

Enhancing Student Researchers Attitude towards the Use and Application of Educational Research Paradigm Theories in Research Studies in Nigeria Universities

¹Teibowei, Bodisere Juliet, ²Goodness Orluwene, ³Jeremiah, Samuel, ⁴Theresa Baikwe Osusu & ⁵Igoni, Mordecai Japheth

^{1&4}Department of Educational Foundations (Guidance and Counseling),
Faculty of Education, Federal University Otuoke

²Department of Educational Psychology (Measurement Evaluation)
Faculty of Education, University of Port Harcourt

³Institute of Education, Rivers State University, Port Harcourt

⁵Department of Business Education, Faculty of Education, Federal University Otuoke

Abstract

This study investigated the attitude of student researchers towards the use of educational research paradigm theories in four Nigerian Universities. As current research studies do not reflect the educational research, paradigm theories neither are they mentioned, rather much emphasis is on methodology and data collection tools based on quantitative and qualitative research. This study is geared towards the need to specify, identify, indicate, and select the appropriate research paradigm theory and to determine the combination and relative influence in any research study. The researcher employed a descriptive survey design. The population of 780 was used composing of post-graduate students from universities in South-South Geographical Zone of Nigeria while the sample size of 120 research students was adopted using a purposive sample technique. The research instrument used was (RPAS) Research Paradigm Assessment Scale. The scale was tested and had a reliability coefficient of the index of 0.82. 20 items were developed on a 4 point Likert scale of SA – strongly, A – Agreed, D – Disagreed and SD – strongly Disagreed. The statistical analysis used was ANOVA and T-Test for hypothesis 1 & 2, while ANOVA for hypothesis 3. Based on the result obtained, recommendations made were geared towards the need for all Faculties in the University to introduce the use and application of paradigm theories in research studies. In addition, paradigm theories should be added in the Curriculum of Tertiary Institutions as a core section in research methodology. Research bodies while organizing seminars should create awareness of research paradigm theories. Also, the National Association for Research Studies and Research Methods in Measurement and Evaluation should ensure that these paradigm theories are reflected and used in research studies in Universities by student researchers.

Keywords: *Educational Research Paradigm Theories: Positivist, Constructivist, Transformative, Pragmatic, Research Paradigm Assessment Scale, Student Research Community.*

Corresponding Author: Teibowei, Bodisere Juliet

Background to the Study

The dynamics involved in research writing and the call for improvement in research studies is acknowledged by notable authorities (Egbule, 2008; Nworgu, 1991; Kpolovie, 2011; Akinade, 2012, and Nwankwor, 2012). Other researchers have contributed contemporary findings on how to improve the research process (Pajarus, 2011; Creswell, 2011, Sally and Neolla 2011). They took lead way in the application of paradigm theories in research studies as a way of ensuring a continuum on the improvement of a more scientific method of writing a research study: a typical case of applying the paradigm theories in a research study. The paradigm theories have been seen as “theories that help the researcher to create avenues for inquiries, formulate questions, select methods with which to examine questions, areas of relevance, establish and create meaning in a research study (Pajarus, 2011). The theories are co-relates with research methodology, the pre-ordinate role while methodology is the central point of focus coming together to form a research study (Neolla and Sally, 2006).

The authenticity of a research study depends on the citations of authorities and applications of theories relevant to the study. This makes a study universally accepted by scholars and the entire research communities. Student researchers that form a sector of the university or higher education Research communities need to improve and explore the application of the paradigm theories. The classification of a research study of qualitative or quantitative and of mixed methods which is the methodology approach and the absence of appropriate paradigm theories make a study incomplete (Somekh and Cewin, 2005). The controversy in research methodology approach which makes the relevance of research paradigm theories very relevant, as “Arising from the dichotomy between qualitative, quantitative and mixed methods which has been problematic for post-graduates supervisors and teachers of research methodology” (Sally et al, 2006).

The research study, therefore, needs to be coherent enough as to make meaning to the reader and scientifically acceptable, hence the need to apply and use necessary theories in the methodology and theoretical framework is very essential for student researchers. However, paradigm theories have not yet gained wide acceptance but its scientific connotations give it a green light for popularity amongst student researchers as paradigm theories help the researcher in the following ways.

1. Create avenues for inquiries.
2. Formulate questions.
3. Select methods with which to examine questions.
4. Design areas of relevance.
5. A puzzle-solving tool.
6. A guide for research.
7. An emergency for solving anomalies.
8. Paradigm theories are responsible for prices.
9. Paradigm theories as a change of worldviews (Pajarus, 2011).

Theories, therefore, cannot be seen in a vacuum but as an emergency and impact of education which all student researchers tend to acquire in any area of study. Education, therefore, can be

seen as the sum total of scientific research which is embedded in any research since it involves testing of hypothesis. Theories, therefore, sum the basis on which hypothesis could be tested and proven, verified and accepted (Creswell, 2011).

It is also obvious that the paradigm theories seemed philosophically frowned at by most research students who tend to avoid analysis of whatever topics they research on. The paradigm theories are philosophical and are essentially a collection of beliefs shared by scientists, a set of argument about how problems are to be understood in scientific inquiries. No natural history can be interpreted in their absence and at least some implicit body of intertwined theoretical and methods of logical beliefs that permits selection, evaluation, and criticisms. Indeed paradigm theories guide the research efforts of scientific communities (Frank citing Kuhn, 2011). Eric (1990), noted that paradigm theories are very useful in research writing, they are seen as a guide for decision making and how we carry out research writing across disciplines, for instance, lawyers use Adversarial and Judgmental paradigm theories. These theories are scientific and philosophical with intent or motivation for undertaking a study.

The issues of using alternative paradigm theories like generalization graded, phenomenology theories etc are more regularly used Ojoego (2006), Oranusi (2005), Nnadi (2010), Samiavi (2010), Ibanichuckwu (2011), Utonasasi (2009), Anyuro (2011), Light Ile (2012), Okachukwu (2010), to mention a few used alternative paradigm theories in their research studies. Thus Makenze and Sally (2006) explain the confusion and misconception in the application of the paradigm theories as follows; however many University courses and research text continue to discuss research in terms of confusion which may be created for undergraduate's students, first time or early career researchers, the research process is already a daunting prospect to the inexperienced researcher and the ongoing debate and contradictory information adds to the confusion. This is further exercised by the indication that people continually ask researchers whether the research is qualitative or quantitative. An appropriate solution to this confusion will be necessary for research to progress from one stage to another.

Statement of the Problem

Student researchers currently do not reflect or mention paradigm theories. Emphasis is on mainly research design, research paradigm methodology approach which deals with qualitative, quantitative and sometimes mixed methods or a combination of both, others include the paradigm language like fundamental research, historical research, phenomenological research while some use alternative paradigm theories like graded theory, qualitative and quantitative, generalization, epistemology, observation, action research, heuristic research (Panjarus, 2011). To enable supervision of student researchers and teachers flow easily with studies carried out by students in the university. Young, (2010) explains that educational research paradigm theories are the “theoretical base for data created by the research activities which are in turn created by the research design”.

The need to improve research writing, makes it more meaningful and have a worldview of the study by students researchers to this, Willies (2007) in his piece as a worldview outlined

paradigm theories as more in touch with reality, gives reasons or purposes for doing research, pointing out the different data, methods as valuable, meaningful and indicates relationship between research and practice.

Student researchers have needed to include paradigm theories in research studies to make explicit and relevance their use in university research communities. Mac-Naughton (2001) sees paradigm theories as a method that guides research and practice in a field. Iketaku (2011) explain research as a study that is aimed at discovering, corrections, interpreting new facts or modifying, revising or verifying accepted theories based on new information. Anaekwe (2007) also adds that when research is geared towards unraveling instructive problems, educational research is implied.

Student researchers need to know how to apply the paradigm theories in research studies. This refers to science, arts, and social sciences. Ikehi (2013) explains educational research as empirical, theoretical, cumulative objective, verifiable and replicable. Noella citing Martins (2005) and Creswell (2003) emphasized the pattern paradigm theories should be in research writing as classification, and secondly matching research paradigm, paradigm approach method, and tools. Orluwene et al (2008) citing Nworgu (1991) explains that when research employs a systematic approach and a scientific method it is said to be a scientific research. And when a scientific method is applied in education it is called educational research.

Objectives of the Study

The study intends to achieve the following research objectives.

1. To ascertain the attitude of student researchers towards the use and application of educational research paradigm theories in a research study.
2. To ascertain whether the faculty type influences the attitude towards the application of educational research paradigm theories in research studies.
3. To ascertain whether a difference exists between student researchers in different Universities, on attitude towards the application of educational research paradigm theories in research studies.

Research Hypothesis

1. There is no significant difference between student researchers with the positive and negative attitude towards the application of educational research paradigm theories in research studies.
2. There is no significant difference in the attitude of student researchers in Arts, Science and Social Science towards the application of educational research paradigm theories in research studies.
3. There is no significant difference between the attitudes of student researchers from the four different universities towards the application of the educational research paradigm theories in research studies.

Literature Review

The four educational research paradigm theories are;

1. Positivist | Post positivist | Anti positivist
2. Constructivist | interpretive
3. Transformative
4. Pragmatic

These theories were made popular by Thomas Kuhn an American scientist & philosopher in 1962 and later by Frank Pajarus in (2011). Kuhn defined these theories as “essentially a collection of beliefs shared by scientist, a set of argument about how problems are to be understood, in scientist inquiries” Kuhn also deduced that, no natural history can be interpreted in the absence of these theories at least some implicit body of intertwined theoretical and methods that include logical beliefs that permit, solution, evaluation, and criticism. Indeed, Paradigm theories guide the research efforts of scientist communities.

Positivist Paradigms/ Post Positivist/ Anti-Positivist Paradigm Theory

This paradigm theory was propounded by a French philosopher August Comte, he based it on observation and reason as means of understanding human behaviour. He believes that time knowledge is based on the experience of senses which can be obtained by observation and experiment, which can only be understood within the framework and principles of assumption of science which are determinism, empiricism, parsimony and generality (Dash 2011).

Determinism according to Comte (2011) means that event is caused by other circumstances; hence prediction and control are necessary to understand the causal link. Empiricism means the collection of verifiable empirical evidence to support theories or hypothesis. Parsimony means explaining the phenomenon in the most economical way possible. Generality is the process of generalizing the observation of the particular phenomenon in the research community and the world. Anti-positivist emphasizes that social reality is viewed and interpreted by the individual according to the ideological position possessed. It also states that knowledge is personally experienced and not acquired or imposed by others.

Ignon (2011). This theory is supported by three schools of thought in social science research. They are phenomenology ethno methodology and symbolic interactionism in which all emphasize human interactions on daily bases. Phenomenology is based on the belief that the individual behavior is determined by the experience gained out of an interaction with the phenomena. Ethno methodology –developed by Harold Garfinkel –deals with the world of everyday life and that theoretical concern is centered around the process of common sense reality construction in everyday interactions. Symbolic interactionism by Dewey, Cooley & Mead (2006) is based on “the understanding and interpretation of interactions that exist between human beings. The concern of this approach is that human beings interpret and define others actions rather than merely reacting to each other's actions. These two theories Positivist and Anti-positivist gave rise to critical theory. The critical theory was propounded by Jungen Hagerman (2000) on investigation and action in social science, in history for historical forces that restrict human freedom and revealed the ideological justification behind such force.

hey were later built on a typology of interest, which are technical interest, practical interest, emancipating interest. Critical theories suggest two kinds of research methodology namely, ideology critique and action research, Rashdi (2011) citing Cohen et al (2000).

Selection of Research Paradigms and Research Methods

Table 1: Selection of research paradigms and research methods

Research paradigms	Research approach	Research methods	Examples
Positivism	Quantitative	Surveys: Longitudinal,	-Attitude of distance learners towards online based education
		Cross-sectional, Correlational; Experimental, and Quasi-experimental and Ex-post facto research	-Relationship between students' Motivation and their academic achievement. - Effects of intelligence on the academic performances of primary school learners.
Anti-positivism	Qualitative	Biographical; Phenomenological; Ethnographical; Case study	-A study of autobiography of a great statesman. -A study of dropout among the female students. -A case study of a open distance learning institution in a country
Critical theory	Critical and action-oriented	Ideology critique; action research	-A study of development of education during the British rule in India -Absenteeism among standard five students of primary school

Although, each of the paradigms have corresponding approaches and research methods, still a researcher may adopt research methods cutting across research paradigms as per the research questions she proposes to answer.

Constructivist/Interpretive

This theory was propounded by Edmund Harsel's in the 20th century deduced from human experience. This theory deals with the creative tendencies of man and the ability to apply all that is learned in our own way. In other words, it means the way we understand them and interpret them' the theory relies on the participant view of the situation being studied and recognizes the impact of the researcher's background and experiences. These involve research studies though are student-centered not teachers centered, Creswell (2003). Examples of such research topics are:

- i. Predicting musical performance among students
- ii. Some correlates of locus of control among student.
- iii. The attitude of the student towards the study of English and Mathematics in Secondary Schools.
- iv. Continuous assessment as motivation for students' performance in schools.

Transformative Education Paradigm Theory

This theory is based on research that addresses issues of social injustice and marginalized people (Martins, 2010). This theory is based on the belief that, inquiry needs to be intended related to politics and political agenda for a change in the society (Pajarus, 2011). In the 1980's & 90's, more people began to see that existing paradigm at that time that positivist and constructivist paradigms theories did not address issues of marginalized people and contained an action agenda for reforms (Makenze and Sally, 2006). It based its research approach on qualitative, quantitative and mixed method and prefers the last in analyzing data.

Pragmatic Educational Research Paradigm Theory

This theory is traced to pragmatists like John Dewey, William James, and Charles Sender Pierce. This theory is based on influence on the field of public administration. In the 1990's, feminist philosophers discovered classical pragmatism as a source of feminist theories in research studies. Such female pragmatist was Duran Keith, Whipps, and Siegfried. Neolla and Sally citing Creswell (2003) explain this paradigm theory as “pragmatism is not committed to any one system of philosophy or reality”. Pragmatist researchers form on the what and how of the research problem and use mostly sociological methods. This theory is also defined as “the illustration of the logic of science including the fixation belief and how to make our ideas clear” (Charles, 2010).

These four theories are made simplified as they make sense in their approach and presentation on how they are to be used by Neolla and Sally (2006) citing Martins (2005) and Creswell (2003) as follows:

S/No.	Positivist	Interpretivist/ Constructivist	Transformative	Pragmatic
1	Experimental	Naturalistic	Critical theory	Consequence of actions
2	Quasi-experimental	Phenomenological	Neo-Marxist	Problem centered pluralistic
3	Correctional	Hermeneutic	Ferminish	Pluralistic
4	Reductionism	Interpretivist	Critical race theory	Real world practice oriented
5	Theory verification	Ethnographic	Frerean	Mixed methods (qualitative and quantitative)
6	Casual comparative	Multiple participant meanings	Participatory	
7	Determination	Soval and historical construction	Emancipatory	
8	Normative	Theory generation	Advocacy	
9		Symbolic interaction	Grand narrative	
10.			Empowerment issue oriented	
11.			Change-oriented	
12.			Interventionist	
13.			Queer theory	
14.			Race specific	
15.			Political	

Methodology

This study utilized the survey design. According to Basavanthappa (2010) states that survey design is used because it deals with the research that the characteristics, behaviour, attitude and intentions of a group of people by asking individuals belonging to that group to answer a series of questions. Also this design was used because the study surveyed the student researcher's attitude towards the application of educational research paradigm theories in research studies in four universities in South South geographical zone in Nigeria. Also a scale relating to application of educational research paradigm theories was administered to student researchers.

Population of the Study

This study was carried out in four Universities in South South Geographical zone of Nigeria. There are University of Port-Harcourt, University of Uyo, Niger Delta University and University of Calabar. The population of study was 780 comprising student of post-graduate studies in the year 2007/2008 study graduate of 2007, 2008/2009 Academic Sessions.

Sample and Sampling Technique

This study adopted the purposive sampling technique used to sample size of 120 research students. This study adopted the suggestion provided by Gay, Mills and Arasian (2009) that 10% of the total population can be used by the researcher, especially if the research adopted the descriptive survey research design. To these effect 76 research students were sampled.

An instrument name Research Student Attitude towards application of educational research paradigm theories scale (RPAS) was generated by the researchers. The scale was scrutinized by expert in measurement and evaluation. The scale was tested and had reliability co-efficient of 0.82. Demographical data were school, gender, faculty and course of study. 20 items were developed on a 4-point Likert Scale of SA-Strongly, A-Agreed, D-Disagreed, and SD-Strongly Disagreed. The scale was scored as SA (4), A (3), D (2), SD (1) on positive statements, while the negative statements SA (1), A (2), D (3), SD (4). 25 and above was scored as positive attitude towards the application of educational research paradigm theories. While below 25 was scored as negative attitude towards the application of educational research paradigm theories.

Method of Data Analysis

Collection and scoring of data was done manually and data was analyzed using ANOVA and T-Test. Using SPSS version 0.15, t-test was utilized for analyzing hypothesis 1 & 2 while ANOVA was used for hypothesis 3

Data Interpretation and Analysis

Hypothesis One: There is no significant difference between research students with positive and negative attitude towards the application of educational research paradigm in research study.

Table one: -t-test Analysis of attitude towards the application of educational research paradigm theories by student researchers in research studies in Universities South South geopolitical zone of Nigeria.

Variables	N	X	Sd	Df	t-cal	Et	Table	Decision
Positive attitude	233	51.24	13.140					
Negative attitude	614	52.27	12.392	294	1.68	2.56	N	Null hypothesis retained

Table one indicate that the calculated t-test value of (1.68) is less than the t-test table value of (2.56) which signifies that there is no significant difference between student researchers with positive attitude and student researchers with negative attitude towards the application of educational research paradigm in research studies.

Hypothesis two: There is no significant difference on attitude of student researchers of Art, Science and Social Sciences towards the application of educational research paradigm in research.

Table two: t-test Analysis attitude of student researchers of Art, Science and Social Sciences towards the application of educational research paradigm theories.

Variables	N	X	Sd	Df	t-cal	Et- Table	Decision
Arts	455	56.47	13.311	292	0.22	1.86	
Science	154	53.80	13.130				Null hypothesis retained
Social Science	156	51.41	12.130				

Table two indicates that the calculated t-test value of (0.22) is less than the t-test table value of (1.86) which implies that there is no significant difference in the attitude of student researchers of arts, science and social sciences towards the use and application of Educational research paradigm theories in all four universities of South South geopolitical zone in Nigeria. The null hypothesis was retained.

Table Three: Analysis of variance (ANOVA) on attitude of student researchers for four universities on application of Educational research paradigm theories

Source of Variance	Sum of Squares	Df	Means Squares SS	Cal F-ratio	Critical F-ratio
Between Groups	131.2481	3	44.0827		
Within Groups	8111.2119	263	26.4300	1.622	2.582
Total	8242.46	269			

Table 3 – implies that the calculated F-value of (1.622) is less than the critical F-value of (2.58) at 0.05 level of significance. Therefore there is no significant difference in the attitude of student researchers towards the application of educational research paradigm theories in all four universities in Nigeria and all the null hypothesis was retained.

Discussions of Findings

Hypothesis one states that there is no significant difference between student researchers with a negative and positive attitude towards the application of educational research paradigm theories in research studies. This, therefore, means that student researchers have a negative attitude towards the use of educational research paradigm theories. This is true as most theses by student researchers reviewed by the researcher merely mention alternative theories like generalization theories, ethnographic theory Granded theory etc. Also, the mentioned paradigm approach like qualitative, Quantitative and mixed methods and went on to mention the research design. Tesch (1990) classified paradigm language as, content analysis, discourse analysis, ethnographic communication, ethno methodology, even structure analysis etc.

Hypothesis two results exposed that there is no significant difference in attitude of student researchers in Arts, Sciences and Social Sciences in the application of educational research paradigm theories. This implies that their attitude is negative. This corresponds with the findings of Pajarus(2011) citing Kuhn (1962) that there is a need to mention educational research paradigm theories, to make research study in all faculties a complete research study.

As Bryka (2001) explains negative attitude as a disposition that needs more awareness for implementation.

Lastly, Hypothesis three explains that there is no significant difference in research students of the different four universities on the use and application of educational paradigm theories. This implies that in all the four universities, they maintained a negative attitude towards the use and application of educational research paradigm theories.

Campbell (1963) theories on inconsistency as a valuable tool on attitude influence to a large extent explain the case of the use and application of the paradigm theories in research studies. Kazeem(2012) states that an area of study or faculty of study can affect the acceptability to apply or teach a particular theme or apply a new approach in a study while those in measurement and evaluation can easily apply a new approach in research studies.

Conclusion

As reflected in this research study, it is glaring that student researchers need to embrace the use of educational research paradigm theories in the research study not minding the area of study or department or faculty be it Arts, Science or Social Science, all universities would embrace a new systematic way of research writing as it will go a long way to improve research writing and make a more meaningful and accepted worldview. Therefore, it is pertinent to say that the educational research paradigm theories are not applied as a result of unawareness and the unpopularity of their importance in research studies.

Recommendations

1. All departments in a faculty should introduce the application of paradigm theories to make a research study more intense and to embrace the realities of change as a dynamics in life.
2. The curriculum for the tertiary institution should include the teaching of paradigm theories in the core course on research methodology as the inclusion of this paradigm; theories will make research work more complete and interesting.
3. Since theories are important to cite in the theoretical framework and in the methodology as the case of the educational research paradigm theories, it will enhance the productivity of research study as each of the educational paradigm theories make more meaning to our present-day lives and can be adopted as ones personal guide towards daily application on the activities that we carry out.
4. Research bodies should organize seminars and conferences where these educational research theories awareness and importance in research studies will be properly explained.
5. The National Association for Researchers Studies & Research Methods in measurement and evaluation should ensure that the paradigm theories are accepted and pursued in all universities by supervisors of students Researchers that will make use of them as a necessity in order to make a research study complete refined and more meaningful.

References

- Akinade, E.A., (2015). *Evaluation in guidance & counseling (4th ed.)*. Ibadan: Brightways Publication.
- Bogdan, R. C., & Buklin, F, (1998). *Qualitative research for education: An introduction to theory and methods (3rd ed)*. Boston: Allyn& Bacon.
- Burns, R. B. (1997). *Introduction to research methods. (3rd ed)*. Australia: Longman.
- Cohen, B. (2000). *Research methods in education (5th ed)*. London: LP.
- Cook, T., & Campbell, D. (1979). Quasi-experimentation, design and analysis, issues for field settings.
- Creswell, J.W. (2003). *Research design Sally & Neolla Qualitative, Qualitative and mixed methods approaches*. London: Macmillan Press
- Collins, A. J. & Bielaczuc, C. (2004). Resign research: Theoretical and method-ological issues. *The Journal of the Learning Science*, 13(1) 15-42.
- Cook, T. D. (1983). Quasi-experimentation: its outology, epistemology and methodology. In *Beyond method. Strategies for Social Research*. London: Morgan Sage.
- Dash, N. K. (1993). Research paradigms in education: Towards a resolution. *Journal of Indian Education* 19(2) pp 1-6.
- Dyson, F. (1990). *The sun, the genome, and the internet: Tools of scientific revolution*. London: Oxford University Press.
- Egbule, J. E., & Okoblah, D.O. (2008). *Research methods in education*, Benin City: Justice Jeco. Publisher.
- Fuller, S. & Thomas, K. (2000). *A Philosophical History for our times*, Chicogo: University of Chicago Press.
- Hodkinson, P. (2004). Research as a swim of work expertise, community and methodological objectivity, *British Educational Research – Journal* 30(1) 9-26.
- Habermas, J. (1970). *Knowledge and Human Interests (J. Shapiro Trans)*. London: Heinemann.
- Kelly, A E., & Lesh, A. (2000). *Trends and shights in research methods. In handbook of research resign in mathematics and science education, (1st ed)*. New Jersey; Lawrence Erlbaum.
- Keat, R. (1981). *The politics of social theory (1st ed)*. Oxford: Basil Blackwell.

- Kuhn, T. S. (1961). *Function of measurement in modern physical science*. (1st ed). London: Isis.
- Kuhn, T. S. (1962). *The structure of scientific revolutions*, (3rd ed) Chicago & London: University Press.
- Kuhn, T. S. (1997). *The function of dogma in scientific research pp 347-69 in A.C. Crombia (ed). Scientific change Csymposium of the History of Science*. Chicago: University of Chicago Press.
- Kuhn, T. S. (1987). *Black-body theory and the quantum discontinuity 1894-191*. Chicago: University of Chicago Press.
- Kuhn, T. S. (2000). *The road since structure philosophical essays (1st ed) Chicago*, Chicago: University Press.
- Kuhn, T. S. (1977). *The essential tension selected studies in scientific traditional and clause*. Chicago: University of Chicago Press.
- Kuhn, T. S. (1996). *Devised science paradigm*, New York: Times.
- Leedy, E. & Ormro, D. (2005). *A handbook for teacher research from design to implementation*, New Jersey: Pearson Education.
- MC Millan, G. & Scumache, A. (2006). *Research in education (6th ed)*. Boston: Pearson Education.
- Merton, D. M. (2005). *Research sally & Neola methods in education and psychology: Integrated diversity with qualitative approaches (2nd ed)*. Thousand Oaks: Sage.
- Mac-Naughton, R. & Siraj, G. (2000). *Young & Willies. doing early childhood research international perspective on theory and practice*. Australia: Allen & Unwin.
- Martin, X. (2008). *Polanyi vs Kuhn, world views apart the polanyi society Missouri Western State University*. Accessed 20 March, <http://www.missourwestern.edu/orgs/polanyi/TAD%20WEB9020ARCHIEVE/TAD33-2/TAD332-2fnl-pg8-24Paf.pdf>.
- Neuman, V. (2000). *Social research methods, qualitative and quantitative approaches (4rd ed)*. Boston Allyn & Bacon.
- Nwankwor, F. (2013). *A practical guide to Research writing (6th ed)*. University of Port Harcourt. M & J. guard Orbit and Communications Ltd.
- Nworgu, S. (1991). *Educational research: Basic Issues methodology*. Ibadan: Wisdom Publishes Ltd.

- Orluwene, G., & Opara, I. (2008). Utilization of education. research findings in Nigeria: Implementation for national development. *Nigeria Journal of Education, Research & Evaluation*, 8(2), 27-34. Ile-Ife: Baoku Communication Press.
- O'Lery, L. (2004). *The essential fund to doing research (1st ed)*. London: Sage.
- Pajarus, F. (2011). *Summary of book scientific revolution by Kuhn University of Chicago*. Chicago.
- Perrin, B. (2000). *Donald T. Campbell and the art of practical In-the-trenches Program Evaluation*. In validity & social experimentation. Edited by Bickman. Thousand Oaks, Sage.
- Somekh, D. & Cewin, N. (2005). *Research methods in the social sciences*. Thousand Oaks Sage.