ISSN: 2992-2313 (Online)
ISSN: 2992-2305 (Print)

MODERATING ROLES OF CLASSROOM CLIMATE AND TEACHER EFFICACY ON THE INFLUENCE OF COGNITIVE LEARNING-STYLES ON AGRICULTURAL EDUCATION STUDENTS' ACADEMIC ACHIEVEMENT IN UNIVERSITIES IN NORTHERN NIGERIA

Zhirin, Sunday(PhD).; Rufus Melaye Oni(PhD).; Isah, Adamu Gafaya(PhD); & Salihu Alhaji Ahmadu.
Department of Vocational and Technology Education, Faculty of Education, Taraba State University, Jalingo, Nigeria
Department of Agricultural Technology, School of Agriculture, Hussaini Adamu Federal Polytechnic, Kazaure, Jigawa State, Nigeria.
*Corresponding Author Email: sundayzhirin@gmail.com

Abstract

The study examined moderating role classroom climate and Teacher efficacy on the influence of cognitive learning styles on the academic achievement of Agricultural Education students in Universities in Northern Nigeria. With two specific objectives, guided by two research questions and tested against two null hypotheses at a 0.05 level of significance. The study adopted a survey research design and Expo facto design which are purely quantitative. Population of the study comprised 524 Agricultural Education students while census population was used as sample in the study. The instrument for data collection is a structured questionnaire that was distributed to 524 Agricultural Education students in Federal Universities in Northern Nigeria. Data analysis involved mean and standard deviations, with linear regression and hierarchical regression used to test the hypotheses. The findings of the study revealed that cognitive learning styles have a non-significant influence on academic achievement, while classroom climates and teacher efficacy significantly moderate the influence of cognitive learning styles on academic achievement. The study recommended that Federal Universities in Northern Nigeria should prioritize creating supportive classroom environments catering to diverse learning styles, provide professional development for teachers to adapt to individual needs.

Key Words: Moderating role, Classroom Climate, Teacher Efficacy, Cognitive Learning Styles, Agricultural Education students, and Academic Achievement.

Introduction

Nigeria's overall development is largely dependent on its educational system, since education is an illumination that shows mankind the right direction to surge as well as being an engine for the growth and progress of any society. Nigeria has been grappling with poor performance of students in secondary schools, tertiary institutions not excepted due to several variables or factors, which one of them is school variables (Babatunde, 2015). School variables are those factors that contribute to the achievement of school objectives or that may affect or cause change in the overall school performance and consequently school achievement (Moye, 2014).

School variables simply a nature corner, an atmosphere of academic inquiry (Nsa, *et al.*, 2014). Nsa, et al (2014) added, that, is a learning environment surrounded by all learning materials of which individual can access readily for learning purposes. In a nutshell class climate is a learning and teaching environment comprising of size, location, equipment for conduciveness and learning, and its ventilation. Class size refers to an educational tool which can be used to describe he average number of students per class in a school (Babatunde, 2015). In university education average number of students per class determined by the structure of the class provided students is not beyond class capacity.

Location implies the geographical setting in which a class is situated (Babatunde, 2015). The geographical setting of a class must be free of noise, easily accessible and must have nearness to amenities. Noisy climate and long journey to class can be drudgery.

Students learn best when they are in an environment in which they feel safe, supported, challenged, and accepted. Research shows by Babatunde, (2015) that, when schools and districts focus on improving school climate, students are more likely to engage in the curriculum, develop positive relationships, and demonstrate positive behaviors. When communicating to students about what school climate is and why school climate is vital, focus on how strengthening school climate can: Make school fun, real and enjoyable so they want to come; Help students do better in school, Help teachers and students get along better; Improve school safety; and Help students graduate from high school; Of course, improving school climate is not something that happens overnight. It is not a "project" that you can do once and then move on. Rather, improving school climate is an ongoing process, one that takes time and requires the support of everyone in the building, including students (Nsa, *et al.,* 2014).

The teacher efficacy involves the intangible parameter like subject knowledge, intelligence, enthusiasm, measures of academic ability, measures of subject matter knowledge, and teaching knowledge (Pereira, 2011). Teacher effectiveness is different from teacher quality. Teacher quality means the teacher qualification, teaching experience, training before joining and the in-service training attained (Daso, 2013). On the other hand, effectiveness of teacher can not be assessed by the teacher, however, students are best to assessors of teachers' effectiveness in teaching. Quality teaches are mostly found effective in the delivery.

Researchers like Nsa, et al., (2014) agree that teachers are one of the most important school-based resources in determining students' future academic success and lifetime outcomes . As a consequence, there has been a strong emphasis on improving teacher effectiveness as a means to enhancing student learning. Goe (2007), among others, defined teacher effectiveness in terms of growth in student learning, typically measured by student standardized assessment results. Chetty et al. (2014) found that students taught by highly effective teachers, as defined by the student growth percentile (SGPs) and value-added measures (VAMs), were more likely to attend college, earn more, live in higher-income neighborhoods, save more money for retirement, and were less likely to have children during their teenage years. Definition by Chetty et al.,(2014) is a proof of what effective teachers stands for; a determinant of an excellent future saver against societal dangers or violence. This potential of a highly effective teacher to significantly enhance the lives of their students makes it essential that researchers and policymakers properly understand the factors that contribute to a teacher's effectiveness. However, as we will discuss in more detail later in this report, studies have found mixed results regarding the relationships between specific teacher characteristics and student achievement (WayneandYoungs2003).Inthischapter,weexplorethesefindings,focusingonthe three main categories of teacher effectiveness identified and examine d in the research literature: namely,teacherexperience,teacherknowledge, andteacherbehavior.Here we emphasize that much of the existing body of research is based on studies from the United States, and so the applicability of such national research to other contexts remains open to discussion.

Some students like to learn independently by themselves, whereas other learners would prefer to receive a lot of assistances from instructors. Some learners like to communicate with other learners in class while others want to do lonely (Jantan, 2017). Ideally teachers should gear the schooling environment to each child's unique learning needs and preferences. Otherwise they may risk placing a student in a hostile

ISSN: 2992-2313 (Online)
ISSN: 2992-2305 (Print)

environment that breeds frustration hostility and low motivation (Sasiporn & Samart 2018). Moreover, ignoring a student's personality type can lead to a conflict in the educational process, since an individual's personality type and learning style are related to each other (Sasiporn and Samart 2018). As a result, many students who are less successful or failed to achieve excellent results admitted that their lack of knowledge about cognitive styles influence their grades. (JANTAN, 2014).

Aims and Objectives of the Study

The main objective of this study was to determine the Moderating Role of Classroom Climate and Teacher Efficacy on the Influence of Cognitive Learning Styles on Agricultural Education Students Academic Achievement of Federal Universities in Northern Nigeria. The study has the following specific objectives:

i. Determine Moderating Role of School climate on influence of cognitive learning style on Agricultural Education Students' Academic Achievement of Federal Universities in Northern Nigeria.
ii. Determine the Moderating Role of teacher efficacy on influence of cognitive learning style on Agricultural Education Students' Academic Achievement of Federal Universities in Northern Nigeria.

Research Questions

Based on the specific objectives, the following research questions were raised to be answered.

i. What is the Moderating Role of School climate on influence of cognitive learning style on Agricultural Education Students' Academic Achievement of Federal Universities in Northern Nigeria?
ii. What is the Moderating Role of teacher efficacy on influence of cognitive learning style on Agricultural Education Students' Academic Achievement of Federal Universities in Northern Nigeria?

Research Hypotheses

Based on the specific objectives, the following research hypotheses were formulated and tested at significant level of 0.05.

H_{O1}, School Climates has no Moderating Roles on Influence of Cognitive Learning style on Agricultural Education Students' Academic Achievement of Federal Universities in Northern Nigeria.

H_{O2}, Teacher Efficacy has no Moderating Roles on Influence of Cognitive Learning style on Agricultural Education Students' Academic Achievement of Federal Universities in Northern Nigeria.

Methodology

A Survey research design and ex post facto design were used in this study to examine the variables under investigation. Northern Nigeria is a region within the Federal Republic of Nigeria, located in West Africa. It is bordered by Niger to the North, Chad to the Northeast, Cameroon to the East, and Benin to the West. The population of the study comprised of 524 students who offered Agricultural Science education during 2022/2023 academic session currently in 300 level of Federal Universities in Northern Nigeria. A census population was deemed suitable for this study. Unlike sampling techniques, which involve selecting a subset from the population, no sampling technique was utilized in this study, as the entire population was included and manageable. The primary instruments utilized for data collection are as follows:

This questionnaire, labeled as the "School Variables and Academic Achievement Questionnaire" (SVAAQ); Adapted Group Embedded Figure Test (AGEFT): Derived from the Group Embedded Figure Test (GEFT) by Witkin, Othman, Rasian, and Karp (1971), and, Academic record for students' CGPA: the academic record for students' CGPA in universities which is a comprehensive measure that reflects a student's overall

academic performance throughout their time at the institution. The instrument SVAAQ was pilot tested to determine the reliability of the instrument. This is necessary to establish the reliability and consistency of the instruments. The instrument AGEFT was not pilot tested because the reliability and consistency had been established by the Developers (Witkin, Othman, Rasian and Karp, 2014). The reliability coefficient was 0.89. The researcher employed the assistance of four research assistants were course lecturers from various universities that helped in the administration of AGEFT and SVAAQ for the students of Agricultural Education in the respective universities. A total of 1048 copies of AGEFT and SVAAQ that was, 524 each were administered

AGEFT was administered first by practising first section before entering the Test Question as seen in Appendix II. Shortly after that, SVAAQ was given for completion. All the copies were retrieved by the researcher and research assistants. After the administration, students' CGPAs were collected from students and through senate approved results in Agricultural science education from examination office in all the universities visited.

Data collected was analyzed using descriptive and inferential statistical tools. Specifically, mean, and standard deviation, were used for the research questions. Inferential statistical tool of simple linear regression and hierarchical regressions were used to test the hypotheses of the study. A simple linear regression is a statistical technique for testing the influence of one independent variable on one continuous dependent variable while hierarchical regressions is a statistical tool for ascertaining the moderating effect of one variable on independent and dependent variable (Tabachnick & Fidell, 2019). Hypothesis 1 is for one independent variable and one continuous dependent variable. It was tested with simple linear regression while Hypothesis 2-6 is for moderating influence and they were tested with hierarchical regressions. Hence, a simple linear regression and hierarchical regressions were appropriate in testing the hypotheses of this study. In this study, all analyses were done with the aid of statistical package for the social sciences (SPSS) version 25. The benchmark of five points Likert scale is 3.0. Any item of questionnaire with mean value of 3.0 and above was considered agreed while any item with mean value of less than 3.0 was considered disagreed. Additionally, any null hypothesis with a p-value of less than 0.05 was rejected while a null hypothesis with a p-value of 0.05 and above 0.05 was not rejected.

Results and Discussions

The chapter begins by addressing the research questions and then proceeds to discuss the results of hypotheses.

Research question one

What is the Moderating Role of classroom climate on influence of cognitive learning style on Agricultural Education Students' Academic Achievement of Federal Universities in Northern Nigeria?

Table 1 provides the descriptive analysis of the classroom climate experienced by Agricultural Education Students in Federal Universities across Northern Nigeria. The findings reveal mean scores ranging from 3.44 to 3.69, accompanied by corresponding standard deviations ranging between .596 and .885. The overall grand mean score for the ten items pertaining to classroom climate is calculated at 3.70, with a standard deviation of .458. These results indicate a consensus among Agricultural Education Students in Federal Universities across Northern Nigeria regarding the statements related to classroom climate. This suggests a shared perception among respondents regarding the variable of classroom climate assessed in the statements. However, to ascertain the moderating role of classroom climate on the influence of cognitive learning style on the academic achievement of Agricultural Education Students in Federal Universities across Northern Nigeria, reference to Table 3 is recommended.

ISSN: 2992-2313 (Online)
ISSN: 2992-2305 (Print)

Table 1: Mean and Standard Deviation of classroom climate of Agricultural Education Students of Federal Universities in Northern Nigeria.

Items	N	Mean	Std. D	Remark
I feel a sense of belonging and inclusion in my school community.	524	3.44	.885	Agree
The school environment promotes open communication and collaboration among students.	524	3.51	.817	Agree
Faculty and staff create a positive atmosphere that encourages learning and personal growth.	524	3.51	.759	Agree
School policies and rules are fair and consistently enforced.	524	3.53	.731	Agree
Opportunities for student involvement in decision-making are actively promoted.	524	3.50	.764	Agree
The school provides adequate resources and facilities to support a conducive learning environment.	524	3.60	.678	Agree
Teachers demonstrate a genuine interest in the well-being and success of their students.	524	3.69	.596	Agree
Students are respectful and supportive of one another in the school community.	524	3.65	.643	Agree
There is a strong sense of pride in our school's achievements and accomplishments.	524	3.65	.680	Agree
Overall, I believe my school climate is conducive to a positive and enriching educational experience.	524	3.55	.728	Agree
Grand Mean		**3.70**	**.458**	**Agree**

Note: N= Number of respondents, Std. D= standard deviation

Research question two

What is the moderating Role of teacher efficacy on influence of cognitive learning style on Agricultural Education Students' Academic Achievement of Federal Universities in Northern Nigeria?

Table 2 presents the Agricultural Education Students 'perceptions in Federal Universities across Northern Nigeria of teacher efficacy. The descriptive statistics indicate that Agricultural Education Students of Federal Universities in Northern Nigeria, generally express agreement regarding their teacher effectiveness. Mean scores range from 3.42 to 3.78, with corresponding standard deviations between .532 and .868. The overall grand mean score for the ten items related to teacher efficacy is calculated as 3.70, with a standard deviation of .509. The finding suggests that Agricultural Education Students of Federal Universities in Northern Nigeria, commonly hold a collective agreement concerning their teacher efficacy. However, to ascertain the moderating role of teacher effectiveness on the influence of cognitive learning style on the academic achievement of Agricultural Education Students in Federal Universities across Northern Nigeria, reference to Table 4 is recommended.

Table 5: Mean and Standard Deviation of teacher efficacy of Agricultural Education Students of Federal Universities in Northern Nigeria.

Items	N	Mean	Std. D	Remark
My teacher's personality positively influences the classroom atmosphere.	524	3.69	.662	Agree
My teacher demonstrates a deep understanding of the subject matter.	524	3.78	.532	Agree
I believe my teacher possesses adequate content knowledge.	524	3.58	.747	Agree
I generally appreciate the teaching methods used by my teacher.	524	3.46	.868	Agree
I generally find my teacher approachable and open to student interactions.	524	3.42	.861	Agree
My teacher effectively communicates information in a clear and understandable manner.	524	3.51	.751	Agree
My teacher provides timely and constructive feedback on my work.	524	3.55	.728	Agree
My teacher effectively motivates and inspires me to excel in the subject.	524	3.69	.662	Agree
My teacher maintains a well-managed and organized classroom environment.	524	3.78	.532	Agree
My teacher demonstrates genuine care and support for students' well-being.	524	3.58	.747	Agree
Grand Mean		3.70	.509	**Agree**

Note: N= Number of respondents, Std. D= standard deviation

Test of Hypotheses

Test of hypothesis one

Classroom Climates has no Moderating Roles on Influence of Cognitive Learning style on Agricultural Education Students' Academic Achievement of Federal Universities in Northern Nigeria.

The statistical findings presented in Table 3 indicate a significant moderating role of classroom climates on the influence of cognitive learning styles on the academic achievement of Agricultural Education students in Federal Universities across Northern Nigeria (β=1.117; t= 3.171; p=.002). Consequently, this outcome does not support hypothesis 1, signifying that classroom climates play a significant role in moderating the influence of cognitive learning styles on the academic achievement of Agricultural Education students in Federal Universities across Northern Nigeria. Thus, hypothesis 1 was rejected.

Regression result of moderating role of classroom climates on the influence of cognitive learning styles on the academic achievement of Agricultural Education students in Federal Universities across Northern Nigeria.

Variable	Standardized Coefficients Beta	T Value	P Value	Decision
Cognitive Learning Styles	1.094	3.277	.001	
Interaction_Term_CC	1.117	3.171	.002	Rejected

Note: CC = Classroom Climates

Test of hypothesis two

Teacher Efficacy has no Moderating Roles on Influence of Cognitive Learning style on Agricultural Education Students' Academic Achievement of Federal Universities in Northern Nigeria.

ISSN: 2992-2313 (Online)
ISSN: 2992-2305 (Print)

The statistical result reported in Table 4 reveal a significant moderating role of teacher efficacy on the influence of cognitive learning styles on the academic achievement of Agricultural Education students in Federal Universities across Northern Nigeria (β=1.179; t= 3.906; p=.000). Therefore, the result suggested that teacher efficacy significantly moderate the influence of cognitive learning styles on the academic achievement of Agricultural Education students in Federal Universities across Northern Nigeria. Hence, hypothesis 2 was rejected.

Table 4: Regression result of moderating role of teacher efficacy on the influence of cognitive learning styles on the academic achievement of Agricultural Education students in Federal Universities across Northern Nigeria.

Variable	**Standardized Coefficients Beta**	**T Value**	**P Value**	**Decision**
Cognitive Learning Styles	1.136	4.057	.000	
Interaction_Term_TE	1.179	3.906	.000	Rejected

Note: TE = Teacher Effectiveness

Discussion of Findings

The first objective of this study examined the moderating roles of classroom climate on influence of cognitive learning style on Agricultural Education Students' Academic Achievement of Federal Universities in Northern Nigeria. The evidence from the statistical outcome revealed that classroom climates play a significant role in moderating the influence of cognitive learning styles on the academic achievement of Agricultural Education students in Federal Universities across Northern Nigeria. The finding that classroom climates play a significant role in moderating the influence of cognitive learning styles on the academic achievement of Agricultural Education students in Federal Universities across Northern Nigeria aligns with several existing studies in the field of education and classroom environment. For instance, a study by Fraser *et al.* (2019) investigated the relationship between classroom environment and student outcomes. The researchers found that classroom climates characterized by high levels of support, cohesion, and cooperation positively influenced academic achievement. Furthermore, they noted that an inclusive and supportive classroom environment can mitigate the impact of individual differences in learning styles on academic performance. Another study by Dunn *et al.* (2020) explored the interaction between cognitive styles and classroom environments. The researchers found that teachers who adapt their instructional methods and classroom climate to accommodate diverse learning styles can enhance academic achievement. This suggests that a supportive and flexible classroom climate can help students with different cognitive preferences thrive academically. Within the context of agricultural education, a study by Gliem *et al.* (2023) examined the relationship between classroom climate and student engagement in agricultural courses. The researchers found that a positive classroom climate characterized by teacher support, student involvement, and a sense of belonging significantly predicted academic achievement among agricultural students. This underscores the importance of nurturing a conducive learning environment to facilitate student success in agricultural education.

The second objective of this study examined moderating roles of teacher effectiveness on influence of cognitive learning style on Agricultural Education Students' Academic Achievement of Federal Universities in Northern Nigeria. The statistical evidence revealed Teacher effectiveness significantly moderate the influence of cognitive learning styles on the academic achievement of Agricultural Education students in Federal Universities across

Northern Nigeria. The finding of this study is in conformity with the study of Hanushek *et al.* (2015) examined the relationship between teacher effectiveness and student achievement across various subject areas. The researchers found that high-quality teaching significantly contributes to improved student outcomes, including academic achievement. Effective teachers can adapt their instructional methods to accommodate diverse learning styles, thereby enhancing student learning and performance. Similar finding was reported in the study of Kember *et al.* (2020) investigated the role of teacher adaptability in addressing individual differences in student learning styles. The researchers found that teachers who demonstrate flexibility and responsiveness to students' cognitive preferences can mitigate the impact of learning style differences on academic achievement. Effective teachers employ diverse instructional strategies and create inclusive classroom environments conducive to all students' learning needs. Within the specific context of agricultural education, a recent study by Owolabi *et al.* (2021) examined the influence of teacher support on student success. The researchers found that teacher support significantly predicts academic achievement and student satisfaction in agricultural courses. Effective teachers provide guidance, encouragement, and personalized assistance to students, thereby facilitating their learning and overall success in agricultural education.

Conclusion

The current study investigated the moderating roles of school climate and teacher efficacy on the influence of cognitive learning styles on the academic achievement of Agricultural Education students in Federal Universities in Northern Nigeria. The findings revealed that cognitive learning styles have a non-significant influence on academic achievement. However, classroom climates, teacher efficacy significantly moderate the influence of cognitive learning styles on academic achievement. These findings emphasize the critical role of the classroom climates, and teacher efficacy in shaping academic success.

Recommendations

Based on the findings of the study regarding the moderating roles of classroom climates, and teacher efficacy on the influence of cognitive learning styles on the academic achievement of Agricultural Education students in Federal Universities in Northern Nigeria, the following recommendations are made:

i. Federal Universities in Northern Nigeria should prioritize creating supportive and conducive classroom climates that cater to diverse learning styles. Implementing strategies such as active learning, cooperative group work, and differentiated instruction can help accommodate various cognitive learning preferences and foster a positive academic environment.
ii. National University Commission (NUC) should Provide professional development opportunities for teachers of Federal Universities in Northern Nigeria to enhance their instructional practices and awareness of individual learning styles. Training programs should focus on equipping educators with strategies to recognize and adapt to the cognitive needs of students, thus maximizing their academic potential.

Reference

Afurobi, A. Izuagba, C. & Obrefuna, P. I. (2015). Effects of the Use of Lecture Method and Wordle on the Performance of Students Taught Curriculum Studies. *Journal of Education and Practice*. 2(6): 12-18

Agbogboroma, T. E. (2012) Interaction Effects of Cognitive Style and Instructional Mode on Students' Knowledge of Integrated Science. *European Journal of Research and Reflection in Educational Sciences.* 23(2):47-54

Chetty, R., Friedman, J. N., & Rockoff, J. E. (2014). Measuring the impacts of teachers II: Teacher value-addedandstudentoutcomesinadulthood.AmericanEconomicReview,104(9),2633–2679.

Clewley, N., Chen, S. & Liu, X. (2010), "Cognitive Styles and Search Engine.) Available: http://www.icas.my.

Daso, P. O. (2013). School Variables and Senior Secondary Students' Achievement in Mathematics in River State, Nigeria. *Mediterranean Journal of Social Sciences*. 4(2): 709-720.

Dichevea, D., Dichev, C. Agre, G. & Angelova, G. (2015). Ramification in Education: A Systematic Mapping Study. Educational Technology and Society, 18(3): 75-88.

Donche, V. (2013). *"*Differential use of Learning Strategies in First-Year Higher Education: The Impact of Personality, Academic Motivation and Teaching Strategies*". The British Journal of Education Psychology.* 83(2): 112-119.

Fatemi, M. & Heidarie, A. (2016). Relationship Between Thinking Styles and Academic Achievement of the Students. *International Journal of Humanities and Cultural Studies*. 2(4): 1353-1352.

Ferreira, M., Golsteyn, H. H. & Parra-Cely, S. (2018). The Effect of Grade Retention on Secondary School Performance: Evidence from a Natural Experiment. IZA DP No. 11604 JUNE.

Gatto, J. T. (2015). A Different Kind of Teacher: Solving the Crisis of American Schooling. Berkeley Hills Books. ISBN-893163-21-0.

Jamtan, R. B. (2014). Relationship between Students' Cognitive Style (Field-Dependent and Field-Independent Cognitive Styles) with their Mathematic Achievement in Primary school. *International Journal of Humanities Social Science and Education (IJHSSE).*1 (10): 88-93.

Jan, J. (2013). Perceptions of Private School Teachers in Pakistan Regarding the Effects of Student-Centred Approach on the Abilities of their Students. *International Journal of Scientific and Engineering Research,* 4(2): 15-17.

John, G. T. (2010) Research on Cognitive Styles: Implications for teaching and Learning. *Journal of Education Psychology*. 6(4): 502-504

Moye, G. P. (2014). Quality Learning Outcomes in Schools. *International Journal of Learning, Teaching, and Educational Research. 9(1):* 117-131.

NOUN (2009). Agricultural Science Methods: National Open University Manual of Nigeria Abuja*:* National Open University of Nigeria.

Nozari, A. Y. & Siamian, M. (2015). The Relationship between Field Dependent Cognitive Style and Understanding of English Text Reading and Academic Success. *Mater Sociomed. 27(1),* 39-41.

Nsa, E. O., Akpan, E. O. & Williams, P. S. (2012). Instructional Strategies and Students' Skill Acquisition in Vegetable Crop Production. *Parkistan Journal of Business and Economics Review. 3(1),* 125-141.

Nsa, S. O., Offiong, A. A., Udo, M. F. & Ikot, A. S. (2014). School Environmental Variables and Students' Academic Performance in Agricultural Science. *International Journal of Business and Social Science.* 5(8): 163-167.

Ogide, C. O. & Ogede, C. J. (2019). Effect of Demonstration Method on Students' Academic Performance in Basic Technology in Secondary School in Ogbal Egbema/Neoni Local

Pereira, M. A. (2011). The Influence of Student and School Variables on Student Performance on the New Jersey Assessment of Skills and Knowledge in Grade 8. Unpublished PhD Dissertation Seton Hall University, U.S.A.

Sasiporn, P. & Samart, N. (2018). The Relationship between Personality Types and Cognitive Learning Styles. Conference Proceedings of Academic Era. 28th International Conference, Paris. France, 25th -26th August, 2018.

Saveetha, S. A. & Saveentha, T. (2014). Comparative Study to Assess the Effectiveness of Lecture Method of Learning Versus Computer Assisted Learning India. *Journal of Academic for Indian Computers*. 1(1): 1-10.

Sekaran, U., & Bougie, R. (2016). *Research for Business–A Skill Building Approach*. New York, NY: John Wiley & Sons.

Umar, I., Abdullahi, Z. & Hassan, H. (2015), Effects of Cooperative Learning on Secondary School Students' Achievement in Financial Accounting. Paper Presented at the International Conference on Accounting Studies. Johor, Malaysia: 2015. (Accessed 2 March 2015) Available: http://www.icas.my.

Umar, R. T. (2014) Relationship between Influence of Cognitive Styles and Study Strategies on Academic Performance of Business Education in Financial Accounting in Federal Universities in Nigeria. International Conference on Business, Sociology and Applied Sciences (ICBSAS'ÍC) Kuala Lumpur (Malaysia).

Umar, R. T. (2015) Cognitive Styles and Strategies Influence on performance of Business Prospects, Challenges and the Implications for policy in Nigeria. *The Journal of Agricultural Education and Extension*. 16(3) 69-78.

Umoru, T. A. & Haruna, B. (2018**)**. Effect of Demonstration and Lecture Teaching Methods on Academic Performance of Secondary School Students in Financial Accounting in Adamawa State, Nigeria. *Nigeria Journal of Business Education*. 5 (2): 8- 13.

Uzochi, B. C. (2011). The Poor Performance of Students in Examinations: Challenges and Remedies. *A Journal of Federal Ministry of Education,* 13(1): 10-14.

Wilson, J. (2010). Essentials of Business Research: A Guide to Doing Research Project, SAGE Publications

Witkin, H. A, Faterson D. R., Dyk, R. E. and Karp, S.A. (1962). *Psychological Differentiation* New York. John Wiley and Sons Inco.

Witkin, H. A. Oltman, P. K., Raskin, E. and Karp, S.A. (1971*). Group Embedded Figures Test Manual.* Palo Alto, Ca: Consulting Psychologist Press.