

IMPACT OF AGE AND GENDER ON HIGH SCHOOL STUDENTS' ACADEMIC PERFORMANCE IN ECONOMICS: A CASE STUDY ANALYSIS.

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Abstract: *The study examined the impact of age and gender on High School students' academic performance in Economics in Irewole and Isokan Local Government Areas of Osun State, Nigeria. Three research questions were formulated and answered at 5% ($\alpha = 0.05$) level of significant. The study adopted expo-facto research design which was qualitative and quantitative in nature and purposeful sampling technique to obtain six-hundred and fifty six (656) Grade 10 (SSS ONE) students from the target population of the study. Three schools were used from both Local Governments based on their unique and similar characteristics and the secondary data with respect to age, gender and scores in Economics were extracted from the results of Unified Promotion Examination (UPE) conducted by Osun State Ministry of Education in May, 2017. Analysis of Covariance (ANCOVA), correlation analysis and t-test statistics were used. The finding of the study indicated that there was no interactive influence of gender and age on the academic performance in Economics. However, positive but weak linear relationship existed between age and performance while there was significant difference in the academic performance of the High School students in Economics on the basis of gender but in favour of female students. The study recommended among others; that teachers, most especially those teaching Economics at High School levels should employ teaching methods that could accommodate the age and gender differences among students. Also, that stakeholders of education should make available necessary instructional devices needed to ensure efficiency in teaching and permanency in learning Economics among High School students of different age and gender.*

Key Words: *Age, Gender, Academic Performance, High Schools, Economics.*

1. INTRODUCTION:

Economics came into the secondary school curriculum as one of the Senior Secondary School subject in Nigeria in 1966. The content of this subject was designed to help students in understanding the human world through enquiring into how resources are used to serve individuals and society. It was also packaged to contribute to the development of critical thinking and decision making skills, which are crucial for the all-round development of students and in particular for their development as life-long learners and responsible citizens. It is on this note that Oleabhielle and Oleabhielle (2015) advocated that Economics teachers should strive in the implementation of the content of the curriculum without any compromise in order to achieve these educational objectives. This is because, the Economics curriculum content is adequate and if adequately implemented by the teachers and effectively absorbed or understood by the students will help the country to achieve the laudable objective of being among the top 20 players of the world economy come year 2020.

Educational objectives which according to Scottish Higher Education Funding Council for 1997/98 consisted of the acquisition of knowledge, the development of understanding and other general intellectual abilities, the development of conceptual, intellectual and subject-specific skills, the development of generic or transferable skills, and the development of values, motivation or attitudes. However, the attainment of these enumerated educational objectives in school subjects determine the extent to which learning outcome is achieved which can be measured after teaching in term of academic performance.

Annie, Howard & Mildred, (1996) defined academic performance as the outcome of education that can be used to determine the extent to which a student, teacher and institution have achieved their educational goals. Epunam, (1999) regarded academic performance as the learning outcomes of the student which include the knowledge, skills and ideas, acquired and obtained through their course of study within and outside the classroom situation. It is the outcome of students' determination and hard work in academic pursuit. Steinberger (2005) posited that academic performance encompasses students' ability and performance, it is multidimensional; it is intricately related to human growth and cognitive, emotional and social physical development; it reflects the whole child; it is not related to a single instance, but occurs across time and levels through a student's life in school and working life. It can be inferred from the above definitions that academic performance can be seen as the observable and measurable behaviour of a

student in a particular situation over a period of time. For example, the academic performance of a student in school subject like Economics includes observable and measurable behaviour of a student at any point in time during or after a course of instruction.

It could be inferred that teaching and learning exercises within the purview of educational settings or formal education cannot be said to be complete process and effective without embarking on valid, reliable, well-structured and coordinated assessment and evaluation of the students involved. As a consequence, David, Keane, Shelton and Calkins (2011) identified that standardized achievement test scores, teacher's ratings of academic performance, and report card grades are some of the key channel through which students' academic performance can be measured. Standardized achievement tests are objective instruments that assess skills and abilities that the students learn through direct instruction in a subject (Scattler, 2001). Teacher's rating scales allow teachers to rate the accuracy of the student's academic work compared to other students in the class, and allow for ratings on a wider range of academic tasks than examined on standardized achievement tests (Dupaul and Rapport, 1991). Report card grades allow teachers to report on classroom academic performance, but are used by few studies due to, among other reasons, a lack of standardized grading system and uniform subject areas students are evaluated on. Frimpong, Emmanuel and Amoako (2017) submitted that there is a positive linear relationship between academic performance in class test score and end of term examination score of students in government Senior High School.

Therefore, academic performance of students depend on numerous factors. Mushtaq and Shabana (2012) advanced that communication, learning facilities, proper guidance and family stress are the factors that affect the student performance such that, communication, learning facilities and proper guidance show the positive impact on the student performance and the family stress shows the negative impact on the student performance but the significant level is high. Jayanthi, Balakrishnan, Ching, Abdul Latiff and Nasirudeen (2014) argued that factors such as gender, nationality of student, co-curricular activities and an interest in pursuing higher degrees affected students' academic scores. In addition, the use of past year examination papers as a learning method improved students' academic scores compared to other methods.

Vigilante, Enose and Dorothy (2013) identified school levies, indiscipline, family problems, the entry behaviour of the child, lack of interest on the girls' side to complete their work, the attitude some parents have towards the girl child compared to the boy child and lack of required school materials like books as predictors of girls' academic achievement in both day and boarding secondary schools. Similarly, Ahmad and Yusuf (2013) pointed out poverty, involvement in household activities, investments on boys' education, early marriage, absence of proper security, lack of child interest, parent's death, school distance, disrespect and stubbornness expected from female students and the religious belief as some of the psycho-social factors which influence high dropout rate among female students than their male counterparts. However, on personal characteristics, some of them enter school late in life. The problem of over age enrolment on the part of female student was premised on the ground of reaching puberty while still at school which may increase the risk of sexual abuse and in turn influence female dropout of schooling. Jabor, *et al* (2011) concluded that when students are getting older than their classmates, their average academic performance in the school subjects decline and continue to decline as their increase and even older students are more likely to drop out of school.

Azuka and Kurumeh (2015) examined the effect of emotional intelligence skills acquisition among secondary school students using the Emotional Intelligence Training Package which was adapted from Adeoye (2010) which covered all the major aspects of emotional intelligence skills like Self-awareness; Self-management; Social-awareness; Relationship-management and Motivation. They reported that acquisition of emotional intelligence skills by students leads to improvement in academic achievement of students in Geometry. It appears that students' emotional skill and intellectual status is a function of his/her age, which in turn determines readiness for school, academic performance and productivity. On the part of readiness for school, Stipek, (2009) opined that there is no appropriate age for children to enter school due to the fact that children do not all develop at the same pace and this calls for variation in school readiness among children. The author added that children who have had extensive experience in group day care or its equivalent—early childhood education programs may be more comfortable and better prepared to handle school tasks than their age-mates who have had little experience in such settings.

Hanan, Marie-Anne and Lori (2015) concurred that age and gender could only be the predictor of postsecondary students' academic achievement provided if the traditional classroom discussion (i.e. face to face) is embraced rather than modern mode of teaching (online). Eze, Ezenwafor and Obi (2015) reported that age and gender had no linear relationship with academic performance, and even that their joint influence was insignificant while significant difference in academic performance existed among university students in Vocational and Technical Education (VTE) Department as a result of age and gender. This according to them was attributed to the involvement of Mathematics, science and ICT in the content of the VTE courses. Ebinuwa-Okoh, (2010) concluded that gender, age and financial status were not significant predictors of academic performance among undergraduate students.

John, Jackson and Simiyu, (2015) lamented that the chronological age of a students had a significant bearing on his/her academic performance such that the youngest one had the potential of having higher score than his/her

oldest counterpart in the teacher made test. Abubakar and Adegboyega, (2012) established a positive correlation between age-academic achievement and gender-academic achievement in Mathematics among students of Colleges of Education. However, age and gender were insignificant in academic achievement of the students but age was reported of being the better contributor to academic achievement. Aransi, (2017) concurred that class stream such as Science, Art or Commercial stream determine academic performance of secondary school students most especially in English Language while gender and number of students per class were referenced to be insignificant to academic performance.

However, on productivity, Kotur and Anbazhagan, (2014) argued that change in these two factors, age and gender will facilitate a resultant change in the performance of the factory workers. This is because, with increasing age the workers tend to exhibit relatively better performance up to certain age and henceforth the performance would begin to decline. Besides, they revealed significant difference in workers' performance in term of productive on the basis of gender in favour of female workers. With respect to an entrepreneurial activity, Rani and Hundie (2016) revealed that there are no statistically significant performance differences between male and female entrepreneurs. Wiebke et al (2016) observed gender and age differences in self-esteem across forty-eight (48) western industrialised countries. On aggregate, men tend to have higher self-esteem than women do, and both genders show age graded increases in self-esteem from late adolescence to middle adulthood. Meanwhile, cultures differ in the magnitude of gender, age, and interactive effect of both age and gender. Therefore, investigation into the relationship among age, gender and academic performance at Senior Secondary School level needs the attention of researchers.

1.1 STATEMENT OF THE PROBLEM

The efforts parents and government are putting into the education of students at High School level is to ensure that both male and female acquire expected knowledge and skills that will make them useful to themselves and their society at large. In Nigeria, there is no gender and age discrimination in the enrolment of students into High Schools. This is to give equal educational opportunity to all students irrespective of their age and gender.

However, despite the fact that both parents and government want students (male and female) to excel in school, significant relationship still exist among age, gender and academic performance of students in many school subjects. These differences have been established by many researchers. Even, we still find other researchers who did not find significant differences among age, gender and students' achievement in school subjects. Thus, investigation into the effects of age and gender on the academic performance still requires the attention of researchers. Therefore, this study stands to investigate the impact of age and gender on the academic performance of High School students in Economics.

1.2 RESEARCH QUESTIONS

Based on the background of the study, the following questions were answered;

- i. What is the interactive influence of gender attribute and chronological age on academic performance in Economics among students of High schools?
- ii. What are the individual contributions of gender quality and chronological age on academic performance in Economics among students of High schools?
- iii. What is the difference between students' academic performance in Economics on the basis of gender quality?

1.3 OBJECTIVES OF THE STUDY

The broad objective of the study was to assess the influences of gender and age on Students' academic performance in Economics at High school level. While, the specific objectives were to;

- i. Determine the interactive influence of gender attribute and chronological age on academic performance in Economics among students of High schools
- ii. Estimate the individual contributions of gender quality and chronological age on academic performance in Economics among students of High schools
- iii. Evaluate the difference among students' academic performance in Economic on the basis of gender quality

2. METHODOLOGY:

2.1 RESEARCH DESIGN

The study adopted ex-post facto research design which is qualitative and quantitative in nature. The design is considered to be appropriate for the study on the basis of the fact that both dependent and independent variables have already been in existence. However, the design gives room for examination of both qualitative and quantitative independent/explanatory variable(s) in retrospect for their workable relationship to and effect on dependent/explained variable(s) without neither add to nor subtract from the prevailing information. The study examined gender (categorical variable) and chronological age (quantitative variable) as independent variables in retrospect against academic performance as dependent variable with the target of establishing the link among them.

2.2 POPULATION

The target population for this study consisted of all Grade 10 (High School One) students who sat for and wrote Economics paper in the Unified Promotion Examination (UPE) conducted by Osun state Ministry of Education in May, 2017 in Irewole and Isokan Local Government Areas of Osun State.

2.3 SAMPLE AND SAMPLING PROCEDURE

Two High schools in Irewole and one in Isokan totalling three schools were purposefully sampled based on similar attributes, in term of oldest in year of establishment, sustenance of high standard in the area of teaching and learning and not only large number of students’ enrolment into Grade 10 but also offering Economics. A total of six-hundred and fifty six (656) students’ Economics results were used for academic performance. On gender distribution, three-hundred and nine (309) were female while the remaining three-hundred and forty seven (347) were male students. Therefore, some of the unique attributes embedded in the sampled schools are enumerated in the figure below;

| Name | LGA | Total Enrolled for UPE Examination | Total Offered Economics |
|-----------------------------|---------|------------------------------------|-------------------------|
| Fatima High School, Ikire | Irewole | 219 | 155 |
| Ayedaade High School, Ikire | Irewole | 219 | 181 |
| A.D.C High School, Apomu | Isokan | 329 | 320 |
| Total | — | 767 | 656 |

Source: Field Work (2018)

2.4 SOURCES OF DATA AND MEASUREMENT OF VARIABLES

The study used secondary data which was extracted from the statutory records sent by the state ministry to each of the sampled schools. Three variables were the main focus of this study and obtained from statutory records which are; gender attribute of the students, actual age that is, chronological age as at the time of Unified Promotion Examination (UPE) conducted by Ministry of Education in May, 2017 and academic performance in Economics. However, age, gender and academic performance variables were measured in the study as chronological age of the students involved in the sample as at time of examination (UPE), categorical measurement was done for gender variable such that zero (0) was used for the presence of female attribute and one (1) otherwise and students actual scores in Economics were used to proxy academic performance respectively in correspondence manner.

2.5 METHOD OF DATA ANALYSIS

The methods of data analysis used in this study were rooted from inferential statistical tools which are Analysis of Covariance (ANCOVA), correlation analysis and t-test statistics. The Analysis of Covariance (ANCOVA) and correlation analysis were used to answer research questions number one and two in as much as the assumption of homogeneity guiding the adoption of ANCOVA for categorical and qualitative variables of regression slopes has been met while t-test statistics was used to answer research question number three at 5% level of significant.

3. TESTS AND RESULTS:

Research Question 1: What is the interactive influence of gender attribute and chronological age on academic performance in Economics among students of High schools?

Table 1: ANCOVA result showing the interactive influence of gender attribute and chronological age on academic performance in Economics among High school students.

Tests of Between-Subjects Effects
Dependent Variable: Performance

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---------------------|-------------------------|----------|---------------|-------------|-------------|
| Corrected Model | 2406.928 ^a | 3 | 802.309 | 9.556 | .000 |
| Intercept | 13282.081 | 1 | 13282.081 | 158.193 | .000 |
| Gender | 135.969 | 1 | 135.969 | 1.619 | .204 |
| Age | 63.438 | 1 | 63.438 | .756 | .385 |
| Gender * Age | 40.290 | 1 | 40.290 | .480 | .489 |
| Error | 54742.724 | 652 | 83.961 | | |
| Total | 1290648.000 | 656 | | | |
| Corrected Total | 57149.652 | 655 | | | |

Source: Author Computation (2018) a. R Squared = .042 (Adjusted R Squared = .038)

Table 1 shows the interactive effect of actual age and gender as covariate and factor respectively on students’ academic performance in Economics. Therefore, the interaction source is in bold face and labelled **Gender * Age** in which the results suggested that the interaction is not statistically significant. This is because, the probability value of

p (0.489) was greater than alpha value of α (0.05) with $F(1,652) = 0.480, p = 0.489$. That is, $p(0.489) > \alpha(0.05)$. This implies that students' gender and actual age working together are insignificant in predicting academic performance in Economics. Hence, there is no significant interactive influence of gender attribute and chronological age of students on academic performance in Economics among High School students.

Research Question 2: What is the individual contribution of gender quality and chronological age on academic performance in Economics among students of High schools?

Table 2: ANCOVA result showing the individual effect of gender attribute and chronological age of students on academic performance in Economics at High schools level.

Tests of Between-Subjects Effects

Dependent Variable: Performance

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|-----------------|-------------------------|----------|-----------------|---------------|-------------|
| Corrected Model | 2366.639 ^a | 2 | 1183.319 | 14.105 | .000 |
| Intercept | 35101.436 | 1 | 35101.436 | 418.400 | .000 |
| Age | 23.233 | 1 | 23.233 | .277 | .599 |
| Gender | 2332.288 | 1 | 2332.288 | 27.800 | .000 |
| Error | 54783.014 | 653 | 83.894 | | |
| Total | 1290648.000 | 656 | | | |
| Corrected Total | 57149.652 | 655 | | | |

Source: Author Computation (2018) a. R Squared = .041 (Adjusted R Squared = .038)

Table 2 exhibits output for the univariate general linear model which contains main effect of gender and age as independent variable on academic performance in Economics. The variables like gender and age as well as other source of variance are listed in the left column of the table. However, for each source of variance, there are several test statistics. In order to ascertain the influence of each independent variables that is, gender and actual age, the F Statistics and its associated significance level were employed. By examining the covariate, i.e. actual age, the F (0.277) and its associated significance level (0.599) indicate that there is no significant linear relationship between chronological age of students and academic performance in Economics at Senior Secondary School stage. This is because, the probability value of p (0.599) was greater than alpha value of α (0.05) with F (0.277). However, gender as next source of variance, provides the $F(1, 653) = 27.8, P < 0.05, \omega^2 = 0.04$ indicated that there is difference in academic performance in Economics between students' gender groups at Senior Secondary School level. The measure of association obtained through omega square formula (ω^2) indicated that the two levels of gender (the independent variable) accounted for approximately 4 percent of the total variance in the students' Economics academic performance scores (the dependent variable), controlling for the effect of their chronological age (the covariate).

Table 3: Result of Correlation analysis showing the relationship between chronological age of the students and academic performance in Economics.

Correlations

| | | Performance | Age |
|-------------|---------------------|-------------|------|
| Performance | Pearson Correlation | 1 | .025 |
| | Sig. (2-tailed) | | .531 |
| | N | 656 | 656 |
| Age | Pearson Correlation | .025 | 1 |
| | Sig. (2-tailed) | .531 | |
| | N | 656 | 656 |

Source: Author Computation (2018)

Table 3 indicates positive linear relationship between age and academic performance but the level of association is not statistically significant. This is because the significant level of 0.531 is greater than the alpha value of 0.05.

Research Question 3: What is the difference between students' academic performance in Economics on the basis of gender quality?

Table 4: T-test result showing the difference between students' academic performance in Economics on the basis of gender quality.

Group Statistics

| | Gender | N | Mean | Standard Deviation | DF | T-Cal | T-Tab |
|-------------|--------|-----|---------|--------------------|-----|-------|-------|
| Performance | Female | 309 | 45.3657 | 8.27013 | 654 | 2.714 | 1.960 |
| | Male | 347 | 41.5793 | 9.87502 | | | |

Source: Author Computation (2018)

Table 4 reveals the disaggregation of students into gender attribute with respect to performance in Economics in which three-hundred and nine (309) female and three-hundred and forty seven (347) male students were used. However, average scores of female and male students in Economics stood at 45.37 and 41.58 with standard deviation values of 8.27 and 9.88 respectively. In addition, the degree of freedom, t-calculated value and t-tabulated were 654, 2.714 and 1.960 at 5% level of significance. Going by the values obtained for t-calculated and t-critical values of 2.714 and 1.960 which indicate that t-calculated is greater than t-critical value that is $2.714 > 1.960$. Hence, significant difference existed in the academic performance of students in Economics with respect to gender attribute. This difference was observed in the academic performance in favour of female students. The outcomes are reported with 95% level of confidence interval.

4. DISCUSSION OF FINDINGS:

The study revealed no interactive effect of actual age and gender when the former was taken as covariate and the latter as fixed factor respectively on students' academic performance in Economics. This implies that students' gender and actual age combining together are insignificant in predicting academic performance in Economics. Hence, there is no significant interactive influence of gender attribute and chronological age of students on academic performance in Economics at High schools level. The outcomes of the findings was in conformity with the assumption of homogeneity of regression slopes in adopting Analysis of Covariance (ANCOVA) in which out of two explanatory variables plugged into the model one was categorical while the other was quantitative in nature as we have gender and chronological age of students in the study. This was in line with the study conducted by Eze, Ezenwafor and Obi (2015) who found that the combined contribution of gender and age to academic achievement of Vocational and Technical Education (VTE) students which stood at 2.3 percent was virtually non-existent. On individual contributions, the findings of the study exhibited no significant linear relationship between chronological age of students and academic performance in Economics at Senior Secondary School stage. While, the measure of association obtained through omega square formula indicated that the two levels of gender (the independent variable) accounted for approximately 4 percent of the total variance in the students' Economics academic performance scores (the dependent variable), controlling for the effect of their chronological age (the covariate) which is low.

The findings of the study also indicated that there is significant difference in the academic performance of students in Economics on the basis of gender characteristics but in favour of female students. It means that male and female students exhibit different levels of performance in Economics at High School levels. This was in consonance with the recent study done by Bitrus, Domiya and Hannatu (2016) in which female students were reported of having higher percentage grade scores of distinction and credit in Economics than their male counterparts in High School Examination conducted by National Examination Council between 2006/2007 and 2007/2008 academic sessions respectively in Maiduguri Metropolis of Borno State, Nigeria. Similarly, it concurred with research findings conducted by Jacob and Linus (2017) where academic achievement of Female students in Geography was reported to have improved significantly compared to their Male counterparts. But, it is contrary to research findings of Aransi, (2017) who found no significant difference in the academic performance of students in two compulsory subjects at High School level that is Mathematic and English Language on the basis of gender.

5. CONCLUSION:

Based on the empirical outcomes of the study, the study concluded that there is positive but weak linear relationship between chronological age of students and academic performance in Economics. Besides, two groups of gender quality explained low percentage of the variation that took place in academic performance in Economics among Senior Secondary School students. And at the same time, significant difference existed in the academic performance on the basis of gender but in favour of female students.

6. LIMITATION OF THE STUDY:

The study was basically designed for the students of the Government/public High Schools within the study area and considered age and gender as key variables in determining academic performance in Economics among High School students while other factors like parental factor and societal factor to mention but a few were not taken into cognisance in this study.

7. RECOMMENDATIONS:

Based on the findings of this study, the following recommendations were suggested;

- Teachers, most especially, those teaching Economics should adopt combination of teaching methods that would be of great benefit to the students not minding their gender or age.
- Stakeholders of education such as parents, government and non-government organizations should work either individually or jointly in providing relevant instructional materials to schools as this would facilitate

effectiveness in teaching on the part of Economics teachers and encourage permanency in learning on the part of students irrespective of the age and gender.

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REFERENCES:

1. Abubakar, R. B and Adegboyega, B I (2012) Age and Gender as Determinants of Academic Achievements in College Mathematics. *Asian Journal of Natural & Applied Sciences*: 1(2), 121-127.
2. Adeoye, H. (2010). Emotional intelligence and self-efficacy as determinants of academic achievement in English language among students in Oyo State Senior Secondary Schools. *Ife Psychologia*. Retrieved September 5, 2017, from <http://www.readperiodical.com//201003/1973238831.html>.
3. Ahmad K and Yusuf N B M (2013) Parents' Perspective on Female Students' Dropouts in Nigeria. *Asian Journal of Education and e-Learning*; Volume 01– Issue 04; 250-261.
4. Annie, W., Howard, W.S. & Mildred, M. (1996), "Achievement and Ability Tests - Definition of the Domain", Educational Measurement, *University Press of America*, 2–5.
5. Aransi, W. O (2017) Effect of Class Classification, Class Size and Gender on Academic Performance Among Fatima High School Students in Irewole Local Government Area of Osun State, Nigeria. *European Journal of Education Studies*; Volume (3) Issue (11), 756-771.
6. Azuka B. F and Kurumeh M. S (2015) Effects of Emotional Intelligence Skills Acquisition on Students' Achievement in Senior Secondary School Geometry in Keffi Education Zone, Nasarawa State, Nigeria. *Asian Journal of Education and e-Learning*; Volume 03 – Issue 04, 243-257.
7. Bitrus, G. A, Domiya, G. A and Hannatu, D (2016) Gender Difference in Academic Performance in SSCE Economics Subject among Senior Secondary School Students in Maiduguri Metropolis, Borno State, Nigeria. *American Journal of Educational Research*; 6(3), 288-293.
8. David, R Keane, S P Shelton, T L and Calkins, D S (2011) Parent involvement and student academic performance: A multiple mediational analysis. *J Prev Interv Community*; 38(3): 183–197.
9. DuPaul G. J, and Rapport M. D. (1991) Teacher ratings of academic skills: The development of the academic performance rating scale. *School Psychology Review*; 20: 284–300.
10. Ebenuwa-Okoh, E. E (2010) Influence of Age, Financial Status, and Gender on Academic Performance among Undergraduates. *Journal of Psychology*, 1 (2): 99-103
11. Epunam, L. C. (1999). Influence of school environmental variables on academic performance as perceived by students. Unpublished M.Ed Thesis. University of Nigeria, Nsukka.
12. Eze, T. I Ezenwafor, J. I and Obi M. N (2015) Effects of Age and Gender on Academic Achievement of Vocational and Technical Education (VTE) Students of a Nigerian University. *Journal of Emerging Trends in Educational Research and Policy Studies*, 6(1): 96-101.
13. Frimpong AA, Emmanuel AK, and Amoako E (2017). A Comparative Study of the Students' Score in Classroom Testing and End of Term Examination among Shs in Techiman Municipality. *Academia Journal of Educational Research*. 5(1): 001-007.
14. Hanan J. A, Marie-Anne M and Lori K (2015) The effects of Age and Gender on student achievement in face-to face and online college algebra classes. *Research in Higher Education Journal*: Volume 27, 1-22.
15. <http://www.abdn.ac.uk/admin/aimsobs.shtml> Centre for Learning & professional Development, University of Aberdeen. accessed 18/12/2017
16. Jabor, M. K Machtmes, K Buntat, Y Kungu, K, and Nordin, M S (2011) The Influence of Age and Gender on the Students' Achievement in Mathematics. *International Conference on Social Science and Humanity*: vol(5),304-308.
17. Jacob, F and Linus K. S (2017) Effect of Gender on Senior Secondary School Students' Academic Achievement in Geography in Ganye Educational Zone, Nigeria. *European Journal of Education Studies*; volume (3) Issue (4), 394-410.
18. Jayanthi S. V , Balakrishnan, S , Ching, A L S Abdul Latiff N. A and Nasirudeen, A.M.A (2014) Factors Contributing to Academic Performance of Students in a Tertiary Institution in Singapore. *American Journal of Educational Research*, 2014, Vol. 2, No. 9, 752-758.

19. John M. M Jackson T and Simiyu, C (2015) Effect of Students' Age on Academic Motivation and Academic Performance among High School Students in Kenya. *Asian Journal of Education and e-Learning*; 3(5),337-342.
20. Kotur, B. R and Anbazhagan, S (2014) Influence of Age and Gender on the Performance. *Journal of Business and Management*; 16(5), 97-103
21. Mushtaq, I and Shabana N. K (2012) Factors Affecting Students' Academic Performance. *Global Journal of Management and Business Research*; Volume 12 Issue 9 Version 1.0. 17-22.
22. Oleabhiele, E. O. and Oleabhiele, E. P (2015) Extent of Implementation of Post-Basic Economics Curriculum in Senior Secondary Schools in Edo State. *Asia Pacific Journal of Multidisciplinary Research*, Vol. 3, No. 3, 1-5.
23. Rani, D. L and Hundie, R. M (2016) Gender and Entrepreneurship Performance Differences in Ethiopia. *Excel International Journal of Multidisciplinary Management Studies*; Vol.6 (3), 24-36
24. Sattler J. M. (2001) Assessment of children: Cognitive applications. 4th ed. Jerome M. Sattler Publisher, Inc.; San Diego.
25. Steinberg, L. (2005). Psychology of adolescents. New York: McGraw Hill.
26. Stipek, D. J (2009) School Entry Age. School Readiness, Encyclopaedia on Early Childhood development, Stanford University School of Education, USA.
27. Viviline C. N, Enose M.W. S and Dorothy C. S (2013) Determinants of Girl Students' Academic Achievement in Mixed Day and Boarding Secondary Schools in Kericho District: An Analytical Study. *International Research Journals*: Vol. 4(7), 543-554.
28. Wiebke B, Ruben C. A, Jaap J. A. D, Peter J. R, Jochen E. G, Jeff P and Samuel D. G (2016) Age and Gender Differences in Self-Esteem—A Cross-Cultural Window. *Journal of Personality and Social Psychology*, Vol. 111, No. 3, 396–410.