

# Effects of Computer-Based Instruction and Reciprocal Peer Tutoring on Secondary School Students Achievement in Agricultural Science in Rivers State, Nigeria

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## Abstract

*This study investigated the effect of computer assisted instruction and reciprocal peer tutoring on secondary school students' achievement in Agricultural Science in Rivers State. Quasi-experimental design was adopted to carry out the study. The sample was 154 SS II students of Agricultural Science in the three randomly sampled public secondary schools in Obio/Akpor Local Government Area in Rivers State. The three secondary schools used in the study are GSSS Rumuokwuta, CSS Rumuepirikom, GGSS Rumueme. The instrument for data collection was 50 item multiple choice Agricultural Science Achievement Test (ASAT) which was validated by three experts. The reliability of the ASAT instrument was ascertained using Kuder Richardson 21 (K-R21) which yielded a coefficient of 0.81. The data collected were analyzed using mean and standard deviation to answer research questions while the hypotheses were tested with Analysis of Covariance (ANCOVA) at 0.05-level of significance. The result of the study showed that computer assisted instruction and reciprocal peer tutoring techniques significantly increased academic achievement of SS II students of Agricultural Science than lecture method. The result of the study also showed that gender of the students had no effect on their achievement based on the teaching techniques used. Based on the findings, the study among others recommended that teachers should be trained with Computer Assisted Instruction (CAI) and Reciprocal Peer Tutoring (RPT) techniques for effective teaching and learning and school administrators, should facilitate the use of CAI and RPT techniques for instructional delivery.*

**Keywords:** Achievement, CAI, gender, innovative teaching techniques, Agricultural Science, RPT.

## Introduction

The growth and development of most nations are dependent on the contents and strength of its vocational education. Some of the vocational subjects at Senior Secondary School level include, Home Economics, Accounting, Business Education, Agriculture (Federal Government of Nigeria, 2014). The Caribbean Examination Council (CEC) (2010) described Agricultural science as a subject that allows students to develop knowledge and understanding of the interaction between the component parts of agriculture, and the scientific principles that explains the processes that takes place when agricultural inputs are transformed into outputs. The concept of agriculture as a science extends beyond the farm as it may also be conducted in the laboratory, classroom and any other enabling environment at primary, secondary and post-secondary school levels. With regards to secondary school, Agricultural science deals with the teaching of how to grow crops, rear animals or livestock and perform other operations that ensure expansion of knowledge in the subject at Junior and Senior secondary school levels.

Secondary education occupies an important position in the educational system. The Federal Government of Nigeria (2014) in her national policy on education described secondary school as education children receive after primary education and before tertiary stage. Secondary school begins generally at about the age of eleven (11) years and continues for about the next six (6) years. Eya and Chukwu (2012) observed a downtrend in the quality of instruction in public secondary schools, evidenced by poor students' performance in external examinations most especially in agricultural science.

The government of Nigeria realized the importance of Agricultural science in secondary schools and emphasizes the prominence of the subject under the 6-3-3-4 system of education (FGN, National Policy on

Education, 2014). Agricultural science was made a pre-vocational core subject at the junior secondary school (JSS). At the senior secondary school (SSS) level, Agricultural science was made a vocational elective, where a student could choose to offer Agricultural science curriculum or any other vocational subjects like technical drawing or home management. The senior secondary school Agricultural science curriculum content is designed to lay a solid foundation for vocational agriculture that is proposed to train individual to acquire relevant occupational skills that make them productive farmers (Federal Ministry of Education, 2008). The Federal Government of Nigeria (2014) in national policy on education highlighted the main objectives of the teaching and learning of agricultural science in secondary schools to include: stimulation and sustaining students' interest in agriculture, enabling students acquire basic knowledge and practical skills in agriculture, preparing students for occupation in agriculture and preparing students for further studies in agriculture. Agriculture is the science and art of cultivating the land to produce crops and rearing of animals for the benefit of man (Ezeja, 2012). Agriculture contributes immensely to Nigerian economy in much ways; provision of food for ever increasing population of the country, raw materials for the utilization of industrial sectors, serving as a source of employment generation, foreign earnings from exportation, provision of market for the products of the industrial sector (Odi, 2013). Before now, the main stay of the Nigerian economy has been Agriculture, contributing more than 40% of the pre-1973 Gross Domestic Product (GDP) and also provided more than 70% of the employment to the Nigerian economy (Umaru & Zubairu, 2012).

Agricultural science is the branch of science which deals with growing of crops and rearing of domestic animals for the benefits of man and raw materials for the industries. It also involves the science of processing, preservation, storage, marketing and distribution of the agricultural products. The objectives of agricultural science are not only to produce professional and skilled manpower, but also to educate the rural community with the aim of ensuring complete transformation of agricultural production from the subsistence level to mechanized agriculture. The researcher during a visit to some public secondary schools observed the result of senior secondary schools within Port Harcourt in West African Examination Council (WAEC) is below average. This could be linked to the use of conventional teaching method by teachers. Conventional method of teaching such as lecture method has been criticized by scholars such as Akinbola (2009) who blamed poor achievement of students in most school subjects on continuous use of conventional teaching method. This is because, conventional teaching methods are teacher-centred rather than students-centred and are predominantly used for instructional delivery in secondary schools. In order to avert the ugly trend in the continuous poor achievement of secondary school students in agricultural science, the use of innovative technique should be more intensified.

Innovative teaching techniques are modern methods of instructional delivery that are meant to foster quality teaching and learning. According to Farah and Hasan (2017), innovative teaching respond to diverse academic needs of the students, different innovative teaching and differentiated strategies and methods are being used by the teachers in their classes. Khurshid and Ansari (2012) identified innovative teaching techniques to include computer assisted instruction among others. Computer Assisted Instruction is defined as an interaction between students, a computer-controlled display and a response entry device for the purpose of achieving educational outcomes (Sani, 2011). In the opinion of Agboh (2015), computer assisted instruction is an automated instructional method in which a computer (electronic machine) is used to present an instruction to the learner through an interactive process. Gana (2013) stated that computer assisted instruction (CAI) is virtually any kind of computer use for teaching in educational settings which include drill and practice, tutorials, simulations and instructional management. Kareem (2018) noted that when used appropriately, computer assisted instruction using different ICTs foster access to education, strengthen the relevance of education to the increasing digital workplace and raise educational quality by teaching and learning in an engaging active process connected to real life. With computer assisted instruction, students can be brought into a computerized environment (Fakomogbon, Omiola, Awoyemi and Mohammed, 2014). Apart from computer assisted instruction, other notable innovative teaching technique capable of stimulating students' achievement as evident in the literature include reciprocal peer tutoring.

Reciprocal Peer Tutoring Instructional Method according to Ogundola (2017) is an instructional strategy that consists of pairing students together to learn or practice an academic task. It can also be regarded as the process between two or more students in a group where one of the students acts as a tutor for the other

group mates. Abdulraheem, Yusuf and Odutayo (2017) stated that reciprocal peer tutoring is regarded as an excellent resource for facilitating the mastery of interpersonal competencies. Ndirika and Ubani (2017) observed that peer tutoring is a flexible, peer-mediated strategy that involves students serving as academic tutors and tutees. Usually, a higher performing student is paired with a lower performing student or students to review critical academic or behavioural concepts. Peer tutoring allows students to receive individual assistance which guarantee increased opportunities to interact in smaller groups. In relation to this study therefore, computer assisted instruction and reciprocal peer tutoring instructional techniques are interactive, stimulating, innovative and students-centered teaching techniques that can be adopted by teachers for enhancing secondary school student's academic achievement in Agricultural Science.

Academic achievement is a measurable behaviour in relation to what is attained or accomplished at the end of a course using standardized test. Sternmayr, Meiber, Weidriger and Wirthwein (2017) described academic achievement as a multifaceted construct that comprises different domains of learning including procedural and declarative knowledge acquired in an educational system. In the opinion of Agboh (2015) academic achievement is seen as a learning outcome or the determination of the extent to which a student has achieved educational goals. Academic achievement of students is the translation of the students' achievement into scores obtained in a cognitive test. One of the concerns that attracts public interest in Nigeria education sectors today is the gender gap in academic achievement of students in schools. According to Uwameike and Osunde (2005), gender refer to all the characteristics of male and female which describes behaviours or attributes expected of individuals on the basis of being either a male or female in a given society. In the opinion of Adigun, Onihunwa, Irunokhai, Sada and Adesina (2015) gender is the range of physical, biological, mental and behavioural characteristics pertaining to and differentiating between the feminine and masculine (female and male) population. The observable disparity in gender achievement in academic has been blamed on a number of factors, including teaching methods.

If the observed poor achievement in secondary school students in Agricultural Science is suspected to have resulted from the continuous use of conventional teaching techniques by the teachers among other factors, then the use of innovative teaching techniques such as computer assisted instruction and reciprocal peer tutoring instructional technique could be employed to see their effects on the academic achievement of students. Hence, this study investigated effects of innovative teaching techniques on secondary school students' achievement in agricultural science in Rivers State, Nigeria.

### **Purpose of the Study**

The main purpose of this study was to determine the effect of Computer Assisted Instruction (CAI) and Reciprocal Peer Tutoring (RPT) on secondary school student's achievement in Agricultural Science in Rivers State, Nigeria. The specific purposes of the study include the determination of the;

1. Effects of computer assisted instruction and reciprocal peer tutoring on students' mean scores in Agricultural Science Achievement Test (ASAT).
2. Effects of gender on students mean scores in Agricultural Science Achievement Test (ASAT) using CAI and RPT.

### **Research Questions**

The following research questions guided the study.

1. What is the mean achievement scores of students taught using techniques CAI and RPT and those taught with lecture method in Agricultural Science Achievement Test (ASAT).
2. What is the mean achievement scores of male and female students taught Agricultural Science using Computer Assisted Instruction (CAI) and Reciprocal Peer Tutoring (RPT) and those taught with lecture method in Agricultural Science Achievement Test (ASAT).

### **Hypotheses**

The following null hypotheses were tested at  $P < 0.05$  levels of significance.

- Ho<sub>1</sub>:** There is no significant difference in the mean achievement score of students taught Agricultural Science using Computer Assisted Instruction (CAI) and Reciprocal Peer Tutoring (RPT) and those taught with lecture method in Agricultural Science Achievement Test (ASAT).
- Ho<sub>2</sub>:** There is no significant difference in the mean achievement score of male and female students taught Agricultural Science based on the teaching techniques.

## Methodology

The study area is Rivers State, Nigeria. Two research questions and two null hypotheses were tested at 0.05-level of significance. Quasi-experimental design was adopted to carry out the study. Quasi-experimental design is pre-test, post-test, non-equivalent control group design which permits the use of intact classes (Gall, Gall and Borg, 2007). The population for the study was all Senior Secondary School (SSS II) students offering Agricultural Science in Public Secondary Schools in Rivers State. The sample size for the study was 154 SSS II students of Agricultural Science from three randomly sampled public secondary schools in Obio/Akpor Local Government Area of Rivers State. The three randomly selected schools include GGSS Rumuokuta with 49 students offering Agricultural Science (23 males and 26 females), Community Secondary School Rumuepirikom with 55 students of Agricultural Science (27 males and 28 females) and GSSS Rumueme with 50 students of Agricultural Science (26 males and 24 females).

Through balloting, GSSS Rumuokuta with 49 students was assigned to Computer Assisted Instructional (CAI) technique (experimental group 1), Community Secondary School Rumuepirikom with 55 students was assigned to Reciprocal Peer Tutoring (RPT) instructional technique (experimental group 2) while GGSS Rumueme with 50 students was assigned to conventional lecture method (control group). The essence of the balloting was to ensure that each of the schools has equal probability of being assigned to either of the experimental or control group. The instrument was validated by three experts from the Department of Agriculture, Ignatius Ajuru University of Education. The instrument for data collection was 50 – item multiple choice-Agricultural Science Achievement Test (ASAT).

Kuder Richardson 21 (k-R21) was used for the test-retest reliability of Agricultural Science Achievement Test (ASAT) with a coefficient of 0.81. Before the commencement of the experiment, all students both in the two experimental and control groups were subjected to a pre-test in order to obtain the pre-test achievement scores. The administration of the pre-test took place a week before the experiment began in the three secondary schools used for the study. The achievement scores obtained by the students from the three groups served as the pre-test scores of the study. Immediately after the pre-test, the actual treatment began in which SSS II students of Agricultural Science in the two experimental groups were taught Agricultural Science using Computer Assisted Instructional method and Reciprocal Peer Tutoring while SSS II students of Agricultural Science in the control group were taught using conventional lecture method. The topics in Agricultural science that were covered in the treatment were Pest and Diseases of Crops and livestock. The treatment lasted for a period of six weeks. After the six weeks of the treatment, the post-test was administered a day after the completion of the experiment. The scripts of the students were collected and marked by the researcher and the students were scored 100%. Hence, any correct answer out of the 50 questions carries 2 marks. Data collected in the two stages (pre-test and post-test) from the three groups (two experimental and one control) were compiled for analysis. The data collected from the pre-test and post-test were analyzed using mean and standard deviation to answer the research questions while the hypotheses were tested using Analysis of Covariance (ANCOVA) at 0.05 level of significance.

## Results

The results of the study are presented in the tables below.

**Research Question 1:** What is the mean achievement scores of students taught Agricultural Science using CAI and RPT and those taught with conventional lecture method in the Agricultural Science Achievement Test (ASAT).

**Table 1: Pre-test and post-test mean scores of students taught Agricultural Science using CAI and RPT and lecture method in Agricultural Science Achievement Test (ASAT)**

S/N	Teaching Methods	N Pre-Test		Post-Test		Post-Pre-Test Gain Scores	
		$\bar{X}$	SD	$\bar{X}$	SD		
1.	CAI	49	27.60	5.78	56.60	6.71	29.00
2.	RPT	55	26.43	5.53	54.75	6.78	28.32
3.	Lecture	50	27.77	4.81	35.76	5.07	7.99

The result in table 1 revealed that SS II students of Agricultural Science taught using Computer Assisted Instructional (CAI) technique had pre-test mean achievement score of 27.60, post-test mean score of 56.60

and mean achievement gain score of 29.00. Students taught Agricultural Science using Reciprocal Peer Tutoring (RPT) instructional method had pre-test mean achievement score of 26.43, post-test mean achievement score of 54.75 and mean achievement gain of 28.32. On the other hand, the SS II students that were taught Agricultural Science with conventional lecture method had pre-test mean achievement score of 27.77, post-test mean achievement score of the control group (lecture) to be 7.99. This result indicates that teaching of Agricultural Science with Computer Assisted Instruction (CAI) and Reciprocal Peer Tutoring (RPT) significantly increased academic achievement of the SS II students than the use of lecture method.

**Research Question 2:** What is the mean achievement scores of male and female students taught Agricultural Science using CAI and RPT and those taught with conventional lecture method in the Agricultural Science Achievement Test (ASAT).

**Table 2: Pre-test and post-test mean scores of male and female students taught Agricultural Science using CAI and RPT and lecture method of Determine Effect of Gender in Agricultural Science Achievement Test (ASAT).**

S/N	Teaching Methods	Pre-Test			Post-Test		Gain Scores	
		Gender	N	$\bar{X}$	SD	$\bar{X}$		SD
1.	CAI	Males	23	27.65	3.36	56.62	6.61	28.97
		Females	26	27.55	3.66	56.58	6.87	29.03
2.	RPT	Males	27	27.42	3.36	55.73	6.36	28.31
		Females	28	25.44	3.40	53.77	6.40	28.33
3.	Lecture	Males	26	27.89	3.35	35.32	7.76	7.43
		Females	24	27.65	3.54	36.20	7.40	8.55

The result presented in table 2 revealed the effect of gender on the achievement scores of SS II students taught Agricultural Science using CAI and RPT and those taught with lecture method. The result showed that male students taught Agricultural Science with CAI had pre-test mean achievement score of 27.65, post-test mean achievement score of 56.62 and mean achievement gain of 28.97. Female students taught Agricultural Science with CAI had pre-test mean achievement score of 27.55, post-test mean achievement score of 56.58 and mean achievement gain of 29.03. The male students taught Agricultural Science with RPT had mean achievement score of 27.42 in the pre-test and 55.73 in the post-test making their mean achievement gain to be 28.31. The female students taught with RPT had mean achievement score of 25.44 in the pre-test and 53.77 in the post-test making their mean achievement gain to be 28.33. For the control group, male students taught Agricultural Science with lecture method had mean achievement score of 27.89 in the pre-test and 35.32 in the post-test making their mean achievement gain to be 7.43. The female students taught with lecture method had mean achievement score of 27.65 in the pre-test and 36.20 in the post-test making their mean achievement gain to be 8.55. This result therefore indicates that teaching SS II students of Agricultural Science using Computer Assisted Instruction (CAI) and Reciprocal Peer Tutoring (RPT) instructional techniques significantly increased academic achievements of both male and female students than those taught with lecture method.

### Testing of Hypotheses

**Ho<sub>1</sub>:** There is no significant difference in the mean achievement score of students taught Agricultural Science using CAI and RPT techniques and those taught with conventional lecture method in the Agricultural Science Achievement Test (ASAT).

**Ho<sub>2</sub>:** There is no significant difference in the mean achievement scores of male and female students taught Agricultural Science based on the teaching techniques.

**Table 3: Summary of Analysis of Covariance (ANCOVA) for test of significance difference in the Mean Achievement scores of students as a result of Treatments and Effects of Techniques on Gender of Students.**

Source	Sum of Square	DF	Mean Score	F-Cal	Sig (P-Value)	Ranks
Corrected Model	2774.125	6	462.354	58.655	0.000	
Intercept	3929.246	1	3929.246	49.033	0.000	
Pre-Test	9.019	1	9.019	0.113	0.738	
Group	2320.198	2	1160.099	38.954	0.000	S*
Gender	32.936	1	32.936	0.411	0.184	NS
Error	5208.746	137	38.020			
Total	243811.000	154				
Corrected Total	7982.871	153				

Note: *R squared = .748 (Adjusted R Squared = .707)*, S\* significant, NS = Not significant

Note: Level of sig. = 0.05

The result presented in table 3 revealed that treatments (CAI and RPT techniques and lecture method) had a significant effect on students' achievement in Agricultural Science Achievement Test (ASAT). The f-calculated (f-cal) value of 38.954 and the p-value of 0.000 which is less than 0.05 level of significance indicating that there was significant different in the mean achievement scores of students taught Agricultural Science based on the treatments given. The post Hoc test of multiple comparison showed that the achievement gains of the students taught with CAI (29.00) and RPT (28.32) were significantly different and higher than those taught with lecture method (7.99). Therefore, the null hypothesis of no significant difference in the mean achievement scores of students taught Agricultural Science using CAI and RPT techniques and those taught with conventional lecture method was rejected. For the effect of gender on academic achievement the result in the table showed that, the f-calculated value of 0.411 and p-value of 0.184 which is greater than 0.05-level of significance indicated that there was no significant difference in the mean achievement scores of male and female students in the Agricultural Science Achievement Test irrespective of the treatments. Hence the null hypothesis of no significant difference in the mean achievement scores of male and female students taught Agricultural Science based on teaching techniques was accepted.

### Discussion of the Major Findings

The result of the study showed that SS II students that were taught Agricultural Science using Computer Assisted Instruction and Reciprocal Peer Tutoring techniques had higher academic achievement in Agricultural Science Achievement Test (ASAT) than those that were taught using lecture method. The findings of this study agreed with the findings of Cyril (2016) on effects of computer-assisted instruction and demonstration method of teaching automobile technology where the author found that Computer Assisted Instruction (CAI) group performed better than the demonstration method of teaching group. Similarly, the findings of the study also corroborated that of Kareem (2015) who investigated the effects of Computer Assisted Instruction on students' academic achievement and attitude in Biology and found that there is significant different between the achievement of students taught Biology using Computer Assisted Instruction and those taught with conventional method. The results of the studies of Samaila et al (2016) confirmed that students taught using computer assisted instruction performed better than the control group.

The findings of this study on effects of reciprocal peer tutoring agreed with the results of the study of AbdulRaheem, Yusuf and Odutayo (2017) on effect of peer tutoring on students' academic performance in Economics in Ilorin where the authors found that students in the peer tutoring group obtained higher achievement scores than students in the conventional instruction group and that the effect was not moderated by gender. In addition, the findings of the study confirmed to that of Ogundola (2017) who found that reciprocal peer tutoring instructional technique was more effective in improving students' cognitive achievement than the conventional teaching method. Ogundola (2017) further found that there

were no interaction effects of treatments and gender on achievement of senior secondary school students in technical drawing.

### **Conclusion**

The lecture method employed by most teachers for instructional delivery seem ineffective for equipping students for better academic achievement in Agricultural Science among other subjects in secondary school. To address the current poor trend in academic achievement of students in Agricultural Science, this study was carried out to establish the effects of computer assisted instruction and reciprocal peer tutoring instructional techniques on students' achievement in Agricultural Science using secondary schools in Obio/Akpor Local Government Area of Rivers State.

### **Recommendations**

Based on these finding, the study therefore recommended that;

1. Secondary school teachers should be trained to be acquainted with the use of CAI and RPT instructional techniques.
2. Since the use of CAI and RPT instructional techniques enhance academic achievement of the students in Agricultural Science, the teachers in secondary schools in the state should adopt the use of these techniques for instructional delivery for improved academic achievement of students in all subjects.
3. Seminars, workshops and conferences should be organized by states and Federal Ministries of Education where teachers will be taught the application and usage of CAI and RPT techniques for effective teaching and learning of students.
4. Secondary school teachers in Rivers State should be provided with in-service training for teaching skill update in the use of innovative and student-centred instructional strategies.

### **References**

- Abdulraheem, Y. Yusuf, H.T. & Odutayo, A.O. (2017). Effect of Peer Tutoring on Students' Academic Performance in Economics in Ilorin South Nigeria. *Journal of Peer Learning*, 10(7), 95 – 102.
- Adigun, J., Onihunwa, J., Irunokhai, E., Sada, Y. & Adesina, O. (2015). Effect of Gender on Students Academic Performance in Computer Studies in Secondary Schools in New Bussa, Borgu Local Government of Niger State. *Journal of Education and Practice*, 6(33), 1 – 7.
- Agboh, C.I. (2015). Effects of Computer Assisted Instructional Technique on Students' Achievement in Financial Accounting in Colleges of Education in Southeast Nigeria. *Research Journal of Finance and Accounting*, 6(20), 31 – 38.
- Akinbola, A.O. (2009). Enhancing Students' Attitude towards Nigeria Secondary School Physics through the Use of Cooperative and Individualistic Learning Strategy. *Australian Journal of Teacher Education*, 3(1), 35 – 42.
- Caribbean Examination Council (CEC) (2010). Agricultural science syllabus. Barbados: CEC. [www.cxc.org](http://www.cxc.org): Accessed on 04/9/2016.
- Eya, P.& Chukwu, L. (2012). Effective supervision of instruction in Nigeria secondary schools: Issues in quality assurance. *Journal of Qualitative Education*, 8 (1),20-26
- Ezeja, C.C. (2012). *Comprehensive Basic Education Agricultural Science for Junior Secondary Schools Book 1* (Upper Basic Education Revised Edition). Enugu: Bee Graphics Int'l.
- Fakomogbon, M.A. Omiola, M.A., Awoyemi, S.O. & Mohammed, R.E. (2014). Effect of Computer Assisted Instructional Package on the Performance of Students in Mathematics in Ilorin Metropolis. *European Scientific Journal*, 10(25), 196 – 206.

- Fankun, D.S., Evbuomwan, G.O. (2017). Financing Agriculture as a way of Diversification of Nigeria Economy: Challenges and Prospects. *The International Journal of Business Management*, 5(5), 2421 – 8916.
- Farah, N. & Hasan, S.M. (2017). Innovative Teaching has a Positive Impact on the Performance of Diverse Students. *Special Collection Student Diversity*, 1 – 8.
- Federal Ministry of Education (2008). *Senior Secondary Education Curriculum, Agricultural Science for SS 1-3*. Lagos: NERDC Press.
- Federal Republic of Nigeria (2014). *National Policy on Education*. Yaba: NERDC Press.
- Gall, M.D., Gall, J.P and Borg, W.R. (2007). *Educational Research: An Introduction. (Eight Edition)*. Boston, New York: Pearson Education Inc.
- Gana, C.S. (2013). Effects of Computer Assisted Instruction with Animation on Achievement and Retention of Students of Colleges of Education in Quantum Physics. Unpublished Ph.D Thesis, Department of Science Education, University of Nigeria, Nsukka.
- Kareem, A.A. (2018). Comparative Study of the Effects of Computer Assisted Instruction on Students' Academic Achievement in Science Subjects in High Schools in Osun State, Nigeria. *International Journal of Innovative Technology Integration in Education*, 15 – 22.
- Khurshid, F. & Ansan, U. (2012). Effects of Innovative teaching Strategies in Students Performance. *Global Journal of Human Social Science Linguistics and Education*, 12(10), 47 – 54.
- Ndirika, M.C. & Ubani, C.C. (2017). Peer Tutoring Teaching Strategy and Academic Achievement of Secondary School Biology Students in Umuahia Education Zone, Nigeria. *IOSR Journal of Research and Method in Education*, 7(3), 72 – 78.
- Nigerian Educational Research and Development Council (2008). *Senior Secondary Agricultural Science Curriculum for SS 1 – 3*. Abuja: NERDC Press.
- Odi, N. (2013). *Agricultural Financing in Nigeria: An Empirical Study of Nigerian*.
- Ogundola, P.I. (2017). Effects of Peer Tutoring Strategy on Academic Achievement of Senior Secondary School Students in Technical Drawing in Nigeria. *British Journal of Education, Society and Behavioural Science*, 19(1), 1 – 10.
- Samaila, Y., Makinde, A.A. & Zambwa, J. (2016). Development of a Computer Aided Instructional for Effective Teaching of Electrical and Electronic Devices at Nigeria Certificate in Education Level in North Eastern Nigeria. Retrieved from ([www.eajournals.org](http://www.eajournals.org)).
- Sternmayr, R. Meiber, A.F. & Wirthwein, L. (2017). Academic Achievement. Oxford bibliographies [www.oxfordbibliographies.com/view/document/](http://www.oxfordbibliographies.com/view/document/)
- Umaru, A. & Zubaini, A.A. (2012). An Empirical Analysis of the Contribution of Agriculture and Petroleum Sectors to the growth and Development of the Nigeria Economy from 1960 – 2010. *International Journal of Social Sciences and Education*, 2(4) 88 – 110.
- Uwameike, R. & Osunde, A.U. (2005). Analysis of Enrolment Pattern in Nigeria Polytechnics Academic Programmes and Gender Imbalance. *Journal of Home Economics Research*, 6(1), 150 – 155.