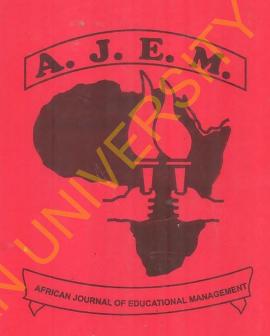
AFRICAN JOURNAL OF EDUCATIONAL MANAGEMENT

ISSN 0795-0065 Volume 18, No. 1 June 2017



A PUBLICATION OF THE DEPARTMENT OF EDUCATIONAL MANAGEMENT UNIVERSITY OF IBADAN.

Table of Contents

Volume 18, No. 1 June 2017

Social well-being among Adolescents in Secondary Schools in the Ibadan Metropolis:

A Correlational Perspective

Adeyemi, Adetola O.

Influence of Self-Efficacy and Social Support on Patients' Physical Well-Being in Selected State Hospitals In Oyo State, Nigeria

Ayangunna, J. A. & Owadara, F. O.

Motivational Factors and Job Performance among Teachers of Public Secondary Schools in Ogun State, Nigeria Akinsuroju, O. E. & Ojeniyi, F. Bolajoko

Peace Assurance in Nigerian Public Universities: A Discourse Ayanyemi, A. K.

Influence of Socio-Economic Status of Parents on the Academic Performance of Secondary School Students in Ogun State, Nigeria Ojikeri, Chioma G. & Emunemu, B. O.

Functional Literacy of Women as an Instrument for Sustainable Development in Nigeria Adetuyi, C. A. & Adeniran, Adeola Adetomilayo

Innovative Teaching Strategies, School Quality as Predictors of Students' Achievement in Junior Secondary School Civic Education in Abeokuta Metropolis Junaid, Ikmat Olanrewaju & Olaniran, N.

1 - 23

25 - 41

43 – 59

61 – 74

75 - 94

95 - 104

105 - 120

Management of Entrepreneurship Education at the Post-Basic Education Level in Enugu State: Implications for Employment Generation Chukwu, Leo C. & Eze, Thecla A.Y.	121 – 135
Contributory Pension Funds and Workers Financial Security in Ogun State, Nigeria Ajala, A. M.	137 – 150
Low Students' Enrolment in Literature- In-English in Public Secondary Schools in Saki West Local Government Area of Oyo State: Causes and Remedies Oladeji, Femi Funmilayo	151 – 161
Work Related Stress of Workers in Ministry of Establishments, Secretariat, Ibadan, Oyo State, Nigeria Apotiade J. K. & Babarinde Bilikis Adefunke	163 - 177
Quality Control Variables as Determinant of Quality of Education in Nursery/ Primary Schools in Ibadan South Local Government, Ibadan, Oyo State Oyedeji, Toyin	179 – 195

.

INNOVATIVE TEACHING STRATEGIES, SCHOOL QUALITY AS PREDICTORS OF STUDENTS' ACHIEVEMENT IN JUNIOR SECONDARY SCHOOL CIVIC EDUCATION IN ABEOKUTA METROPOLIS

Junaid, Ikmat Olanrewaju & Olaniran, N.
Institute of Education, University of Ibadan
iojunaid@yahoo.com & natholaniran2013@yahoo.com

Abstract

The research investigated innovative teaching strategies, school quality as predictors of students' achievement in junior secondary school civic education in Abeokuta metropolis. Multistage sampling techniques were adopted in selecting two Local government Areas in Abeokuta, five hundred (500) students offering Civic Education and thirty (30) teachers. Four research questions were raised and answered with three validated instruments; Innovative Teaching Method Questionnaire (r = .69); School Quality Questionnaire (r = .75); Civic Education Achievement Test (CEAT), guided the study. Data obtained were analysed using Pearson Product Moment Correlation and multiple regressions at 0.05 level of significance. Results indicated that relationship exists between innovative teaching strategies and students' achievement in civic education(r = .169, $p < 0.05_{(.017)}$). Also, the finding revealed that school quality was significant on students' achievement in civic education(r = .312, $p < 0.05_{(.000)}$). Apart from, the earlier mentioned findings, all the variables jointly explained 10% of the variance observed in students' achievement in civic education. Further, results showed, that school quality (6 = .288, t 4.156, $p < 0.05_{(.000)}$) contribute positively significant in the prediction of students' achievement in civic education. However, innovative teaching strategies (6 = 0.100, t 1.435, p > $0.05_{(.153)}$) contributed positively but insignificantly in the prediction of students' achievement in civic education. This is an indication that school quality actually predicted students' achievement in civic education. The paper therefore recommended that: teachers should be exposed to available innovative teaching strategies through workshop and seminars to ensure desirable students' achievement in civic education.

Key Words: Teaching-strategies, Achievement, School-quality, Civic-Education

Introduction

Civic Education is an important component of education that enables citizens to participate fully in government and democratic processes. It is a kind of education that provides students with a rich knowledge and understanding of their responsibilities as citizens. It is a study of how man could become an affective quality citizen in the society as well as how government works and functions. Students' exposure and possession of civic knowledge will not merely inculcate behaviour and skills that will make a person demonstrate an acceptable behaviour in the society, but have a vital role to play in equipping people to act on and influence peaceful co-existence in the society.

A major innovative in secondary school education classrooms is the use of engaged or active learning strategies. As such, each of the strategies that are presented below utilizes the tenets of engaged or active learning. Engaged learning can be defined as a teaching and learning strategies that encourages students to be responsible for their own learning, to be energized by learning, to make strategic choices, and to work in collaborative, social learning environments. Active learning is described as the creation of opportunities for students to act and reflect on the information and ideas presented to them. Common forms of active learning include: panel discussion, role-play, brainstorming, cooperative and collaborative learning, inquiry-guided learning, audio-video method, project-based learning, problem-based learning and team-based learning (Savage, 2009)

Brainstorming teaching method is procedural and it is an overall plan for the orderly presentation of materials intended to teach skills and knowledge of organizing and expressing ideas. The major purpose of brainstorming as a teaching method is to foster and enhance communication skill, help to promote thinking and decision—making skills as well as fostering different viewpoints and opinions (Revelland Wainwright, 2009). Brainstorming teaching method is a good way of getting bright ideas. It differs from the discussion method and the focus is on generating as many ideas as possible from participants without judging them. In this teaching method, all ideas are given equal credence. Participants are encouraged to let ideas flow



freely, building on and improving from previous ideas. No idea, however crazy, should be rejected. Ideas generated should be listed exactly as they are expressed on a board or flipchart, or written on sheets of papers (Revelland Wainwright, 2009). Brainstorming as a group creativity forum for general ideas. Brainstorming is an innovative conference with special nature in order to produce a list of ideas that can be used as clues leading students to the development of the problem while giving each student the chance to express his or her ideas and share these ideas with others and encourage new ideas (Clark, Moran, Skolnikand Trick, 2009).

Role playing is an activity presented during a lesson to show a specific issue or situation for study and discussion. In role playing, there is usually no prepared script to be memorized, it does not involve elaborate preparation and there may be no rehearsals (Bezuidenhout, 2009). Planning a role play involves selection of a problem or issue of interest and students simply act the roles intended to portray by the play. Students are allowed to select the roles they would like to play. Roles must not be forced on any students. It is important to discuss the role-play after presentation by asking relevant questions in other to highlight the key learning skills which have taken place. Role-playing is useful for developing positive attitudes towards social issues and modifying the behaviour of learners. It also helps to develop student's vocabulary and skill of expression which is needed in the teaching and learning processes of civic education. The main disadvantage of roleplaying is stigmatization of students who play negative roles (Adu, 2004).

Many research findings have shown that the success of any educational endeavour rest on the availability of physical facilities especially the school building. Supporting this, Olutola (1982) cited in Junaid and Owhonda (2017), noted that the availability of the school building and other plans contribute to good academic performance as they enhance effective teaching-learning activities. He further stated that well sited school buildings with aesthetic conditions, playground, lavatory, etc. according to the scholar usually contribute to achieving higher educational attainment by the students. However, Ogunmoyela (1994) lamented that school buildings of public schools have no roof, windows and doors, some walls are cracked, instructional facilities are lacking while teachers are frustrated consequent upon lack of

equipment/facilities to meet educational endeavours. Comparing schools in developing countries with what obtains in industrialised world, in terms of facilities, materials, utilisation, and provision.

Physical facilities in school are combined to determine learning environment which, according to Adu, (2002) to mention few, are complimenting other factors to determine students' academic achievement. In the study conducted by Adeogun (2001) on the effects of school physical facilities on students' academic achievement, the report shows that, to some extent, school physical resources do not have much influence on students' academic achievement when compared with the effects of socio economic status of parents, student academic background attitude of student to studies.

Instructional materials are materials needed to facilitate teaching- learning process in school. Instructional materials with students' learning outcome have been the major variables of interest to the researchers. (Isola, 2010) referred to them as objects or devices, which help the teacher to make a lesson much clearer to the learner. Instructional materials are also described as concrete or physical objects which provide sound, visual or both to the Instructional materials are in various classes, such as audio or aural, visual or audiovisual. Thus, audio instructional materials refer to those devices that make use of the sense of hearing only, like radio, audio tape recording and television.

However, visual instructional materials on the other hand, are those devices that appeal to the sense of sight only such as the chalkboard, chart, slide, and filmstrip. An audio-visual instructional material however, is a combination of devices which appeal to the sense of both hearing and seeing such as television, motion picture and the computer. Among the instructional materials the classroom teacher uses, the visuals out-numbered the combination of the audio and audio-visual. In the same vein, Salawu and Adedapo (2001) listed four important factors including the acute scarcity of instructional resources which they said constrained educational systems from responding more fully to new demands. They claimed that, in order for government to do their part in meeting the crisis in education, educational systems will need real resources that can be purchased through substantial subvention from government. Bassey (2002) noted that the use of instructional resources would make discovered facts glued firmly to the

memory of students. An adage says "a look is worth a thousand words" also helps to reveal the value of instructional materials in teaching and learning process.

School environment indicate a great deal of cooperation among the various groups in the school setting while another school of thought assert that it may means a climate of tension and friction among the various groups that make up the school system. Falodun (2003) cited in Owhonda (2014), asserted that school environment affects students' education and their conduct. Inadequacy of space and facilities in schools can easily inhibit the productivity of both the teacher and the learner while a conducive learning environment would enhance the sustenance of interest, stimulate learning and ensure satisfactory development and academic performance. Darling-Hammond, Chung and Frelow, (2002)in their study asserted that school climate is determined by the resources, especially classrooms under which the teachers and students operate which influences attitude in teaching and learning. Un-conducive classroom creates stress on teachers and students resulting in negative attitude toward school and learning by students.

Students' academic achievement defines the totality of the learner in his or her school cycle. Contrary to the perception of the stakeholders in education sector literature reveal that there are many factors that influence students' academic achievement most obvious among them are utilization of instructional materials, teacher's: experience, qualification and teaching effectiveness (Aremu and Oluwole, 2001).

Over the years, there has been a persistent dwindling trend in the general achievement of Nigerian students in almost all the subjects in public examinations especially in (WAEC) and (NECO) which has been of much concern to all the stakeholders in the education sector. This trend seems to affect the University enrolment as well as efficiency in labour market. It has also been observed that majority of the teachers are fond of using traditional strategies of teaching and quality of school at the same time as deviating from the specified standard in educational policy. While several studies have researched into variables affecting students' achievement such as school location, teachers' quality, classroom management and so on, there seems to be scanty studies on innovative teaching strategies and school quality in relation

to students' achievement in civic education in Abeokuta Metropolis. This study therefore, investigates innovative teaching strategies, school quality as predictors of students' achievement in junior secondary school civic education in Abeokuta metropolis.

Research Questions

Based on the stated problem, the study will be guided by the following questions:

- What is the relationship between innovative teaching strategies 1. and students' achievement in Civic Education in Abeokuta Metropolis?
- What is the relationship between school quality and students' achievement in Civic Education in Abeokuta Metropolis?
- To what extent do innovative teaching strategies and school quality combine to predict students' achievement in Civic Education in Abeokuta Metropolis?
 - What are the relative contributions of the innovative teaching strategies and school quality in the prediction of students' achievement in Civic Education in Abeokuta Metropolis?

Method

Design

The study used ex-post facto design of survey type. This research design was chosen because the researcher did not have control over the variables as their manipulation had already occurred.

Population and Sample

The target population for this study comprised all Civic Education teachers and all junior secondary school II Civic Education students in Abeokuta Metropolis. The reason for this choice was that, the teachers are in the best position to provide adequate information about their use of innovative teaching method and students' will demonstrate their achievement through answering questions in Civic Education Achievement test. Multi stage sampling procedure was employed for the study. First, Abeokuta Metropolis has been stratified along two local government. Simple random sampling technique was employed to select two educational zones in the metropolis. Moreover, from each of the selected zones, simple random sampling technique was adopted to select five schools each, making a total of fifteen schools in all. Purposive sampling technique was used to select thirty (30) Civic Education teachers and fifty (50) junior secondary school two students each from the selected schools. The total sample therefore was five hundred and thirty (530) participants: Thirty (30) Civic Education teachers and five hundred (500) students.

Research Instruments

Three instruments were designed for this study. These are:

- Innovative Teaching Method Questionnaire (ITMQ)
- b. School Quality Questionnaire (SQQ)
- d. Civic Education Achievement Test (CEAT)

Innovative Teaching Strategies Questionnaire (ITSQ)

This questionnaire was constructed by the researcher and the instrument is measured teachers' adaptation of innovative teaching strategies. It contained two sections: A and B. Section (A) is on participants' personal data: which consisted of school name, gender, qualification, area of specialization, teaching experience age bracket and so on. Section (B) consisted of twenty-two items on innovative teaching strategies. The participants responded along 4-point Likert scale response options, which are: (MT = Most of the time, S = Sometime, LHT = Less than Half of the time, AN = Almost Never). The instrument was given to the three (3) experts in research instrument construction for proper vetting, content and construct validity. It was then validated by the researcher on a similar sample of thirty (30) respondents that were not included in the study and the resulting reliability co-efficient was 0.69.

School Quality Questionnaire (SQQ)

This questionnaire was adapted by the researcher from the work of Owhonda (2014) with 0.78 as reliability co-efficient. The instrument measured school essential infrastructural facilities that can enhance smooth teaching-learning in a typical school setting. It contained two sections: A and B. Section A is on participants' personal data: which consists of school name, gender, age bracket and so on. Section B

consisted of twenty-five items on school quality components. The participants responded along 4-point Likert scale response options, which are: (SA= Strongly Agree; A=Agree; D= disagree and SD= Strongly Disagree). The instrument was given to three (3) experts in research instrument construction for proper vetting, content and construct validity. It was further validated by the researcher on a similar sample of thirty (30) respondents that were not included in the study and the resulting reliability co-efficient was 0.75.

Civic Education Achievement Test (CEAT)

This instrument consisted of two sections, A and B: Section A was on the bio-data of the students which are the students' age and gender. Section B contained 60 items that were constructed from five major topics in JSS2 first term Civic Education curriculum. The test blue print on 60 items was contructed based on the first three levels of Bloom's taxonomy of educational objectives (Knowledge, Comprehension and thinking) and was trial tested. The difficulty indices and discriminating indices of the items were found. The items with difficulty indices between 0.40 and 0.75 and with discriminating indices between 0.32 and 0.45 were finally selected. This reduced the items to 50 items which the researcher finally used for the study.

Data Collection

The data were collected through the help of four trained research assistants and after the administration of the instruments, the researcher and the assistants collected the instruments back for analysis.

Data Analysis

Data collected were analysed using Pearson Product Moment Correlation and multiple regressions at 0.05 level of significant.

Results

Research Question One: What is the relationship between innovative teaching strategies and students' achievement in Civic Education in Abeokuta Metropolis?

Table 1: Correlation between innovative teaching strategies and students' achievement in Civic Education

Variables	No	Mean	Stan Dev	r	Р	Remark
Innovative Teaching Strategies	780	3.55	.715	0.169*	.< 0.05 _(.017)	Sig
Students' Achievement in Civic Education	780	3.24	.891		0.03(.017)	

Significant at 0.05

Table1 presents the Pearson product moment correlation result of the relationships between innovative teaching strategies and students' achievement in Civic Education. The table revealed positive moderate significant relationship between the variables at (r = 0.169, p)< 0.05(.017)). This is an indication that innovative teaching strategies are parts of the factors that influenced students' achievement in Civic Education.

Research Question Two: What is the relationship between school quality and students' achievement in Civic Education in Abeokuta Metropolis?

Table 2: Correlation between School Quality and Students' Achievement in Civic Education

Variables	No	Mean	Stan Dev	R	Р	Remark
School Quality	780	3.37	.738	0.312**	<	Sig
Students' Achievement in Civic Education	780	3.24	.891	Contract Con-	0.05(.000)	

Significant at 0.05

Table 2 presents the Pearson product moment correlation result of the relationships between school quality and students' achievement in Civic Education. The table revealed positive moderate significant relationship between the variables at (r = 0.312, p < $0.05_{(.000)}$). This is an indication that school quality is part of the factors that influenced students' achievement in Civic Education.

Research Question Three: To what extent do innovative teaching strategies and school quality combine to predict students' achievement in Civic Education in Abeokuta Metropolis?

Table 3: Model Summary and ANOVA on Innovative Teaching Strategies and School Quality and students' Achievement in Civic Education

Education					
R = .327					
	107 quare = .098 or of the esti	mate = .8	46	io d	
Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	16.871	2	8.436	11.779	.000
Residual	141.084	.778	.716		
Total	157.955	.780	6		

Significant at 0.05

From table (3) the combination of the two variables that is innovative teaching strategies and school quality as independent variables considered in this study, jointly related withstudents' achievement in Civic Education with positive moderate correlation at R=.327, a multiple R square of .107 with Adjusted R square of .098. The multiple correlation of .327 indicated a moderate relationship among the two predictor variables: innovative teaching strategies, school quality and students' achievement in Civic Education. Moreover, as shown in table3 the combination of the independent variables considered in this study explains 9.8% or 10% of the variance observed in Students' Achievement in Civic Education. The observed R value was statistically significant at F (df = 2,778) = 8.436, P < $0.05_{(.000)}$. This implied that the predictor variables were part of the variables one can reckon with that actually predicts students' achievement in Civic Education.

Research Question Four: What are the relative contributions of the innovative teaching strategies and school quality in the prediction of students' achievement in Civic Education in Abeokuta Metropolis?

Table 4: Relative Contribution of Innovative Teaching Strategies and School Quality on Students' Achievement in Civic Education

Model	Unsta		Standardized Coefficients		Sig.
	В	Std. Error	Beta		
(Constant)	1.624	.368		4.411	.000
Innovative Teaching Strategies	.124	.086	.100	1.435	
School Quality	.348	.084	.288	4.156	.000

Significant at 0.05

From table 4, it is evident that one of the independent variables contributed significantly to the prediction of students' achievement in Civic Education. School quality with this feature (β = .288, t 4.156, p < 0.05(.000)) to the prediction of students' achievement in Civic Education. However, this variable contributed positively but insignificantly in the prediction of students' achievement in Civic Education. Innovative teaching strategies with this feature (β = 0.100, t 1.435, p > 0.05_(.153)). This is an indication that school quality actually predicted students' achievement in Civic Education.

Discussion of the Findings

The significant relationship between school quality and students' achievement in Civic Education buttressed the findings and assertion of many authors and researchers. For instance, Moronfola (2002) discovered that schools providing basic facilities such as electricity performed much better in achievement growth than schools that did not. The quality of air inside public school facilities may significantly affect the student's ability to concentrate. On the other hand, Ogunleye (2002) maintained that there was a small but steady positive relationship between the quality of a public school facilities and range of academic and community outcomes, while on other hand, Mcgowen (2007) claimed that school facility conditions are not statistically

significant in relation to academic achievement. In the same spirit, Murillo and Roman (2011) showed that schools in lower socioeconomic districts and schools attended by younger students had the strongest association between poor building conditions and absenteeism.

Moreover, other researcher and authors provided empirical evidence of the effect of building quality on academic outcomes Owhonda (2014) stated that the goal of infrastructure development is to increase school attendance motivation and to improve academic performance of students. The researcher further found out in the study that students of high literate blocks and of good school infrastructure motivated more to attend school than their counterparts. Likewise, the finding in this study supported the assertion of Novak (2000) who stated that poor facilities affected the health and productivity of teachers and make retention of teachers difficult and on the academic side, results to a shift from the best facilities to the worst decreases in student academic performance. Buckley (2000) in a related study on district school facilities and academic performance opined that changing from worst to best overall environmental compliance rating led to an average of ten to thirty-six point increases in schools performance.

In addition, Asiyai (2006) worked on "An appraisal of the adequacy of physical resources availability for teaching Chemistry in Secondary Schools" and found out that the quality of school infrastructure has a significant effect on school attendance and dropout rates. Furthermore, Datta (1994) cited in Olayiwola (2014) remarked that learning in poor infrastructural conditions resulted in tiredness with a short period of time. Olutola (1982) noted that the availability of the school building and other plans contributed to significant academic performance as they enhance effective teaching-learning activities. In the study conducted by Adeogun (2001) on the effects of school physical facilities on students' academic achievement, the report showed that, to some extent, school physical resources do not have much influence on students' academic achievement when compared with the effects of socio economic status of parents.

The location of a school has a significant effect on the academic performance of the child. In other words, students tend to learn and perform better in educationally stimulating environments which are

likely to arouse student's higher degree of interest. Although, rural schools are typically less active than urban schools, variation exists between states. For instance, in Nigeria, generally, most rural-based schools lacked enough qualified teachers, were poorly equipped and lacked basic amenities, all of these factors challenge desirable learning achievement (Okoye, 2008).

The finding in this study about the association of innovative teaching strategies with students' achievement in Civic Education, support the assertion of many authors and some researchers on the effect of new modern method of teaching that are just emerging in teaching-learning process. Carston and Theohans (2009) explained brainstorming as a group creativity forum for general ideas. Brainstorming is an innovative conference with special nature in order to produce a list of ideas that can be used as clues leading students to the development of the problem while giving each student the chance to express her ideas and share these ideas with others and encourage new ideas (Carston, and Theohans 2009).

Furthermore, Hoffman (2001) in his work found out that public secondary schools in Nigeria should be provided with adequate varieties of instructional media. He also noted that if teachers in public secondary schools were to assume new roles and use new techniques of teaching, they should become familiar with more than one teaching techniques rather than relying on textbooks, chalkboard and lecture method.

Role-play also provided a high degree of student participation as Ezeudu and Okeke (2013) asserted that in a role-play, all students were actively involved." Further benefits are that role-playing can give insights into a future profession (Molise and Hlalele, 2014) and particular issues from working life (Basso and McCoy 2007) have found that role-playing can provide students with a broader set of skills for future employment.

Moreover, Buckley (2000) in his published work viewed the fact that in most classrooms, teaching methods, materials and teaching techniques are based on prescribed texts and syllabus which are used homogenously in spite of vast differences in classrooms and level of students. The traditional methods which largely depend on lecturing and rote learning reduced learning to mechanical memorization and miserably fail in developing skills competency among the students.

Therefore, the necessity to deviate from the grand methods and materials and to use innovative materials and techniques of teaching has been strongly felt (Buckley, 2000).

Summary, Conclusion and Recommendations

From the findings of the study, it was observed that there are positive relationships between innovative teaching strategies (audio-visual stimulus; brainstorming activity; panel discussion; role play activity) and School quality (facilities; instructional materials; the school environment) with achievement in junior secondary school Civic Education. The results and findings of this research should move further rather than being additional data to the understanding of the happenings in teaching and learning environment. Therefore, the researcher submitted that when teachers are expose to good working condition in term of school quality and they are being expose to the modern innovative teaching strategies through periodic seminars and the teachers prepare themselves to use it in the classroom, there is the tendency for students' achievement in Junior Secondary School Civic Education to reach the desirable level. The paper recommended that: teachers should be exposed to available innovative teaching strategies through workshop and seminars to ensure quality delivery of instruction.; since, the result of this study revealed that school quality is one of the major variables that correlate students' achievement in Civic Education, government at all level should ensure that quality of school are improved upon; there should be adequate supply of instructional materials, physical facilities to enhance productive interaction between the teacher and the students; government should ensure the provision of enabling school environment that are students' friendly.

References

Adeogun, A.A. (2001). "The principal and the financial management of public secondary schools in Osun State" Journal of Educational System and Development. 5, (1), 1-10.

Adu E. O. (2004). An introduction to economics education: A basic text for tertiary institutions students. Ibadan: Educational Research and Study Group.

- Aremu,. A. O. & Oluwole. A. O. (2001). Gender and birth order as predictors of normal pupils anxiety pattern in examination. *Ibadan Journal of Education Studies*, 1 (1), 1-7.
- Asiyai, R.I. (2006). An appraisal of the adequacy of physical resources availability for teaching Chemistry in secondary schools in Delta State. Science Teachers Association of Nigeria: Proceeding of 47th Annual Conference. Heinemann Educational Bok (Nig.) PLC.
- Bassey, M.P. (2002). Availability of resources for the teaching of science subject in public secondary schools. A case study of some selected secondary schools in Alimosho Local Government.
- Basso, D. & McCoy, N. (2007). The co-teaching manual. Port Cheater, N. Y: National Professional Resources Inc.
- Bezuidenhout, L. (2009). Creating a: virtual classroom evaluating the use of online discussion forums to increase teaching and learning activities: Proceedings of EduLearn09 Conference. Barcelona, Spain.
- Buckley, F. J. (2000). Team teaching what, why and how? Thousand Oaks C. A. Sage Publication, Inc.
- Carston, T. J. and Theohans, G. (2009). Creating inclusive schools for all students. The Indian Psychological Revolution, 70 (4), 213 216.
- Clark, I., Moran, G., Skolnik, M. & Trick, D. (2009). Academic transformation: The forces reshaping higher education in Ontario. Montreal and Kingston: McGill-Queen's University Press.
- Darling-Hammond, L., Chung, R., & Frelow, F. (2002). Variation in teacher preparation: How well do different pathways prepare teachers to teach? *Journal of Teacher Education*,53(4), 286–302.
- Ezeudu, F. O. & Okeke, P. (2013). Effect of simulation on students achievement in senior secondary school Chemistry in Enugue East Local Government Area of Enugu State Nigeria. *Journal of Education and Practice* 4 (19) 25 40.
- Hoffman, E. A. (2001). Successful application of active learning technique to introductory Micro-Biology, *Micro-Biology Education*, 2 (1), 5 11.

- Isola, O.M. (2010). Effects of standardized and improvised instructional materials students' academic achievements in secondary school Physics. M. Ed Thesis, University of Ibadan, Ibadan.
- Junaid, I. O. & Owhonda, N. G. (2017). School quality and teacher characteristics as correlates of students' learning outcome in History in Rivers State. M. Ed Thesis, University of Ibadan, Ibadan. Lagos Education Review: A Journal of Studies in Education, 17(1).
- McGowen, R.S. (2007). The impact of school facilities on student achievement, attendance, behavior completion rate and teacher turnover rate in selected Texas high school. M.Ed Dissertation.
- Molise, H. & Hlalele, D. (2014). Case study as a teaching and learning strategies in the teaching of Economics. A literature review, *Mediterranean Journal of Social Sciences* 5 (23), 5-20.
- Moronfola, B. (2002). "Effects of instruction resources on the academic achievements of secondary school students in Ilorin Local Government of Kwara State. Unpublished M.Ed Research Thesis.
- Ogunmoyela, K. (1994). Report in the Nigerian Tribune, Friday, September 30.
- Okoye, N.S. (2009). The effect of gender socio-economic status and school location on student performance . *Nigeria Journal of Integrated Science* 5 (3) 35-50.
- Olayiwola, N.M. (2014). School factors as determinants of students achievement in senior secondary school Biology in Ibadan, Nigeria. *Unpublished M.Ed Project*, University of Ibadan.
- Revell, A. & Wainwright, E. (2009). What makes lectures "unmissable"? Insights into teaching excellence and active learning. *Journal of Geography in Higher Education*. 33 (2), 209-223.
- Salawu, I. O. & Adedapo, Y. A. (2001). Perception of private secondary school teachers to the provision of teaching facilities in schools as is result of wage increase. *Journal of Professional Teacher Trainers (JPTET)*, 3 (1and2), 156-163.
- Savage, S. (2009). The effect of information technology on economic education. *Journal of Economic Education*. 40 (4), 337 353.