UNIJERPS
Unizik Journal of Educational Research and Policy Studies VOL.19 (3);
January-June, 2025 https://unijerps.org
2023 Impact Factor: **6.834;** 2022 ***Impact Factor***: 5.156; ***2021 Impact Factor: 5.641;***
2020 Impact Factor: 5.355. *Indexing and Impact Factor URL: http://sjifactor.com/passport.php?id=21363*

STUDENTS' ATTITUDE TOWARDS LEARNING OF BIOLOGY: CASE STUDY OF DEMONSTRATION SECONDARY SCHOOL, FEDERAL COLLEGE OF EDUCATION (TECHNICAL), UMUNZE

Rt. Hon. Ejike Okechukwu *ACiarb*
(Ph.D. in View), Educational Planning and Administration, National Open University of Nigeria
Law Student, Chukwuemeka Odumegwu Ojukwu University,
Igbariam Campus, Anambra State
Ogbunuko@gmail.com and ogbuefinukoefi@yahoo.com, 08062463334

ABSTRACT
For students to develop questioning ability, critical thinking, problem solving techniques and decision-making skills and become lifelong learning individuals, they should be enabled to improved their knowledge, understanding and attitude towards learning Biology. This study was carried out in Demonstration Secondary School Federal College of Education, Umunze, Anambra State. One hundred (100) respondents drawn from 2019/2020 academic session biology students constituted the sample size for the study. Data were collected through a questionnaire. The data were analyzed using simple percentages or facility values. Scores of 50.0% and above were considered positive opinions while scores below 50.0% were considered negative. The results of the study showed that teachers' influences and the desire to lead a career in Biology related fields are the most influencing factors that make students to have interest in Biology course, in addition fear of drawings contributed immensely to their dislike of the course. Some recommendations were made based on the findings.

Keywords: Students; Attitude; Learning; Biology.

Introduction

The Federal Government of Nigeria (FGN, 2014) in its National Policy on Education defines science and technology as the aspect of education that leads to the acquisition of practical and applied skills as well as basic scientific knowledge. The valuable role of science and technology in the transition from a pre-industrial to a modem technologically developed society with a corresponding marked improvement in the quality of life is universally acknowledged (Alabi, 2015, Okaforcha & Okeke, 2025; Ugwaka & Igbokwe 2020). To achieve the needs of the society, therefore, literacy in science is essential for the daily existence of man. The Federal Government of Nigeria (FGN, 2014) stated that the two major objectives for secondary schools education are to prepare students for a useful living in a science and technology oriented society and to equip students with skills necessary for coping with the demands of higher education. The Federal Government of Nigeria (FGN, 2015) also spelt out this further in its National Policy on Education, which says that the aim of education should be to inculcate in the

child, the spirit of inquiry and creativity through the exploration if nature and local environment.

Biology is the natural science that studies life and living organisms, including their physical structure, chemical processes, molecular interactions, physiological mechanisms, development and evolution (Abonyi, 2022). Biology as a science plays an important role in explaining the events that occur in the human, animal and plant body. It is the study of living things and their vital processes (Onyekwelu, 2024). It deals with all the physicochemical aspects of life. Attitude may be defined as a predisposition to respond in a favourable or unfavourable manner with respect to a given situation or object (Oskamp and Sckultz, 2015). However, Rosemund (2016) also opined that attitude implies a favourable or unfavourable evaluative reactions towards something, events, programmes exhibited in an individual's beliefs, feelings, emotions or intended behaviours. Soyibo (2015) and Wilson (2013), in their studies reported that students' positive attitudes to biology correlate high with their academic achievement. Studies have shown those attitudes are linked to academic achievements. Lawrenz & Olarewaju (1976) in Okeke (2017) observed that one of the main causes of poor performance in science is the poor attitudes of the students.

Research has also revealed that students show different attitudes to Physics, Chemistry and Biology in schools (Osborne et al, 2003. Murphy & Whitelegg, 2016). Girls tend to respond more positively to biological sciences than to physical sciences of which biology is among (Warrington and Younger, 2010). Shu'aibu (2012) observed that for learning to take place, three factors must be present simultaneously, namely: the teacher, the learner and the materials designed to be learnt alongside provision of conducive environment that makes the leaning of the materials both possible and meaningful (Ekwesianya, Okaforcha & Okeke, 2020; Enwezor, 2021; Ojimba, 2024). Teachers' expectations are conveyed to students in different ways, which have powerful influence in enhancing or hindering the development of the students' self-images as competent or incompetent learners (Enwezor, & Chukwunonye, 2021; Ugwaka & Igbokwe, 2023).

Statement of the Problem

Most students perceived Biology to be a very difficult, mathematical and abstract subject. Many students get poor grades, lost interest and have negative attitudes to Physics. Research is needed to investigate the students' attitude towards the leaning of physics.

Purpose of the Study

The objectives of the study are:

1. Identify the attitudes of students of Demonstration Secondary School, Federal College of Education, Umunze, Anambra State towards the study of Biology and

2. Identify the factors influencing their attitude towards the study of Biology.

Research Questions

The research questions are as follows:

1. What are the attitudes of students of Demonstration Secondary School, Federal College of Education, Umunze, Anambra State towards the study of Biology?
2. What are the factors influencing their attitude towards the study of Biology?

Hypotheses

The following null hypotheses are put forward to answer the research questions mentioned.

1. There is no relationship between the teachers' influences and the students' attitude in Biology course.
2. There is no relationship between background in biology and fear for drawings.

Methods

The study made use of a survey design, and descriptive technique was used in the study. The population for this study consisted of three hundred and fifty-nine (359) 2019/2020academic session students of Demonstration Secondary School, Federal College of Education, Umunze, Anambra State that are offering Biology as a course. The sample comprises of one hundred (100) 2019/2020 academic session SS 2 students of Demonstration Secondary School, Federal College of Education, Umunze, Anambra State that are offering Biology. The instrument for this study was a questionnaire designed to receive responses from the students. The questionnaire is in one part as all the respondents are expected to belong to the same category (SS 2 Biology students). There were ten (10) questions in the questionnaire. One hundred (100) copies of the questionnaire were administered to biology 2019/2020 academic session students. The questionnaires were distributed to the students using random sampling. The simple percentage method of data analysis was used. The percentages responses of fifty percent (50.0%) and above were considered as positive responses, while below fifty percent (50.0%) were considered as negative responses with regard to the students' attitude.

Results

Table 1: Frequency distribution of population information of respondents

Sex	Responses	
	Number of responses	**Percentage of responses**
Male	33	33.0
Female	67	67.0
Total	**100**	**100.0**

Table 1 show that thirty-three (33) of the respondents are male while the remaining sixty-seven (67) are female.

Table 2: Frequency distribution of respondents with respect to the positive attitude in Biology course.

Do you have interest in Biology as a course?	**Responses**	**Frequency**	**Percentage**
	Yes	30	30.0
	No	70	70.0
	Total	**100**	**100.0**

Table 2 reveals that 70.0% of the respondents do not have positive attitude in Biology as a course.

Table 3: Cross tabulation of respondents who have positive attitude in Biology against reason for doing so.

Have interest in Biology as a course	**Reason**	**Interest**	**Teacher's influence**	**Parent's influence**	**Friends' influence**	**Lead to career**	**No response**	**Total**
	Freq.	4	10	6	8	9	3	40
	Percentage	10.0	25.0	15.0	20.0	22.5	7.5	100.0

From Table 3, it was discovered that 25.0% of the respondents have positive attitude in Biology because of Teachers' influences; 20.0% and 15.0% are as a result of peer and parents influences and 22.5% of the respondents are interested in Biology because it leads to career.

Table 4: Cross tabulation of respondents who are 111ot interested ta Biology against reason for doing so.

Do you have interest in Biology as a course?	**Reason**	**Fear of drawings**	**Fear of teachers**	**Wide in scope**	**No response**	**Total**
	Freq.	25	6	18	11	60
	Percentage	41.7	10.0	30.0	18.3	100.0

From Table 4, it can be seen that majority of the respondents (41.7%) have no interest in Biology for the fear of drawings. This is attributed because of the poor background in fine and applied art.

Table 5: Frequency distribution of respondents with respect to the rate of understanding of Biology.

How do you rate your understanding of Biology?					
	Very easy	**Easy**	**Difficult**	**No response**	**Total**
Frequency	19	35	33	13	100
Percentage	19.0	35.0	33.0	13.0	100.0

From Table 5, it can be seen that 33.0% of the respondents perceived Biology as a difficult course and 13.0% of the respondents do not respond.

Table 6: Frequency distribution of respondents that are interested in pursuing Biology at a higher institution level.

	Do you wish to study Biology at higher institution?			
	Yes	**No**	**No response**	**Total**
Frequency	10	70	20	100
Percentage	10.0	70.0	20.0	100.0

Table 6 reveals that only 10.0% of the respondents are interested in pursuing Biology course at a higher institution level.

Discussion of Findings

For the students who like biology, the result showed that teachers' influence and the desire to lead a career in Biology related fields are the most influencing reasons. However, a good percentage of them have interest in the course because of friends' and parents' influences. These findings are supported by earlier works of researchers who have identified lack of interest, influence of others, and perception of the subject as difficult as some of the contributing factors to low performance in Biology course (Anushiem, 2023; Azubuike, 2024; Ogunleye, 2016; Okeke, Okaforcha & Ekwesianya, 2019; Otuka, 2013). The results clearly showed that majority of the students do not consider studying Biology at the higher institution level.

Conclusion

From the foregoing, therefore, we can conclude the teachers' influence and desire to lead a career in Biology related field are the most influencing factors that make students have interest in the Biology course. In addition, fear of drawings contributed immensely to their dislike of the course.

Recommendations

Based on the findings of the study and conclusion reached, the following recommendations were made:

1. Biology teachers should be friendly and sociable to students.

2. Biology teachers should adopt different learning strategies in order to enhance students' attitude toward the subject.

3. Seminars, workshops and conferences should be organized for Biology teachers to keep them up to date with the latest teaching techniques and methods in Biology.

REFERENCES

Abonyi, A. U. (2022). Sustaining a Claim or Counterclaim for a Declaration of Title to Land: A Review of David Nwankwo Egemonye v Peter Obichukwu Egemonye. *IRLJ*, *4*, 160.

Abonyi, A. U. (2022). The Constitutionality of RUGA as a Land Policy in Nigeria. *AJLHR*, *6*, 52.

Abonyi, A. U. (2023). The Protection of Prisoners of War under International Humanitarian Law. *LASJURE*, *4*, 115.

Adinna, I. P., & Onyekwelu, R. A. (2021). Evaluation Of Supervision Related Challenges on The Implementation of National Policy on Secondary Education in Anambra State Nigeria. *Online Journal of Arts, Management and Social Sciences (OJAMSS);* 5(2), pg.272 – 281

Alabi, O. (2015). Relevance of Science and Technology to Home Economics in Nigeria. *Nigerian Journal of Science and Educational Research*, 1(1), 42-45.

Anthony, O. C. (2014). The United States and Political Revolution in Africa: A Study of the 2011 Revolution in Egypt. Humanities and Social Sciences Review, CD-ROM.; 3(2):269–281.

Anthony, O. C. (2019). Implementation of vision 20: 2020 agricultural policy and food production in Nigeria, 2007–2015. International Journal of Research and Innovation in Social Science; *3*, 42-64.

Anushiem, M.I. & Anushiem, U.M.J. (2023). Leave to Sue a Company in Liquidation Under section 580 of Companies and Allied Matters Act 2020: Imperative for Legislative Intervention. *Frontline Bar Journal (FBJ); 1(2),* available in google scholar at http:// www. nigerianjournalsonline.com.

Anushiem, U. M. (2025). Education Law in Nigeria: Imperative for Fundamental Rights Provision. *African Journal of Educational Management, Teaching and Entrepreneurship Studies*, *15*(1).

Anushiem, U. M. (2023). The intervention of finance act on taxation of non-resident companies in Nigeria: An appraisal. *Chukwuemeka Odumegwu Ojukwu University Journal of Private and Public Law*, *4*(1).

Anushiem, M. U. (2019). The Constitutionality of The Exclusive Jurisdiction of The Investments and Securities Tribunal (IST). *African Journal of Constitutional and Administrative Law*, *1*, 64-77 available in google scholar at http:// www.journals.ezenwaohaetorc.org

Anushiem, U.M.J. (2022). Intervention of Finance Act (2019) as Amended on Taxation of Dividends in Nigeria: A Legal Appraisal' *Nnamdi Azikiwe University, Journal of Commercial and Property Law*, 9 (1); available in google scholar at http:// www.journals.unizik.edu.ng

Anushiem, U.M.J. (2022). The Intervention of Finance Act on Taxation of Non-Resident Companies in Nigeria: An Appraisal', *Chukwuemeka Odumegwu Ojukwu University Journal of Private and Public Law (COOUJPPL)* 4 (1).

Anushiem, U.M.J. (2023). Appraisal of the Prospects for Taxation of Digital Economy in Nigeria', *Unizik Law Journal,* 19 (2), available on online on journals.ezenwaohaetorc.org.

Azubuike, O. R. (2024). Perceived Influence of Principal Leadership Styles on Teachers' job Performance in Public Secondary Schools in Awka South LGA. *Top Educational Review Journal;* 15(12);24-32. ttps://zapjournals.com/Journals/index.php/terj

Ekwesianya, A. A. (2022). Principals' school-Community Relationship Management Strategies for School Plant Maintenance in Secondary Schools in Awka Education Zone of Anambra State. *African Journal of Educational Management, Teaching and Entrepreneurship Studies*, *6*(1), 191-200.

Ekwesianya, A. A. (2025). Towards Effective Integration of Artificial Intelligence in Teaching Profession in Nigeria: Issues and The Way Forward. *African Journal of Educational Management, Teaching and Entrepreneurship Studies*, *14*(1).

Ekwesianya, A. A., Okaforcha, C., & Okeke, N. I. (2020). Principals' Capacity-Building Needs for Conflict Resolution in Secondary Schools in Anambra State. *International Journal of Innovative Science and Research Technology; 6 (5); 513-516.*

Enwezor, C. H. (2021). Relationship Between Principals' human Resource Management Practices and Teachers' job Satisfaction in Secondary Schools in Anambra State. *UNIZIK Journal of Educational Research and Policy Studies*, *2*, 137-150.

Enwezor, C. H., & Chukwunonye, M. N. (2021). Principals' application of Code of Ethics in The Management of Examination Malpractice in Secondary Schools in Anambra State. *COOU Journal of Educational Research*, *6*(2).

Enwezor, C. H., & Obi, E. (2022). Academic Staff Work Environment and Work Orientation as Correlates of their Job Satisfaction in Colleges of Education in South East, Nigeria. *Unizik Journal of Educational Research and Policy Studies*, *11*, 81-93.

Enwezor, C. H., & Obi, E. (2022). Work Environment and Orientation of Male and Female Academic Staff as Correlates of Their Job Satisfaction in Colleges of Education in South East, Nigeria. *UNIZIK Journal of Educational Research and Policy Studies*, *10*, 168-179.

Enwezor, H. C. (2021). Perceived Impact of School Climate on Academic Performance of Secondary School Students in Onitsha North Local Government Area, Anambra State. *UNIZIK Journal of Educational Research and Policy Studies*, *4*, 117-136.

Enwezor, H. C., & Chukwunonye, N. M. (2022). Employability Skills Applied by Principals for Managing Generated Revenue for Effective School Management in Anambra State, Nigeria. *The Pacific Journal of Science and Technology*, *23*(2), 66-73.

Ethelmary, D., Nwankwo, A. A., & Aroh, G. N. (2019). Stress and Employee Performance in Selected 5 Federal Universities in South East Nigeria.

International Journal of Management Studies and Social Science Research, 3(4), 1-11.

Ezeaku S. N (2019). Creative Quality of Educational Managers in functional Education as a panacea to Achieving Sustainable Development in Anambra State, Nigeria. *Journal of Education, Society and Behavioral Science* Vol. 31 (issued) (Pg 1-9).

Ezeaku, S. N. (2025). Instructional Leadership in The Era of Ai: Correlates to Open School Climate in Secondary Schools in Anambra State. *UNIZIK Journal of Educational Research and Policy Studies*, *19*(1).

Ezeaku, S. N., & Okoye, A. C. (2025). Best Strategies for Ensuring a Good Organizational Climate in Secondary Schools in Anambra State. *Unizik Journal of Educational Laws and Leadership Studies*, *1*(1).

Ezeamama, C.A. Ofozoba C.A. (2023) "*Role of Local Governments in Rural Development of Nigeria, A Case Study of Ekwusigo Local Government Area of Anambra State".* British Journal of Marketing Studies, 11(5). pp. 22-43.

Federal Government of Nigeria (FGN) (2014). *National Policy on Education.* Yaba, Lagos:

Federal Government of Nigeria (FGN) (2015). *National Policy on Education.* Yaba, Lagos:

Ibe, I. U. (2019). An Appraisal of The Legal and Administrative Framework for Taxation in Nigeria. *African Journal of Constitutional and Administrative Law*, *1*.

Iloka, P. C., & Nwakoby, C. S. (2025). Examination Of the Legal Rights of Teachers: A Case Study of The Anambra State Legal Provisions. *Unizik Journal of Educational Laws and Leadership Studies*, *1*(1).

Iloka, P. C., & Nwakoby, C. S. (2025). Safety And Security in Managing School Facilities. *Unizik Journal of Educational Laws and Leadership Studies*, *1*(1).

Izuchukwu, V.C., K.A. Ugwaka, V. Arazu and C.U. Ezechi, 2023. Quality evaluation of commercial fish ponds in Uli, Anambra State and their health implications. *International Journal of Agricultural Research;* 18(2), 56-63.

Lawrentz, F. (2016). Predictions of students' attitudes towards science from students' perception of classroom learning environment. *Journal of Research in Science Teaching*. 13(6), 509- 515.

Murphy, P. & Whitelegg, E. (2016). Girls and Physics*: Continuing Barriers to Belong to the Curriculum Journal*. 17(3), 281 - 305. NERDC Press.

Nneka Anthonia Obumse & Uju P. Egenti (2021). Influence of mental health status on academic achievement of public secondary school students in Anambra State. *African Journal of Educational Management, Teaching and Entrepreneurship Studies.*

Nneka Anthonia Obumse, Uju P. Egenti (2021). Influence of psychosocial variables on campus adjustment of first-year students of Colleges of Education in Delta State, Nigeria. *Unizik Journal of Educational Research and Policy Studies.* Vol. 9. (2021).

Nwakoby, C. S. (2025). Leadership In Educational Management. *UNIZIK Journal of Educational Research and Policy Studies*, *19*(1).

Nwakoby, C. S., & Iloka, P. C. (2025). Examining Education Law of Torts in Public Secondary Schools in Anambra

State. *UNIZIK Journal of Educational Laws and Leadership Studies*, *1*(1).

Nwakoby, C. S., & Iloka, P. C. (2025). Regulatory Challenges in Implementing Digital Education in Anambra State for Sustainable Development. *Unizik Journal of Educational Laws and Leadership Studies*, *1*(1).

Nwankwo, A. A. (2022). Green business strategies and performance of breweries in South-East Nigeria. *International Journal of Innovative Social Sciences & Humanities Research*, *10*(1), 127-138.

Nwankwo, A. A. (2022). Impact of Emerging Digital Technology on Organizational Performance: A Study of Fidelity Bank in Anambra State. *International Journal of Business Systems and Economics*, *13*(5), 156-168.

Nwankwo, A. A., & Ezeibe, C. V. (2021). Influence of innovation on financial performance of small and medium scale enterprises in Onitsha. *International Journal of Business & Law Research*, *9*(2), 172-180.

Nwankwo, A. A., & Okoye, O. A. (2022). Time Management as a Tool for Organizational Survival in the Private Sector; a Study of Transport Firms in Anambra State. *International Journal of Business Systems and Economics*, *13*(5), 235-249.

Nwankwo, I. N. (2020). Assessment of principals' implementation of education management information systems in staff personnel management in secondary schools in South-East states of Nigeria. *International Journal of Innovative Science and Research Technology; 5 (10)*, 398 - 404.

Nwankwo, I. N. (2022). Management practices for controlling fund wastages and misappropriation in secondary schools In Anambra State. *Unizik Journal of Educational Research and Policy Studies*, *14*(1), 177-190.

Nwankwo, I.N. (2022). Management Practices for Controlling Fund Wastages and Misappropriation in Secondary Schools in Anambra State. *Unizik Journal of Educational Research and Policy Studies (UNIJERPS) 14 (1)*; 177-190.

Obumse, N. A. (2022). Influence of Parents Socio-Economic Factors on Psychosocial Adjustment Levels of Anglophone Adolescents Residents in Burkina-Faso, Francophone Speaking West Africa. Sapientia Global Journal of Arts, Humanities and Development Studies (SGOJAHDS), 5(3) p.g. 147 – 161

Obumse, N. A. (2022). Relationship Between Family Levels of Expenditures and Socio-Cognitive Adjustment Levels of Adolescents in Anambra State Nigeria. *Sapientia Foundation Journal of Education, Sciences and Gender Studies*, *4*(3). pg. 213 – 223

Obumse, N. A. P. (2022). Influence of Parenting Styles and Nurturance on the Psychosocial Development of Adolescents in Enugu State: Implication for Employability and Global Competitiveness in The New Normal. Sapientia Global Journal of Arts, Humanities and Development Studies (SGOJAHDS), 5(3); p.g. 59– 68

Obumse, N. A., & Chinwe, T. (2021). Sexual Violence Among Female Undergraduates in Anambra State: Prevalence, Patterns and Counselling Practices. *Journal of Educational Research & Development*, *4*(1).

Ofozoba C. A. (2020), "*A Philosophical Reflection on Gender Inequality and the Status of Women in the 21st Century*

Nigeria Social Environment". The International Journal of Humanities & Social Studies; 8(10) DOI No: 10.24940/theijhss/2020/v8/i10/HS2010-036. www.theijhss.com

Ogunleye, A. O. (2016). Level of acquisition of process skills among some biology students and implication for science education. *Journal of Science Teachers' Association of Nigeria*. 31(182), 39-46.

Ojimba, C.C. (2020). Legal Implications of Technology Transfer to Nigeria. *Chukwuemeka Odumegwu Ojukwu University Journal of Commercial and Property Law*, *2*(1).

Okaforcha, C. C. (2021). Relationship Between Principals' staff Personnel Practices and Teachers' job Commitment in Secondary Schools in Anambra State. *African Journal of Educational Management, Teaching and Entrepreneurship Studies*, *4*(1), 191-198.

Okaforcha, C. C., & Iloka, C. P. (2025). Disciplinary Measures as Correlates of Students' misbehaviour in Public Secondary Schools in Anambra State. *UNIZIK Journal of Educational Research and Policy Studies*, *19*(1).

Okaforcha, C. C., & Okeke, I. N. (2020). School Leadership as A Correlate of Teachers' job Satisfaction in Public Secondary Schools in Awka Education Zone of Anambra State. *UNIZIK Journal of Educational Research and Policy Studies*, *1*, 1-7.

Okaforcha, C. C., & Okeke, N. I. (2025). Towards Effective Safety Management in Secondary Schools in Nigeria. *Unizik Journal of Educational Research, Science and Vocational Studies*, *1*(1).

Okaforcha, C., & Okeke, N. I. (2019). Extent of principals' human resource management practices for teachers' job involvement in secondary schools in Anambra State. *African Research Review*, *13*(2), 145-155.

Okechukwu, E. (2025). Legal Protections of Teachers for Sustainable Workforce. *Unizik Journal of Educational Laws and Leadership Studies (UNILAWS), 1 (1).*

Okechukwu, E. (2025). Principals' Effective Communication Strategies for Improving Teachers' Job Performance in Secondary Schools in Anambra State. *Unizik Journal of Educational Research and Policy Studies VOL.19 (2).*

Okechukwu, E. (2025). Teachers Rights and Responsibilities and Societal Expectations. *Unizik Journal of Educational Laws and Leadership Studies (UNILAWS), 1 (1).*

Okeke, J. O. (2016). The attitude of secondary school students to study Mathematics in Nigeria. *Journal of Science Teachers Association of Nigeria*. 14, 38-84.

Okeke, N. I. (2022). Principals' organizing Strategies for School Plant Maintenance in Secondary Schools in Awka Education Zone of Anambra State. *UNIZIK Journal of Educational Research and Policy Studies*, *13*(1), 167-173.

Okeke, N. I., & Okaforcha, C. C. (2025). Towards Effective Management of University Education in Nigeria. *Unizik Journal of Educational Laws and Leadership Studies*, *1*(1).

Okeke, N. I., Okaforcha, C., & Ekwesianya, A. (2019). Attrition and strategies for teacher retention in secondary schools in Anambra State. *Global Journal of Education, Humanities and Management Sciences, 1(1), 148–156.*

Okeke, N. I., Okaforcha, C., & Ekwesianya, A. (2019). Principals' School Self-

Assessment Practices for Secondary School Improvement in Awka Education Zone of Anambra State. *Global Journal of Education, Humanities and Management Sciences* (GOJEHMS); 1(1), pg.128 - 136

Okoye, A. C., & Ezeaku, S. N. (2025). Digitalization in Teaching and Learning and The Challenges Hampering Its Smooth Flow. *African Journal of Educational Management, Teaching and Entrepreneurship Studies, 14*(1).

Onyekwelu, R. A. (2021). Principals' administrative Measures for Enhancing Instructional Effectiveness in Anambra State Public Secondary Schools. *COOU Journal of Educational Research, 6*(1).

Onyekwelu, R. A. (2024). Teachers' Professional Competencies as correlates of Student's Academic Achievement in Public Secondary Schools in Anambra State. AJSTME, Volume. 10 (3); 404-411; https://www.ajstme.com.ng

Onyekwelu, R. A., & Adinna, P. I. (2022). Influence Of Covid-19 On the Nigeria Secondary Education System: Effective Virtual Learning, The Way Forward (A Case Study of Anambra State). *Journal of Educational Research & Development*, *5*(2).

Osborne, J. F., Simon, S. & Collins, S. (2003). Attitude towards science. A review of the literature and its implication. *International Journal of Science Education*. 25(9), 1049 - 1079.

Osegbue, G. C. (2025). Early childhood education in Nigeria: challenges and prospects. *Unizik Journal of Educational Laws and Leadership Studies, 2*(1).

Osegbue, G. C. (2025). Crisis intervention and response in educational institutions: developing and implementing plans in developing countries. *African Journal of Educational Management, Teaching and Entrepreneurship Studies*, *15*(1).

Osegbue, G.C. (2019). Perceived impact of effective educational planning on education system for national cohesion and global competitiveness. *International Journal of Educational Practice (IISTE)*, 10(11), 108-117.

Osegbue, G.C. (2021). Principal' management of students' personnel services for attainment of educational goals in Anambra State. *Journal of Educational Research and Development, 4(1*), 85-92.

Osegbue, G.C. (2022). Effectiveness of visual video tutoring on students' learning in coping with COVID 19 in the new normal. *International Journal of Educational Practice (IISTE),* 13(21) 110-122.

Osegbue, G.C., & Nnubia, J.N. (2020). Adequacy of strategic plan implementation in secondary schools' administration for sustainable educational development in Anambra State, Nigeria. *Unizik Journal of Educational Management and Policy, 4(1)*, 104-114.

Oskamp, S. & Schultz, P. W. (2015*). Attitude and opinions* (3rd Ed). Mahwak, N. J.: Lawrence Eribaum Associates.

Otuka, J. O. E. (2013). Problems related in the development of biology education in secondary schools. *Journal of Science Teachers 'Association of Nigeria.* 21 (2), 133 -136.

Rosemund, E. J. (2016). *Effects of an experimental achievement goals pilot program on mathematical achievement.* Northern Arizona University, Flagstaff. Digital Dissertations No. 8508756.

Shuaibu, A. A. M. (2012). The teacher factor in science and technology education. In

Adeyanju, T. K. (Ed). *Revitalizing Education in Northern States*. Science and Technology. 3, 35. Kaduna Northern Education Research Project (NERP).

Soyibo, S. (2015). Learning for mastery. *Evaluation Comment (2),* 1-5

Ucheagwu-Okoye, O. M. (2021). The Need for Arbitration as An Alternative Dispute Resolution Mechanism in Tax Disputes Resolution in Nigeria. *Idemili Bar Journal*, *2*.

Ucheagwu-Okoye, O. M. (2025). Educational Laws and Their Impact on Inclusive Education for Students with Disabilities in Anambra State: Implications for Sustainable Development. *Unizik Journal of Educational Laws and Leadership Studies*, *1*(1).

Ucheagwu-Okoye, O. M. (2025). Role Of School Leaders in Promoting Mental Health Awareness Among Secondary School Students in Anambra State for Sustainable Development. *African Journal of Educational Management, Teaching and Entrepreneurship Studies*, *14*(1).

Ucheagwu-Okoye, O. M. (2025). The Role of Artificial Intelligence (AI) in Student Assessment and Evaluation in Educational Leadership in Tertiary Institutions in Anambra State. *Unizik Journal of Educational Laws and Leadership Studies*, *1*(1).

Ugwaka, K. A. (2025). Availability, accessibility and utilization of e-learning resources in teaching agricultural science in senior secondary schools in Anambra state. *African Journal of Educational Management, Teaching and Entrepreneurship Studies*, *15*(1).

Ugwaka, K. A. (2025). Integrating digital agriculture into the undergraduate agricultural education programmes in Nigerian universities for vocational development. *Unizik Journal of Educational Research, Science and Vocational Studies* 2 (1); 229-241.

Ugwaka, K.A. and Igbokwe S.O. (2020). Effect of ration level on the growth and development of clarias gariepinus. *International Journal of Agricultural Research and Food Production,* 5(3); 1-9.

Ugwaka, K.A. and Igbokwe, S.O. (2023). Effect of Phthalates from Plastic Culture Materials on the Growth and Survival of African Catfish. *International Journal of Agricultural Research; 18 (1): 36-44.*

Warrington, M. I. & Younger, M. (2010). The other side of the gender gap. Gender and Education. 12(4), 493 - 508.