

## **GENDER INFLUENCES ON STUDY HABITS OF MATHEMATICS STUDENTS' ACHIEVEMENT**

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### **ABSTRACT**

This paper looked at the influence of Gender on the study Habits of students of mathematics. It is established that female student tend to have better study habits than their male counterparts. Therefore counseling strategies should be adopted to assist the male students to improve on their study habits.

**Keywords:** Gender Influence, Study Habits, Mathematics, Achievement.

### **INTRODUCTION**

Gender issues abound in all spheres of the society. The educational conditions of girl child vis-a-vis the boy child constitute an important gender issue. The cultural and traditional responsibilities of men and women are also different, hence the influence on the upbringing of the female child and male child. The concept of gender role classification involves a personality- trait –like categorization of a person and inequality of gender in some sex denominated subjects like Mathematics.

Learning outcomes of Mathematics education have become a phenomenon of interest to all and this account for the reason why scholars having been working hard to unraval factors that militate against good academic performance (Aremu & Sokan,2002). At the outset of an activity, students differ in learning as a function of their prior experiences, personal qualities and social support. The latter includes the extent that parents and teachers encourage them to learn, facilitate their access to resources necessary for learning, and teach them strategies that enhance skill acquisition and refinement (Ewumi, 2012)

Poiani (2002) noted that raising students Mathematics abilities required enhancing Mathematics performance by cultivating good study habits such as personal development skills of the learners. Fleming (2003) subsequently defined study habits as the regular tendencies and practices that are depicts during the process of gaining information through learning or the behaviors used when preparing for tests or learning academic material. Also Charles-Ogan and Alamina (2014) See study habits as a desired repetitive pattern of studying a subject. Good study habits therefore will make learners rational in thinking, curious, open-minded, objective, honest, humble and never suspicious, (Akporehwe & Onwioduokit, 2010). Study habits such as learning to listen, note-taking and test-taking enhance cognitive abilities which helps the student to perform better in a subject like Mathematics. Every student has his/her own way of studying. Some students prefer to study in a quiet atmosphere alone without any interference, while others prefer studying with peers, discussing and reviewing ideas together. This therefore shows that learning is a matter of personal habits (Charles-Ogan & Alamina 2014).

Gender involves the psychological and socio-cultural dimensions of being male or female (Ewumi, 2012). A gender role is a set of expectations that prescribes how females or males should think, act and feel. Ewumi (2012) noted the importance of personality in terms of traits and contexts rather than the personality traits alone. In this wise, adolescents' gender development is influenced by their observation and imitation of others gender behaviour, as well as by rewards and punishments of gender-appropriate and gender-inappropriate behaviour. Parents and siblings influences adolescents gender roles. Results of students on study habit as a function of gender have been very interesting and illuminating though findings have differed from one study to another.

In a study on Age and gender difference on study habit, Ossai (2012) found that female students are better in study habits such as time scheduling, concentration, listing, note-taking and reading. Although trends in international Mathematics and science study (TIMSS-2003) cited in Amatobi and Amatobi (2013) found no significant difference in the performance of boys and girls in Mathematics achievement, they however observed difference between boys and girls in terms of their attitude to the subject. Salami (2013) studied the impact of biological gender on study habits, found that females are generally shown to be more ethical such as frequency of attending lecturers and seeking academic assistance, missing class tests and assignments duration of study, adherence to timetable and note-taking and as such try to avoid negative consequences of behaviors such as cheating. In comparison to men, women's greater sense of duty and responsibility in the roles they occupy as study, daughter and friend may lead to a better understanding of the expectations placed on them and as such have better study habits than men (Salami, 2013).

According to David, Ball and Reay (2003) studied on gender issues in parental achievement in student choices higher Education found out that female students' relative to male students may develop and maintain closer relationship with their Professors which allow them to learn the study habits. Experience has shown that female student relative to male student tend to tend to develop the courage to seek academic assistance and even counseling from their Professors. This partly explains why cases of dropout and membership of secret cults is higher among the male students in Nigerian schools.

### **Statement of the Problem**

The current situation in Nigeria is that the performances in Mathematics at secondary school level has been generally poor but on the average girls tend to perform better than boys. This raises a serious concern since if the trend is unchecked it will undermine gender equity in Nigeria education system. Thus there is a need for all hands to be on deck to ensure that Mathematics achievement improves together with maintaining gender equity at all levels of Nigerian educational system. This study trends to investigate the gender influence on study habits of Mathematics students.

### **AIM AND OBJECTIVE OF STUDY**

The main aim and objective of the study is to investigate the gender influence on study habits of Mathematics students in Rivers State of Nigeria.

### **Research question**

Do study habits of mathematics students' differ on the basis of gender?

## Hypothesis

There is no significant difference in the study habits of the students on the basis of their gender.

## METHODOLOGY

The ex-post-facto descriptive survey design was used for this study. The population of the study consists of one thousand two hundred and forty-eight male and female students in senior secondary schools in Port Harcourt Local Government Area of Rivers State. A simple random selection of the schools were used for their study. The instrument for the study was student's study habit Assessment Scale (SSHAS) adopted from (Charles-Ogan, 2013) which was a structured Likert scale type questionnaire comprising of 9 items closed ended questions, as used for students self-rating exercise, in order to describe their study habit in Mathematics. The instrument was validated by two experts in Mathematics education and the reliability was calculated as 0.86 using kuder-Richardson 21 for the internal consistency of the items.

The data obtained from students responses were analyzed using the simple statistics while hypothesis was tested at 0.05 significant level using t-tests.

### Research Question 3

What are the study habits of Boys and Girls Mathematics?

Table 1.1: Study Habit of Boys and Girls

S/N	STUDY HABITS	BOYS 172 RESPONSE Frequencies			GIRLS 228 RESPONSE Frequencies						
		SA	A	D	SD	MEAN	SA	A	D	SD	MEAN
1.	I study mathematics even when I am very tired	40 (160)	50 (150)	50 (100)	37 (37)	2.57	60 (240)	58 (174)	63 (126)	47 (47)	2.57
2.	I study mathematics first by Deciding what area to study	38 (152)	34 (102)	68 (136)	32 (32)	2.50	56 (224)	54 (162)	65 (130)	53 (53)	2.50
3	I study mathematics for about 50 minutes and then take about ten minutes break before starting again	28 (112)	43 (129)	72 (144)	29 (29)	2.40	45 (180)	60 (180)	68 (136)	55 (55)	2.41
4.	I study mathematics always with textbook	30 (120)	48 (144)	61 (122)	33 (33)	2.44	41 (164)	78 (234)	56 (112)	53 (53)	2.47
5.	I study mathematics with a friend(s), quiz each other, compare notes and predict test question	27 (108)	50 (156)	61 (122)	34 (34)	2.41	40 (160)	60 (180)	75 (150)	53 (53)	2.40

6.	In solving a problem. I pay much attention to details	29 (116)	30 (90)	58 (116)	55 (55)	2.19	39 (156)	45 (135)	50 (100)	94 (94)	2.13
7.	I study mathematics for a very long period without regard to my time table	24 (96)	28 (84)	64 (128)	56 (56)	2.12	40 (160)	34 (102)	59 (118)	95 (95)	2.10
8.	I feel good when I solve mathematics problem by myself	20 (82)	30 (90)	65 (130)	57 (37)	2.10	44 (176)	31 (93)	60 (120)	93 (93)	2.11
9.	I study mathematics with high level of concentration	16 (64)	29 (87)	75 (150)	52 (52)	2.05	40 (160)	33 (99)	41 (82)	115 (115)	2.00

$$\text{Grand mean: } \frac{4+3+2+1}{4} = 2.5$$

Table 4.3 reveals the different study habits of boys and girls in mathematics. There is no gender differentiation among the learners in their decision to arbitrary choice of concepts in mathematics. Both sexes also study mathematics even when they are tired, taking about 50 minutes to study mathematics and using just ten minutes for a break. However, the girls practice mathematics using their textbooks more than the boys ( $X : 2.47 > 2.44$ ). Collaborative study of the subject matter are carried out effectively by both boys and girls, in terms of studying with concentration, the boys studied with a high concentration than the girls ( $2.05 > 2.00$ ). This implies that the boys contributed to the high performance of students in mathematics more than the girls as discussed in table 4.2.

**Hypothesis:** No significant difference between the study habits and performance of the boys and girls in mathematics.

**Table 1.2:** Students study habit and performance in mathematics classified by gender.

Students	No	Mean	SD	Df	Cal t-value	t-critical	Decision
Boys	172	2.309	0.70	398	0.091	1.960	Accepted
Girls	228	2.299	0.60				

The calculated t-value of 0.091 is less than the table value of 1.965 at 0.05 level of significance therefore; the null hypothesis which states that there is no significance difference between the study habits of boys and girls in mathematics is accepted. This means that there is no significant difference between the effect of study habits on boys and girls on their performance in mathematics.

## DISCUSSION OF FINDINGS

The result of the findings indicates that a significant positive relationship exist between students study habits and their performance in mathematics. The study habit has a significant

role or influence on the level of performance. Students' study habit rather than their inability to comprehend mathematical expressions, affects their performance in mathematics. Ossai (2011) survey report on study habits predicts examination behavior: An imperative for enhancing quality of college guidance and counselling advocated for the inclusion of study habits in the curriculum, for both males and females. The essence of this is indicated by the result of this study that males and females performance in mathematics are differentially affected by their study habits.

## RECOMMENDATIONS

Based on these findings, the following recommendations are made:

1. Mathematics teachers should adopt a wide range of instructional strategies in order to improve study habits of students.
2. Teachers should accept the responsibility of developing through teaching, students' study habits.

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