracted from the test. Most students acknowledge that been distracted by other things such as a death of loved one, disappointment, fear of failure, and so on, interfere with their level of concentration and prevent them from performing well (Oludipe, 2009).

Meichenbaur and Butler (2005) supported a similar conceptualisation of test anxiety (worry and emotionality). They expanded on possible contributing factors such as the nature of the test anxious student's internal dialogue. They proposed that the test anxious person's inner dialogue is self-oriented rather than task-oriented, malicious in nature, and self-escalating. Carrie (2009) believed that test anxiety surfaces for some elementary school students when their parents begin to make unrealistic demands or high expectations of learning outcome from them.

Test Anxiety and Students Learning Outcome

Copious explanations have been offered to clarify the correlation or link between test anxiety and

students learning outcomes. Some authors suggest that test anxiety may consume cognitive resources, thus preventing students from concentrating on the test (Eysenck, 2012). Test anxiety is a feeling of worry and tension, negative thoughts, and it occurs before or during the test. Test or examination conditions generate a sense of threat and fear for students experiencing test anxiety. This sense of threat and fear disrupts one's attention as well as memory function. Test anxiety has been shown to have a consistently negative association with test performance and test anxious students are found to perform about 12 percent below their nonanxious peers (Sansgiry & Sail, 2006).

Result of study by Nadeem, Ali, Maqbool, and Zaidi (2012) revealed a negative association between anxiety and students learning outcomes. Sridevi (2013) reported a negative and low correlation between anxiety and students learning outcomes. In their study, Vig and Asha (2013) noted that test anxiety has an adverse influence on students learning outcomes. Mattoo and Nabi (2012) indicated that test anxiety is a major obstacle to academic achievement. They emphasised that educational stakeholders cannot ignore test anxiety if they are concerned about students learning outcomes. If not adequately addressed, there might be severe and long-lasting consequences namely; students procrastination, poor learning outcomes, and withdrawal from socialising with peers or other situations.

Eysenck (2012) established that test anxiety produces irrelevant and inappropriate thoughts, worry, and dwindled and disrupt concentration, resulting in academic challenges. When attention is hinder and impaired, one's memory is disrupted, leading to inadequate or unsatisfactory learning outcomes (Needham, 2016).

Gender and Students' Learning Outcome

The impact of students' gender on students' learning outcome has been controversial and inconclusive. Some researchers have reported that males are better than females in certain school subjects while girls are better than others. Even though researchers have demonstrated in their studies that significant do not exist between male

and female (boy and girl) students learning outcomes at any level or grade, a good number have identified gender differences (Yusuf, 2014). A common belief exist, that male students are disposed to better learning outcomes than their female counterparts. Idialu (2013) reported better male students learning outcomes in mathematics and other science subjects, while Ton (2003) found that females students outperformed males students in some other school subjects. Young and Fisher (2000) revealed that males are superior academically to females.

Agbir (2004) exhibited that gender was not a significant cause in students' overall mean learning outcomes. According to Ifeakor (2005), gender influenced students' cognitive performance in favour of boys. Pillow (2008) looked at the correlation between students' gender and learning outcomes. The study revealed a significant correction between students gender and students learning outcomes. More so, the studies by Lipe (2009) and Chinwuba and Osamuyimen (2011) also found no differences in gender and students learning outcomes.

Empirical Studies

There has been a wealth and bodies of literature on test anxiety and students learning outcomes. Ojediran and Oludipe (2016) studied test/examination anxiety and pre-service students' learning outcomes using 450 students participants. The result showed that the low test tension or anxiety students performed better than those with high test anxiety. Students gender was a significant factor in students learning outcomes. Okogu, Osah and Umudjere (2016) examined assessment anxiety and students learning outcomes. This study established that assessment anxiety negatively contributed to students learning outcomes. Mohammed, Halilu and Muhammadi (2017) investigated test anxiety and learning outcomes using 350 respondents. Results obtained discovered no gender and test anxiety effect on students learning outcomes.

Cassie (2012) explored the association or link between test anxiety and students learning outcomes. The study observed that students with

test anxiety problems had poor learning outcomes. Ossai (2012) examined test anxiety and students' learning outcomes in English Language using test Anxiety scale (TAS) as the study instrument. The study found that test anxiety affected students learning outcomes. Gender has significantly influenced students learning outcomes.

Participants

The study is a correlational study. The study sample involved 380 Upper Basic eight students (190 males and 190 females). The multi-stage sampling procedure was employed in selecting the study sample.

Instrument

Two instruments— a questionnaire and Test scores in Social Studies were utilised for data gathering. The questionnaire titled Student Test Anxiety Questionnaire (STAQ) was adopted from Charles D. Spielberger. The questionnaire was in two sections; Section A was designed to collect respondents' data such as the school name, number on the roll call, and students' gender, while section B consisted of 20 items statements that measured test anxiety level. The second instrument was a students' first term test scores in Social Studies.

Data Analysis

Regression was employed to analyse data gathered at 0.05 level of significance.

Results

Research Question One

What is the correlation between test anxiety and students learning outcomes in Social Studies?

Table 1: Analysis of Correlation of Test Anxiety and Students Learning Outcomes.

Variables	N	R
Test anxiety	380	
Learning Outcomes		-0.639

Table 1 summarised the Correlation Coefficient analysis of data relating to test anxiety and students' learning outcomes in Social Studies. The correlation results ($r=-0.639$) indicated a negative association between test anxiety and students learning outcomes. Thus, it infers that the association between test anxiety and students learning outcomes in Social Studies is negative.

Hypothesis One

There is no statistically significant correlation between test anxiety and students learning outcomes in Social Studies.

Table 2: Summary of Regression of test anxiety and Students' Learning Outcomes

Model	Sum of Squares	Df	Mean Square	Obs F-ratio	Critical F-ratio
Regression	15462.568	1	15462.568	260.812	3.84
1 Residual	22410.168	378	59.286		
Total	37872.737	379			

Table 2 further shows that the R-value in table 3 was significant. The observed f-ratio of 260.812 was greater compared to the critical f-ratio of 3.84. Thus, the null is rejected, meaning that a significant link or correlation subsists between test anxiety and students' learning outcomes in Social Studies.

Research Question Two

What is the correlation between gender and students' learning outcomes in Social Studies?

Table 3: Correlation between Gender and Students' Learning Outcomes

Variables	R	R Square	% R Square	Adjusted R Square	Std. Error of the Estimate
Gender	0.072	0.005	0.5	0.003	9.98347
Learning Outcome					

Table 3 summarised the regression analysis of data. The regression results ($R=0.072$) indicated a positive correlation between gender and students learning outcomes. Thus, it is concluded that the correlation between gender and students learning outcomes is positive. The R-squared of 0.005 in Table 3 also indicated that gender only contributed about 0.5% to students' total variation in students' learning outcomes. The rest (99.5%) could be due to test anxiety other factors not included in the study.

Hypothesis Two

There is no statistically significant correlation between gender and students learning outcomes in Social Studies.

Table 4: Summary of Regression Analysis of gender and Students Learning Outcomes.

Model	Sum of Squares	df	Mean Square	Observed F-ratio	Critical F-ratio
Regression	197.568	1	197.568	1.982	3.84
Residual	37675.168	378	99.670		
Total	37872.737	379			

From Table 4, the F-ratio (1.982) is higher or more than the critical F-ratio (3.84) at the chosen significant level (0.05). Consequently, the null hypothesis was accepted. This implies that no significant correlation exists between gender and learning outcomes of students in Social Studies.

Research Question Three

What is the correlation among test anxiety, gender and students learning outcomes in social studies?

Table 5: Multiple Correlation of Test Anxiety, Gender and Students Learning Outcomes

Variables	N	R	Decision
Gender	380		Negative
Test anxiety		-0.696	Correlation
Learning Outcome			

Table 5 demonstrations that the multiple correlation coefficient (R= -0.696) between test anxiety, gender, and students' learning outcomes is negative. A value of R=-0.696 indicates an adequate level of negative prediction.

Hypothesis Three

There is no statistically significant correlation among test anxiety, gender, and students learning outcomes in Social Studies.

Table 6: Summary of Regression Analysis of Test Anxiety, Gender and Students Learning Outcomes.

Model	Sum of Squares	df	Mean Square	Obs F-ratio	Critical F-ratio
Regression	54638.606	2	27319.303	177.347	3.00
Residual	58074.752	377	154.044		
Total	112713.358	379			

The table further shows that the R-value was significant. The observed f-ratio of 177.347 is greater when compared to the critical f-ratio (3.00). Thus, the hypothesis is rejected in null

form, meaning significant correlation existed among test anxiety, gender and students learning outcomes in Social Studies.

To establish among the study independent variables that affected students learning outcomes most, a regression coefficient analysis was done as presented in table 7

Table 7: Regression Coefficient

Model	Unstandardised Co-efficient B	Std. Error	Standardised Co-efficient Beta	t	Sig.
(Constant)	66.776	2.285		29.218	0.000
Gender	0.285	1.274	0.008	0.224	0.823
Test anxiety	-0.601	.032	-0.696	18.831	0.000

a. Dependent Variable: Students learning outcome

From the results in table 7, the unstandardised coefficient indicates the extent to which the dependent variable (Students' learning outcomes) differs from the independent variable, while all other independent variables are held constant. Gender with a value of 0.285 unstandardised co-efficient and standardised coefficient value of 0.008 reported a no significant influence on students learning outcomes.

Test anxiety with a value of -0.601 of unstandardised co-efficient and standardised coefficient value of -0.691 was reported to influence students' learning outcomes significantly. This means that a one-unit increase in test anxiety would yield a 0.601-unit decrease in the predicted students learning outcomes. Similarly, for the standardised coefficient, a one standard deviation rise of test anxiety level would yield a 0.691 standard deviation reduction or decrease in students learning outcome.

Discussion

Result of hypothesis one revealed a correlation between test anxiety and learning outcomes of students' in Social Studies. The analysis that about 48.3% of the total variability in the students' learning outcomes could be due to the independent variable's influence (test anxiety). The study also discovered an increase in test anxiety level would yield a 0.601-unit decrease in

the predicted students' learning outcomes. This finding agrees with Khalid and Hasan (2009), Nicholson (2009), Ossai (2012), Cassie (2012), Ojedian and Oludipe (2016), Okogu, Osah and Umudjere (2016) and Yousefi, Mansor, Mansor, Juhari and Ma'rof (2020), who in their various studies observed that test/examination anxiety affect students learning outcomes. And that low or less test/examination anxiety have better learning outcomes and the other way round. The study finding is in contrast with Mohammed, Halilu and Muhammadi (2017) who reported no effect of test anxiety on students learning outcomes.

Analysis of hypothesis two revealed a no relationship or correlation between gender and students learning outcomes in Social Studies. The research indicated that gender only contributed about 0.5% to the total variation in students learning outcomes. This means that being a male or female has no significant influence on students learning outcomes in Social Studies. This conforms with Agbir (2004), Udousoro (2011) and Chinwuba and Osamuyimen (2011) which revealed that students gender does not correlate with students learning outcomes. The finding, however, disagreed with that of Pillow (2008).

Analysis of hypothesis three revealed a significant statistical negative correlation among test anxiety, gender and students learning outcomes in Social Studies. This finding agrees with Rezazadeh and Tavakoli (2009) who established negative relationship between test anxiety, gender and students learning outcomes.

Conclusions

Corresponding to the study's findings, in conclusion, negative correlation subsists between test anxiety and students' learning outcomes, which implies that an intensification in anxiety leads to unsatisfactory or decreased student learning outcomes. Thus, test anxiety has a bearing on students learning outcomes. It also demonstrated that correlation existed between students' gender and students learning outcomes. Explicitly, the gender of students does not influence students learning outcomes in Social Studies. This is an indication that the intellectual capabilities of females were the same as the

males. Disparities in males and females learning outcomes of earlier reports by most researchers might be due to other issues or influence like teachers non-usage of effective and innovative instructional methods. The study established test anxiety and gender, jointly predict students learning outcome in Social Studies.

Suggestions

- Parents and teachers should also encourage students to prepare effectively for any test so that they would be able to develop confidence in themselves, which may prevent test-related anxiety.
- Teachers should inform students effectively on content, test techniques and test format to decrease test/examination anxiety and improve their learning outcomes.
- Teachers and Counsellors should create enabling tension and extreme stress-free learning environment and condition to enable students to minimise test anxiety and pressure.

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