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Assessment of Gender and Interest in Mathematics Achievement in Keffi Local Government Area of Nasarawa State, Nigeria

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Abstract

This paper assesses gender and interest in mathematics achievement in Keffi Local Government Area of Nasarawa State, Nigeria. Three objectives were raised in relation to 3 hypotheses. The study adopted ex-post facto research design. The target population for this study consisted of 3548 SS 3 students' in 2017/2018 academic session from 24 Senior Secondary Schools. The population was made up of 2,705 male and 843 female students. The sample of this study consist 361 SS 3 students which involved 182 male and 179 female students' .The researchers developed a single Performa as instrument for data collection. Logical validity index of 0.89 and 0.82 were obtained with the rational consensus of 0.85. Descriptive statistics of mean and standard deviation were used to answers research questions while inferential statistics of biserial correlation was used to test the formulated hypotheses at the 0.05 level of significance. The study found that male students excel in mathematics achievement more than their female counterparts. And male students have interest in mathematics than female students that is to say; there is significance relationship between male and female and interest in mathematics. The study recommended that teachers should make use of alternative teaching methods like the use of games and simulations to motivate students' interest (male and female) in the learning of Mathematics.

Background to the Study

The selection of mathematics as one of the core subjects offered in primary and post primary institutions in Nigeria, as well as its status as part of mandatory requirement for admission into post-secondary Institution in the country (i.e. attainment of pass credit level) are clear indication of the relevance of the subject in Nigeria education. In addition, job opportunities and recruitment exercises into security agencies are accessible with good achievement or success in mathematics. Aptitude tests for employment, promotion and placement are made up of questions that are based on mathematics. These are significant justifications of the relevance of mathematics for individual personal development and success. At national and global levels, there is a general consensus that economic development, viability and stability are solely, in the 21st century, scientific and technological based. This means that, economic prosperity of a nation depends largely on the scientific and technological development, which cannot be possibly attained without sound, effective and strong Mathematics education (Fajemidagba, ; Sule, 2009 and Collin, 2000).

Alechenu (2012), described mathematics as the "queen" of the sciences without which it would be difficult for people to study other sciences like physics, chemistry, biology and computer science/information technology. Underscoring the importance of science and technology to national development, he said. "We hope our government will properly address the issue of scientific transformation of our grown dynamics and processes as a nation" (Alechenu, 2012),

As important as the subject is, there is tremendous and persistent failures of the Nigerian Students in it. Sanni (2013), has remained a major concern to mathematics learning. Learners continue to manifest weak understanding of mathematical concepts, skills generalization, among others, not only in external examinations but in classroom exercises.

Academic achievement of students has often been associated with their gender and location. Gender refers to the fact of being male or female (Pearson Education, 2003). Kanno (2008) referred to gender as an analytic concept that describes sociological roles, cultural responsibilities and expectations of men and women in a given society or cultural setting. Ezeh (2013) explains that 'gender describes the personality traits, attitudes, behaviour, values, relative power, influence, roles and expectation (femininity and masculinity) that society ascribes to the two sexes on a differential basis'. Therefore, gender is a psychological term and a cultural construct developed by society to differentiate between the roles, behaviour, mental and emotional attributes of males and females. The influence of gender on students' achievement in mathematics has remained a controversial and topical issue amongst educationists and psychologists. Freud (2011) suggested that the difference in mathematics achievement of male and female anatomy has bearing and indeed account for the difference observed between the personalities of men and women.

There have been gender differences in the achievement of students in some forms of examinations, test or assessment, distort the meaning of test and decisions based on it for some group of examinees. The honorable minister of education also made a presentation of poor performance of candidates in public examinations including English Language and Mathematics over the period of 2005 – 2009 (Federal Ministry of Education News, 2010).

Considering the West African Examinations Council (WAEC, 2009) and the National Examinations Council (NECO, 2009), Senior School Certificate Examinations (SSCE) results were reported to have recorded very low percentage passes in mathematics at credit level. In trying to find out the reasons for this unfortunate situation in mathematics education in Nigeria, Amoo (2002) blames students' poor learning interest and teachers' failure to use appropriate and stimulating teaching methods. The situation may be due to lack of motivation of students (Sidhu, 2002).

School location refers to the particular place, in relation to other areas in the physical environment (rural or urban), where the school is sited. In Nigeria, rural life is uniform, homogenous and less complex than that of urban centers, with cultural diversity, which often is suspected to affect students' academic achievement. This is because urban centers are better favoured with respect to distribution of social amenities such as pipe borne water, electricity, healthcare facilities while the rural areas are less favoured. This is also true in the distribution of educational facilities and teachers. These prevailing conditions imply that 'learning opportunities in Nigerian schools differ from school to school' (Ariyo and Ugodulunwa, 2007). Nwogu (2010) found that location was significant in learning aspects of mathematics that involve angles, with rural students exhibiting more learning difficulties than their urban counterparts do. Ahiaba and Igweonwu (2003) investigated the influence of school location on the performance of chemistry students in rural and urban schools at the SSC examination and found that chemistry students in urban schools performed better with superior grades, than their rural counterparts while failure rate was higher in the rural schools. Some studies (Bosede, 2010; Ezeh, 2011) showed no difference in academic achievement of students because of location. Agbir (2004) showed that rural students performed better on practical skills in chemistry than their urban counterparts did.

The influence of location on students' academic achievement remains controversial and inconclusive. This calls for further investigation. Bosede (2010) showed that there is no difference in performance of students because of location. Location here is in terms of whether the place of study or school is sited in rural or urban community. Onah (2011) showed that urban students achieved more than the rural students did. No available literature from empirical studies explained if there is any differential performance because of gender and location in chemical bonding. In evaluating learning outcome, the effect of gender and school location on learning and hence achievement in a teaching-learning process is often not taken into consideration. Curriculum designers and examination bodies do not make allowance for differences in school location and gender, hence students, irrespective of their gender and school location are subjected to the same teaching curriculum, teaching method and examination in a given subject. It is expected that teachers should be conscious of, and make allowances during classroom activities for differences in school location and gender. It is recognised that differences exist in the way individuals react to learning situations and materials. Davis (2010) noted that teaching and learning can take place anywhere (rural or urban), and at any time in so far as there is communication between the teacher, the learner and the learning material.

Lack of interest in Mathematics has direct implications for students' involvement in areas that require a strong Mathematics background, including Science, Technology, Engineering and Mathematics (STEM) disciplines and careers, particularly for females. Lower interest is closely related to lower performance on mathematics-related achievement tests and lower grades in Mathematics (Betz, 2010), less interest in taking challenging Mathematics curricula prior to enrolling in College (Nosek 2002), and less interest in pursuing a career in STEM disciplines (Usher, 2009). Females express less interest in Mathematics than their male peers and some studies link that lower interest to fewer females pursuing careers in STEM fields (Usher, 2009).

Statement of the Problem

Observations and reports from examining bodies like WAEC, NECO and JAMB revealed that a high percentage of secondary school students continue to perform poorly in Mathematics examinations. Considering the analysis of the results of the examination conducted by the West African Examinations Council (WAEC) in Nigeria in May/June 2016, it was published that out of about 13.8% of the candidates who had credits and above in Mathematics and English Language plus three other subjects, 7.32% were males while 6.43% were females signifying that the males performed slightly better than the females. The poor achievement could affect individual student by getting discouraged and subsequently lost interest completely in mathematics that is fundamental to his or her existence. This is because mathematics is a core subject for gaining admission to any level of academic pursuits. Despite the Federal Government efforts towards gender equality in four dimensions, namely; equality of access, equality in the learning process, equality of educational outcomes and equality of external results (USAID, 2008). The interest in raising the level of achievement in Mathematics has been a major concern to researchers in recent times. Therefore, this study focused on the assessment of gender and interest in mathematics achievement in Keffi Local Government Area of Nasarawa State, Nigeria in relation to school type and school location.

Objectives of the Study

1. Determine the significant relationship between mean achievement of male and female students' interest in Mathematics achievement.
2. Estimate the significant relationship between urban and rural school students' in Mathematics achievement.
3. Estimate the significant relationship between private and public school students' in Mathematics achievement.

Research Questions

The following research questions were raised to guide the study:

1. What is the significant relationship between mean achievement of male and female students interest in Mathematics achievement?
2. What is the significant relationship between urban and rural school students' in mathematics achievement?
3. What is the significant relationship between private and public school students' in mathematics achievement?

Statement of the Hypotheses

The following hypotheses were being tested at the 0.05 level of significance:

1. There is no significant relationship between mean achievement of male and female students interest in Mathematics achievement.
2. There is no significant relationship between urban and rural school students' Mathematics achievement.
3. There is no significant relationship between private and public school students' Mathematics achievement.

Empirical Studies

Ifegbesan (2010) investigated the "influence of students' achievement in mathematics of Senior Secondary School in Bayelsa State of Nigeria". He considered inferential design as appropriate because of its descriptive nature of the data. The relevant data for this study were obtained from the Junior Secondary School Examinations test items in achievement for the year 2006. The sample size of this study was 600 students randomly selected from the population of 12,436 in SSS3 students' examination for 2006 in Bayelsa State. The state was stratified into three zones and four schools were randomly selected from each of the zones making a total of 12 schools. The SSS.C.E Mathematics objective paper for 2006 formed the instrument used for data collection. The test was an hour multiple choice of Mathematics ability. The finding of this study showed that students' achievement in 2006 SSCE Mathematics test was high. Comparing the hypothetical pass mark of 20.00 with the students' mean score of 28.59, this indicated that the students performed very well. The aspect of influence of sex on the performance of students showed the means and standard deviations were 29.24 and 6.00 for male, and 27.93 and 7.98 for females respectively.

Oluwatayo and James (2011) investigated "gender difference in Mathematics. 220 SS III students from four mixed schools in Akure North Local Government Area of Ondo State". The students were selected using stratified random sampling technique. The instrument for collecting data was a 40-item multiple choices Mathematics Achievement Test drawn from the concept of number and numeration and validated by mathematics experts. The internal consistency of the instrument was estimated at 0.65 using KR 21, and administered using research assistants. Data were analyzed using mean, standard deviations and tested at 5% level of significance. Results showed no gender difference in Mathematics achievement both in urban and rural areas, though performances of males and females in the rural areas were below average. It was recommended that Mathematics teachers should regularly test students on the various mathematical concepts and feedback provided to prepare them for credible achievement in Mathematics at internal existence examinations.

Yusuf and Adigun (2010) examined the "influence of school type, sex and location on students' academic performance in Ekiti State secondary schools". The sample of the study consisted of forty (40) secondary schools. Four (4) Government colleges (State Unity colleges) were purposively selected for the study while thirty-six (36) public secondary schools were randomly selected for the study. The school sampled had presented candidates for both West Africa Examinations Council (WAEC) and National Examinations Council (NECO)

respectively. An instrument, school type, sex, location and students' academic performance inventory was used to collect data for the study. Data collected were analyzed using percentage scores and t- test statistics. Three null hypotheses were generated and tested at 5% level of significance. Findings from the study showed that the level of students' academic performance was low. It was also revealed that school type, sex and location had no significant influence on students' academic performance.

Research Design

The study adopted ex-post facto research design. This is because it enabled the researcher to harvest existing results. The population is made up of 3,548 students which consist 2705 male and 843 female students. Simple random sample method was used in this study. The sample of the study was made up of 182 male and 179 female students totaling 361 respondents. A single Performa was used as instrument for data collection from students' senior certificate examination conducted by WAEC and NECO. The Performa (instrument) is called 'Students' Proforma for Mathematics Results' (SPMR). Logical validity indices of 0.89 and 0.82 were obtained with the rational consensus of 0.85 with the reliability of 0.82 index using Cronbach coefficient Alpha method of estimating reliability. This is considered suitable because Cronbach coefficient Alpha is a more general method of estimating internal consistency (Anikweze, 2013).

Descriptive statistics of mean and standard deviation was used to answers research questions while inferential statistics of Biserial correlation was used to test the formulated hypotheses at the 0.05 level of significance using SPSS Version 21.

Results

Analysis of Research Questions

Research Question 1: What is the significant relationship between mean achievement of male and female students interest in Mathematics achievement?

Table 1: Descriptive Statistics for Difference between Mean Achievement of Male and Female Students interest in Mathematics

Variable	n	Mean	S.D
Male Achievement in Mathematics	182	58.5	26.3
Female Achievement in Mathematics	179	47.2	23.1

© *SPSS version 21*

Table 1 shows the descriptive statistics for relationship between mean achievement of male and female students interest in Mathematics achievement. It is evident that the male students' mean achievement score in Mathematics and that of female students are obtained to be 58.5 and 47.2 respectively. These results revealed that male students excel more in Mathematics than their female counterparts. The standard deviations for male and female students were given by 26.3 and 23.1 respectively. The achievement showed a high standard deviation and mean, this was because of divergent abilities of students whereby some performed excellently well and other performed lowly. The implication of this was that teachers do not carry every

student along in the teaching of mathematics particularly in the area studied.

Research Question 2: What is the significant relationship between urban and rural school students' achievement in mathematics?

Table 2: Descriptive Statistics for Relationship between Mean Achievement of Urban and rural Students in Mathematics

Variable	N	Mean	S.D
Urban Achievement in Mathematics	189	48.5	22.3
Rural Achievement in Mathematics	172	37.2	19.1

© *SPSS version 21*

Table 2 shows the descriptive statistics for relationship between mean achievement of urban and rural students in Mathematics. It was evident that the male students' mean achievement score of urban students in Mathematics and that of rural students were obtained to be 48.5 and 37.2 respectively. These results revealed that male students excel more in Mathematics than their female counterparts. The standard deviations for urban and rural students were given as 22.3 and 19.1 respectively. The achievement showed a high standard deviation and mean, this was because of divergent abilities of students whereby some performed excellently well and other performed lowly. The implication of this is that teachers do not carry every student along in the teaching of mathematics particularly in the area studied.

Research Question 3: What is the relationship between private and public students' achievement in Mathematics

Table 3: Descriptive Statistics for Differences between Mean Achievement of public and private Students in Mathematics

Variable	N	Mean	S.D
Public Achievement in Mathematics	223	52.5	34.3
Private Achievement in Mathematics	139	61.2	22.1

© *SPSS version 21*

Table 3 shows the descriptive statistics for relation between mean achievement of public and private students in Mathematics. It was evident that the public students' mean achievement score in Mathematics and that of private students were obtained to be 52.5 and 61.2 respectively. These results revealed that private students excel more in Mathematics than their pubic counterparts. The standard deviations for public and private students were given as 34.3 and 22.1 respectively. The achievement showed a high standard deviation and mean, this was because of divergent abilities of students whereby some performed excellently well and others performed lowly. The implication of this is that teachers in private schools are more engaged in teaching than public school in the studied area.

Testing of Hypotheses

Hypothesis 1: There is no significant relationship between male and female students' interest achievement in Mathematics.

Table 4: Regression Equation, Correlation Coefficient of Significance for Male and female Students' Achievement in Mathematics

Table 4a: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.715[a]	0.511	0.509	0.20350

a. Predictors: (Constant), male interest

Table 4b: Table of coefficients for variables

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Male	6.54	0.076		1.920	0.301
	Female	0.515	0.045	0.845	29.884	0.000

a. Dependent Variable: achievement

The regression equation is as follows:

$M_m = 6.54 + 0.515 (F_m)$

Where: M_m = Males Students' Achievement in Mathematics, F_m= Female Students' Mathematics

Table 4 showed the regression equation, correlation and t-test results for male and female students' achievement in Mathematics. The structured straight line regression equation relating male students' interest and achievement in Mathematics test is $M_m = 6.54 + 0.515(F_m)$ (Table 4c) showed that the estimate of the slope of M_m is positive, which implies a direct relationship between the dependent variable (M_m) and independent variable (F_m). The regression result also indicated that for a unit increase in male students' interest in Mathematics, their achievement in Mathematics will increase by about 0.52.

Correlation coefficient of approximately 0.72 (Table 4a) was obtained for interests and male students' achievement in Mathematics test, signifying a positive relationship between male students' interest and their achievement in Mathematics test. The coefficient of determination of 0.511 indicated that approximately 51% of variation in male students' scores in Mathematics was explained. Furthermore, at 0.05 level of significance and degree of freedom of 181, the t-test value of 1.920 which was greater than the critical value of 1.645 was obtained. Therefore, since

the calculated value of T was greater than the critical value, the null hypothesis was rejected. Hence, there was a significant relationship between male and female students' achievement in Mathematics.

Hypothesis 2: There is no significant relationship between urban and rural students' achievement in mathematics.

Table 5: Regression Equation, Biserial Correlation Coefficient of Urban and rural Students' Achievement in Mathematics

Table 5a: Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.694[a]	0.482	0.416	0.19850

Predictors: (Constant), urban interest

Table 5b: Table of coefficients for variables

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Rural	6.88	0.056		1.910	0.301
	Urban	0.501	0.045	0.845	29.884	0.000

Dependent Variable: achievement
The regression equation is as follows:
$M_u = 6.88 + 0.501 (I_u)$

Where: M_u = Mathematics achievement, I_u = Rural and rural school Students' Interest Scores
Table 5 showed the regression equation, correlation and t-test results for urban and rural students' achievement in Mathematics. The structured straight line regression equations relating urban students' interests and achievement in Mathematics test is $M_u = 6.88 + 0.501 (I_u)$ (Table 5b). It shows that the estimate of the slope of M_u is positive, which implies a direct relationship between the dependent variable (M_u) and independent variable (I_u). The regression result also indicated that for a unit increase in urban and rural students' in Mathematics, their achievement in Mathematics will increase by about 0.50.

Correlation coefficient of 0.694 (Table 5a) was obtained for urban and rural students' achievement in Mathematics, signifying a positive relationship between urban students and their achievement in Mathematics. The coefficient of determination of 0.482 indicated that 48% of variation in urban students' achievement in Mathematics is explained by their interest in the subject. Furthermore, at 0.05 level of significance and degree of freedom of 264, the t-test value of 1.910 (Table 5c) which was greater than the critical value of 1.645 was obtained. Therefore, since the T_{cal} was > the T_{crit} value, the null hypothesis of no significant was rejected. Hence, there was a significant relationship between urban and rural school students' and their achievement in Mathematics.

Hypothesis 3: There is no significant relationship between private and public school students' achievement in Mathematics.

Table 6: Regression Equation, Correlation Coefficient of Private School Students' Interest and their Achievement in Mathematics

Table 6a: Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.669[a]	0.447	0.465	0.1950

a. Predictors: (Constant), private interest

Table 6b: Table of coefficients for variables

Coefficients a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Public	6.81	0.056		1.787	0.301
	Private interest	0.481	0.045	0.845	29.884	0.000

a. Dependent Variable: achievement

The regression equation is as follows:
$M_{pr} = 6.81 + 0.481 (I_{pr})$
Where: M_{pr} = Private School Students' Achievement in Mathematics, I_{pr} = Private and public School Students' Scores.

Table 6 showed the regression equation, correlation and t-test results for private school students' interests and achievement in Mathematics. The structured straight line regression

equation relating private school students' interests and achievement in Mathematics is M_{pr} = 6.81 + 0.481 (I_{pr}) (Table 6b). The equation showed that the estimate of the slope of M_{pr} is public and positive, which implies a direct relationship between the dependent variable (M_{pr}) and independent variable (I_{pr}). The regression result also indicated that for a unit increase in private school students' interest in Mathematics, their achievement in Mathematics will increase by about 0.48 (Table 6b).

Correlation coefficient of 0.669 (Table 6a) was obtained for achievement in Mathematics, and this signified a positive relationship between private school students' and their achievement in Mathematics. The coefficient of determination of 0.447 (Table 17a) indicated that about 45% of variation in private school students' achievement in Mathematics was explained in Mathematics. Furthermore, at 0.05 level of significance and degree of freedom of 141, the T_{cal} value of 1.787 which was > T_{crit} value of 1.645 was obtained. Therefore, since the calculated value of t was greater than the critical value, the null hypothesis was rejected. Hence, there was significant relationship between private and public school students' achievement in Mathematics.

Findings of the Study

The major findings obtained in this study are summarized as follows:

(1) It was found that male students excelled in Mathematics more than their female counterparts. There was also a significant difference between mean achievement of male and female students in Mathematics.

(2) The regression result indicated that for a unit increase in urban students' in Mathematics, their achievement in Mathematics will increase by 0.50, while for a unit increase in rural students in Mathematics, their achievement in Mathematics will increase by 0.49. There was a significant relationship between rural and urban students' achievement in mathematics; and between urban and rural students' achievements in Mathematics.

(3) The regression result indicated that for a unit increase in private school students' interest in Mathematics, their achievement in Mathematics will increase by 0.48, while for a unit increase in public school students' achievement will increase by 0.52

Discussion of Findings

It was found that male students excel in Mathematics more than their female counterparts. There was a significant difference between mean achievement of male and female students in Mathematics. This go in line with Oluwatayo and James (2011) whose results showed gender difference in Mathematics achievement both in urban and rural areas, though performances of males and females in the rural areas were below average. This is because of the following reasons; environmental factors, teacher qualification, teacher teaching method, teacher attitude and parental involvement, It was recommended that Mathematics teachers should regularly test students on the various mathematical concepts and feedback provided to prepare them for credible achievement in Mathematics at internal existence examinations.

The regression result indicated that for a unit increase in urban students mathematics, their achievement in Mathematics will increase by 0.50, while for a unit increase in rural students mathematics, their achievement in Mathematics will increase by 0.49. There was a significant relationship between rural and urban students' achievement in mathematics; and between rural students' achievements in Mathematics. This in support of Yusuf and Adigun (2010). Findings from the study showed that the level of students' academic performance was low. It was also revealed that school type, sex and location had no significant influence on students' academic performance.

The regression result indicated that for a unit increase in private school students' interest in Mathematics, their achievement in Mathematics will increase by 0.48, while for a unit increase in public school students' achievement will increase by 0.52. There was also a significant relationship between public and private school students' achievement, and between public and public school students' achievements in Mathematics. This agreed with Ifegbesan (2010). The finding of this study showed that students' achievement in 2006 JSS Mathematics test was high. Comparing the hypothetical pass mark of 20.00 with the students' mean score of 28.59 in private school ant 1.48 in public schools. This indicated that the students performed very well in private schools than public schools.

Conclusions

The results of this study revealed that interest generally influences the students' achievements in Mathematics. There was a significant relationship between mean achievement of male and female students in Mathematics. There was a significant relationship between interests and students' achievement in Mathematics test by gender, school location as well as by school type. The results also demonstrated that there may be other factors (e.g. environment, quality of teaching, attitude and availability of teaching aids) that contribute to students' achievement in Mathematics.

It was therefore concluded that the best teaching practice that is capable of enhancing the students' achievement in Mathematics in senior Secondary Schools in Karu LGA of Nasarawa State should be welcomed and employed by both private and public schools in rural and urban areas. It is believed that increasing the level of interest of students will have a profound effect on their achievements in Mathematics in both internal and external examinations.

Recommendations

Based on the findings of this study, the following were recommended:

1) Teachers should make use of alternative teaching methods like the use of games and simulations to motivate students' interest (both male and female) in the learning of Mathematics.
2) Parents, teachers, educational planners, curriculum developers, proprietors and society at large should discourage students from viewing mathematics ability as genetic (natural) gift but rather view it as something that can be developed through study and by seeking additional resources and assistance when being faced with challenges. By so doing, it is believed that both male and female would increase and maintain their interest in Mathematics.

3) The stakeholders, Parents Teachers Association and other school managements need to change the orientation of students, parents and society at large over false belief that boys are born with greater aptitude for mathematics through socio-cultural impacts. As such, they would get to know that both boys and girls have the same innate ability to learn mathematical skills and are both interested in variety of objects and ideas.

References

Agbir, E. (2004). *The meaning of things.* New York: Cambridge University Press.

Ahigba. L. & Igweonu, U. (2003). *The influence of sex-role stereotyping on women's attitudes and achievement in mathematics,* Women and mathematics: Balancing the equation (pp. 175–198).

Alechenu, S. O. (2012). Gender related differential item functioning in mathematics multiple choice test items set and administered by National Examination Council. *Journal of Mathematical Science Education.* Abuja: Federal Capital Territory, Nigeria.

Amoo, R. (2002). *How gender differences are hurting our relationships, our children, and our jobs*, *Same difference*: New York, NY: Basic Books.

Anikweze, C. M. (2013). *Measurement and evaluation for teacher education.* Enugu: SNAAP Press Ltd.

Ariyo, F., & Ugodulunwa, J. (2007). *Psychology applied to teaching. 5th Ed*. Boston: Houghton Mifflin Company.

Basede, P., (2010), & Josephs, R. A. (2011). Stereotype relevance and gender differences in mathematics performance: *Journal of Personality and Social Psychology.*

Davis-kean, P. E. (2002). *Gender differences in mathematics interest and performance*, London**:** University of Michigan**.**

Ezeh, A. (2013). Is gender a factor in mathematics performance among Nigeria Pre-service Teachers? *Sex Role*: 51 (11&12), 749 -754.

Fajemidagba, P. L., Sule, K. (2009) Collin, R. (2000). Determinants of individuals' differences and gender differences in knowledge. *Journal of Educational Psychology*, 93 (4), 797–825.

Freud, O. (2011). Relevance of science teaching to the needs of the community. *Journal of STAN,* 14 (13) 57-68.

Ifegbesan, A. (2010). Gender-stereotypes belief and practices in the classroom: The Nigerian post-primary school teachers. *Global Journal of Human Social Science.* 10 (4) (Ver. 1.0) GJHSS Classification–A (for) 130102,130105,130313.

Kanno, E. E. (2008). The deprived Cross Riverians. *The Nigerian Chronicle* August, 13.

Nosek, C. (2002). *A Social-cognitive approaches to motivation and personality*. Psychological Review, 95 (2), 256–273.

Nwogu, M. (2010). Achievement in mathematics and science: Do mothers' beliefs matter 12 years later? *Journal of Educational Psychology,* 96 (1), 97–109.

Oluwatayo, S. & James, T. (2011). Is mathematics a gift? Beliefs that put females at risk: Why aren't more women in science? *Top researchers debate the evidence* (pp. 47–56). Washington, DC: American Psychological Association.

Onah, J. (2011). Background paper for workshop 1: *Quality education and gender equality.* Paper presented at the International Conference on Education: Forty-seventh Session, Geneva. Department of Counseling Psychology, Delta State University Abraka. Development Technology Systems Inc.

Sannni, S. A. (2012). Analysis of problems encountered in teaching and learning of mathematics in secondary schools. Abacus: J. Math. Assoc. Nigeria, 27 (1) 30-36.

Sidhu, D. (2002). The corporation and society in 1970s. *The Public Interest 24,* Summer.

Usher, S. (2009). *Self-theories: Their role in motivation, personality, and development (Essays in Social Psychology).* Philadelphia, PA: Psychology Press.

Yusuf, P. & Adigun, C. (2010). *Gender bias in test items used in physics senior secondary certificate examination.* Unpublished M.Ed, University of Ife, Osun State.